OECD Reviews of Pension Systems

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OECD Reviews of Pension Systems: Portugal



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Foreword

This Pension Review provides an assessment of Portugal's retirement income provision from an international perspective and focuses on the capacity of the pension system to deliver adequate retirement income in a financially sustainable way. The review highlights OECD best practices for the design of pensions by covering all components of pension systems: public, occupational and personal plans as well as schemes for public sector employees. The analysis is based on both OECD flagship pension publications, Pensions at a Glance and Pensions Outlook, and country-specific sources and research.

The report was prepared by a team of pension analysts from the OECD's Directorate for Employment, Labour and Social Affairs and Directorate for Financial and Enterprise Affairs: Pablo Antolin, Boele Bonthuis, Hervé Boulhol, Diana Hourani, Ananita Kusumaningsih, Marius Lüske and Stéphanie Payet. Editorial assistance was provided by Liv Gudmundson and Lucy Hulett.

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The authors are very grateful to Stefano Scarpetta (ELS Director), Mark Pearson (ELS Deputy Director), Monika Queisser (ELS Head of Social Policy Division) and Christian Geppert, Maciej Lis and Andrew Reilly (ELS Pension Analysts) for their useful comments. The Review was written under the overall supervision of the OECD Secretary-General, Angel Gurría, and the Special Counsellor to the Secretary-General, Gabriela Ramos.

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Executive summary

This review provides a detailed analysis of the different components of the Portuguese pension system, which consists of an old-age safety net, a pay-as-you-go earnings-related public scheme and voluntary private pensions. It assesses the system according to the OECD best practices and guidelines, and draws on international experiences to make recommendations for improvement. It also addresses the effects of recent labour market trends on future retirement benefits and on the pension coverage of workers in non-standard forms of employment.

Portugal is ageing rapidly. The projected decrease of the working-age population until 2050 will be among the largest in the OECD, leading to a substantial fall in the number of contributors to the pension system. Retirement finances will be put under stress as a result. Old-age inequality is high in Portugal but thanks to safety-net provisions, the relative old-age poverty rate is below the OECD average. The labour market has been recovering from the deep and prolonged crisis of 2008-09 in Portugal and employment rates are now close to the OECD average. Yet, for those who were affected the crisis is likely to leave its mark on future pensions. The main recommendations are presented below.

- *Simplify non-contributory benefits to avoid the multiplication of instruments with similar objectives. In particular, merge the old-age social pension, the complement (CES) and the top-up (CSI), and remove the CSI's means testing to descendants' income*. The interaction between numerous non-contributory schemes pursuing similar objectives is unduly complex. Means-testing the CSI not only at the household level but also including descendants' income might cut cost by restricting the number of beneficiaries but makes the pension system complicated. The administrative complexity generates costs and long waiting times, and some people may be discouraged or uncomfortable to have their children's income means-tested.
- *Lower the minimum contribution period of 15 years required for the minimum pension, adjust the benefit level accordingly and ensure that each additional year of contribution results in a higher minimum pension benefit*. For those currently entering the labour market there are three levels of minimum pensions available: one for those with 15-20 years of contributions, one for those with 21-30 years of contributions and one for those with 31 years of contributions or more. In Portugal, the minimum pension provides little additional benefit from working longer. Only those with contributory periods just below the thresholds of 15, 21 and 31 years benefit from working longer in terms of the minimum pension.
- *Separate the uprating of the initial minimum pension benefit at retirement from the indexation of minimum pensions in payment*. The uprating of the initial benefit should be closely related to average- or minimum-wage growth to ensure a stable level relative to labour income over time.

- *Duly implement the link between increases in the retirement age and life expectancy gains, and extend that link to the minimum age of early retirement*. The link between the retirement age and life expectancy plays a key role in dealing with challenges raised by population ageing. It should be extended to the minimum age of early retirement, which at 60 years is currently too low.
- *Use the sustainability factor to adjust pension benefits across the board as an ultimate instrument to ensure financial sustainability*. Abolishing the sustainability factor only for retirement at or after the normal retirement age created very large pension penalties for those retiring before the normal retirement age. These differences will grow with life expectancy gains. Once the sustainability factor has been reshaped early retirement could rather be discouraged by raising the current 0.5% penalty per month of early retirement.
- *Eliminate the option for long-term unemployed people to enter retirement very early and without the full penalties applied to other early-retirement entries*. Ensure effective support for active job-search efforts of older workers in particular. Policy measures should ensure that unemployment schemes do not encourage early retirement. Rather than permitting older long-term unemployed to enter retirement very early with lower penalties, the unemployment benefit system should be adapted to offer good protection against unemployment while providing effective active labour market programmes to strengthen job-search efforts and employability before the retirement age.
- *In the benefit calculation, uprate past wages with wage growth rather than a combination of price inflation and wage growth while lowering accrual rates*. For benefit calculation, uprating past wages based mostly on prices makes the financial balances of the pension system and pension replacement rates highly dependent on real-wage growth. This is undesirable because productivity developments are difficult to predict and difficult to influence by policies. With the same objective in terms of financial balances and pension levels, it is preferable to shift to wage uprating and lower accrual rates accordingly – which are currently very high.
- *Index intermediate pensions at least with prices and use lower accrual rates in the contribution phase to finance this more generous indexation*. Medium pension levels (between two and three times the IAS) are currently indexed below prices (inflation minus 0.5 percentage point) when annual real GDP growth is smaller than 2%. Indexation below prices erodes standards of living during retirement and jeopardises pension adequacy.
- *Increase coverage by improving incentives to contribute to voluntary pension schemes and promoting occupational plans*. Increasing incentives could be achieved by: removing the complexity of the pension tax system by applying one set of tax rules to all schemes and contributions; and, introducing non-tax financial incentives (such as fixed nominal subsidies or matching contributions). The government could also promote occupational plans as an effective way to increase coverage.
- *Improve withdrawal settings*. The conditions currently permitting early withdrawals from Retirement Savings Plans (PPRs) are relatively lenient. The government could tighten these conditions and align retirement age rules with the

statutory retirement ages. It could also discourage taking sizeable retirement savings as lump sums.

- *Improve regulation*. The Portuguese government should consider updating the assumptions around the minimum funding ratio calculation and develop Portuguese mortality tables for use in funds' independent funding ratio calculation.

Chapter 1. Introduction to the Review of the Portuguese pension system

This chapter introduces the Review of the Portuguese pension system. This review provides policy recommendations on how to improve the Portuguese pension system, building on the OECD's best practices in pension design. The review describes the Portuguese pension system in great detail and identifies strengths and weaknesses based on cross-country comparisons. After economically painful years during the financial crisis and its aftermath, Portugal's economy has recovered. While public debt remains at high levels, the labour market has made remarkable improvements over the last years, with strongly increasing employment rates and falling unemployment. Portugal's demographic situation is challenging. The country's population is ageing very rapidly and shrinking, among other things due to very low fertility rates.

1.1. OECD Reviews of Pension Systems

The OECD Reviews of Pension Systems deliver an in-depth analysis of the pension system in selected countries. They focus on the pension system's capacity to provide adequate retirement income in a financially sustainable way. The reviews examine how demographic, social and economic developments affect pension benefits and pension spending. They cover all components of the pension system, both old-age safety nets and earnings-related schemes, public and private pensions, and special regimes for specific occupations. The analyses heavily draw on OECD flagship publications (*Pensions at a Glance* and *Pensions Outlook*) and use country-specific sources and research.

OECD Reviews of Pension Systems: Portugal is the fourth in the series, after Ireland (2014), Mexico (2016) and Latvia (2018), with a fifth review on Peru currently being prepared. It is financed by the European Commission as part of the project *Improving the Pension Prospects of EU Member States* and jointly produced by the OECD Directorate for Employment, Labour and Social Affairs and the Directorate for Financial and Enterprise Affairs. This review provides policy recommendations on how to improve the Portuguese pension system, building on the OECD's best practices in pension design. The review describes the Portuguese pension system in great detail and identifies strengths and weaknesses based on cross-country comparisons.

This introductory chapter starts by succinctly discussing why now is a good time for an OECD review of the pension system. It then describes Portugal's broader economic and demographic background, focussing on aspects with a particular relevance for old-age pensions. It stresses that public debt is a major burden and potentially a source of vulnerability for the country. The chapter also summarises recent labour market developments that are of special interest for the pension system. While the labour market has been recovering from the recession in Portugal and while employment rates are now close to the OECD average, the crisis has left its mark and challenges persist. The chapter then describes the fast ageing prospects in Portugal resulting from record-low fertility rates on top of improvements in life expectancy, and summarises migration dynamics.

The second chapter describes first-tier pension schemes – the first layer of social protection in old age. First-tier pension schemes help protect those with short contribution periods or low pension entitlements more generally against old-age poverty. In Portugal its main components are the old-age social pension, a supplement (CSI) with broader means-testing rules than the social pension and the minimum pension from the earnings-related scheme. Several additional supplements combine into a nexus which provides almost every individual older than the retirement age with some income.

The third chapter describes the mandatory earnings-related pension scheme and its historical background. The main component of the Portuguese old-age pension system is a pay-as-you-go defined benefit scheme, the so-called *Pensão de velhice*. Entitlement to an earnings-related pension requires at least 15 years of contributions. This pension can be taken from the statutory retirement age – 66 and four months in 2018 – and in the case of a long contribution history from age 65 without a penalty. It can also be taken with a penalty from age 60 through early-retirement schemes.

The fourth chapter analyses Portugal's voluntary funded pension system and proposes ways to improve it. Voluntary funded pensions play a fairly limited role in the Portuguese pension landscape today as coverage is low, including in the occupational private pension system. The chapter discusses the different aspects of voluntary funded schemes and evaluates those components with reference to international comparisons. It explores the

tax treatment of private pensions, trends in assets under management and investment returns. Other issues the chapter covers include funding rules and competition in the private pension sector.

The fifth chapter describes the interaction between the labour market and pensions. The global financial crisis and the European debt crisis in the late 2000s and early 2010s had a profound impact on the Portuguese labour market. Given the tight link between labour market outcomes and pension entitlements, these labour market difficulties could have knock-on effects and result in low future pensions. While short career histories are uncommon among current retirees in Portugal, career breaks may become a more serious problem among future generations of retirees. The chapter also documents trends in non-standard work, such as self-employment, part-time work and temporary work, and analyses pension insurance of non-standard workers. In addition, it discusses potential consequences of automation and digitalisation on the labour market.

1.2. Why review the Portuguese pension system now?

Population ageing prospects, the effects of the financial crisis on pension entitlements and the fiscal space, and the risk of increasing inequality among future retirees are major challenges for retirement systems in OECD countries. In order to address these challenges, many countries have reformed their pension systems over the last decade, trying to keep up with demographic, financial and labour market developments. One of the key messages of the Annual Growth Survey of the 2018 European Semester (European Commission, 2018[1]) is that pension reform in Member States should aim to ensure financial sustainability and retirement income adequacy as broadly as possible.

In which way and how strongly governments reformed pension systems varied across countries. Among the most common reforms were changes in retirement ages, contribution rates and pension benefit levels. Some countries decided to introduce automatic adjustment mechanisms into their pension systems, based on demographic and economic developments (OECD, 2017[2]). While these innovations promise to reduce political risks, their correct design and implementation are challenging.

Portugal has been particularly active in reforming its pension system over past decades, mainly focusing on improving financial sustainability (European Commission, 2018[3]). Among the main reforms since the 1990s were (Chapter 3): increasing the period to calculate the reference wage; aligning the retirement age for women; linking the retirement age to life expectancy; reforming the minimum pensions; consolidating the scheme for civil servants with the general regime for private-sector workers; and, formalising indexation rules.

Now is the time to take stock of where these recent measures have taken the Portuguese pension system. Short-term pressure has fallen thanks to the sustained economic recovery, providing the opportunity to optimise the current design of various pension components. Improvements are all the more necessary as the pace of ageing will be fast in Portugal, with demographic projections pointing to a sharply decreasing total population size despite an increasing number of retirees. This might create imbalances in the financing of pensions and ultimately put downward pressure on retirement income. This Review will analyse: whether first-tier pensions efficiently meet the key objective of providing income protection for the most vulnerable retirees; whether the parameters of the public pension scheme are set in a way that makes the core of the system well equipped to face ageing challenges and possibly deep changes in the functioning of the

labour market; and, how the voluntary funded pension scheme can be improved to provide complementary income.

The Portuguese pension system consists of old-age safety nets (Chapter 2), a pay-as-you-go defined benefit scheme (Chapter 3) and voluntary private savings (Chapter 4). The defined benefit scheme has two main components: the general social security scheme, *regime geral da Segurança Social* and the civil servants pension scheme, *Caixa Geral de Aposentações* (CGA). The latter has been closed to new entrants since 2006 with new civil servants contributing to the general scheme. The safety net includes an old-age social pension and a complement, the so-called *Complemento Solidário para Idosos* (CSI), both of which pursue similar objectives but have different eligibility criteria. Finally, funded voluntary pensions make up a very small share of total pension entitlements.

In total, 93% of the population aged over 65 receives an old-age pension. The general social security scheme pays pensions to 77% of the population over 65 while 22% of that age group receives a pension from the civil servant scheme. Minimum pensions are paid to 38% of the population aged over 65, while the old-age social pension and the CSI are received by 1% and 8% of this population, respectively.

1.3. Economic and demographic background

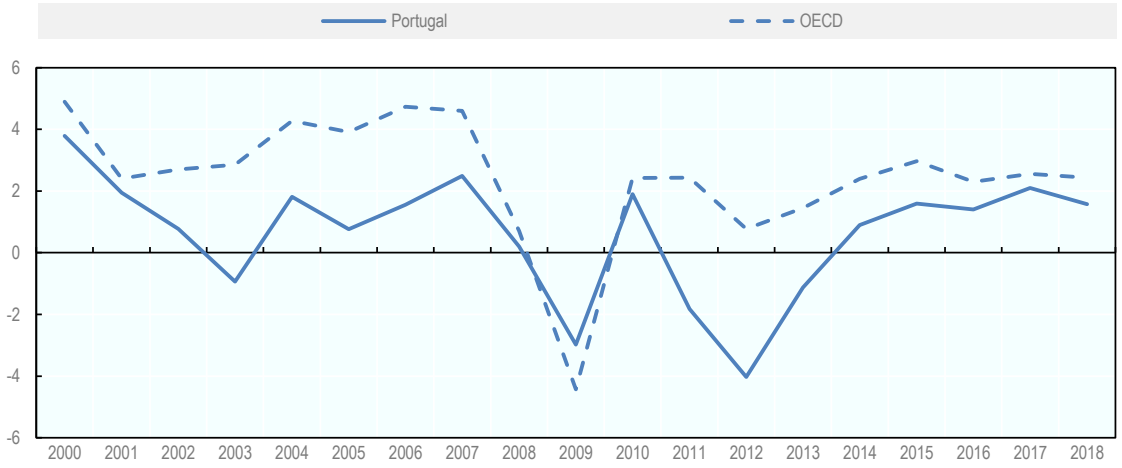
1.3.1. Recent economic context

Unlike in Spain, for example, Portugal's economy had already struggled in the years preceding the Great Recession, with sluggish economic growth and labour market difficulties. Portugal was among the countries that were most deeply affected by the crisis. Between 2009 and 2013, real GDP shrunk in four out of five years, dropping by more than 4% in 2012 alone (Figure 1.1). While most OECD countries were hard hit by the financial crisis in 2008/2009, real GDP grew again in the OECD on average in 2010. Portugal, by contrast, stood out as one of the countries facing a very severe economic downturn in 2011/2012. In 2011, Portugal agreed to implement a reform programme in return for a EUR 78 billion IMF-EU bailout. From 2014 onwards, real GDP growth rates turned positive again to reach 2.1% in 2017 and a projected 1.6% in 2018, against 2.6% and 2.4% on average in the OECD, respectively.

While Portugal's recovery has been solid, the country's economy still faces significant challenges. An exceptionally high debt burden built up during the crisis, resulting from high unemployment rates and expansionary fiscal policy until 2011 to support growth. Due to persistent general government deficits, the gross public debt had grown even before the crisis, from 50% in 2000 to 68% of GDP in 2007 – already above the Maastricht 60% threshold – and then rose sharply to 131% in 2014, decreasing to an estimated 123% in 2018 (Figure 1.2).[1] According to OECD projections, public debt as a percentage of GDP is likely to decrease over the next years, but only at a slow pace, falling to about 120% of GDP in 2030 (OECD, 2017[4]). As a result, the scope for fiscal policy is limited today and old-age social protection – the biggest share of public expenditure in Portugal – is likely to remain exposed to financial pressure in the foreseeable future.

Figure 1.1. After years of sluggish growth, GDP is rising again

Real GDP growth, by year, in %

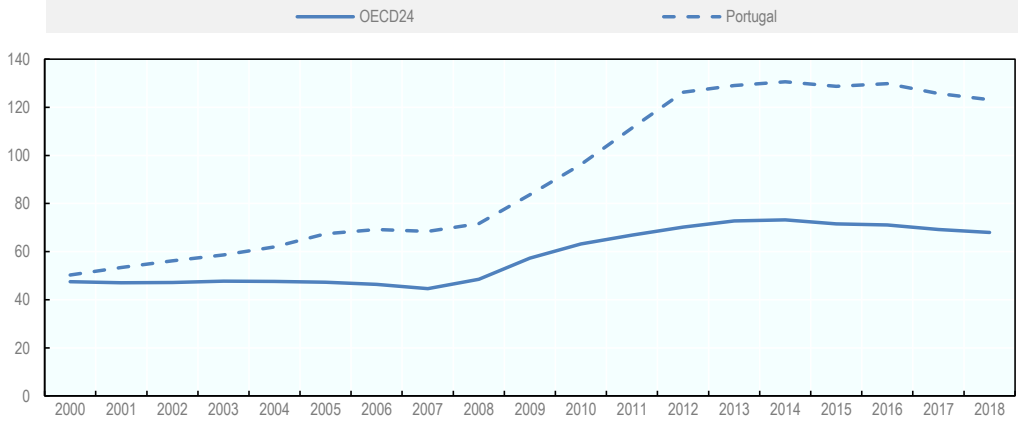


Source: OECD Economic Outlook: Statistics and Projections (https://stats-2.oecd.org/Index.aspx?DataSetCode=EO101_INTERNET).

StatLink http://dx.doi.org/10.1787/888933925747

Figure 1.2. Debt levels soared during the crisis and have remained high since then

Gross public debt, Maastricht criterion, % of GDP



Source: OECD Economic Outlook: Statistics and Projections (database).

StatLink http://dx.doi.org/10.1787/888933925766

1.3.2. Labour market

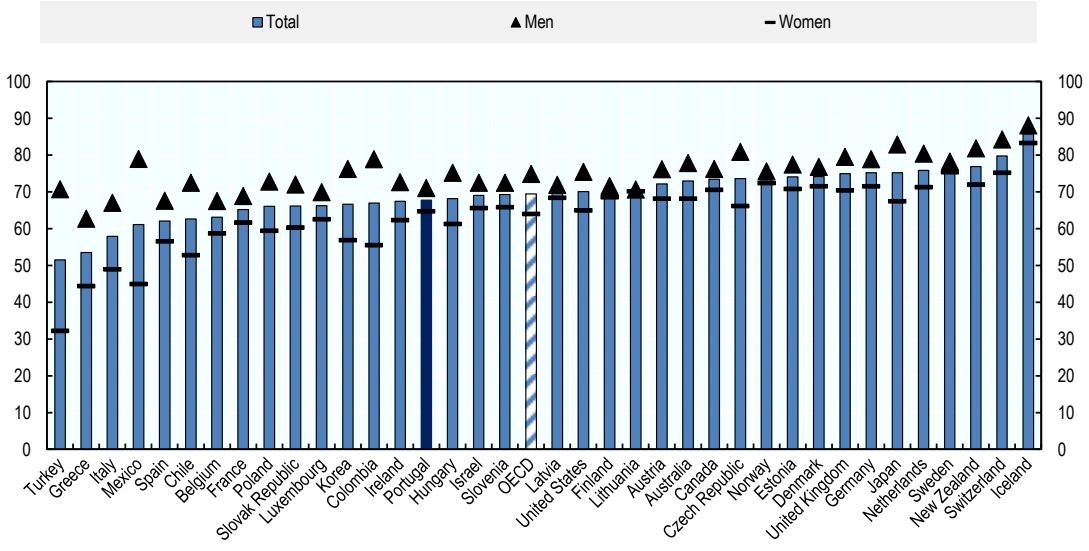
Labour market disruptions were severe throughout the crisis. Job exits rates surged, finding new employment became difficult and unemployment rates escalated, reaching 15% in 2013 among 25-64 year-olds and 35% among 20-24 year-olds. Since the peak of the economic crisis five years ago, the Portuguese labour market has made remarkable progress.

Today, unemployment is in line with its pre-crisis levels and employment rates are close to the OECD average (Figure 1.3). In 2017, 67.8% of 15-64 year-olds worked, against 69.4% in the OECD. While employment rates are higher than for example in France (65.2%), Spain (62.1%) and Italy (58%), they are still well below top-performing countries, such as New Zealand (76.9%), Switzerland (79.8%) and Iceland (85.8%), leaving scope for further improvements.

Men have a higher chance of working than women, but the employment gender gap is narrow compared to other countries, with a 6.3 percentage-point gap between men and women against 10.8 percentage point on average in the OECD. Employment rates among men are below-average (71.1% against 74.9% in the OECD), while they are above-average among women (64.8% against 64% in the OECD). The recovery in employment in Portugal has been driven by a good performance of female employment. Indeed, employment rates among women are now higher than ten years ago, while male rates are still below their pre-crisis level.

Figure 1.3. Employment rates are below-average

Employment rates, 15-64 year-olds, 2017, %



Source: OECD Labour Force Statistics.

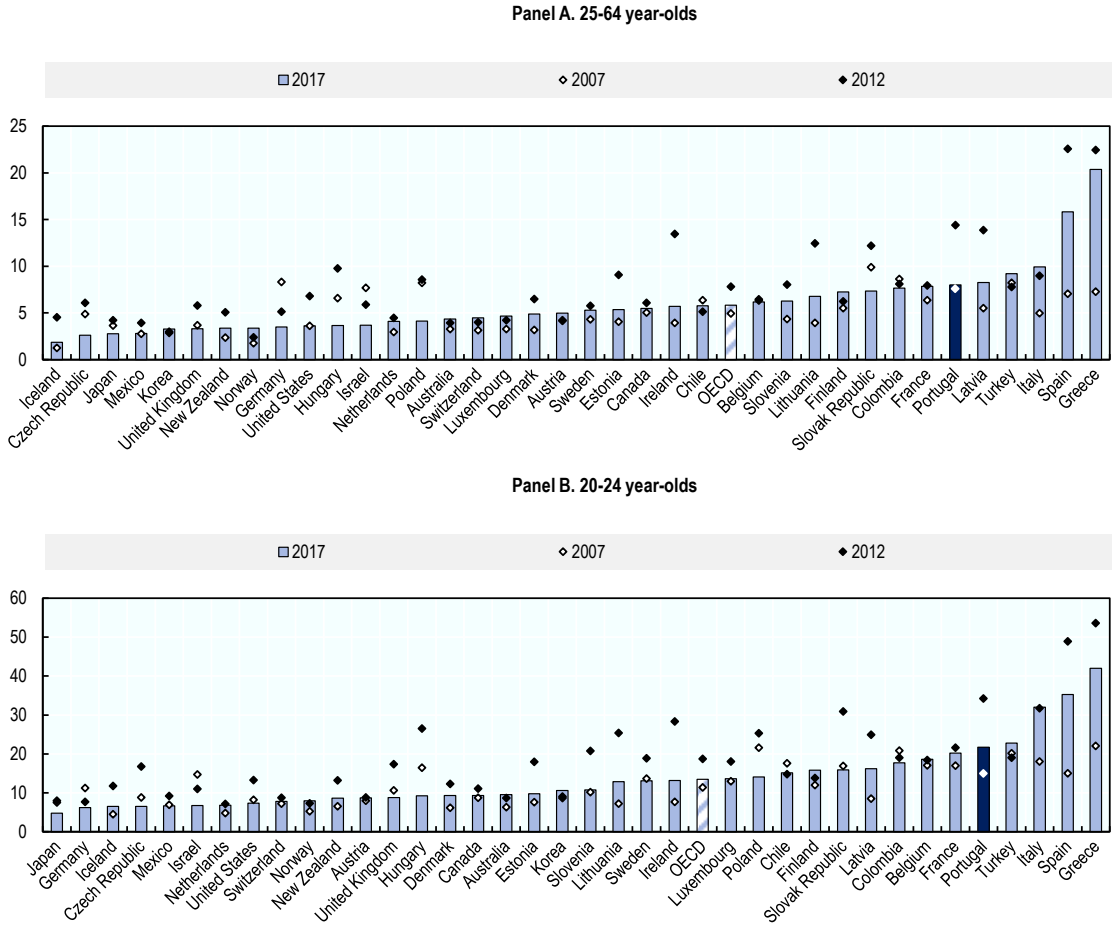
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The repercussions of the Great Recession affected workers of all ages. Among 25-64 year-olds, unemployment soared, reaching a rate of 14.3% in 2012, up from 7.6% in 2007 (Figure 1.4, Panel A). Since the peak of the crisis, it has fallen sharply, standing at 5.8% in the third quarter of 2018.

Young people were hit even harder than prime-aged workers (Panel B). Unemployment among 20-24 year-olds reached close to 35% in 2012, against 17% in 2007, making a smooth labour market entry virtually impossible for a large number of young Portuguese. Employment prospects for young people, too, have improved since the crisis, but unemployment rates among 20-24 year-olds are still high.

Figure 1.4. Unemployment surged during the crisis, especially among young people

Unemployment rate by age and year (in %)



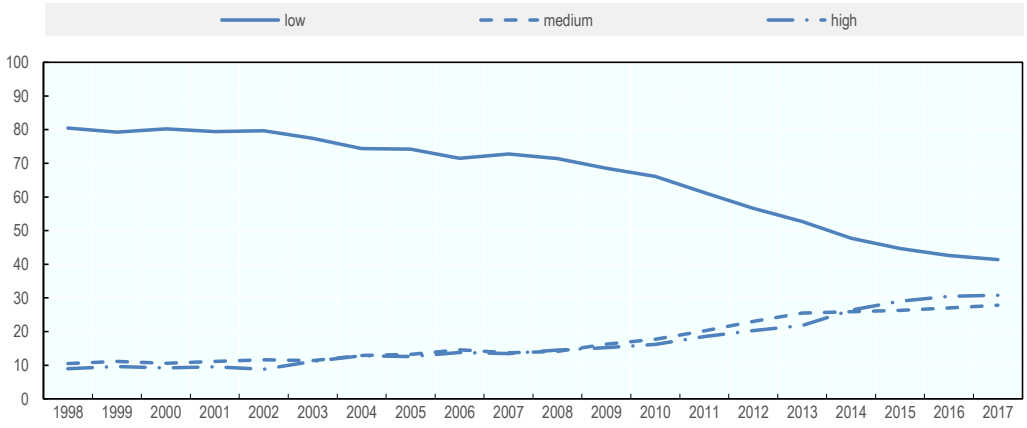
Source: OECD Labour Force Statistics.

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While labour market difficulties experienced during the crisis bear the risk of long-lasting knock-on effects on employment prospects, future employment outcomes may be positively influenced by the strong increase in educational attainment that has taken place over the last two decades (Figure 1.5). The share of people with more than low educational attainment was very low just 20 years ago, but it has increased very markedly since then. In 1998, over 80% of 35-44 year-olds were low-educated, against 10.5% with medium education and 9% with high education. Since then, the share of low-educated 35-44 year-olds has almost halved, standing at just 41% in 2017, whereas 31% were highly educated in 2017 and 28% had medium education. Such an impressive advance in educational attainment, especially in times of quick technological change and automation, can be a central element permitting workers to keep pace with changing labour market trends and to update their skills more easily.

Figure 1.5. Educational attainment is increasing rapidly

Share of 35-44 year-olds, by educational attainment



Source: Eurostat.

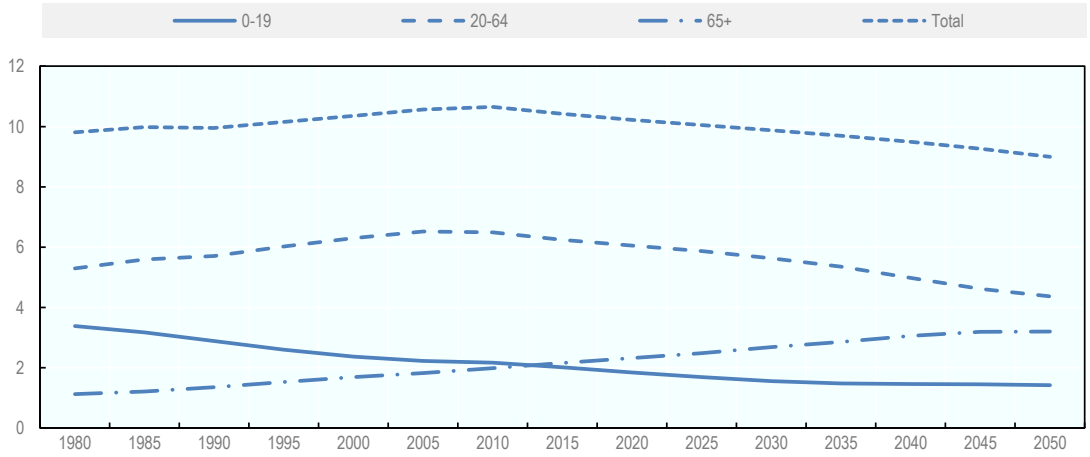
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1.3.3. Demographics

Portugal's population has started to shrink a few years ago. After peaking at 10.7 million inhabitants in 2009, the population decreased to 10.4 million in 2015 and is expected to decline further, to under 10 million by 2030 and under 9 million by 2050 (Figure 1.6). The overall decrease in the population is due to a sharp decrease in the number of young people and working-age adults. While there were 2.2 million under-20 year-olds in Portugal in 2005, they were only 2.0 million in 2015. Their number is expected to fall to 1.6 million in 2030 and even further later on. As for 20-64 year-olds, they were 6.5 million in 2005 and 6.2 million in 2015, with a projected 5.6 million in 2030. Conversely, the upward trend in the number of people 65 and older is expected to continue during the first-half of the century. It stood at 2.2 million in 2015, up from 1.8 million in 2005, and would reach a peak of 3.2 million in 2050. As a consequence of the rapidly falling number of young people and increasing number of older people, Portugal is ageing very quickly. While there were more than three young people under 20 for every person aged 65 or above in 1980, the 65+ has outnumbered the under 20 year-olds since 2015 and there will be more than two people over 65 for every young person under 20 in 2050.

Figure 1.6. Portugal's population is shrinking due to a lack of young people

Total population and population by age-group, historical values and projections, in millions



Source: United Nations, World Population Prospects – 2017 Revision.

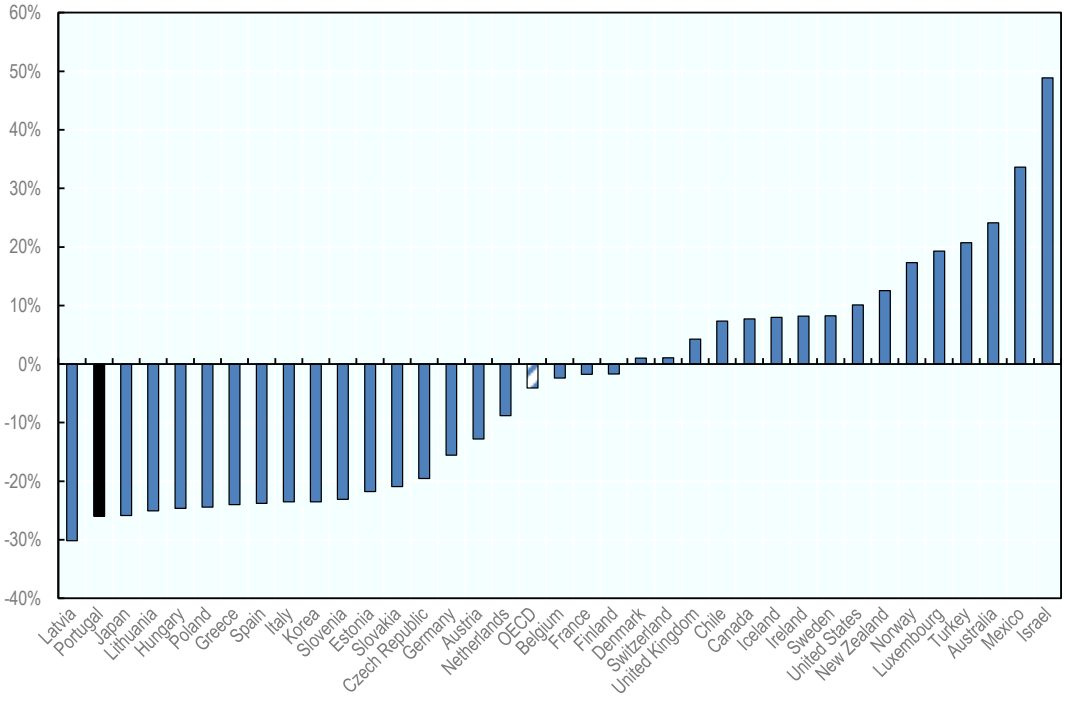
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Among all OECD countries, Portugal is the country with the second largest decline (in percentage) in the size of the working-age population between 2015 and 2045, just after Latvia (Figure 1.7). The number of 20-64 year-olds is projected to fall by 26% in Portugal, against a decrease of 4% on average in the OECD and increases in 16 OECD countries, with a maximum increase in the working-age population of almost 50% in Israel. The falling number of working-age adults in Portugal may have major consequences for the labour market, GDP and pension finances.

Population ageing will accelerate at a fast pace in Portugal. The increasing share of older people in the population has pushed the so-called old-age dependency ratio - the number of people older than 65 years per 100 people of working age (20-64) - from 19.6 in 1975 (around the OECD average) to 34.6 in 2015 (Figure 1.8). By 2050, it is expected to be 73.2, making Portugal the fourth oldest country in the OECD based on this measure after Japan, Spain and Greece according to UN data. Eurostat data provide a similar picture, with only Greece being projected to have a higher old-age dependency ratio than Portugal in 2050 among EU countries. While longer lives are undoubtedly a positive development the financial pressure on Portugal's pension system has been growing.

Figure 1.7. The decrease in the working-age population will be among the strongest in the OECD

Projected change in the population aged 20-64 in OECD countries between 2015 and 2045

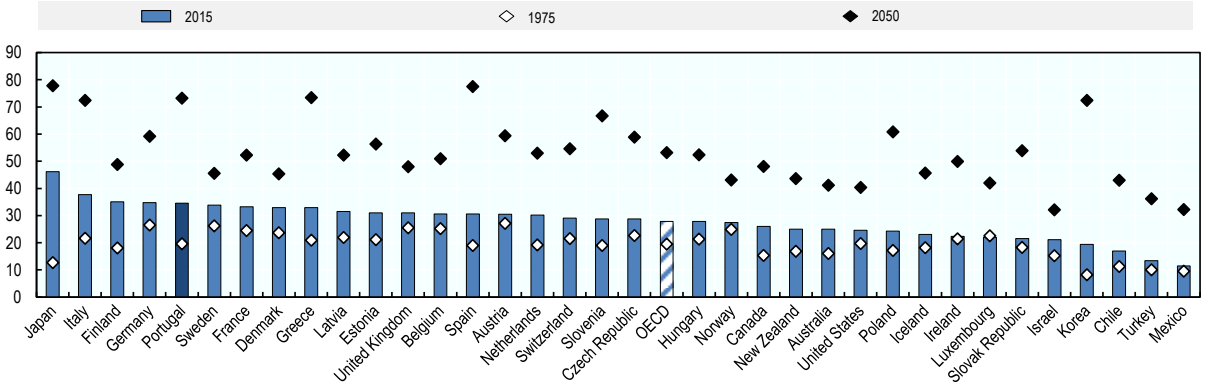


Source: United Nations, World Population Prospects – 2017 Revision.

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Figure 1.8. The old-age dependency ratio will more than double by 2050 in Portugal

Number of people older than 65 years per 100 people of working age (20-64), 1975-2050

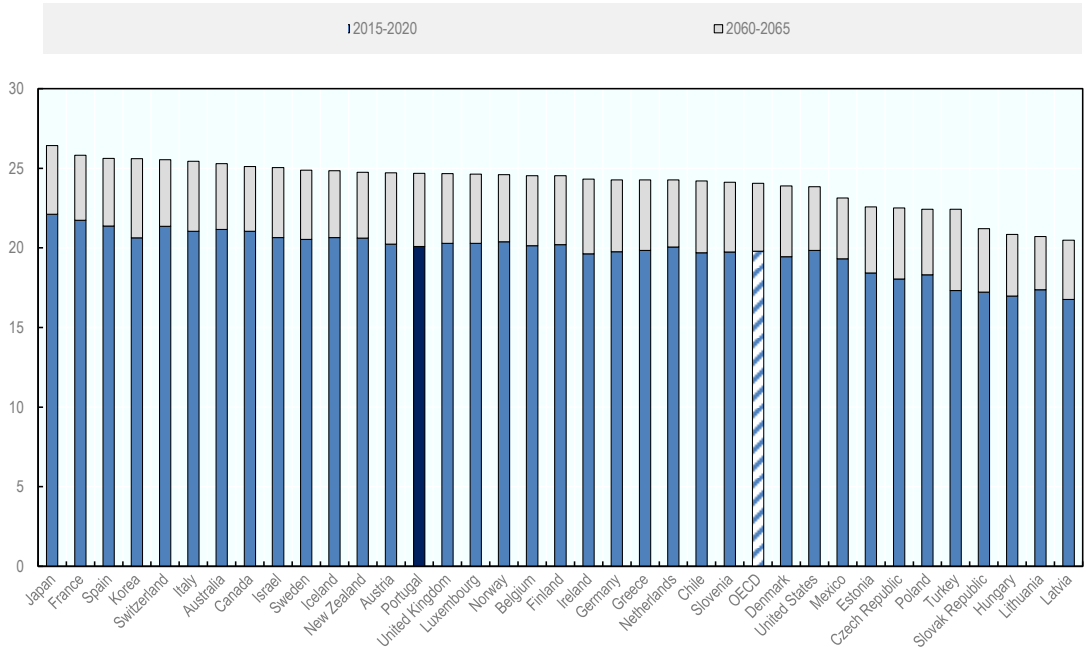


Note: The projected old-age dependency ratios differ based on the sources used. This report is based on UN data for comparison reasons. The largest differences are the following: according to Eurostat the old-age dependency ratio (65+/20-64) would increase by 39 and 19 percentage points between 2015 and 2050 in Spain and Austria, respectively, against 47 and 29 points with UN data. On the other hand, it would increase in Latvia by 33 points based on Eurostat against only 21 points with UN data.
Source: United Nations World Population Prospects – 2017 Revision.

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Figure 1.9. Life expectancy at age 65 will increase

Remaining period life expectancy at age 65



Source: United Nations World Population Prospects – 2017 Revision.

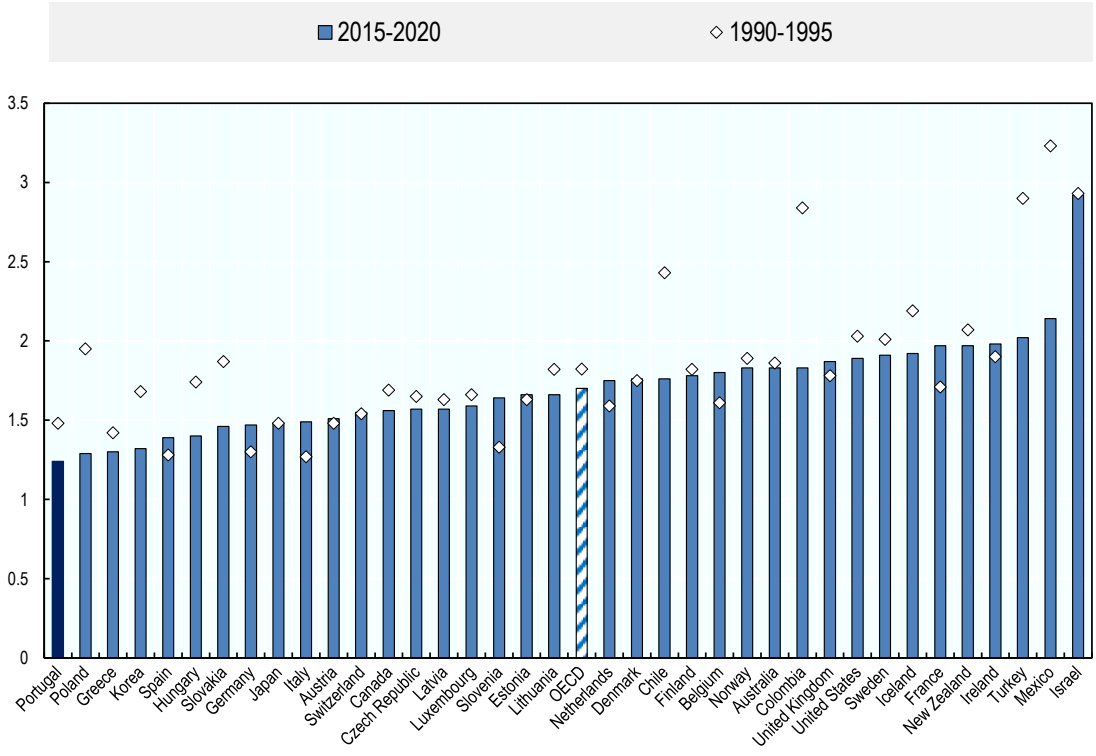
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One of the factors contributing to the increasing number of old people is rising life expectancy. People who reach 65 in Portugal currently have a remaining life expectancy of 20.1 years (Figure 1.9), comparing to 19.8 years on average in the OECD. In 2060, it is projected to be 24.7 years against 24.1 in the OECD. The 4.6-year gain in life expectancy at age 65 in Portugal is projected to be among the highest in the OECD. Only few countries are expected to experience more pronounced improvements, such as Turkey (5.1 years) and Korea (5 years).

Another factor contributing to the falling number of young people is low fertility over past decades. Portugal currently reports the lowest fertility rates among all OECD countries, at only 1.24 children/woman, against 1.70 in the OECD (Figure 1.10), well below what is needed to stabilise the size of the population. While fertility rates were still relatively high in the early 1980s, they plummeted to about 1.5 children/woman in the early 1990s and have kept shrinking further until today.

Figure 1.10. Portugal has the lowest fertility rates in the OECD

Total fertility rates, children/woman



Source: United Nations, World Population Prospects – 2017 Revision.

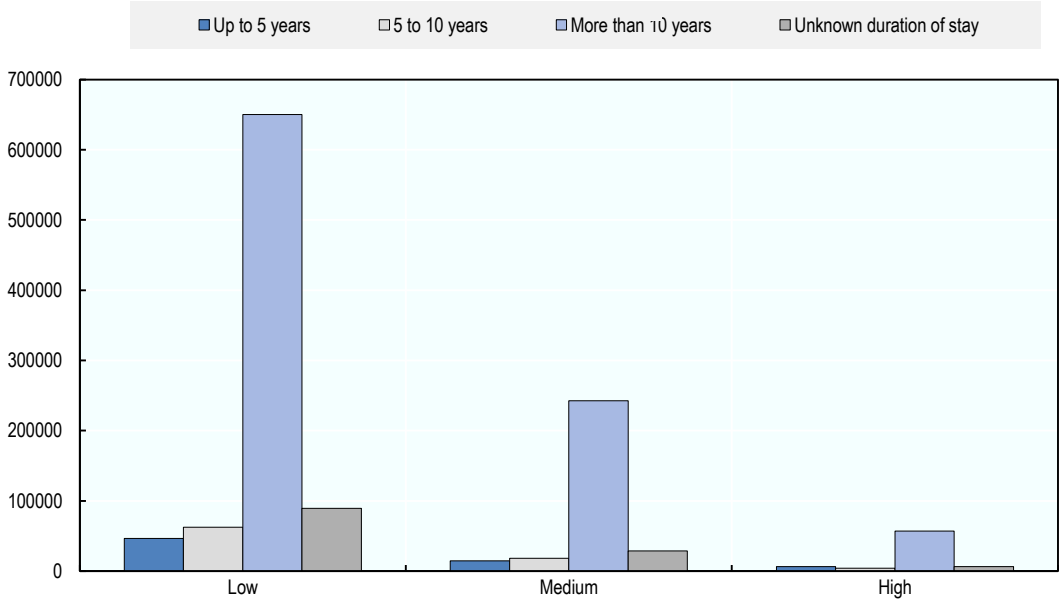
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The number of Portuguese living in other OECD countries is very high. It is estimated that around 20% of the Portuguese live outside of Portugal (Eurofound, 2016[5]). Portuguese emigrants tend to stay abroad for a long time once they have left (Figure 1.11). Among Portuguese emigrants of all educational groups, most stay abroad for at least ten years and only very few return rapidly. Moreover, the largest group of Portuguese currently living abroad are low-educated immigrants. About 850 000 Portuguese-born low-educated emigrants live in other OECD countries, against just over 70 000 high-educated.

In the years preceding the European debt crisis, the number of people moving to Portugal exceeded the number of people leaving the country (Figure 1.12). In 2005, for instance, there were almost 50 000 entries to Portugal against just above 10 000 exits. When the financial crisis hit the country, entries to Portugal slowed down while exits jumped up significantly. Whereas fewer than 17 000 people left the country in 2009, they were close to 54 000 in 2013 when the crisis was at its peak. Many of the emigrants who left Portugal were young people, and worries arose that these exits might exacerbate ageing pressure.

Figure 1.11. Portuguese emigrants often remain abroad for a long time

Portuguese emigrants to other OECD countries by duration of stay and educational level, absolute numbers

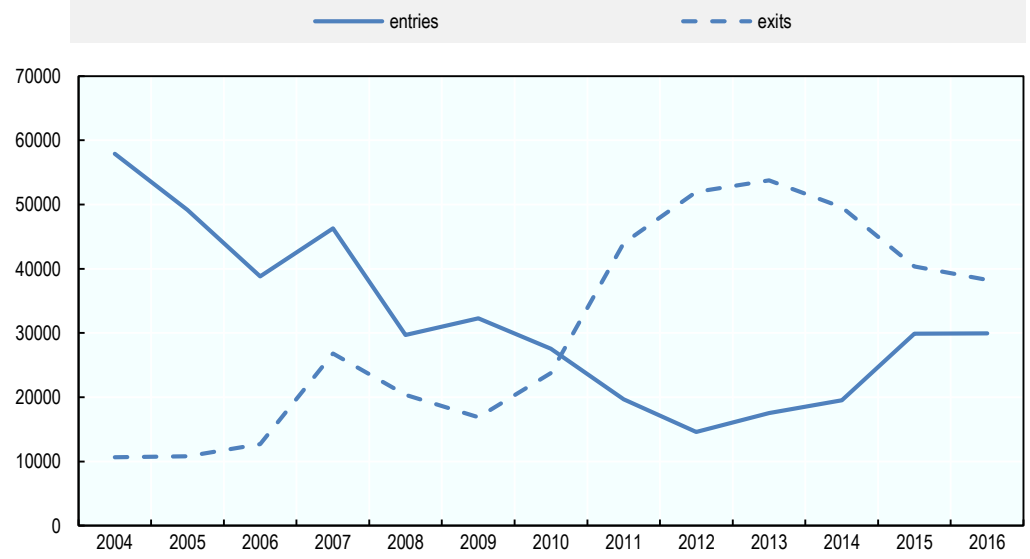


Source: OECD Migration Database.

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Figure 1.12. Net immigration has shifted to net emigration

Number of people moving to Portugal and leaving Portugal, by year



Source: Observatório das migracoes imigracao en números. Indicadores de Integracao de imigrantes relatorio estatistico anual.

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Note

[1] The Portuguese Government estimates public debt levels of 121.2% of GDP in 2018 and of 118.5% in 2019. Source: State Budget 2019.

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Chapter 2. First layer of social protection in old age

This chapter focuses on first-tier pensions in Portugal. These schemes help protect those with short contribution periods or low pension entitlements more generally against old-age poverty. In Portugal the main components of first-tier pensions consist of: the minimum pension from the earnings-related scheme, the means-tested old-age social pension and a supplement (Solidarity Supplement for the Elderly, CSI) for those whose total income is below a certain threshold taking into account various resources including descendants' income. The chapter also investigates the interaction of the different layers of first-tier pensions and describes old-age poverty, old-age inequality and pension coverage gaps in Portugal. It concludes with policy recommendations to improve first-tier pensions.

2.1. Introduction

The pay-as-you-go defined benefit pension scheme in Portugal links benefits with past earnings. Eligibility for these pension benefits requires to have reached 15 years of contributions. Moreover, even when the minimum years of contributions are reached it can still be that earnings-related benefits are at a low level and need to be topped up.

First-tier pension schemes – the first layer of social protection in old age – help protect those with short contribution periods or low pension entitlements more generally against old-age poverty. In Portugal the main components of first-tier pensions consist of: the minimum pension from the earnings-related scheme – between 21% and 30% of the average wage; the means-tested old-age social pension at 11% of the average wage; and a supplement (Solidarity Supplement for the Elderly, CSI) up to 29% of the average wage for those whose total income is below a certain threshold taking into account various resources including descendants' income. In addition to these three big components there are several additional supplements, including one which level varies whether the individual is younger or older than 70.

All first-tier pensions in Portugal are tax-financed. This is not unusual since first-tier pensions are not earnings-related and are therefore not closely linked to contributions. More precisely, the full old-age social pension is financed by taxes. Minimum-pension payments are the difference between the minimum pension level someone is eligible for based on her or his contribution period and the earnings-related entitlements. It is this top-up which is tax financed. This works similarly for the CSI.

When looking at the aggregate numbers, both in terms of number of recipients and of benefit levels, minimum pensions are by far the largest component. The minimum pension top-ups represented 0.5% of GDP in 2016[1], while total spending on minimum pensions including the earnings-related components was 2.6% of GDP. This compares to spending levels for the social pension and the CSI of 0.04% and 0.11% of GDP, respectively.

The nexus of first-tier pensions provides almost every individual older than the retirement age having no earnings-related pension with some income. However, the variety of schemes and eligibility conditions and the often complex interaction between them results in a difficult to navigate social protection system with large differences in outcomes between seemingly similar people.

This chapter focuses on schemes protecting the most vulnerable among the elderly in Portugal. The next section deals with old-age poverty and inequality followed by a description of coverage gaps and periods of low income. Then the design of first-tier pensions in Portugal is described focusing first on minimum pensions and next on safety-net features. This is followed by an investigation into the interaction of the different layers of first-tier pensions. The last section concludes with some policy options.

2.2. Old-age poverty and inequality

Relative old-age poverty and old-age inequality have fallen in Portugal over the past decade, but Portugal remains one of the most unequal European countries, both for the population as a whole and for the elderly in particular. The economic crisis which started in 2008 halted the steady decrease in both income inequality and old-age poverty, and increased working-age poverty. Therefore, despite the undeniable progress made at the beginning of this century, a significant share of the older population is still at risk of

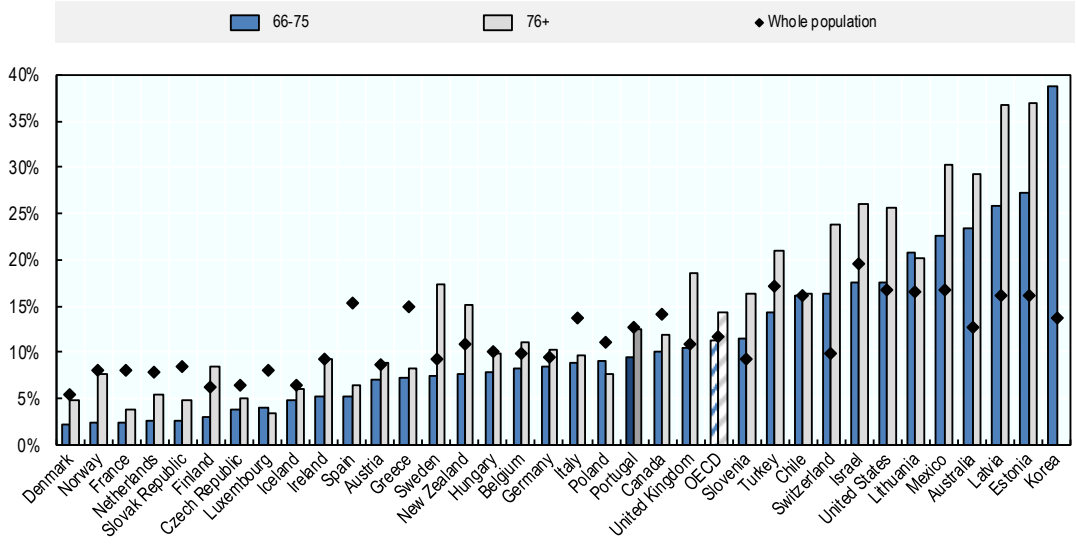
poverty and future elderly generations might face higher inequality (OECD, 2017[1]). European Commission (2018[2]) notes that, despite an improvement of retirement income adequacy between 2008 and 2016, the pension system does not ensure an adequate protection for all the elderly against poverty and social exclusion.

2.2.1. Relative old-age poverty in Portugal is slightly lower than the OECD average

The old-age poverty rate – defined as the share of individuals older than 65 having less than half the median disposable income for the total population – was more than halved, from 17.1% in 2004 to 8.1% in 2011, before rising again to 10.8% in 2015.[2] It is slightly lower than in the OECD on average. It is also lower than the poverty rate for the entire Portuguese population. This relative poverty line amounted in Portugal to EUR 4 960 per year or EUR 413 per month in 2015. Breaking it down by age groups, the poverty rate among 66-75 year-olds was 9.4% compared to 11.1% for the OECD in 2015, while, for those older than 75, it is higher at 12.5% compared to the OECD average of 14.4% (Figure 2.1).

Figure 2.1. Portuguese relative old-age poverty rates are below OECD average

Poverty rates % of the population subgroup, 2015



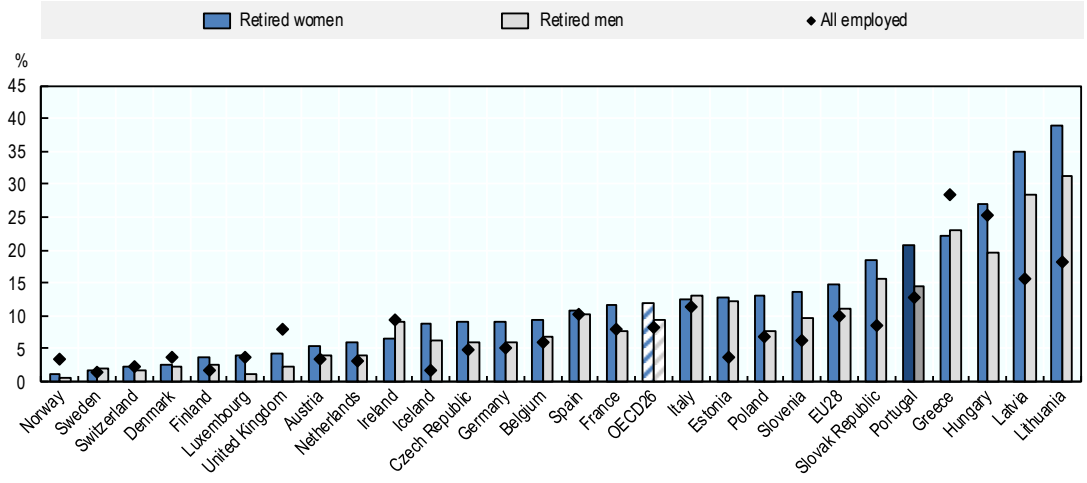
Note: 2015 or latest data available. Relative old-age poverty defined as households receiving less than half the median disposable income.
Source: OECD Income Distribution Database.

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Severe material and social deprivation at older ages, a notion that is more closely related to absolute poverty, paint a less favourable situation for Portugal than reflected by relative poverty. More than one in five retired women is identified as being severely materially and socially deprived (Figure 2.2).[3] Among European OECD countries, only Greece, Hungary, Latvia and Lithuania have higher rates. As is standard, for both retired men and the employed the rates are lower, but they are still well above the OECD26 average (for those countries with comparable data) and the EU28 average.

Figure 2.2. Material and social deprivation is common among retired women in Portugal

Rates of material and social deprivation, %, 2016



Note: Severe material and social deprivation rate is defined as the proportion of people living in households that cannot afford at least five of thirteen essential items.
Source: Eurostat.

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2.2.2. Old-age inequality is high in Portugal

Working-age inequality often transmits to old age. Adults with stable jobs, higher incomes and better access to health care are more likely to retire with adequate income (OECD, 2017[1]). People with unstable careers, low incomes and low-quality jobs, by contrast, tend to be in worse health, prone to unemployment and at greater risk of poverty throughout their lives and into old age. Temporary contracts are widespread in Portugal and the share of temporary contracts remained much higher than in the OECD on average (Chapter 5) despite the recovery from the economic crisis. Moreover, pension rules were tightened to improve financial sustainability and deal with public finance pressure (Chapter 3). Therefore, it is likely that old-age inequality will become a more pressing issue in the future.

Despite coming down from higher levels, Portugal still has the highest level of old-age income inequality among OECD EU countries, as measured by the Gini coefficient - which varies between 0 if everybody had the same income and 1 if all of the income went to only one person. The Gini coefficient among those over 65 was at 0.34 in 2015 (down from 0.37 in 2004) against about 0.30 in the OECD on average, ranging from 0.18 in the Czech Republic to 0.44 in Chile (Figure 2.3).[4]

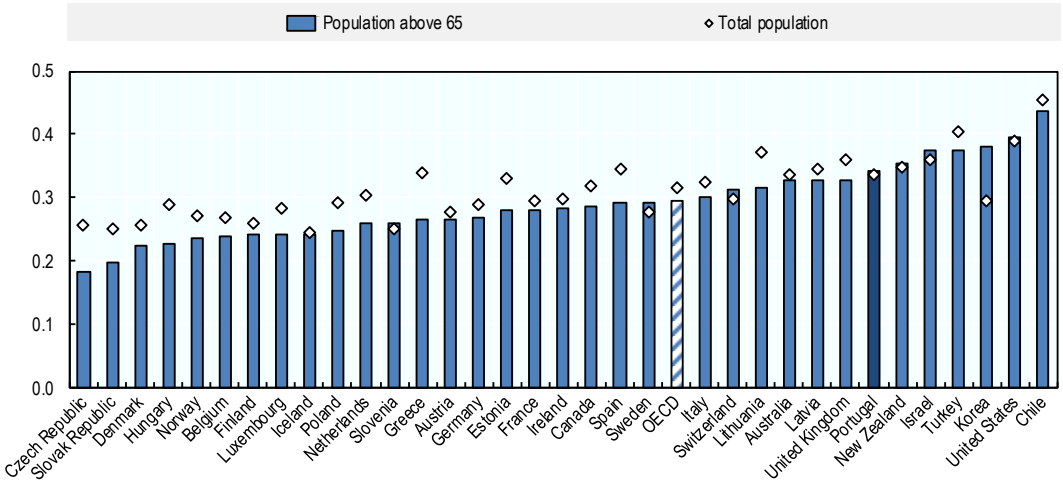
In Portugal, the Gini coefficient is similar for older people as for the entire population. Only a few countries including Iceland, Slovenia, Sweden and Switzerland share such a pattern (Figure 2.3). This is relatively unusual because pension systems tend to level off inequality as people disengage from the labour market. Moreover, in Portugal, the high coverage of the minimum pension (Section 2.4) helps limit old-age inequality.

Earnings and income inequality in Portugal rose throughout the 1980s and 1990s before coming down slightly in the early 2000s (Cardoso, 1998[3]; Arnold and Rodrigues, 2015[4]). As OECD (2017[1]) shows, Portugal is one of the countries that largely transmits

changes in working-age inequality into old-age inequality. Even when abstracting from career interruptions, more than 90% of increases in wage inequality are passed through into pension inequality against 67% for the OECD on average. This is because progressivity in the Portuguese pension system is very limited for full-career workers with replacement rates being similar for high and low earners, as in Italy, the Netherlands and Poland among others.

Figure 2.3. Old-age income inequality is high in Portugal

Gini coefficient (after taxes and transfers), 2015



Source: OECD Income distribution database.

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2.3. Coverage gaps and low earnings

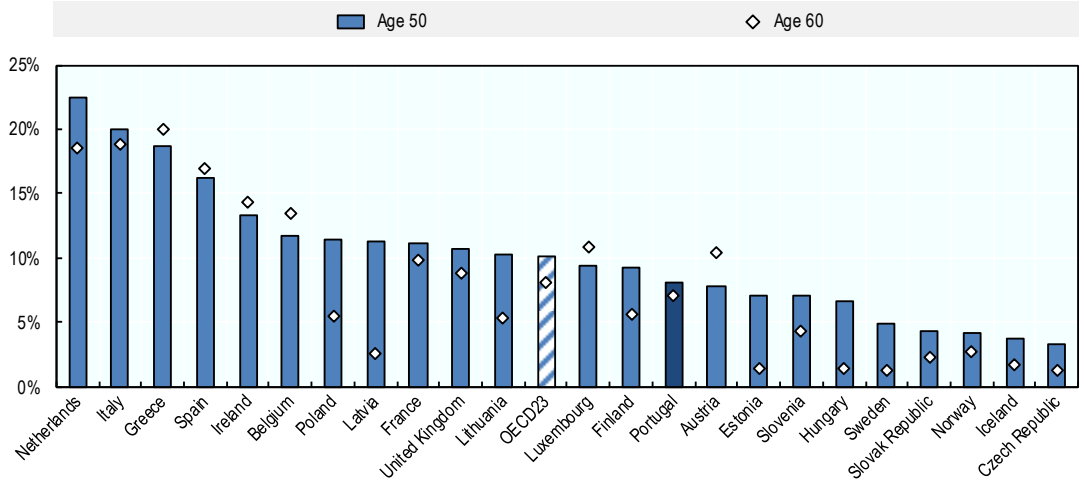
Two of the main reasons for having to rely on first-tier pensions are coverage gaps from the earnings-related schemes and low earnings throughout the career. On both fronts Portugal scores around the OECD average and significantly better than other Southern European countries.

2.3.1. Coverage gaps

One reason why people eventually might have to rely on first-tier pensions is limited career length. To be eligible for a contributory pension in Portugal someone needs to contribute for at least 15 years. Most people in Portugal do reach at least 15 years of contributions. By age 60, only 7% of the population had not reached that number of years in 2015, slightly below the 8% share for those aged 50 (Figure 2.4). These shares are close to the OECD average but much lower than in other Southern European countries and the Netherlands.

Figure 2.4. The incidence of very short careers is not particularly high in Portugal

Share of the population with less than 15 years of work experience, 2015



Note: Share of people with specific work experience based on survey data. This work experience might deviate from the social security contribution record as working in the shadow economy or abroad does not induce any domestic social security contributions while some non-employment spells (childcare, unemployment, disability) do. Due to data availability, Germany and Denmark are excluded from the OECD (unweighted) average.
Source: EU-SILC 2015.

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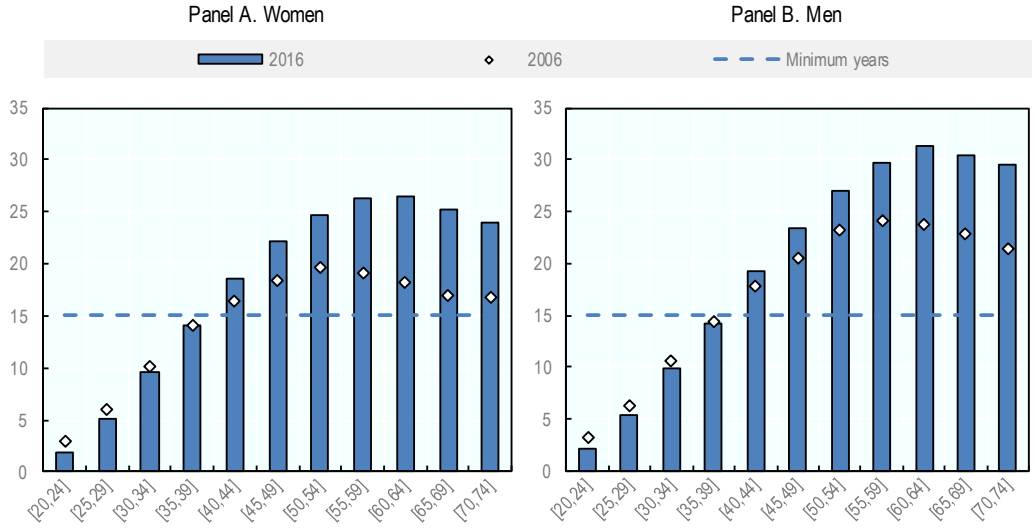
Overall, the share of people reaching 15 years of contribution at different ages has been stable across cohorts (Figure 5.3 in Chapter 5). Moreover, among those who contribute, the age at which someone can be expected to have reached 15 years of contributions has been relatively stable over the past decade, close to 40 years. Indeed, on average both men and women between the ages 35 and 39 have reached 14 years of contributions in 2006 and in 2016 (Figure 2.5).

For the age groups 40 and over the average years of contributions has increased significantly, especially for women. This increase was realised despite the negative effect of the crisis on contribution records. However, the data for older age groups should be treated with caution since contribution records are missing – i.e. just not available even if there were actual contributions - for a significant part of the older population. At retirement those with missing records have to prove their contribution histories by other means, for instance by showing payslips. The reported increase in contribution years across cohorts is therefore likely to be overestimated.

More precisely, with the above caveat, around the statutory retirement age (65 in 2006 and 66 and two months in 2016) the average years of contributions sharply increased by about 8.2 years for women and 7.7 years for men between 2006 and 2016. Especially for women this makes a big difference since in 2006 they barely exceeded the minimum threshold of 15 years on average. By contrast, younger age groups have slightly lower average years of contributions in 2016 compared to 2006. This is likely caused by a combination of later entry because of longer education and falling employment rates among the youth, who were hard hit by the financial crisis.

Figure 2.5. The average years of contributions increased for most age groups, 2006-16

Average years of contributions by 5-year age group and gender for those with contribution records



Note: Records for older cohorts are incomplete. Average years of contributions are therefore likely underestimated.
Source: Portuguese social security data.

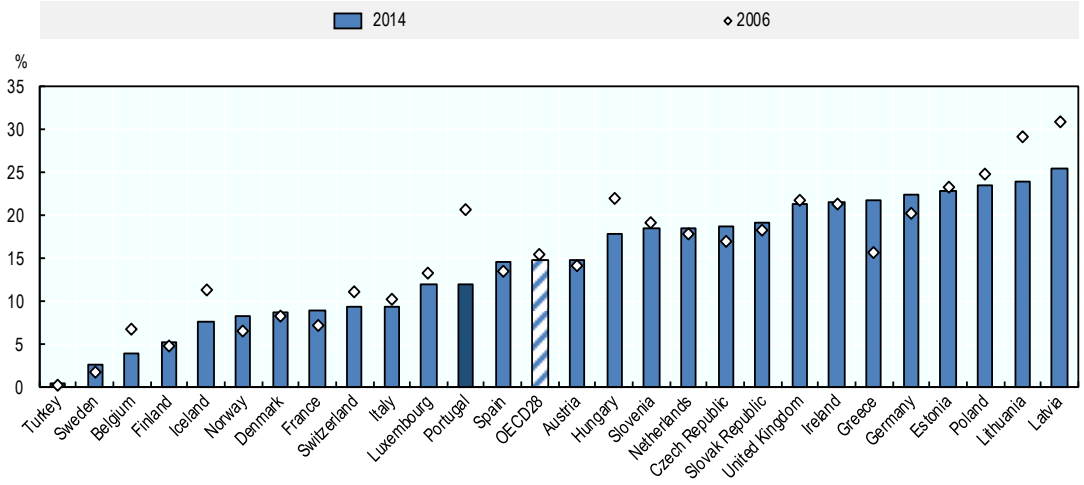
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2.3.2. Low earnings

The share of low-wage earners came down sharply in Portugal. Employees earning less than two-thirds of the median wage represented 12% of total employees in 2014 against 21% in 2006 (Figure 2.6). This means that the share of low-wage earners in Portugal is now below the OECD28 average of 15%. This decrease may be partially explained by the substantial rise in the minimum wage from 47% to 58% of the median wage while the OECD average ratio is 51% (Figure 2.7).

Figure 2.6. Share of employees with low earnings has decreased significantly since 2006

Share of employees earning less than two-thirds of the median wage, %

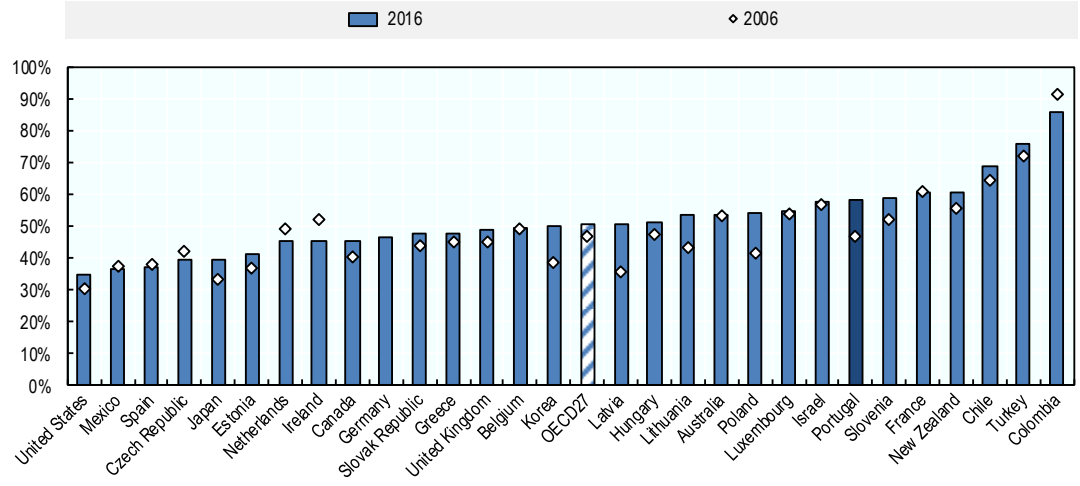


Note: Only companies with 10 employees or more are included.
Source: Eurostat, Structure of earnings survey.

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Figure 2.7. The minimum wage is relatively high in Portugal

Minimum wage as % of the median wage, 2016



Source: OECD Employment and Labour Market Statistics.

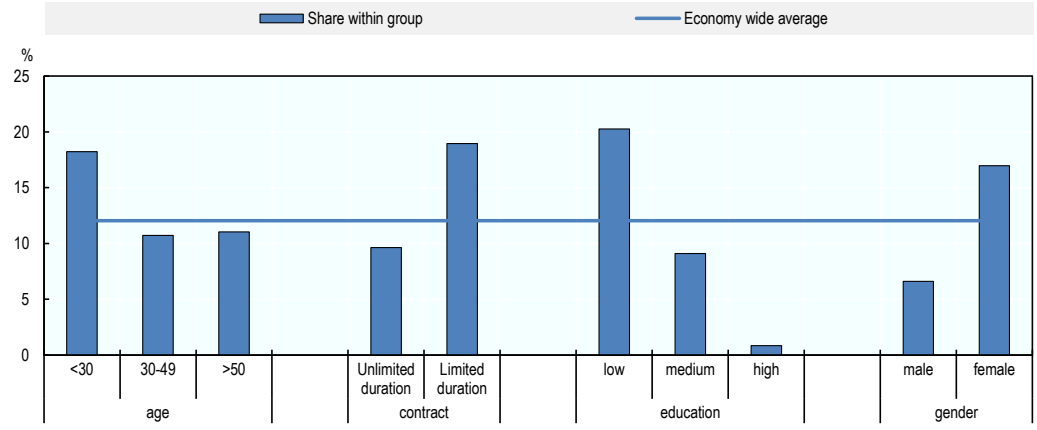
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Even for someone who contributed for a large part of the working life, low lifetime earnings might still mean reliance on first-tier pensions in old age, specifically the minimum pension. Moreover, there is a wide disparity in the share of low earners by age, type of contract, education and gender. For example, employees under 30 are more likely to be low earners (Figure 2.8). This can simply reflect a life-cycle effect. However,

current younger workers have been severely hit by the global crisis in Portugal, and it is therefore crucial to avoid hysteresis effects which raise the risks of getting stuck in low paying jobs and of relying on minimum pensions in old age. Also unsurprisingly, low-educated individuals and employees on contracts of limited duration are more likely to be low earners. Consequently limited duration contracts are likely to have a detrimental effect on pension entitlements. Finally, women are much more likely to be low earners, with a huge gender pay gap reflecting both differences in hourly wages and in working time. All these groups are therefore more likely to be vulnerable in old age and have to rely on minimum pensions.

Figure 2.8. Share of low earners by characteristics

Low earnings defined as earning less than two-thirds of the median wage, 2014



Source: Eurostat, Structure of earnings survey.

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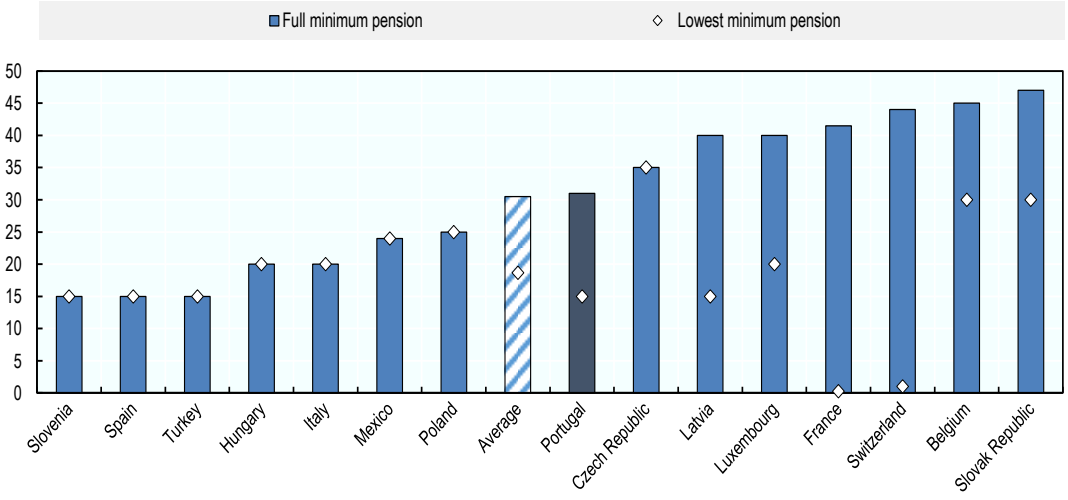
2.4. Minimum pension

The minimum pension covers those who are eligible for an earnings-related pension but whose entitlements fall below a certain threshold. In Portugal, the minimum pension benefit tops up the earnings-related pension to given thresholds which depend on the length of the contribution period.

Those who have contributed for at least 15 years to the main earnings-related pension scheme (*regime geral de Segurança Social*) are eligible to a minimum pension. The minimum contribution period for an old-age pension in general is also 15 years, but used to be 10 years before 1994. Those who reached this minimum requirement before the law changed in 1994 are still eligible for a minimum pension.[5]

The minimum pension level increases with the contribution period with the full minimum pension obtained with 31 years of contributions or more. The required number of years to get a full minimum pension is average compared to other OECD countries (Figure 2.9). In Portugal, the criteria used to validate contributions is accommodative as 120 days of contributions count as one contributory year.[6] Multiple years with less than 120 days of contributions can be aggregated to form a full contributory year.

Figure 2.9. Minimum years of contributions to get a minimum pension, 2016



Source: OECD Pensions at a Glance (2017).

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Table 2.1 shows how the length of the career affects the minimum pension amount. Someone with a career length of 31 years or longer gets a 38% higher minimum pension than someone with a career length of 15 years. Periods of non-employment covered under the social security systems – such as maternity, paternity, adoption, unemployment, sickness and family care – are considered contributory periods.[7]

Table 2.1. Minimum pension amounts, 2018

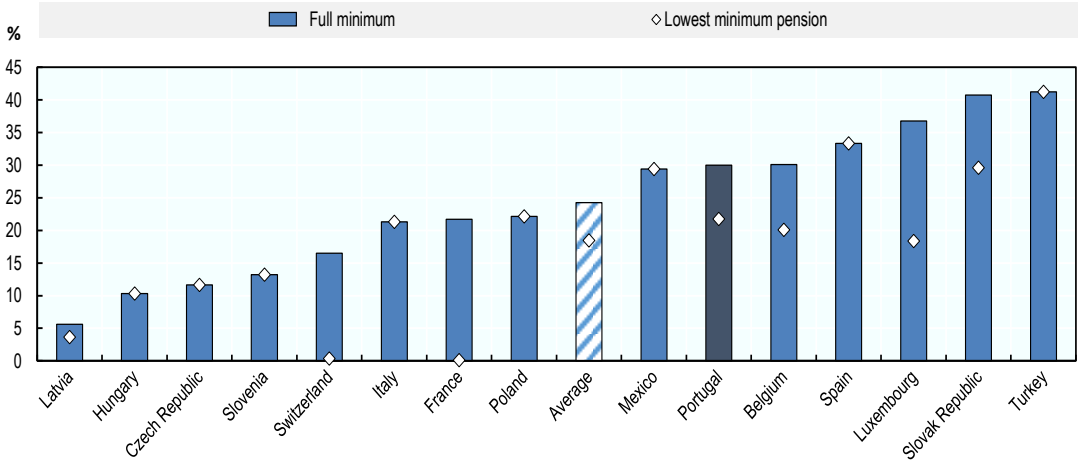
Contribution period	Annual minimum pension amount
10 – 15 years	EUR 3 767.12 (21% of average wage)
15 – 20 years	EUR 3 951.64 (22% of average wage)
21 – 30 years	EUR 4 360.58 (24% of average wage)
31 and more years	EUR 5 450.76 (30% of average wage)

Note: For those who fulfilled the previous minimum years of contributions requirement before 1994 a minimum pension can be obtained with between 10–15 years of contributions (EUR 3 767.12, or 21% of the average wage). The average wage in 2018 is based on preliminary data. The annual amounts take into account 14 payments, 12 for each month and two extra in June and December.

The level of the full minimum pension is significantly higher as a share of the average wage than in most OECD countries, 30% versus 24% on average for countries having a minimum pension scheme (Figure 2.10), which is one-quarter higher. Minimum pensions range from about 6% of the average wage in Latvia to 41% in the Slovak Republic and Turkey. Belgium and Mexico have a similar full minimum pension level as Portugal, relative to the average wage, but with a longer and shorter required contribution period, respectively.

Figure 2.10. Level of minimum pension

Minimum pension as % of average wage, 2016



Source: OECD Pensions at a Glance (2017).

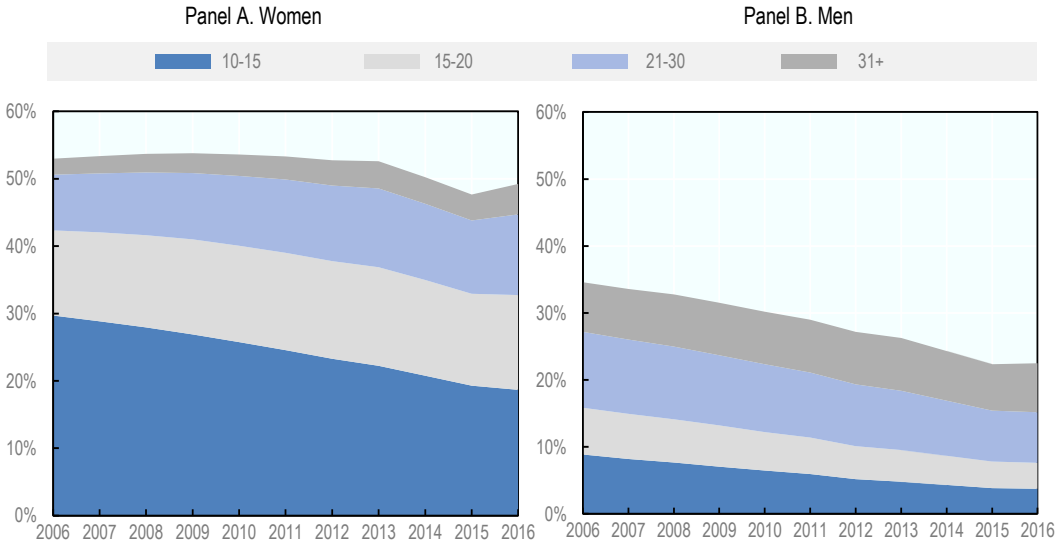
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The number of beneficiaries of the minimum pension is high in Portugal. In 2016, about 823 000 people aged 65+ received a minimum pension, which represents 38% of the 65+ population: about one-quarter of men and half of women aged 65 and over received a minimum pension (Figure 2.11). Among the four levels of the minimum pension, the larger share of women (18.7% of those older than 65) received the lowest minimum pension, meaning they had less than 15 years of contributions. However, the number of people receiving the lowest level is rapidly declining since fewer people are eligible for this minimum pension level since 1994.[8] The three higher levels have all slightly gained in importance for women since 2006. The share of men older than 65 receiving the minimum pension has steadily declined from about 35% in 2006 to about 25% ten years later. The majority of men now receiving the minimum pension have validated more than 20 years of contribution.

In terms of the design of the minimum pension scheme, OECD countries can be roughly divided into four categories. The most common category - the Czech Republic, Hungary, Italy, Mexico, Poland, Slovenia, Spain and Turkey - only has only one minimum pension level. The minimum years of contributions that is needed is between 15 and 35 years of contributions depending on the country. Second, France and Switzerland have linearly increasing minimum pensions from the first quarter or year of contributions, respectively. Each additional quarter or year earns the same proportion of the full minimum pension. Third, other countries, like Belgium, Luxembourg and the Slovak Republic, have a combination of both: a minimum number of years of contributions needs to be reached to be eligible after which the benefit increases linearly (for the Slovak Republic at two different rates depending on the career length). Finally, Portugal and Latvia are the only two OECD countries that have discrete steps – both Portugal and Latvia have four levels. In Portugal this will be reduced to three once the last person covered under previous eligibility criteria from before 1994 passes away (i.e. the 10-15 year step will be eliminated).

Figure 2.11. A large share of the older population receives minimum pensions

Share of 65+ population receiving a minimum pension, by pension level and gender



Source: Own calculations based on data from the Ministry of Labour, Solidarity and Social Security, Portugal.

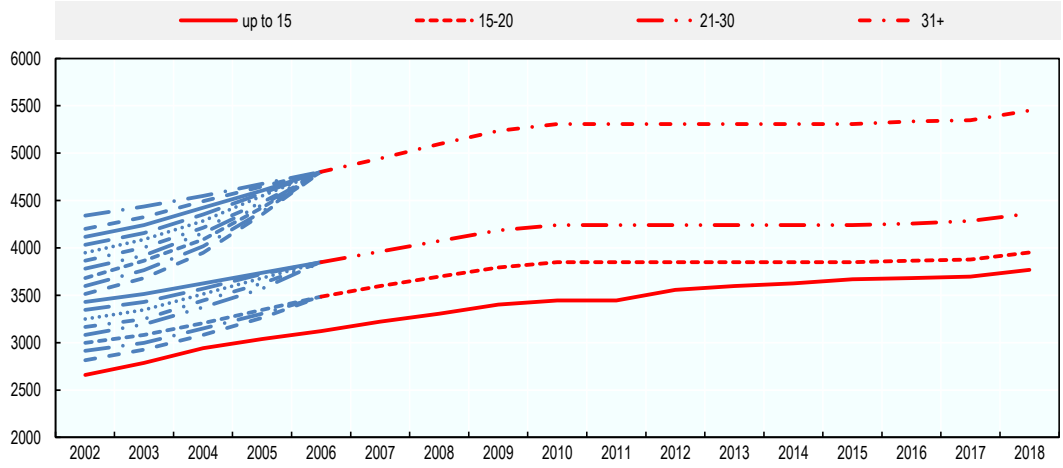
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Discrete steps create discontinuities whereby a small difference in the contributory period can generate a big change in the benefit level. Thus, in Portugal, the minimum pension does not reward each additional year of contribution, therefore distorting labour supply incentives for low earners. Only those with contributory periods just below the thresholds of 15, 21 and 31 years benefit from working longer in terms of the minimum pension.

This was not always the case. While after 1974 a single minimum pension existed at 50% of the minimum wage, in 1997 18 different levels were introduced, and one additional lower level was added in 2002 for those with fewer than 15 years of contributions (Figure 2.12). Each year (between 30 and 40 years) or every two years (between 15 and 30 years) of additional contributions increased the minimum pension. These 19 different levels were reduced to four in 2016, and will be further reduced to three over time with the elimination of the lowest level.

Figure 2.12. The number of minimum pension levels was reduced over the years

Level of minimum pension, EUR per year



Note: Before 2006, 19 different minimum pension levels can be distinguished by contribution years: up to 15, 15-16, 17-18, 19-20, 21-22, 23-24, 25-26, 27-28, 29-30, 31, 32, 33, 34, 35, 36, 37, 38, 39 and 40 years of contributions.
Source: Ministry of Labour, Solidarity and Social Security, Portugal.

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2.4.1. Indexation of minimum pensions

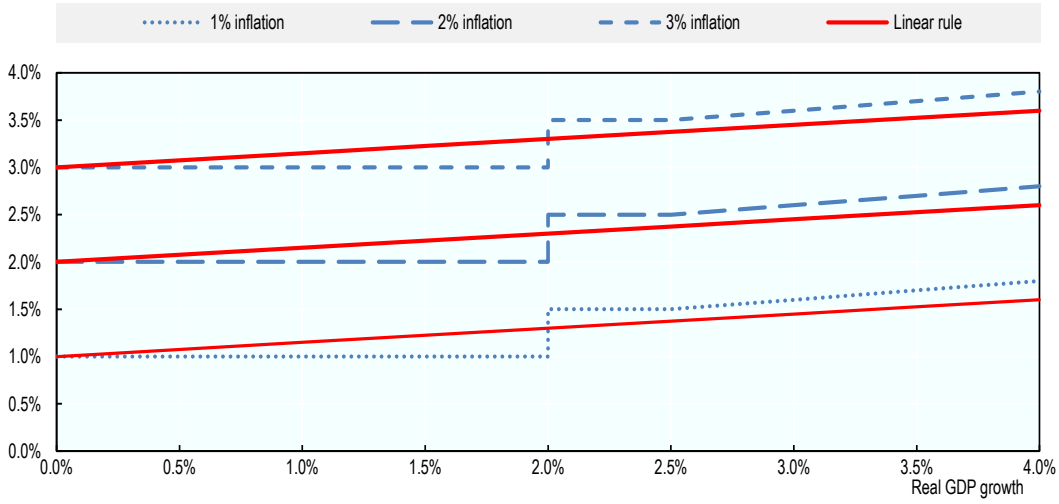
Before 2007, minimum pensions were indexed in a discretionary manner (as were all other pensions in payment), taking into account real GDP growth and price inflation but leaving the ultimate decision up to policy makers. However, since 2007 detailed rules are in place for the indexation of most pension benefits. Exceptionally, the values for most pensions were frozen during the crisis years as part of the structural adjustment programme of the Troika, with the exception of some of the lowest pensions to avoid significant real cuts for the poorest pensioners.

Central to the values of the various benefits is the so-called Social Support Index (*Indexante dos Apoios Sociais* or IAS). The IAS was established in 2007 and serves as a point of reference for determining, calculating and updating social security benefits. Its monthly value was EUR 429 in 2018. The different levels of the minimum pension, which in principle move in line with the IAS, for 15-20 years, 21-30 years and 31 and more years are currently equal to 66%, 72% and 90% of the IAS, respectively.

The indexation of the IAS depends in a complex way on real GDP growth and inflation (Figure 2.13). If real GDP growth is less than 2%, the IAS (and therefore the minimum pension) is indexed with inflation. If real GDP growth is between 2% and 2.5% the IAS is indexed with inflation plus 0.5 percentage point, if real GDP growth exceeds 2.5% the IAS is updated with inflation plus 20% of real GDP growth (Table 3.2, Chapter 3).[9] Here again, this way of indexing benefits creates an undesirable discontinuity: a jump when real GDP growth is larger than the artificial 2% mark on top of the change in the slope once the 2.5% mark is exceeded. Overall, an indexation rule equal to inflation plus 15% of real GDP growth will be close to the current indexation while avoiding this weakness: this corresponds to the linear rule illustrated in Figure 2.14. It would result in slightly

more generous indexation for real GDP growth rates of less than 2% offset by slightly less generous indexation for higher growth.

Figure 2.13. Indexation of minimum pensions



Note: The current rule is depicted by the lines with the step increase at 2% real GDP growth (dashed lines). The proposed linear rule (the solid line) depicts an indexation rule of inflation plus 15% of real GDP growth.
Source: Ministry of Labour, Solidarity and Social Security, Portugal and own calculations.

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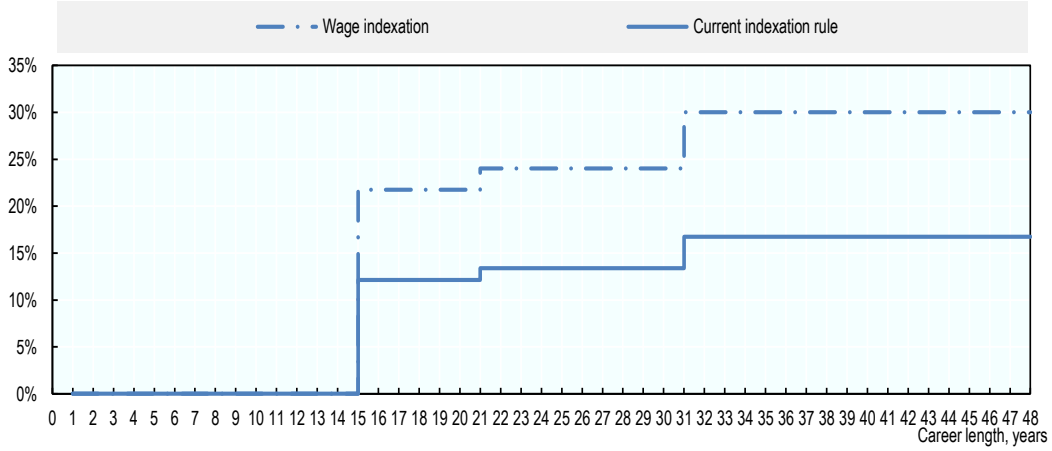
As a long-term trend, productivity gains result in increasing real wages. Given current indexation rules, this implies that minimum pensions will gradually fall relative to wages.[10] Indexing minimum pensions to average wages is the only way to avoid this decline in "replacement rates" over time. However, wage indexation is costly in the long term. The longer someone lives, the larger the difference between benefits with wage and with price indexation becomes. Increasing life expectancy therefore makes this even more costly.

In this context, a good compromise worth considering is to distinguish the indexation of the minimum pension benefit that is paid at the time of retiring from the indexation of pension in payments. The former should be indexed to wages to avoid declining relative levels. The latter should be determined globally by the trade-off between income adequacy and financial cost. The negative side of such a framework is that recipients have a different benefit level depending on when they retired. But this reflects cohort effects driven by improving standards of living over time from one generation to the next.

The following example illustrates the extent to which the minimum pension level could fall in relative terms given current indexation rules. Based on the economic assumptions used in the OECD pension model, annual real wages grow by 1.25% in the long term, which implies that real GDP growth is below 2% and therefore that the IAS evolves in line with prices. For someone entering the labour market now, this means that at the time of retirement the full minimum pension will be reduced to 17% of the average wage against 30% today (Figure 2.14). If the indexation rules were applied over time, the minimum pension would, as shown below, lose most of its relevance.

Figure 2.14. Current indexation rules are likely to almost halve minimum pensions over time

Level of minimum pension, % of average wage, 2065 projections



Note: Real wages are assumed to grow with 1.25% per year, and GDP and the wage bill (W*L) are assumed to grow at the same rate. Since labour supply is expected to shrink due to ageing – for example based on UN projections the population aged between 20 and 69 years is projected to shrink by 35% within half a century - this means that GDP growth would be below 1.25%. Therefore, current indexation rules imply that minimum pensions are projected to be indexed by prices only.
Source: OECD calculations

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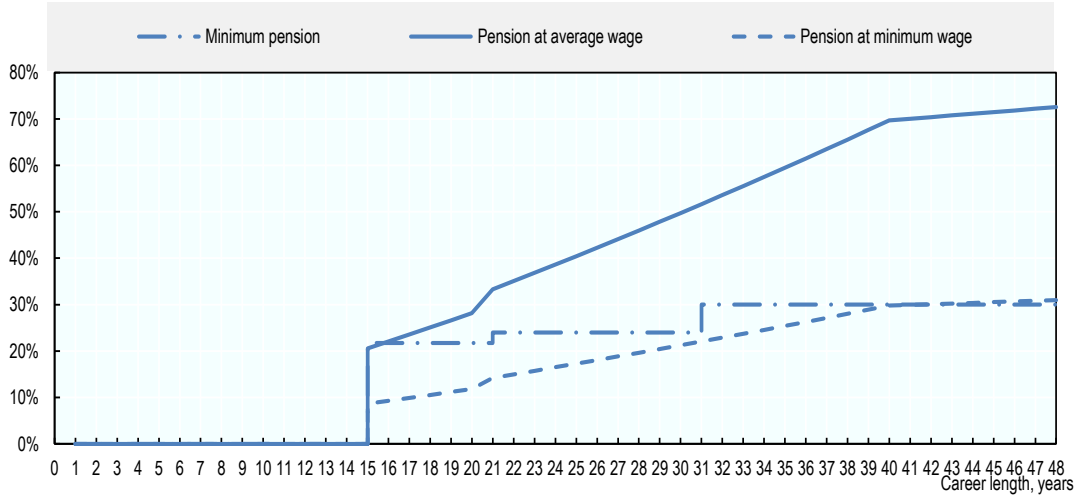
2.4.2. Minimum pension levels and earnings-related entitlements

Assuming that the minimum wage and the minimum pensions remain at their current levels relative to average wages, someone with a full career at the minimum wage will roughly receive an earnings-related pension equal to the highest minimum pension: the lower two lines in Figure 2.15 coincide after a 42-year career.[11] For shorter careers at the minimum wage, the minimum pension effectively tops up the earnings-related part. Hence, unless someone has a full career, minimum-wage earners will benefit from the top-up built into the minimum pensions.

For anyone earning the average wage or above it is unlikely that the minimum pension will be relevant. The entitlement of an average-wage worker (top line in Figure 2.15) will exceed the minimum pension level after 17 years of contributions, i.e. shortly after being eligible to the contributory pension. Entitlements steadily increase until someone reaches 40 years of contributions, after which accrual ceases but the pension increases because of more favourable reference earnings (Chapter 3 for a detailed description of the earnings-related pension). For someone in an intermediate situation earning three-quarters of the average wage, minimum pension levels are exceeded after 21 years of contributions.

Figure 2.15. Minimum pension and full-career earnings-related pensions

Entitlements by contribution period, % of average wage, in gross terms



Note: The minimum wage is 42% of the average wage in every period considered. For this chart it is also assumed that minimum pension levels evolve over time in line with wages. Projections are based on someone entering the labour market at age 20 (period 0) in 2016 and retiring at age 68 (period 48).
Source: OECD pension model.

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2.5. Old-age safety net

The old-age safety net helps protect those with no employment history or very short contribution periods. The Portuguese old-age safety net consists of a wide range of schemes. The most important are the old-age social pension (*Pensão Social de Velhice)* and the Solidarity Supplement for the Elderly (CSI). The old-age social pension is a flat-rate benefit for people with no or very low income while the CSI is a top-up for people with income up to a higher threshold but with broader means-testing. Over the last decade, between 1% and 1.5% received the old-age social pension and between 8% and 12% of people older than 65 received the CSI. On top of the social pension someone automatically receives the extraordinary solidarity supplement (CES) and can also potentially get dependency complements, additional health benefits and financial support to pay for energy cost.

Some of these benefits can or cannot be combined. This mix of safety net features can be difficult to navigate through for eligible persons. To apply for these benefits potential recipients have to fill out an array of forms. Since means-testing applies to most of these safety-net features this can lead to significant delays in receiving the benefits. European Commission (2018[2]) suggests to strengthen the transparency, harmonisation and simplification of the pension system, namely as regards the coexistence of diverse means-tested mechanisms, and to assess the efficacy of the existing means-tested benefits as regards their major goal of tackling poverty among the elderly.

2.5.1. Old-age social pension

For those who are not eligible to a contributory pension, eligibility to the social pension requires to:

- have reached the official retirement age.
- have a monthly gross income not exceeding 40% (for a single) or 60% (for a couple) of the IAS (EUR 428.90 in 2018). This corresponds to less than EUR 171.56 (or 13.2% of the gross average wage) for a single person and EUR 257.34 for a couple.
- be a national citizen residing in Portugal *or* be a foreign citizen residing in Portugal and covered by the EU social security regulations (EU Member States, Iceland, Liechtenstein, Norway and Switzerland) or international social security instruments in force in Portugal (Australia, Brazil, Cape Verde and Canada).
- not be covered by any compulsory social protection scheme or transitional rural schemes.

The monthly amount of the old-age social pension in 2018 was EUR 207.01, its value being linked to the IAS. This means that, given current IAS indexation rules, the value of the old-age social pension will gradually fall relative to wages. The old-age social pension is topped up by the extraordinary solidarity supplement (CES), which varies according to age (EUR18.02 per month for someone younger than 70, EUR 36.02 from the age of 70). Therefore, the full benefit of the old-age social pension with supplement is EUR 225.03 for someone younger than 70 and EUR 243.03 for someone older than 70. This corresponds to 17.3% and 18.7% of the gross average wage, respectively.

The old–age social pension in Portugal is not a top-up but a fixed amount, regardless of how much someone is under the income threshold. This can lead to the strange situation in which someone with income just below the threshold ends up with a higher income than someone with income just above the threshold. In addition, the CES top-up makes the old-age social pension unnecessarily complicated. Even if it were considered politically desirable to have a higher benefit for those older than 70, at least the top-up paid to those younger than 70 could be merged with the social pension. The reason why the CES is separated from the old-age social pension is that other social security benefits are linked to the value of the old-age social pension. An increase in the old-age social pension therefore automatically leads to an increase in the linked social security benefits. This should be reformed as, given that the receipt of the CES is automatic, the integration would simplify matters.

2.5.2. Solidarity Supplement for the Elderly (CSI)

In addition to the old-age social pension the Solidarity Supplement for the Elderly (CSI) – a cash support paid monthly to low-income elderly people – was introduced in 2006. To be eligible for the CSI someone must:

- have reached the official retirement age.[12]
- have lived in Portugal for at least six consecutive years on the date of application.
- have an annual income of less than EUR 5 175.82 in 2018.
- have an annual income of less than EUR 9 057.69 for a couple in addition to the individual threshold in 2018.

The CSI is a top-up, paid up to the means-testing threshold of EUR 5 175.82 (28.5% of the gross average wage) for a single and EUR 9 057.69 for a couple (50% of the gross average wage). These figures are updated on a discretionary basis.[13]

The CSI means-testing takes into account not only all income sources of the household but also the income of descendants with whom the applicant is in contact with (regardless of whether they live in the same household). The means-testing of the CSI is therefore more extensive than a typical old-age safety net, the reasoning being that descendants with high income can financially take care of their parents.[14] Around 18% of the beneficiaries who received the CSI in 2018 had their entitlements reduced because of their descendants' income.

The law is meant to convey the idea that it is socially just to oblige children who can afford it to take care of their parents. However, this might in practice lead to a perpetuation of low disposable income from one generation to the next within the same family. Children with parents with high pensions will never have to contribute to their care while children with poorer parents will have to contribute financially if they managed to climb the social and economic ladder. This makes the existing link between parents' income and children's income analysed in OECD (2018[5]) even stronger, running against the potential objective of enhancing social mobility. By contrast, financing such benefit by (progressive) taxes ensures that the broadest shoulders bear the greatest burden without having to resort to means-testing of descendants.

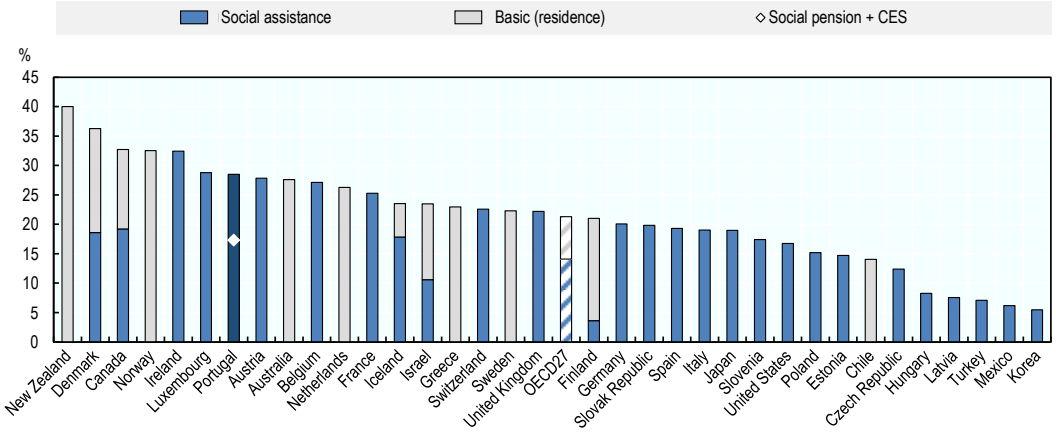
The eligibility criteria above are listed in a simplified way for presentation purposes. In fact, the real list is very cumbersome, and the induced complexity in trying to understand it is amplified as available official information through the law, the social security website and official guidelines is not presented in the same way. Hence, for the elderly, applying to the CSI and determining with which benefits it can be combined can be a daunting task since receipt of the CSI depends on many criteria.[15] Having another instrument, and such an intricate one, on top of the other old-age safety nets creates complexity, calling for a simplification of the system.

There might be severe problems with the take-up rate, possibly due to the complexity and opacity of the CSI, which might generate large inequality even among vulnerable people. The level of the CSI benefit is around the relative poverty line defined as half the median equivalised income for the total population: for the latest year for which data are available for the median equivalised income (2015), the poverty line stood at EUR 4 960 per year while the CSI was EUR 4 909. Yet, the poverty rate of those over 65 was larger than 10% in 2015 and the poverty depth was 20.9%, meaning that those with income below the poverty line had an average income 21% lower, i.e. EUR 3 923, way below the CSI level. Somehow, even with benefits close to the poverty line the CSI does not reach a significant proportion of those who need it.

Figure 2.16 shows the benefits received from first-tier pensions for individuals who never contributed. Taking into account only the old-age social pension (plus the CES for those younger than 70), with benefits equal to 17.3% of the average wage, Portugal ranks below the OECD average of 21.0%, with a large range from less than 10% of the average wage in Hungary, Korea, Latvia, Mexico and Turkey to more than 30% in Canada, Denmark, Ireland, New Zealand and Norway (Figure 2.16).[16] However, individuals with no income of their own and no descendants with sufficient income also receive the CSI, which increases the safety net to 28.5% of the average wage, well above the OECD average and a level exceeded among European countries in only Austria, Denmark, Ireland, Luxembourg and Norway.

Figure 2.16. Non-contributory pension benefit level

% of average wage, 2016



Note: The non-contributory pension benefit level assumes no other sources of income, therefore, means-testing has no impact. For Portugal, the social assistance level is the CSI threshold.
Source: OECD, Pensions at a Glance 2017.

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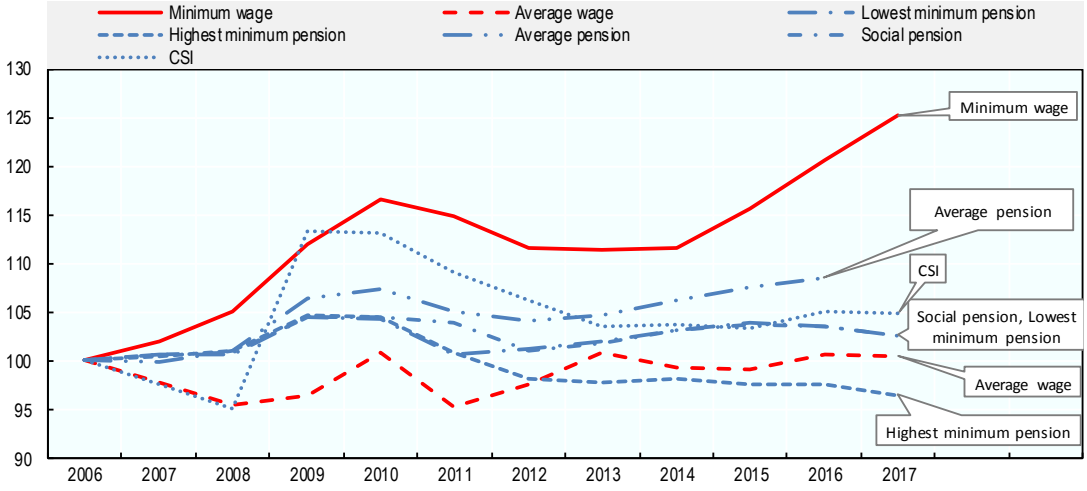
2.6. Interactions between first-tier pension elements

The minimum pension and social safety-net levels evolve in principle in line with the IAS. This is what happened until 2010. However, as discussed above, due to the economic crisis, indexation rules were temporarily suspended with the exception of the lowest pensions, which led to a relative increase in the levels of the old-age social pension and of the lowest minimum pension compared with the highest minimum pension level (Figure 2.17). Between 2006 and 2017, the average wage was broadly stable in real terms. The minimum wage increased much faster, by 25% in real terms and the average pension, by about 10%. The CSI ceiling, which is updated on a discretionary basis, rose by about 5% (in real terms) while the full minimum pension fell by 3.5%.

Among first-tier benefits the minimum pension is by far the most commonly received. As discussed before, around 38% of people over 65 received a minimum pension in 2016, having come down from 45% in 2006 (Figure 2.18).[17] In addition, after its introduction in 2006, the number of CSI beneficiaries as a share of the 65+ population quickly exceeded 12% before levelling off around 8% in 2016 and 2017. In 2017, around half of CSI recipients are receiving some minimum pension benefits. This also means that about 10% of those receiving the minimum pension are topped up by the CSI. The share of people receiving the old-age social pension is very small, between 1.2% and 1.5% of the population over 65 over the last decade, highlighting that most beneficiaries of the old-age safety nets have income between the levels of the social pension threshold and the CSI threshold.

Figure 2.17. First-tier pensions lag behind real minimum wage growth

In real terms, index 2006=100



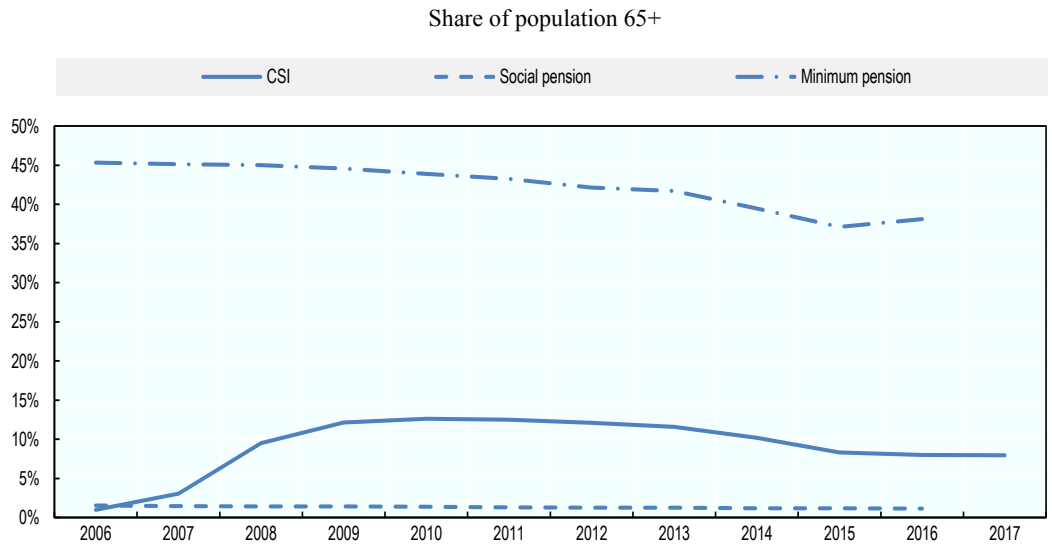
Source: OECD and Social security statistics Portugal.

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There are numerous non-contributory schemes pursuing similar objectives, and their interaction is unduly complex. Despite the CSI having different eligibility criteria it largely has the same objective as the old-age social pension. At the same time the CSI benefit ceiling exceeds most of the minimum pension levels and is about twice the level of the social pension. This gives the impression that, with the introduction of CSI in 2006, rather than adjusting existing eligibility criteria or benefit levels to changes in social and economic conditions, additional schemes have been piled up.

How the social pension, the CES and CSI complement initial income is shown in Figure 2.19, Panel A. Ignoring the means-testing feature related to the income of descendants, someone with low income levels receives both the social pension and the top up from the CSI. As income before transfers grows the flat-rate social pension stays the same, eventually leading to total income exceeding the CSI level. In total someone younger than 70 with income just below the social pension threshold (EUR 2 402) would receive a yearly social pension combined with the CES of EUR 3 150 on top, providing a total income of EUR 5 552. If someone earns slightly more they are only eligible for the CSI (again assuming no other sources of income and no income of descendants) which would top up their income to EUR 5 176, i.e. 7% less. This Figure shows that apart from this peculiarity, the social pension and the CES does not add anything to the CSI - at least in this case when descendants' incomes are ignored.

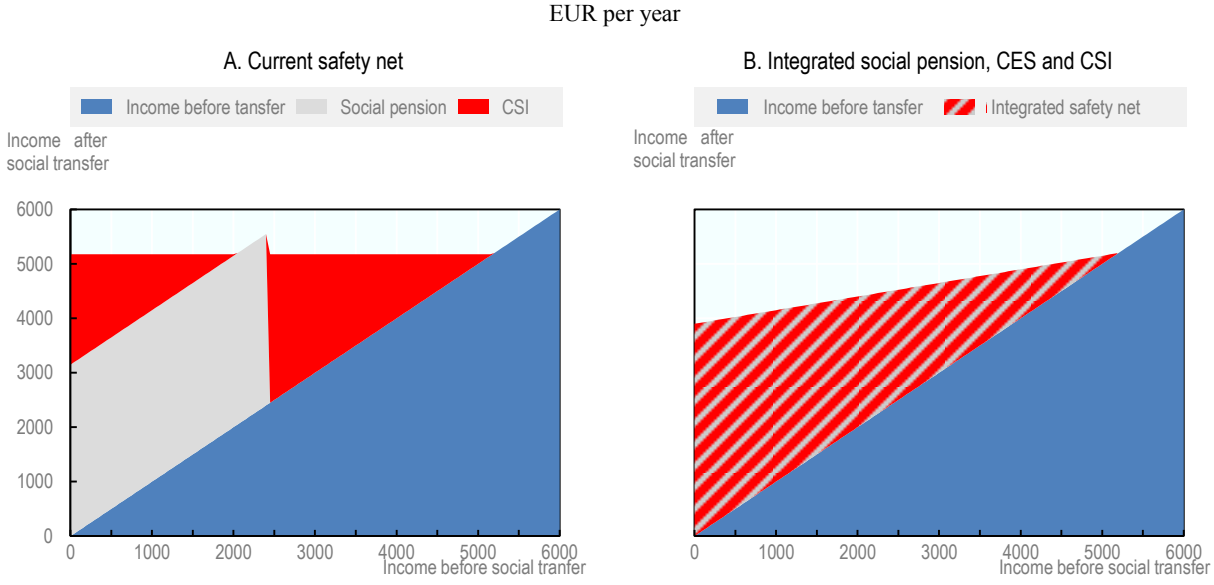
Figure 2.18. Recipients of the minimum pension and the Solidarity Supplement



Source: Own calculations based on data from the Ministry of Labour, Solidarity and Social Security, Portugal.

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Figure 2.19. Total income before and after social transfers



Note: CES supplement for someone younger than 70 is included in social pension. It is assumed there is no income of descendants. Panel B is for illustrative purposes only, it does not reflect policy recommendations on specific benefit levels.
Source: Own calculations based on data from the Ministry of Labour, Solidarity and Social Security, Portugal.

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There is therefore a strong case for integrating the social pension, the CES and the CSI. This can easily generate the same benefit levels (ignoring descendants' income) while drastically simplifying the whole nexus. For instance, the current level of the CSI can be taken as a top-up fully means-tested at the household level. However, the current schedule implies that pre-transfer income is withdrawn at a dissuasive rate of 100% until the CSI threshold is reached. That is, before the CSI threshold is reached a higher income before transfer does not lead to any increase in disposable income. A more appealing alternative would consist in ensuring that the income after transfer rises with the initial income by withdrawing the means-tested benefit at a lower rate against own income, as shown for illustration purposes in Figure 2.19, Panel B based on a withdrawal rate of 75%. This would provide incentives to earn income including through contributing to the earnings-related pension. This can be done either by lowering the level of the means-tested benefit – currently much higher than the OECD average (Figure 2.16) – or increasing the CSI level (and therefore minimum pensions, see below) if resources were available.

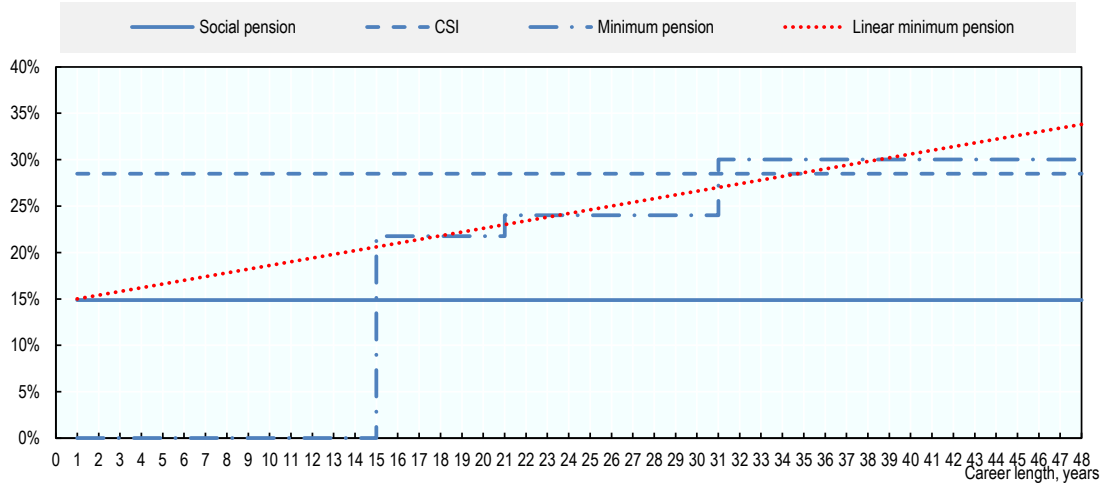
At 28.5% of the gross average wage, the current CSI ceiling is very close to the full minimum pension which is only available after 31 years of contributions (Figure 2.20). This implies that the CSI almost eliminates entirely the step pattern of the minimum pension schedule and substantially reduces the role of minimum pensions. Indeed, since the CSI is not linked to contributions and since the highest minimum pension is only marginally higher there are very limited additional minimum pension entitlements generated by contributing on earnings. Overall, the CSI resembles a flat-rate benefit, leading to an almost doubling of benefits from the old-age social pension.

For people with less than 15 years of contributions, the social pension (plus CES) topped up with the CSI is the only source of income (Figure 2.20), when excluding other sources such as capital income and ignoring descendants' income for the means-test. After that individuals are eligible for the first step of the minimum pension which is also topped up by the CSI. This still holds when reaching the second step of the minimum pension and it is only after 31 years that someone receives a marginally higher income solely from the full minimum pension.

In order to simplify the current framework and reward contributions, on top of the integration of the old-age social pension (plus the CES) and the CSI discussed above, the minimum pension could increase steadily such that each year or month of contribution generates some first-tier pension entitlements. This is illustrated in Figure 2.20 for example in the case where minimum pension entitlements grow linearly with the contribution period while the minimum pension at 40 years of contributions remains at the current level of the full minimum pension. This linear minimum pension is topped up by the integrated safety net (up to the first 37 years of contributions in the illustrated schedule). The shown schedule is constructed as an illustration by assuming that someone with no contributions gets a benefit of 21% the average wage, similar to the OECD average. This initial benefit is then assumed to be withdrawn at a rate of 75% against the linear minimum pension, ensuring a steady progression with the number of contribution years. In the shown schedule it is fully withdrawn after 37 years, from which total income is determined by the minimum pension only (or the earnings-related pension if higher of course). The levels of all these parameters could be set as needed, weighing pension adequacy and financial cost. Beyond enhanced work incentives, the implementation of these mechanisms would smooth the overall benefit pattern for low-income pensioners.

Figure 2.20. Only the highest level of minimum pension exceeds the CSI

First-tier pensions by contribution period, share of the average wage



Reading note: The current system is represented by the minimum pension step function, the social pension (including CES) and the CSI benefit. In the illustration shown in the chart, the minimum pension grows linearly with the career length from the first year of contributions to reach EUR 6 480 for someone with a 48-year career. On top of that for someone with no other sources of income there is a safety net top-up, starting from EUR 4 000 and withdrawn at a rate of 75% against minimum pension income. Hence, for a 25-year career, as an example, the illustrated schedule includes a minimum pension of EUR 3 375 which is topped up to the level of the integrated safety net of EUR 4 744 for this level of income (Figure 2.18, Panel B).
Source: OECD calculations.

StatLink http://dx.doi.org/10.1787/888933926336

2.7. Policy options

A significant share of the Portuguese population benefits from minimum pensions. Among them, about 10% receive additional income from the Solidarity Supplement (CSI). On top of this a wide range of safety-net benefits support the most vulnerable. These benefits often pursue similar objectives making them potentially redundant; in terms of spending at least they represent small amounts. CSI effectively plays the largest role within the old-age safety net, but eligibility criteria are complicated and the relatively high level of CSI in combination with a 100% withdrawal rate means that a wide range of pre-transfer income does not generate any increase in disposable income. In short, while first-tier pensions in Portugal improve the living standards of older people, they can be streamlined.

A comprehensive reform would consist in consolidating the old-age social pension, the extraordinary solidarity supplement (CES) and the CSI. Merging these schemes would enable every old-age person with low income levels to receive the merged benefit. The means-tested consolidated benefit should be withdrawn at a much lower rate than 100% against other income (including income from the minimum pension) to maintain incentives to contribute.

Means-testing should be done at the household level only. Means-testing the CSI not only at the household level but also including children's and grand-children's income might

cut cost but contributes to perpetuating low disposable income across generations within the same families, makes the pension system complicated and defeats the purpose of a formal pension system. Indeed, one of the reasons to introduce a formal pension system is to avoid that people have to rely on family members in old age. In addition the administrative complexity for pensioners to apply for the CSI implies that some people who are eligible might miss out on receiving it while others might be affected by long waiting times. Furthermore, this also generates administrative costs.

The current levels of the various schemes imply that for the most part minimum pensions are offset by the CSI, leading to small additional income. Moreover, in itself, the minimum pension in Portugal provides very little additional pension benefits from working longer when workers are far from one of the career-length thresholds. In order to solve this, beyond withdrawing the consolidated safety-net benefit at a slower rate than the current 100%, the minimum pension level should increase gradually with the length of the contribution period such that each year of additional work is rewarded by a higher minimum pension. Moreover, even if average contribution periods are rising, the minimum pension (and earnings-related pensions in general) should be available at a lower level to those who have fewer than 15 years of contributions.

The indexation of the minimum pension should distinguish between uprating the initial minimum pension level that people get at the time of retirement and the indexation of pensions in payment. The uprating of the initial benefit should be closely related to average- or minimum-wage growth in order to ensure a stable level relative to labour income over time. The indexation of pensions in payment should be determined by trading-off its generosity and its financial cost. For a given total cost, a more favourable indexation implies a lower initial benefit level and vice-versa.

Key recommendations

- Simplify non-contributory benefits to avoid the multiplication of instruments with similar objectives. In particular, merge the old-age social pension, the complement (CES), and the top-up (CSI), and remove the CSI's means-testing to descendants' income.
- Avoid withdrawing safety-net benefits such as the CSI against other income at a 100% rate. Instead withdraw the CSI or ideally the consolidated benefit recommended above at a much lower rate.
- Lower the minimum contribution period of 15 years required for the minimum pension, adjust the benefit level accordingly and ensure that each additional year of contribution results in a higher minimum pension benefit.
- Separate the uprating of minimum pension benefits available upon retiring, which should be as close as possible to wage indexation, from the indexation of minimum pension in payments, which should be identical to the indexation of earnings-related pensions.

Notes

[1] Of this 0.5% of GDP, the minimum pension directly related to the earnings-related scheme represents 0.4 percentage points, while the remainder refers to minimum pensions related to survivor and disability pensions.

[2] This poverty measure is different from the definition used by Eurostat, which uses 60 % of the national median equivalised disposable income after social transfers. The median disposable income increased a little during the crisis.

[3] Severely affected by a lack of resources or social activities. Eurostat defines the severe material and social deprivation rate as the proportion of people living in households that cannot afford at least five of the following thirteen items: face unexpected expenses; one week annual holiday away from home; avoid arrears (in mortgage, rent, utility bills and/or hire purchase instalments); afford a meal with meat, chicken or fish or vegetarian equivalent every second day; keep their home adequately warm; a car/van for personal use; replace worn-out furniture; replace worn-out clothes with some new ones; have two pairs of properly fitting shoes; spend a small amount of money each week on him/herself ("pocket money"); have regular leisure activities; get together with friends/family for a drink/meal at least once a month; have an internet connection.

[4] Income inequality for the working age population (15-64) followed largely old-age income inequality: coming down in the early 2000s before flattening out during the crisis.

[5] Also those who enter retirement through invalidity need fewer minimum years of contributions, 3 and 5 years for fully and partially disabled respectively.

[6] In the case of part-time work a full working day consists of 6 hours of work.

[7] In the past military service was included as well.

[8] However, anyone who fulfilled the old qualifying period criteria prior to the change in the law can still receive this minimum pension.

[9] The brackets in the law are not literally defined in the same way, but boil down to the same formula. The law states that a) if the average real GDP growth is less than 2%, the IAS is indexed with inflation, b) if the average real GDP growth is equal to or greater than 2% and less than 3%, the IAS is indexed with inflation plus 20% real GDP growth, with a minimum of inflation plus 0.5 percentage points and c) if the average real GDP growth is equal to or higher than 3%, the IAS is indexed with inflation plus 20% real GDP growth. Part of the second bracket b) can be included in the third bracket c) since real GDP growth rates between 2.5% and 3% will push indexation over the lower limit of inflation plus 0.5 percentage points. Therefore, the rule for this range is equal to the rule for bracket c). Growth rates between 2% and 2.5% will by definition lead to indexation of inflation plus 0.5 percentage points.

[10] Even if more recently this has not been the case (see Section 2.2)

[11] If minimum pensions are indexed to prices only, the minimum pension would be largely irrelevant in 2065. At 12% of the average wage, the first step of the minimum pension would exceed entitlements for someone with 15 to 20 years of contributions at the minimum wage. Afterwards, entitlements would always be larger than the minimum pension.

[12] In 2018 it was possible to combine the CSI with an early pension claimed after 2014 (Chapters 3 and 5). However, the CSI benefits was only available in 2018. This measure was introduced to compensate for the penalties levied on early pensions during the financial crisis.

[13] The value of the CSI is updated periodically by joint ordinance of the Minister of Finance and the Minister of Labour and Social Solidarity, taking into account the evolution of prices, economic growth and the distribution of wealth.

[14] According to Portuguese law descendants are legally obliged to take care of their parents when needed.

[15] For instance, within the official guidelines, in the description of the eligibility criteria it seems that someone who is eligible for the social pension *cannot* be eligible for the CSI. The guideline (on page 5) states as a necessary condition: "s*er cidadão português e não ter tido acesso à pensão social por ter rendimentos acima do valor limite de EUR 171,56 se for uma pessoa ou de EUR 257,34 se for um casal*" (translation: be a Portuguese citizen without access to the social pension because of income above of the threshold of EUR 171.56 for a single or EUR 257.34 for a couple). However, the section describing which other benefits the CSI can be combined with states that the CSI *can* be combined with the social pension. The guidelines (on page 7) state: *Pode acumular [CSI] com: 1) Pensão de Invalidez (a partir de outubro 2018) e Velhice do Regime Geral; 2) Pensão de Sobrevivência; 3) Pensão Social de Velhice; 4) Prestação Social para a Inclusão, desde que estejam reunidas as demais condições de atribuição do CSI (idade, recursos e residência em território nacional).* In English: [the CSI] can be combined with 1) a disability pension (as of October 2018) and an earnings related pension; 2) a survivor pension; 3) the old-age social pension; 4) the Social Provision for Inclusion, provided that the other eligibility criteria of the CSI (age, resources and residence in national territory) are met. http://www.seg-social.pt/documents/10152/24737/8002_complemento_solidario_idosos/d3551bf8-8ffa-4caf-8d26-3d0627d0fae4 . In practice, the source of income is irrelevant as long as the means-testing criteria are met.

[16] For some countries, this includes a residency-based basic pension. In these countries people accrue basic pension rights solely by living in that particular country.

[17] Those receiving a minimum pension while being younger than 65 are not included in this statistic.

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Chapter 3. Earnings-related mandatory pensions

This chapter describes the mandatory earnings-related pension scheme and its historical background. The main component of the Portuguese old-age pension system is a pay-as-you-go defined benefit scheme, the so-called Pensão de velhice. The chapter presents current pension outcomes, describes the rules of the current pension system and assesses its capacity to deliver good pensions in a financially sustainable way. It also describes the pension scheme for civil servants and other special regimes. The chapter concludes with policy recommendations to improve earnings related pensions.

3.1. Introduction

The Portuguese earnings-related old-age pension system is pay-as-you-go defined benefit (DB). Private-sector workers are covered by pensions within the general social security scheme, *regime geral da Segurança Social*. The former civil service pension scheme, *Caixa Geral de Aposentações* (CGA), has been closed to new entrants since 2006 and new civil servants contribute to the general scheme. Yet, the CGA will continue to operate for most of the 21st century as, although rules have converged except for the pre-2006 entitlements, those who became civil servants before 2006 continue in the old scheme.

More than three-quarters (77%) of people older than 65 received a pension from the general social security scheme in 2016 and 22% from the CGA. Moreover, there are special rules for various professions who have lower official retirement ages and sometimes lower minimum contributory requirements.

Portugal has been particularly active reforming the pension system over past decades, mainly focusing on improving financial sustainability (European Commission, 2018[1]). The chapter is organised as follows. The next section contains a brief history of the Portuguese pension system. Section 3.3 describes the current situation of contributors and retirees in Portugal while the following section describes the rules of the current earnings-related pension system and includes simulations of future outcomes. Section 3.5 discusses survivor pensions, civil service schemes and the special regimes. Finally, the last section concludes and provides policy options.

3.2. Recent changes in the Portuguese pension landscape

The Portuguese pension system was initially a funded pension system but converted into a public pay-as-you-go defined benefit (DB) system starting from the 1960s. Over the years, the minimum years of required contributions increased as did the years used to calculate the reference wage. Additional payments, a 13th and 14th month, were granted, and a safety net for the poorest pensioners was introduced. In 2006, the two separate systems for private-sector workers and civil servants were merged and indexation rules were implemented while indexation had been largely discretionary up until then.

This section first discusses the population ageing context and then focuses on a brief history of the Portuguese pension system. It provides details about measures legislated over the past decades. In order to provide an overview upfront, the main pension reforms since 1990 are summarised in Table 3.1.

Table 3.1. Overview main reforms since 1990

Retirement age	Convergence between men and women at 65 (1999)	Retirement age raised to 66 and linked to life expectancy (2014)	
Accrual period	Minimum years of contributions for a pension raised from 10 to 15 years (1993)	Number of years after which accrual stops increased from 37 to 40 years (1999)	Bonus of 10% per year of late retirement for those with more than 40 years of contributions (1999)
Benefit formula	Reference wage: best 10 out of last 15 years (1993)	Accrual rate set at 2% (previously 2.2%) (1999)	Reference wage: extended to 40 years and accrual rates set between 2% and 2.3% depending on wage level (2002)
Sustainability factor	Introduction (2007)	Abolishment for retirement from normal retirement age (2014)	
Early retirement	Access to the long-term unemployed from age 55 with 20 years of contributions (1999)	Raised from age 54 to 55 (2007)	Early retirement suspended (2012) re-enacted in 2015 but at age 60
Penalty	4.5% per year of anticipation (1999)	6% per year of anticipation (2007)	
Civil servant	Start convergence of rules with general regime (1999)	Closed for new entrants (2006)	

3.2.1. Population ageing

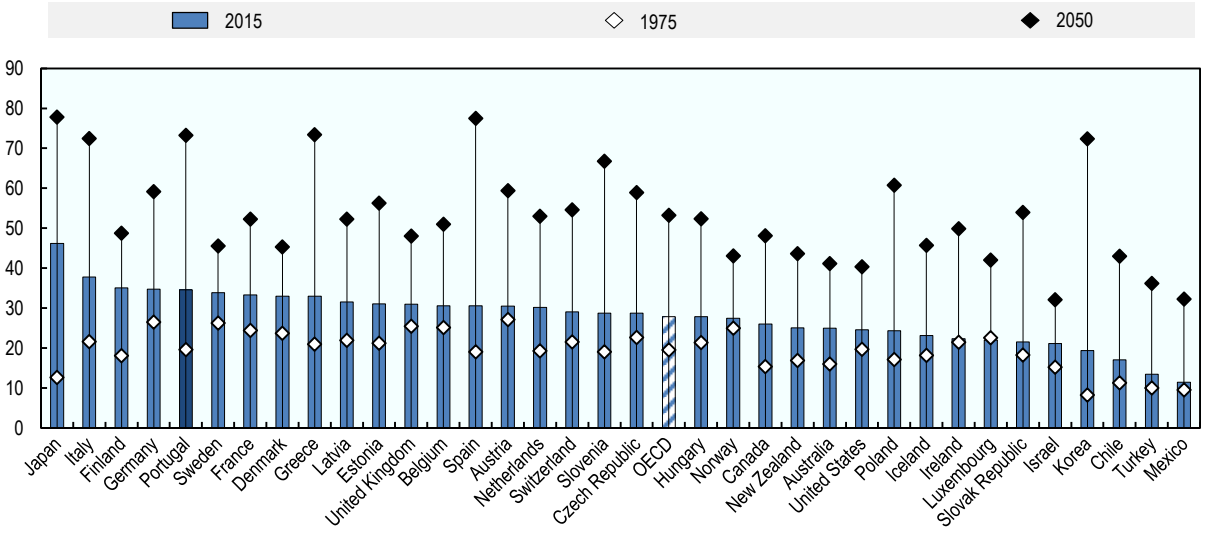
A combination of low fertility and rising life expectancy has pushed the old-age dependency ratio – the number of people older than 65 years per 100 people of working age (20-64) – from 19.6 in 1975 (close to the OECD average), to 34.6 in 2015 against 27.9 in the OECD on average (Figure 3.1). By 2050, it is expected to be 73.2, making Portugal the fourth oldest country in the OECD based on this measure using UN data, after Japan, Spain and Greece. Eurostat data produce a similar picture, with only Greece projected to have a higher old-age dependency ratio than Portugal in 2050 among EU countries. As a consequence, the financial pressure on Portugal's pension system has grown.

The old-age dependency ratio is computed using fixed age boundaries, and as such only captures demographic shifts regardless of whether people are still working at higher ages. Accounting for the rising retirement age leads to a smaller increase in the *effective* old-age dependency ratio compared to the changes projected based on fixed age boundaries. Between 2015 and 2050, the statutory retirement age is projected to increase by 2.5 years (from 66 to 68.5 years) due to life expectancy gains (Section 3.4). Therefore, when using this increase of 2.5 years in the age boundary, the old-age dependency ratio in 2050 would be lower at 62 instead of 73.

As other OECD countries, Portugal has benefited from the long-term trends of rising longevity. Since 2000, life-expectancy gains have indeed been large in Portugal (Figure 3.2). Whereas countries like Mexico and the United States have gained less than 2.5 years in life expectancy at birth, the increase has been 4.5 years in Portugal, one of the highest in the OECD and well above the OECD average of 3.7 years. Moreover, the majority of the years gained are in reported good health: 3.8 out of 4.5 years.[1]

Figure 3.1. The old-age dependency ratio will more than double by 2050 in Portugal

Number of people older than 65 years per 100 people of working age (20-64), 1975-2050

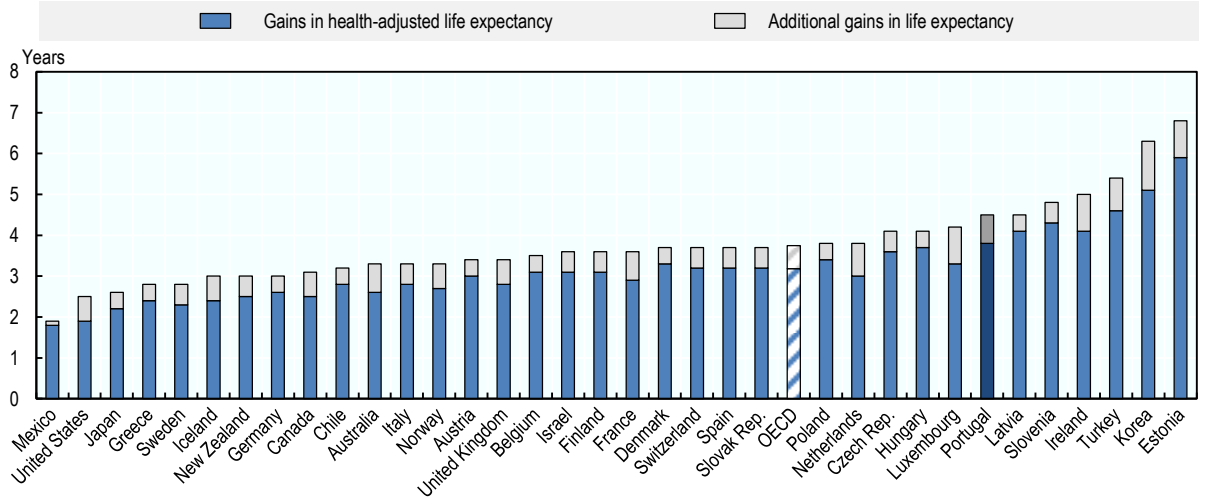


Note: The projected old-age dependency ratios differ based on the sources used. This report is based on UN medium variant projections for comparison reasons. The largest differences are the following: according to Eurostat the old-age dependency ratio (65+/20-64) would increase by 39 and 19 percentage points between 2015 and 2050 in Spain and Austria, respectively, against 47 and 29 points with UN data. On the other hand, it would increase in Latvia by 33 points based on Eurostat against only 21 points with UN data.
Source: United Nations World Population Prospects: The 2017 Revision.

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Figure 3.2. Extra years of life expectancy have been largely in good health

Total gains in life expectancy at birth, OECD countries, 2000--15



Note: Health-adjusted life expectancy is defined as the number of years that people can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.
Source: WHO (2016).

StatLink http://dx.doi.org/10.1787/888933926374

3.2.2. Main reforms before the financial crisis

A unified social insurance system, encompassing pensions, health care and social assistance, was created in 1962. Moving away from the previously funded schemes, most pensions under the new law were to be financed on a pay-as-you-go basis (Chuliá and Asensio, 2006[2]).

Initially, minimum contribution periods and periods used to calculate the reference wage to compute pension benefits were short. In 1973, the minimum contribution period was set at 24 months and the reference wage was based on the best five out of the last ten years of earnings. Men could retire at age 65 and women at age 62. While by the early 1970s most salaried workers were covered many participants had significant coverage gaps in their career. In an effort to combat old-age poverty, a thirteenth pension payment to all pensioners (Christmas payment) was introduced in 1974, and a fourteenth payment (holiday payment, in July) in 1990. In 1977, an old-age safety net, the so-called social pension, was established, which became means-tested in 1980. The late-70s and early-80s saw a significant expansion of coverage to self-employed workers, domestic employees, artists, workers without a work contract and those who decided to voluntarily contribute.

In 1977 and 1983, Portugal requested financial assistance from the IMF to deal with rising public deficits. The social security contribution rate was raised to 26.5% and subsequently to 28.5%. The minimum contribution period for a pension was increased to 60 months, taking effect in 1980; in 1982, it was again raised to 120 months starting in 1987.

In 1984, the goals and principles of social security were put into law with the Social Security Framework Law. In terms of funding, the law established that the general scheme was to be financed by the Social Security budget, through contributions from workers and employers, whereas the non-contributory schemes were to be financed by transfers from the state budget.

A single social security contribution came into force in 1986. The contribution rates for employees and employers were set at 11% and 24%, respectively. In 1993, the minimum years of contributions were raised again to the current level of 15 years with at least 120 days of contributions needed for one year to be recorded. The reference wage was based on the best ten out of the last 15 years rather than five out of ten previously. In the same year, additional levels of minimum pensions were introduced with longer contribution periods leading to larger minimum pensions (Chapter 2).

The retirement age for women increased gradually until it converged to men's retirement age of 65 in 1999. The full-career reference in the Portuguese pension system, defined as the number of years after which accrual stops, was increased from 37 to 40 years. Early retirement was not possible before the age of 60. From 1993 up to 2002, each year of contributions led to an accrual of 2% of the reference wage. Previously it had been 2.2%. After 2002 it varied between 2% and 2.3% depending on career length and the reference wage.

In 1996, the period for which unemployment credits are granted was extended to the 45-54 age group against 55-65 previously. In 1999, a bonus of 10% per year of late retirement (with a maximum of 50%) was introduced for those with more than 40 years of contributions. Early retirement was made possible if the beneficiary had contributed for at least 30 years and was older than 54. For early retirement, benefits were reduced by 4.5% per year of anticipation, with a maximum of 45%. Finally, pensions for the long-term

unemployed were introduced which could be taken from the age of 55 with 20 years of contributions.

Civil servants who started work before 1993 had much more favourable pension rules. They needed only five minimum years of contributions instead of 15 and the retirement age was 60 instead of 65. A more favourable pension formula resulted in much more generous pensions compared to the general social security scheme. Between 1993 and 2006 a gradual convergence between the rules of the civil-servant scheme and the general social security scheme was put in motion. Since 2006, no new entrants have been allowed in the civil-service scheme, instead new civil servants have contributed to the general regime. At the same time, the convergence of the retirement age, full career length and eligibility for early retirement between both schemes was sped up to eliminate the last remaining differences by 2015 for the majority of civil servants (and 2022 for the few remaining civil service occupations).

In 2002, after severe fiscal pressure, steps were taken to make pensions more financially sustainable through less generous pensions. The reference earnings used to calculate pension benefits were gradually changed from the best 10 years of the last 15 years to the full-career average earnings. Uprating of past wages was changed from price inflation to a combination of price inflation and earnings growth. Shortly after, in 2007, indexation rules of pensions in payment were introduced for the first time. Previously, indexation was largely discretionary with the law simply stating that pensions should be indexed according to salaries, prices and other politically relevant macro-economic figures. At the same time, a sustainability factor was introduced which adjusted the initial benefit level for new retirees to rising life expectancy. The sustainability factor is given by life expectancy at 65 in 2006 divided by life expectancy at 65 in the year before retirement. With rising life expectancy, the sustainability factor slowly moves away from one, reducing initial benefits at a given age more and more over time. Finally, from the age of 55 someone could apply for early retirement, maintaining the minimum of 30 years of contributions but increasing the penalty to 0.5% for each month of early retirement.

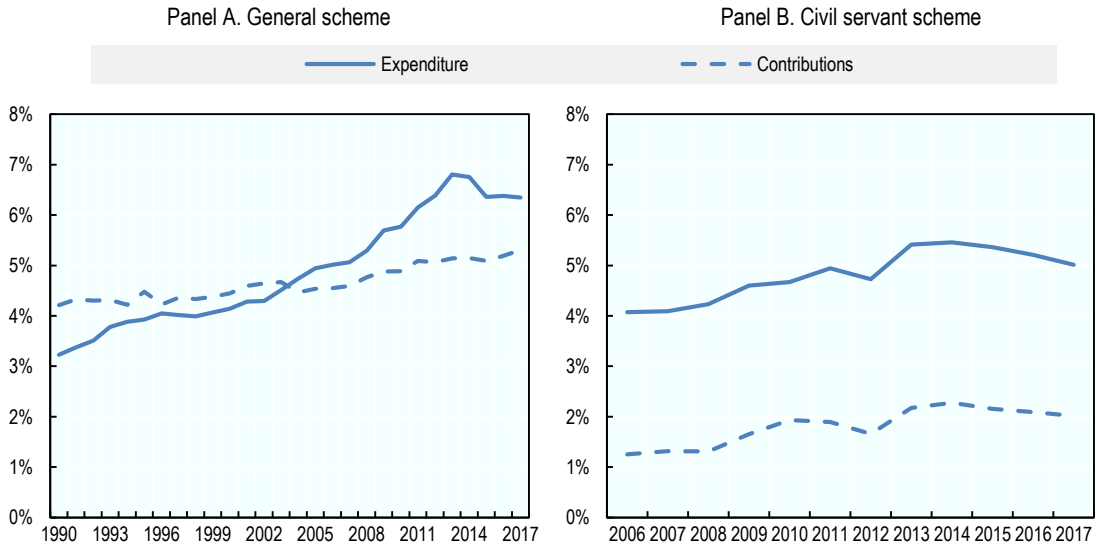
3.2.3. Main reforms during and after the financial crisis[2]

The 2007 financial crisis and subsequent sovereign debt crisis hit Portugal hard and, by 2010, the general government deficit had increased to 11.2% of GDP. Between 2011 and 2015, the receipts of pension contributions as percentage of GDP stayed relatively constant, while expenditures on earnings-related and minimum pensions kept rising until 2013 before stabilising (Figure 3.3, Panel A).

The balance of the general scheme is typically reported separately from the balance of the civil-servant scheme (Panel B). The total pension budget (combining both schemes) has been in structural deficit due to the negative balances in the civil-servant scheme: expenditures in the civil-servant scheme have been consistently higher than contributions, generating an annual deficit of about 3% of GDP since 2006, which is financed by taxes. Meanwhile new civil servants have entered the general scheme, contributing to its revenues while not yet claiming pensions.

Figure 3.3. Contributions and expenditure for the general social security scheme and the civil servant scheme

Contributions and expenditure on earnings-related and minimum pensions, % of GDP



Note: Non-contributory pensions are excluded except the top-up of minimum pensions. For the general regime, contributions are based on the proportion of social security contributions going to pensions 22.65/34.75.
Source: Ministério do Trabalho, Solidariedade e Segurança Social and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933926393

In 2011, Portugal agreed to an ambitious reform programme in the context of a EUR 78 billion IMF-EU bailout. To combat shortfalls in social security contributions an extraordinary solidarity contribution (*Contribuição Extraordinária de Solidariedade*) was introduced under the Economic and Financial Adjustment Programme.[3] The tax brackets and tax rates used of this extraordinary solidarity contribution have kept being modified. The contribution was a temporary additional tax applied to pensions in payment. Initially the tax was set at 10% for monthly pensions over EUR 5 000 (Annex Table 3.1 in the Annex).[4] Subsequently, rates were raised (up to 40% for some pension levels) and the range of pensions subject to the extraordinary solidarity contribution widened. The extraordinary solidarity contribution scheme was abolished at the end of 2016.

In addition, in 2012, early-retirement possibilities under the social security programme and the 13th– and 14th–month pension payments (for those with monthly pensions over EUR 1 100) were suspended.[5] Before the suspension of early-retirement schemes it was possible to claim an early pension at the age of 55 with at least 30 contribution years, with the pension being reduced by 0.5% for each month of anticipation. Pension indexation was temporarily suspended too. The bailout terms included measures to encourage employees to retire closer to the normal retirement age of 65, such as raising the minimum years of contributions for early retirement to 40 and raising the early retirement age to 60 (enacted in 2015). However, early retirement (with benefit reduction) at age 57 was still possible in case of unemployment (see Section 3.4).

In 2014, the retirement age was raised from 65 to 66 years and linked to life expectancy from 2016 onwards. This reform was implemented while abolishing the sustainability

factor for those retiring at or after the official retirement age. Therefore, instead of linking initial pension levels to life expectancy, now only the retirement age is linked to life expectancy while the sustainability factor remains in place for early retirement.[6] Moreover, technically, the base year used for the sustainability factor formula was changed from 2006 to 2000, implying a stronger penalty of about 7.5 percentage points, from 7.0% (2006 base) to 14.5% (2000 base) in 2014.

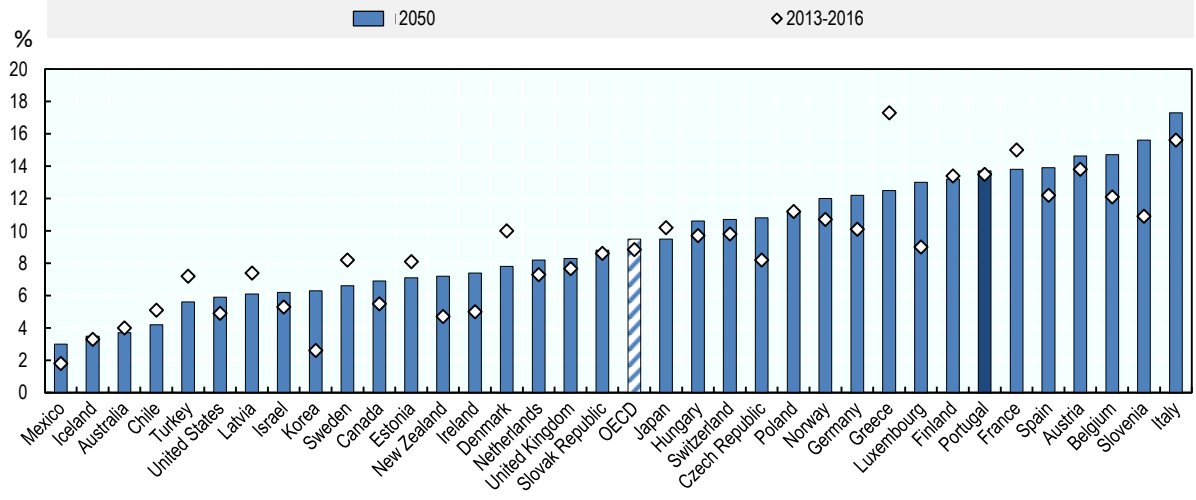
Some measures taken during the crisis were subsequently abolished through a ruling of the constitutional court. For instance, the decision to suspend the holiday and the Christmas allowance was reversed. What remained was the extraordinary solidarity contribution (until 2016) and the temporary suspension of both indexation and early retirement.

3.2.4. Future expenditures

The measures taken over the past two decades have improved the financial sustainability of the Portuguese pension system. Yet, given population ageing, public pension expenditure is expected, based on the projections by the European Commission (European Commission, 2018[3]), to rise over the medium term, before coming down to current levels around 2050 (Figure 3.4). By 2050, among the countries with the highest spending on pensions as a percentage of GDP, only France, Greece and Portugal would avoid an increase from the current levels. Still only Austria, Belgium, France, Italy, Slovenia and Spain are projected to spend more than Portugal with 13.7% of GDP in the middle of the century.

Figure 3.4. Projections of public expenditure on pensions

Public pension expenditure, % of GDP



Note: The figure for Australia is 2055.
Source: For all non-EU OECD countries except Norway (OECD, 2017[4]) and for all EU OECD countries and Norway (European Commission, 2018[3]).

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The stabilisation of future spending is the result of opposing forces. Changes in spending can be split into the change of the old-age dependency ratio, the benefit ratio, the coverage ratio, an employment effect and the labour share:

$$\frac{pension\ expenditure}{GDP} = \frac{average\ pension\ benefit\ *\ number\ of\ pensioners}{GDP}$$

$$= \frac{population\ 65+}{population\ 20\text{-}64} * \frac{average\ pension\ benefit}{average\ wage} * \frac{\frac{number\ of\ pensioners}{population\ 65+}}{\frac{number\ of\ employed}{population\ 20\text{-}64}} * \frac{wage\ bill}{GDP}$$

$$= old\text{-}age\ dependency\ ratio * benefit\ ratio * \frac{coverage\ ratio}{employment\ effect} * labour\ share$$

An increase of 1% in the old-age dependency ratio that is not offset by a decrease of 1% in the average pension relative to the average wage leads to an increase of 1% in the share of pension spending in GDP, assuming that the labour share in the economy, the coverage ratio (number of pensioners for 100 people over 65) and the employment ratio (total employment relative to the population aged between 20 and 64) are constant. This is why it matters crucially that employment increases, especially through a raise in the effective retirement age, in order to avoid that ageing directly leads to lower pensions, higher spending or both.

The old-age dependency ratio – based on fixed age boundaries – in Portugal is projected to increase rapidly. This will thus tend to mechanically increase spending on pensions. This effect alone would add 10.6 percentage points of GDP on spending by 2050. However, according to the European Commission (European Commission, 2018[3]), it is partially offset by a drop in the coverage ratio thanks to a rising retirement age (-3.0 percentage points of GDP) and by a drop in the benefit ratio of almost 30% contributing to a drop of about 5 percentage points. of GDP in spending. According to projections of the effective exit age by the European Commission, people will retire on average before the normal retirement age (one year and eight months early for men and two years and one month for women). Given the large penalty for early retirement in Portugal (see Section 3.4) this leads to a large projected drop in pension benefits and spending. Finally, the employment effect is expected to lower pension spending by an additional 2.0 percentage points of GDP.

3.3. Current outcomes of the pension system

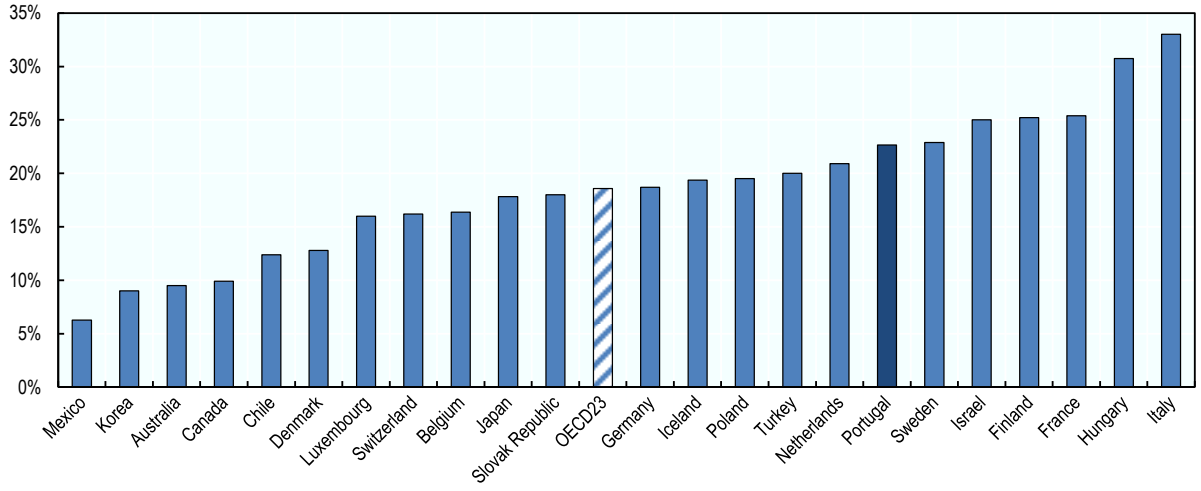
3.3.1. Contributions

In Portugal, all non-contributory pensions are financed by taxes. While the law stipulates that earnings-related pensions should in principle be financed by contributions, any deficit should also be financed by the general government budget.

Employees and employers pay social contributions equal to 11% and 23.75% of wages (34.75% in total); in total, although this does not represent an earmarked pension contribution rate, 22.65 percentage points go to the pension budget.[7] The contribution rate is relatively high, compared to the OECD average (of countries with earmarked pension contributions) of 18.6%, especially given that there is no wage ceiling in Portugal. However, it is still 10 percentage points below the maximum in Italy at 33% (Figure 3.5).

Figure 3.5. Mandatory pension contribution rates

% of wage for an average-wage worker in 2016



Note: Other OECD countries do not have earmarked pension contributions, instead pensions are paid from general social security contributions.
Source: (OECD, 2017[4]).

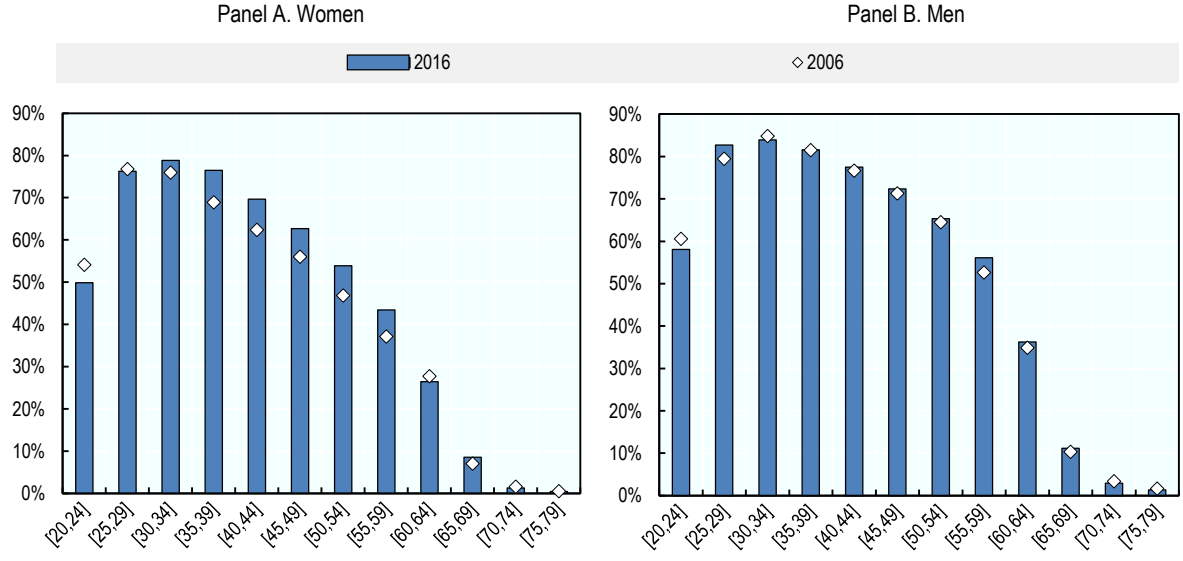
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Four million people between the ages of 20 and 65 contributed to the pension system in 2016, which is equivalent to 64% of the population in that age group to be related to an employment rate of 68%. Contributions had the following age pattern in 2016 (Figure 3.6): 50% of women and 58% of men between the ages of 20 and 24 contributed, with this share rising to a peak of 79% and 84% for 30-34, declining after age 35 and more sharply towards the retirement age.

Between 2006 and 2016, the share of women contributing increased significantly among those aged between 30 and 59 years. By contrast, during the same period, the share of men contributing has been relatively stable for most age groups. However, there has been a slight increase of 3.5 percentage points in the share of contributors aged 55-59, which likely reflects the heavier penalty for early retirement.

Figure 3.6. People contributing to the pension system

Share of population, by age group



Source: OECD calculations based on Portuguese social security data and UN population statistics.

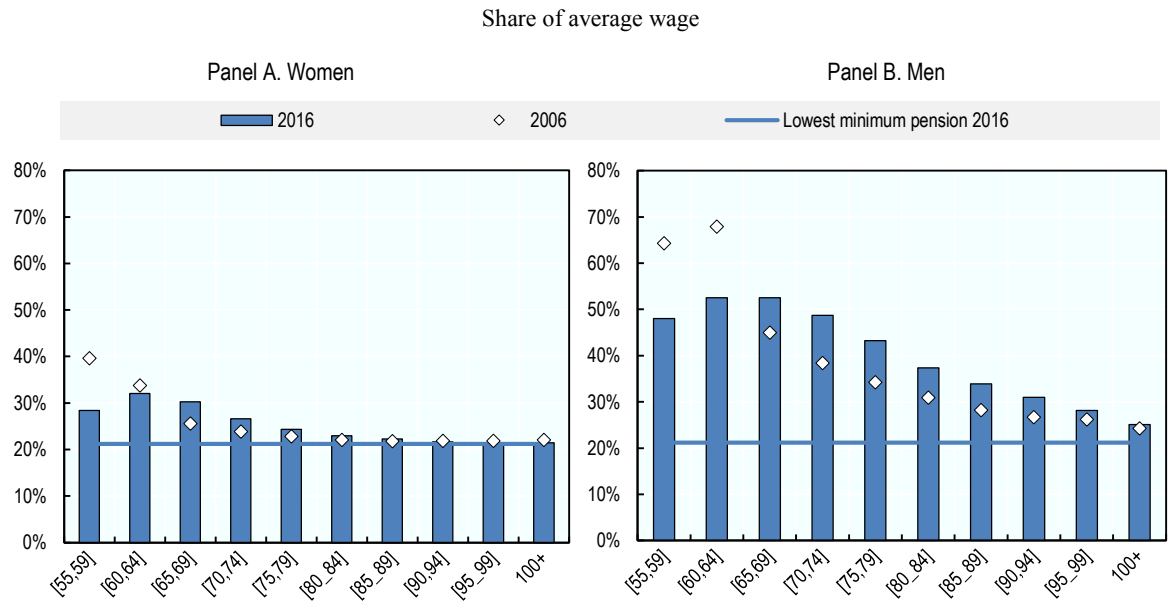
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3.3.2. Benefit levels

The average pension in payment of the general social security scheme in December 2016 was EUR 453, or 36% of the gross average wage. This is only slightly above the safety net benefit (CSI) at 28.5% of the average wage (Chapter 2). Moreover, newly granted pensions in 2016 were EUR 555 on average, 44% of the average wage. Pension benefits vary across age groups and gender (Figure 3.7). Women received an average pension of EUR 332 whereas men got EUR 583, i.e. 26% and 46% of the average wage, respectively. The gender pension gap is much larger than in other European countries, on average.[8]

Since 2006, the average pension increased from 41.5% to 45.9% of the average wage for men, and from 24.5% to 26.1% for women, partly due to past improvements in employment.[9] This increase happened for almost all age groups, especially for men. Older women (75+) tend to receive pensions that are on average close to the lowest minimum pension level (Figure 3.7, Panel A and Chapter 2).

Figure 3.7. Average earnings-related benefit in the general scheme by age and gender



Source: OECD calculations based on Portuguese social security data.

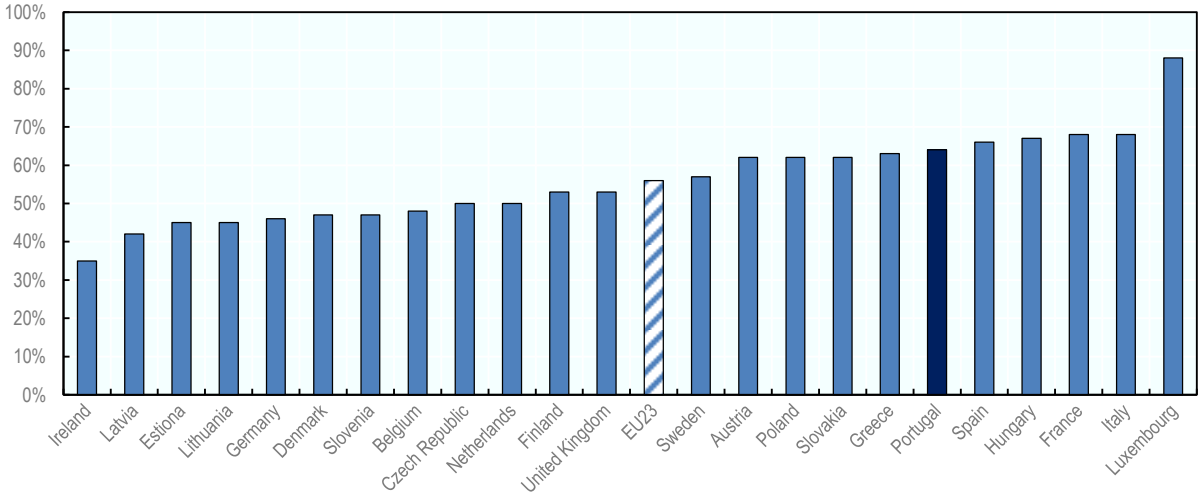
StatLink http://dx.doi.org/10.1787/888933926469

Moreover, younger age groups among both men and women, tend to receive a higher pension, due in part to the combination of wage improvements, and longer careers for women, across generations. The indexation of pensions in payments, which is less favourable over time than wage indexation, also contributes to this. Only those who retire very early (age group 55-59) now receive a lower pension than those who are slightly older (age group 60-64, who are also in early retirement). Early retirement, however, is less attractive financially given the reforms of the past decades.

Compared to other countries, Portuguese retirees have relatively high pension benefits relative to earnings of those close to the retirement age. The median gross pension of someone aged 65-74 in Portugal was 64% of median gross earnings of someone aged 50-59 in 2016 (Figure 3.8). One reason why this figure is much higher than the average pension from the general regime mentioned above is that it takes into account all pensioners including civil servants. The EU23 average is 56% with countries ranging from as low as 35% in Ireland to as high as 88% in Luxembourg. This is consistent with a high relative income of those older than 65 in Portugal (Figure 3.9). On average those older than 65 receive 95% of the average income for the whole population, against 88% in the OECD on average.

Figure 3.8. Current total pension benefits

Median individual gross pension of people aged 65-74 in % of the median individual gross earnings of people aged 50-59, 2016

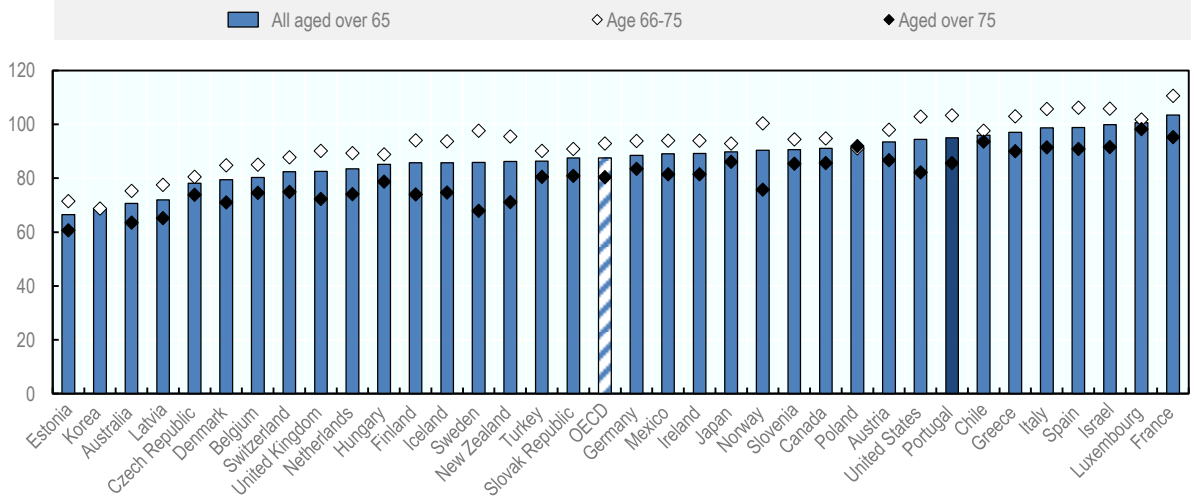


Source: European Commission, Pension Adequacy Report 2018.

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Figure 3.9. Average income of older people

Gross average income of people aged over 65, % of total population average income, 2014 or latest available year



Source: (OECD, 2017[4]).

StatLink http://dx.doi.org/10.1787/888933926507

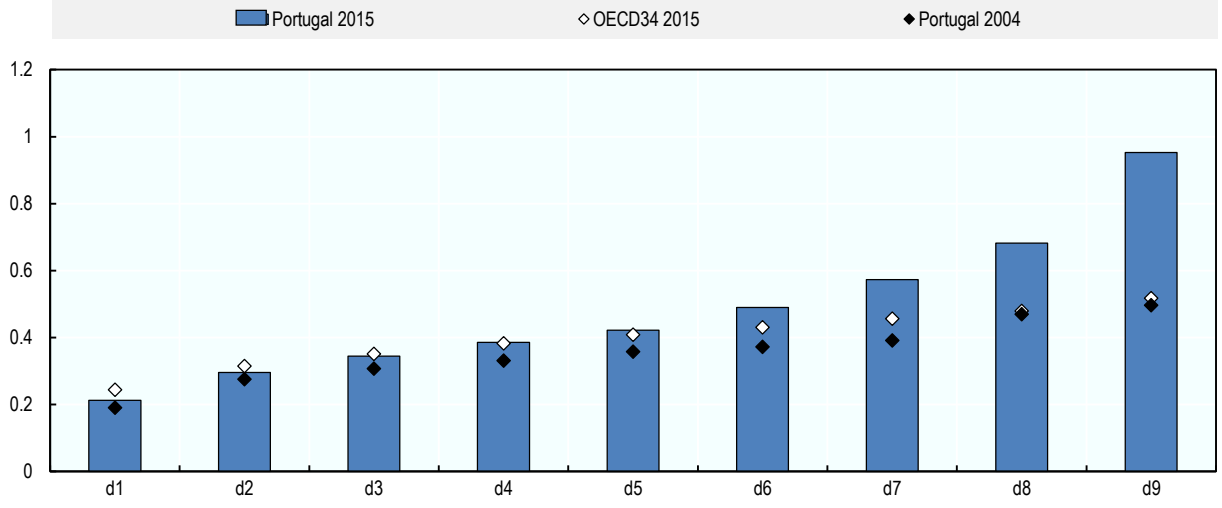
3.3.3. Inequality

Inequality in old-age social security transfers, the majority of which is made up of pension benefits, is very high in Portugal with a substantial increase over the last decade. The 10% pensioners with the highest transfers received more than 4.5 times the transfers of those receiving the 10% lowest pensions in 2015 (Figure 3.10). By contrast, for the OECD on average, this inter-decile ratio is 2.1.

The main difference relative to the OECD average comes from those receiving the higher pensions. For example, for the highest decile, the average social security transfer is more than 95% of the average wage in Portugal against 52% in the OECD on average. In some OECD countries social security only consists of flat-rate or means-tested benefits, or pensionable earnings are capped at a relatively low level, all of which compress the overall distribution. Old-age income inequality increased sharply in Portugal as the inter-decile ratio was 2.6 "only" in 2004.

Figure 3.10. Distribution of social security transfers

Pension benefits by decile as multiples of the average wage, 65+ population



Source: OECD calculations based on OECD income distribution database.

StatLink http://dx.doi.org/10.1787/888933926526

3.4. The current general earnings-related pension scheme

3.4.1. Accrual phase in the general scheme

Reference wage

Since 2002, the reference wage used to determine the pension has gradually been calculated over the best 40 years of the career.[10] Past wages are uprated using 75% of the consumer price inflation (excluding housing) and 25% of earnings growth (more specifically, earnings declared to social security). In addition, the rate at which past earnings are uprated cannot exceed inflation plus 0.5 percentage points.

Portugal is not the only country that does not uprate with wage growth. Belgium, Estonia, Finland, France, Greece and Spain all uprate with a combination of wages and prices or prices only. In the long term, wage growth is typically higher than price inflation due to productivity gains, which leads to positive real wage growth – even though in the context of the economic crisis wages have not outgrown prices in many countries, including Portugal. Yet, over time, a mix of price and wage uprating tends to lower pensions compared with the usual wage uprating. For example, based on the economic assumptions used in the OECD pension model of 1.25% for long-term real-wage growth, assuming that the other parameters are unchanged, the uprating formula used in Portugal leads to a pension which is about 16% lower for a career of 40 years or more compared with wage uprating.

Compared with wage uprating, a less favourable uprating mechanism is one way to generate savings and improve financial sustainability. For example, a shift to price uprating is generally more accepted and politically easier than a lower accrual rate that would generate the same net saving because it is less well understood by citizens. However, on top of the induced lack of transparency, it has a serious downside. While pension revenues evolve in line with wages, uprating based at least partly (75% in Portugal) on prices make spending less responsive to real-wage growth.

This makes the financial balances of the pension system highly dependent on real-wage growth, i.e. on productivity gains, which is a parameter that is typically difficult to influence for policy makers.[11] When real-wage growth is stronger than expected, pension replacement rates decrease, thereby improving finances. Conversely, when real-wage growth is lower than expected, net savings are lower than planned. The fact that pension replacement rates and pension finances become sensitive to productivity developments is an undesirable property of the schemes which do not uprate past earnings with wage growth.

With the same objective in terms of financial balances, it is therefore preferable to shift to wage uprating and lower accrual rates accordingly. For example, to keep the future replacement rate constant, shifting to wage uprating should be accompanied by a 16%-reduction in accrual rates, from about 2.22% today for a 40-year career (see below) to 1.86%, using the assumptions of the OECD pension model.

Accrual

The level of pension benefits is determined by the product of the reference wage and total accruals. For those with 15 to 20 years of earnings, the accrual rate is 2% per year of contributions. This means that the total pension is:

$$P = w * 2\% * N$$

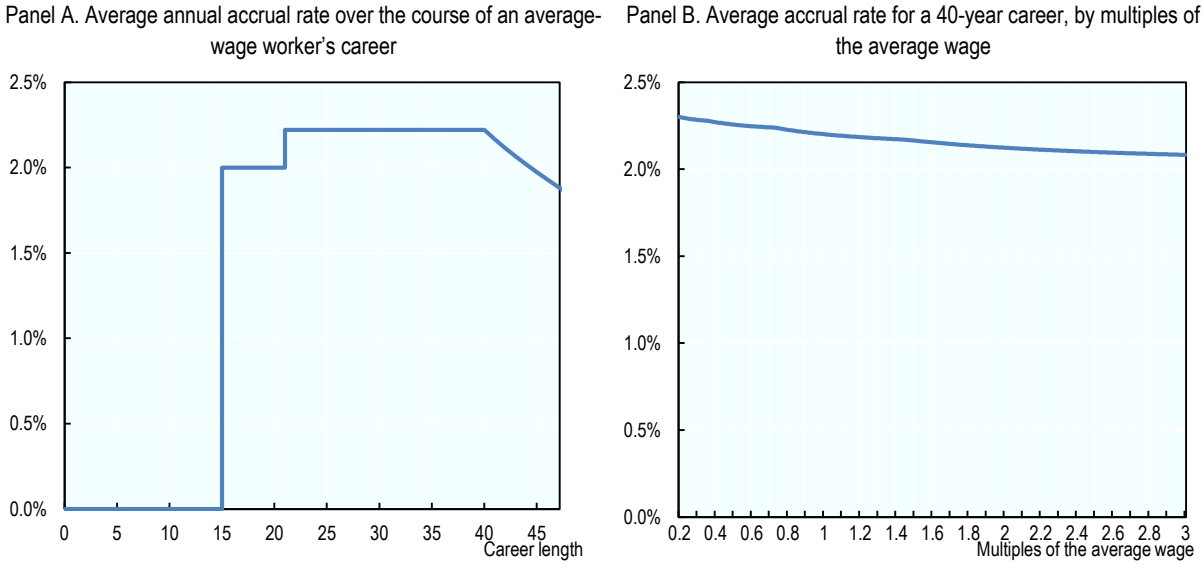
in which w is the reference wage and N is the number of years of contributions.

For more than 20 years of contributions the calculation becomes a bit more complicated. Depending on the level of the reference wage, the annual accrual rate varies between 2% and 2.3%. The thresholds for the different accrual rates are linked to the so-called social support index or *indexante dos apoios sociais* (IAS, Chapter 2). For an average-wage worker with a 40-year career the average accrual rate is equal to 2.22% (Figure 3.11, Panel A). Accruals stop after 40 years of contributions with bonuses for working longer only applied to working past the retirement age.

Someone entering the labour market at age 20 in 2018 will need to work for 47 years and two months to retire without penalty (see below). Since accrual stops after 40 years of contributions, this means that average accrual rates for longer than 40-year careers are lower than the accrual rates for the first 40 years. For example, over a the full career (47 years and two months), the average accrual rate for an average-wage worker is equal to 2.22% * 40/(47+2/12) = 1.88%.

At the end of someone's career, the average accrual rate depends on the reference wage in order to ensure that those with lower wages have higher replacement rates for the same career length. That is, the average accrual rate decreases slightly with the reference wage. For example, someone who earns half the average wage over a 40-year career has an average accrual rate of 2.26% compared to 2.08% for those earning three times the average wage (Panel B). This 0.18 percentage-point difference (2.26% - 2.08%) between these cases implies a 7.2 percentage-point difference in the total accrual rates (90.4% for low-wage earners versus 83.2% for high-wage earners).

Figure 3.11. Accrual rates



Source: OECD calculations based on information from Ministry of Labour, Solidarity and Social Security.

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Accrual rate comparisons across countries should be carried out with some limitations in mind. Accrual rates capture only one of the elements influencing the pension replacement rates. First, they are expressed as a percentage of the earnings that are "covered" by the pension system, which may differ across countries in particular due to various earning thresholds. Second, they do not account for measures such as the uprating of past wages and sustainability factors, which might affect *effective* accrual rates. Yet, overall, annual accrual rates around 2% are record high among OECD countries (Figure 3.12).

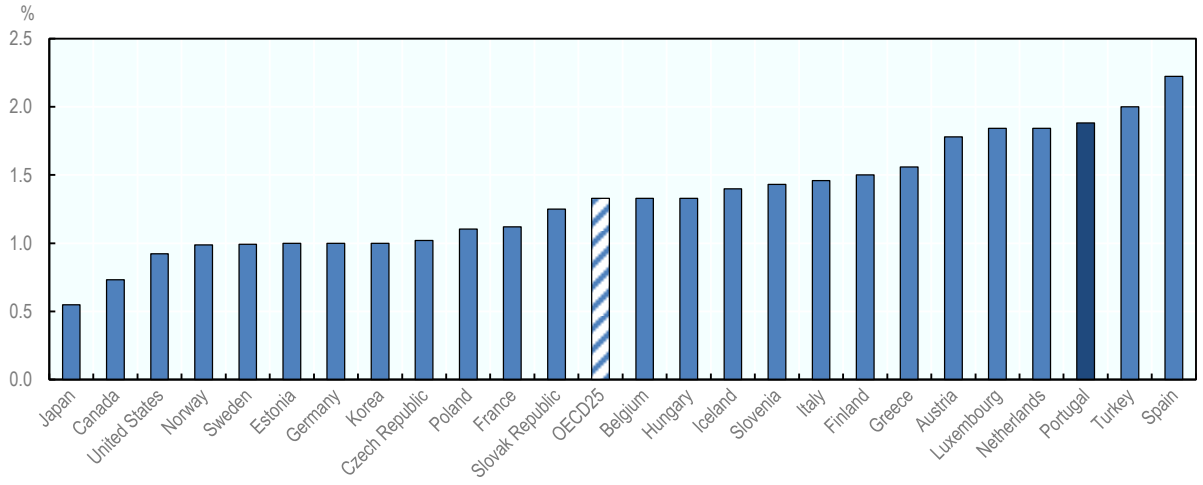
Portugal has one of the higher accrual rates in the OECD at 1.88% on average over the full career. Only Turkey and Spain have average accrual rates of 2% and over. Austria, Luxembourg and the Netherlands also have high annual accrual rates of about 1.8%. Several countries have much lower rates, such as Estonia, Germany, Norway and

Sweden, closer to 1%, with Canada, Japan and the United States having the lowest rates in line with low contribution rates.

High contribution rates help finance high accrual rates. Yet, taking into account the contribution rate of 22.65% and the parameters built into the pension system in Portugal, the estimated annual real rate of return for a full-career worker is around 1.9%. Given the progressive features embedded in the system, the rate of return for less favourable careers is higher, except for early retirement which is heavily penalised. However, the internal rate of return of a financially sustainable pay-as-you-go scheme is the growth rate of the wage bill. Given the expected fall in the size of the labour force (Chapter 1), this internal rate of return is therefore lower than the long-term wage growth rate, which is assumed to equal 1.25% per year in real terms in the OECD pension model. That is, due to high accrual rates while accounting for contribution rate levels, the rates of return promised by current rules are significantly higher than the internal rate of return the pension system finances by itself.

Figure 3.12. Future average accrual rate for average earners

Average accrual rate over the full career



Note: Accrual rates vary by earnings in the Czech Republic, Portugal, Sweden, Turkey and the United States. Accrual rates vary by years of service in Greece, Hungary, Luxembourg and Spain. A full career is from age 20 (in 2018) to the normal retirement age.
Source: (OECD, 2017[4]).

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3.4.2. Retirement phase

Eligibility

Eligibility for an old-age pension requires contributions during at least 15 calendar years. From 1994, a calendar year is considered to be at least 120 working days with recorded earnings and contributions. Years with less than 120 days of earnings registration may be aggregated to complete a calendar year. The number of days that exceeds 120 days (either from combined years or single years) are not taken into account for the count of another calendar year.[12]

Retirement age

The statutory retirement age at which someone is eligible for a full old-age pension was 66 years in 2014. From 2015 onwards, two-thirds of life expectancy gains at age 65 (with a lag of two years) are passed onto increases in the retirement age:

$$m_t = 2/3 \sum_{i=2015}^{t} 12\ (LE_{i-2}^{65} - LE_{i-3}^{65}) = 8 * (LE_{t-2}^{65} - LE_{2012}^{65})$$

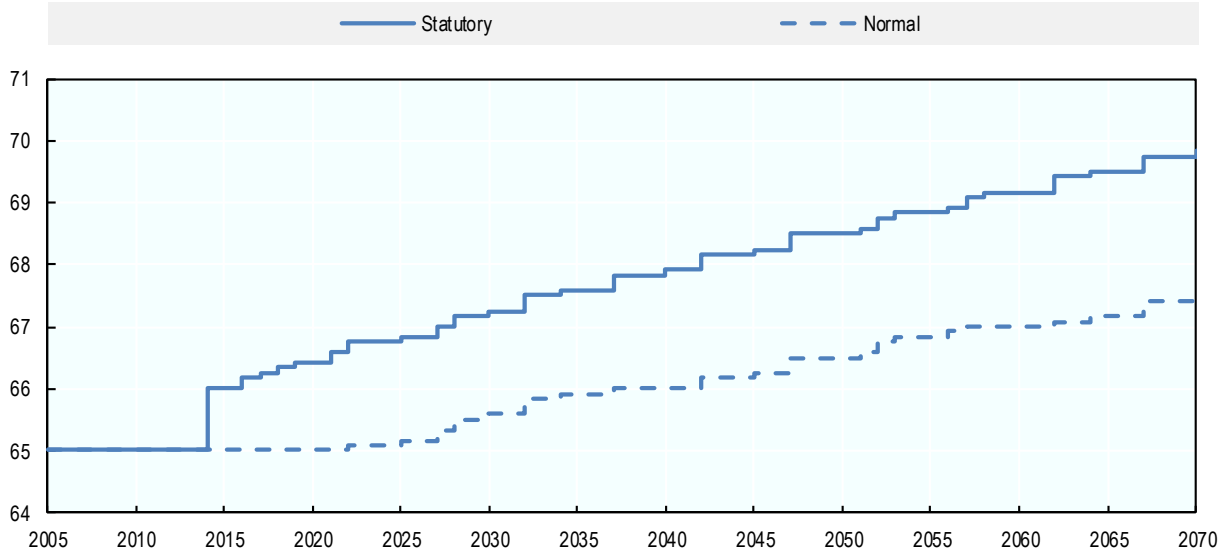
in which m is the number of months to increase compared to 2014 and LE^{65} is life expectancy at age 65 expressed in years.

For instance, in 2018, the legal retirement age was set at 66 years and 4 months, considering two-thirds of the gains in life expectancy between 2015 and 2016. The increase in the retirement age is rounded to the nearest full month.

However, from age 65, the retirement age without penalty can be reduced (from the legal retirement age) by four months for each year of contributions exceeding 40.[13] Thus, for someone with a full career, the pass-through from life expectancy gains to changes in the normal retirement age is actually one-half (= 2/3 divided by (1+1/3) as the reduction of four months per year amounts to one-third).

Plotting the retirement age over time, using life-expectancy projections to estimate future retirement ages based on current rules, the statutory retirement age will reach 69.5 in 2066 (Figure 3.13). However, taking into account the reduction for contributory careers over 40 years, this means that those entering the labour market at age 20 in 2018 could retire with a full pension after a full career at age 67 and two months in 2066. This is the future normal retirement age in the OECD simulations in this section. Someone who entered the labour market at age 20 can still retire at age 65 in 2022 after a full career.[14]

Figure 3.13. Future retirement ages



Note: The normal retirement age is defined as the age at which someone who entered the labour market at 20 can retire after a full career without any reduction to the pension.
Source: OECD calculations based on information from Ministry of Labour, Solidarity and Social Security.

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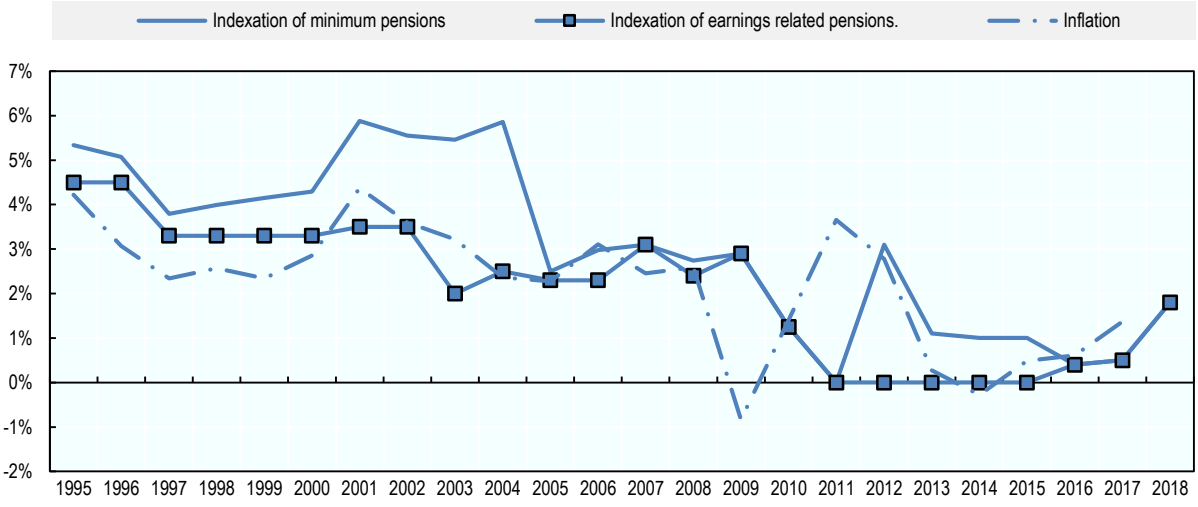
Indexation

Indexation of pensions in payment used to be discretionary in Portugal. Pensions were indexed according to salaries, prices and other politically relevant macro-economic figures, but it was up to policy makers to determine the exact amount of indexation. This type of indexation allowed for extensive political discretion in pensions adjustment, including extraordinary increases.

In 2007, detailed rules for indexing pensions, taking into account the evolution of prices and GDP growth, were adopted for the first time (see below) but then suspended for several years due to the financial crisis and the deterioration of public finances. Between 2011 and 2015, only low pensions were indexed.[15] In addition, there was also an extraordinary increase of up to EUR 10 in monthly pensions (from the general regime and CGA) lower than 1.5 times IAS in 2017 and 2018. The increase was limited to EUR 6 for pensions that had been increased between 2011 and 2015.

Indexation of minimum pensions has been almost consistently larger than price inflation since 1990 with the exception of a few years since the financial crisis (Figure 3.14).[16] Indexation of earnings-related pensions, on the other hand, was below inflation on several occasions, most notably when indexation was suspended. On average since 2000, minimum pensions were indexed by inflation plus 0.7 percentage point while earnings-related pensions were indexed by inflation minus 0.4 percentage point.

Figure 3.14. Annual indexation rates



Source: Ministry of Labour, Solidarity and Social Security and OECD statistics.

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The automatic indexation rule was reinstated in 2016 and slightly adjusted in 2017 by raising the threshold of the lowest pension bracket (Table 3.2). There are different rules depending on the levels of pensions, with the lowest pensions being indexed with the same formula used for the social support index (IAS), from inflation to inflation plus 20% of real GDP growth depending on the level of growth. The lower the pensions, the more favourable the indexation formula, with an order of magnitude of the yearly difference of about 0.5-0.7 percentage points (Figure 3.15).

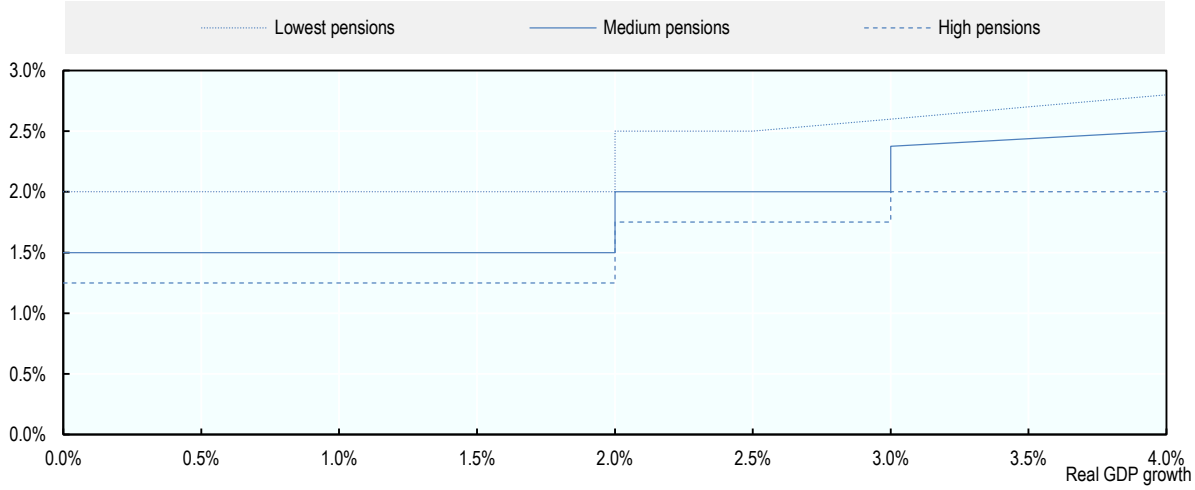
This means that as people age during retirement, the differences between low and high pensions are gradually compressed. If, for instance, annual real-GDP growth is less than 2%, someone with an initial pension of 2.5 times the average wage (more than six times the IAS) will experience a real drop of 7.1% over a period of ten years to 2.1 times the average wage based on OECD assumptions used in pension modelling.[17] During the same period, someone with a pension up to two-thirds of the average wage (two times the IAS) will not experience a real drop in pension benefits ending up at 59% of the average wage. Hence after ten years, the relative pension in these cases falls from by 7% from 3.75 to about 3.5.

Table 3.2. Pension indexation rules

Real GDP growth vs pension bracket	Real GDP growth < 2%	2% = Real GDP growth < 3%	Real GDP growth > 3%
IAS and Pensions up to 2 IAS	Inflation	Inflation + 20% real GDP growth (minimum: Inflation + 0.5pp)	Inflation + 20% real GDP growth
Pensions between 2 IAS and 6 IAS	Inflation - 0.5pp	Inflation	Inflation + 12.5% real GDP growth
Pensions over 6 IAS	Inflation - 0.75pp	Inflation - 0.25pp	Inflation

Figure 3.15. Indexation of pensions in payment

Assuming a 2% annual inflation rate for three different levels of pensions



Source: OECD calculations based on information from Ministry of Labour, Solidarity and Social Security.

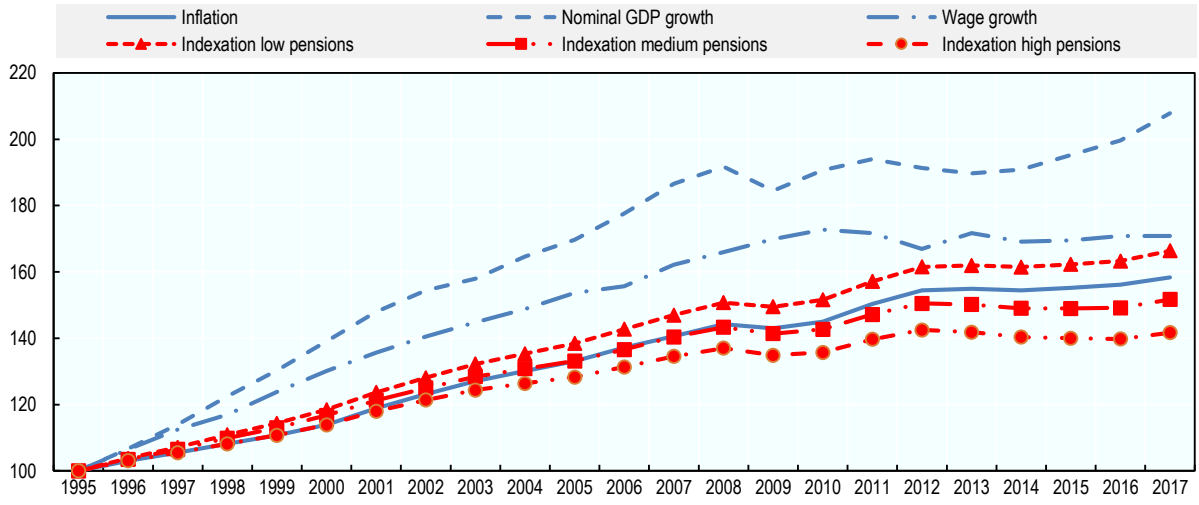
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The medium pension bracket (Table 3.2) starts at 2 IAS, which is roughly equal to two-thirds of the average wage. These pensions are indexed below inflation if real GDP growth stays subdued. Sub-inflation indexation should as much as possible be limited to high pensions. Also, the jump in the indexation pattern as a function of GDP growth is not ideal and could be smoothed as argued in Chapter 2.

Between 1995 and 2017 real GDP grew on average by 1.4% per year, exceeding 2% between 1995-2000, in 2007 and in 2017 only. If the current indexation rules had been applied in the past, low pensions would have outperformed prices, growing slightly less

than wages (Figure 3.16). Median pensions would have largely followed prices except for the period since the start of the financial crisis in 2007. Finally, higher pensions would have risen with prices until 2001 but fallen behind rapidly afterwards.

Figure 3.16. Current indexation rule applied from 1995



Source: OECD calculations based on information from Ministry of Labour, Solidarity and Social Security.

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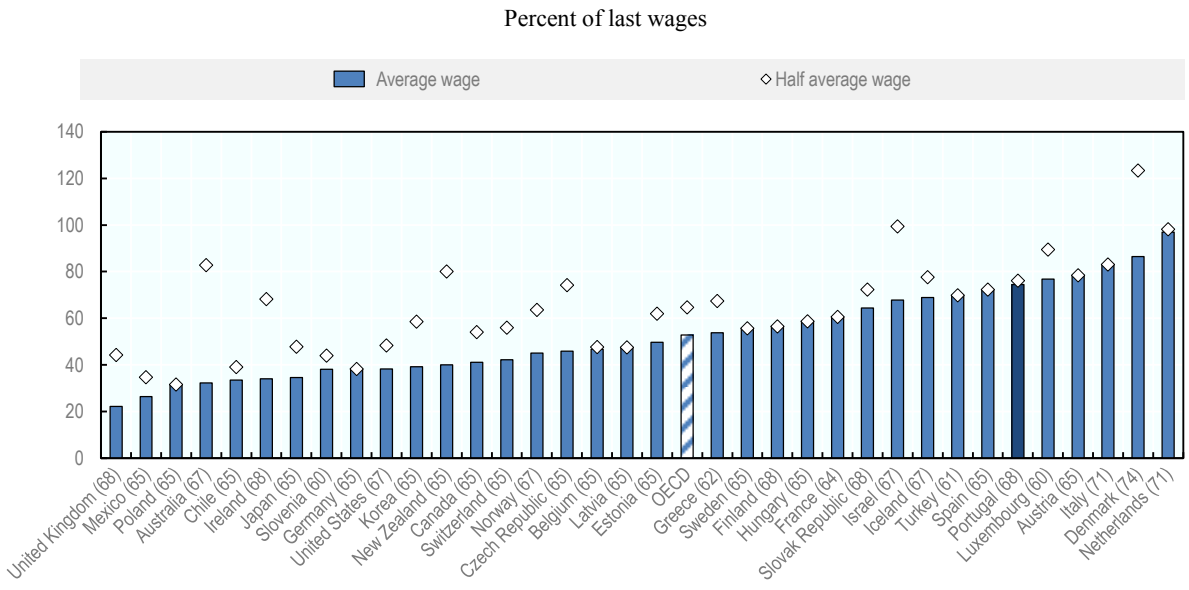
Gross replacement rates

Phased in changes in the benefit formula of the Portuguese pension system will have a profound impact on pensions. The European Commission estimates that the replacement rate of a full-career average-wage worker entering at age 25 and retiring at the earliest age possible without penalty in 2056 will be 8.6 percentage points lower than someone retiring in 2016, implying a lower pensions of 11% (European Commission, 2018[5]). This is one of the largest drops in replacement rates in Europe.

Nevertheless, replacement rates will still be relatively high in international comparison. For the OECD base case scenario – someone entering the labour market at age 20 in 2018 and retiring at the normal retirement age after an uninterrupted career – the gross replacement rate for an average-wage worker will be 74.5% compared to an OECD average of 52.9% (Figure 3.17).[18] Only Austria, Denmark, Italy, Luxembourg and the Netherlands have a higher future replacement rate.

Low earners (half the average wage) with a full career get a similar replacement rate (76.1%) as average-wage workers in Portugal. This is because accrual rates are only mildly progressive as shown above. By contrast, for the OECD average the replacement rate for low-wage earners is about 12 percentage points higher than for the average-wage case. The reason for higher replacement rates for low earners in some countries is because of more progressive mandatory pension systems. The most extreme case is New Zealand where everyone gets the same flat-rate benefit, the basic pension, regardless of earnings. However, at 64.6% the OECD average replacement rate of low earners is still much lower than in Portugal.

Figure 3.17. Future gross replacement rates for full-career workers



Note: Entry at age 20 in 2016 (2018 for Portugal), retirement at the normal retirement age at the average or half the average wage throughout an entire uninterrupted career. Normal retirement age in brackets.
Source: OECD pension model.

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Beyond accrual rates, one reason for the relatively high replacement rate in Portugal is the comparatively high normal retirement age. Based on current legislation, it will increase from 65 in 2016 to 67 years and two months in the future, against 64.3 and 65.8 on average in the OECD. Given Portugal's pension rules, retiring at the future OECD average normal retirement age of 66 years would generate a replacement rate of 48.3% for the average-wage worker - compared with 52.9% in the OECD – sharply below 74.5% at age 67 years and two months. Among this reduction of 26.2 percentage points, only three points come from lost accrual, the rest stemming from the penalty on early retirement (see below).

Moreover, the full-career assumption is a best-case scenario. In 2016, the average contribution period was equal to 26.5 years for women and 31.3 years for men (Chapter 2). Someone who works only 31 years until the future official retirement age (70 in 2068) will have a pension that is about 20% lower than in the full-career case. Chapter 5 provides greater details about the impact of incomplete careers on pensions. In addition, the impact of early and late retirement on pension benefits are discussed below. Overall, as shown in the preceding section, the current average pension from the general scheme is relatively low at 36% of the average wage, reflecting low wages and employment in the past.

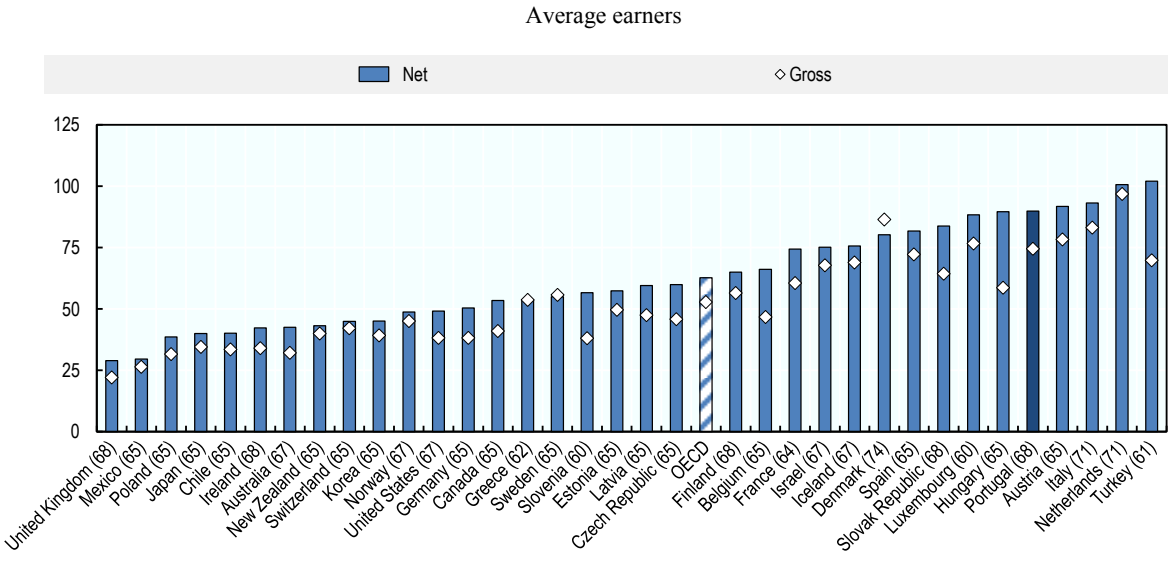
Net replacement rates

Pensioners usually pay a lower average income tax rate than workers since pensions are typically lower than labour earnings and tax systems are progressive. They also pay a lower contribution rate as for example no unemployment and pension contributions are

levied on pension benefits. In addition, in several OECD countries, pensions are less taxed than labour income at the same income level. More than half OECD countries have a higher tax-free allowance and some countries like Turkey do not tax pensions at all. In Portugal, pensions are liable for tax purposes in the same way as labour income.[19] Pensions are exempt from social security contributions.[20]

The net replacement rate (individual net pension entitlement divided by net pre-retirement earnings) matters more to individuals than the gross replacement rate, as it reflects their disposable income in retirement in comparison to when working. For Portugal, the future net replacement rate for the full-career average-wage worker is 89.9% compared to a gross replacement rate of 74.5% (Figure 3.18). On average in the OECD, the net replacement rate is 62.9%, well below Portugal's replacement rate, which is the fifth highest in the OECD.

Figure 3.18. Future net pension replacement rates



Note: Normal retirement age in brackets.
Source: OECD pension model.

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3.4.3. Early and late retirement

Rules for early retirement

Retirement before the normal pension age is possible for every insured person aged at least 60 who have completed a contribution period of 40 calendar years with registered earnings. In case of long-term unemployment (having exhausted access to unemployment benefits) an early pension is possible from age 62, provided that the unemployed person was 57 or older when she became unemployed and completed the minimum qualifying period (15 years) (Chapter 5). For those aged 52 or over when becoming unemployed with contributions for 22 years, an early pension is also possible from the age of 57.

In all of these cases pension benefits are reduced. First a general reduction, based on the sustainability factor (which is still in place for early retirement), is applied regardless of

the number of months of early retirement. The sustainability factor for the year of retirement is calculated as life expectancy at age 65 in 2000 divided by life expectancy at age 65 in the year before retirement:

$$SF_t = \frac{LE_{2000}}{LE_{t-1}}$$

This reduction – one minus the sustainability factor - is equal to 14.5% in 2018 and if consistently applied it is expected to rise to 31.0% in 2065.

On top of that, a reduction of 0.5% is applied for each month of early retirement preceding the normal retirement age. For example, in 2018 the official retirement age is 66 and four months. Retiring one year earlier for someone with 40 years of contributions would lower benefits by 6% on top of the sustainability factor.

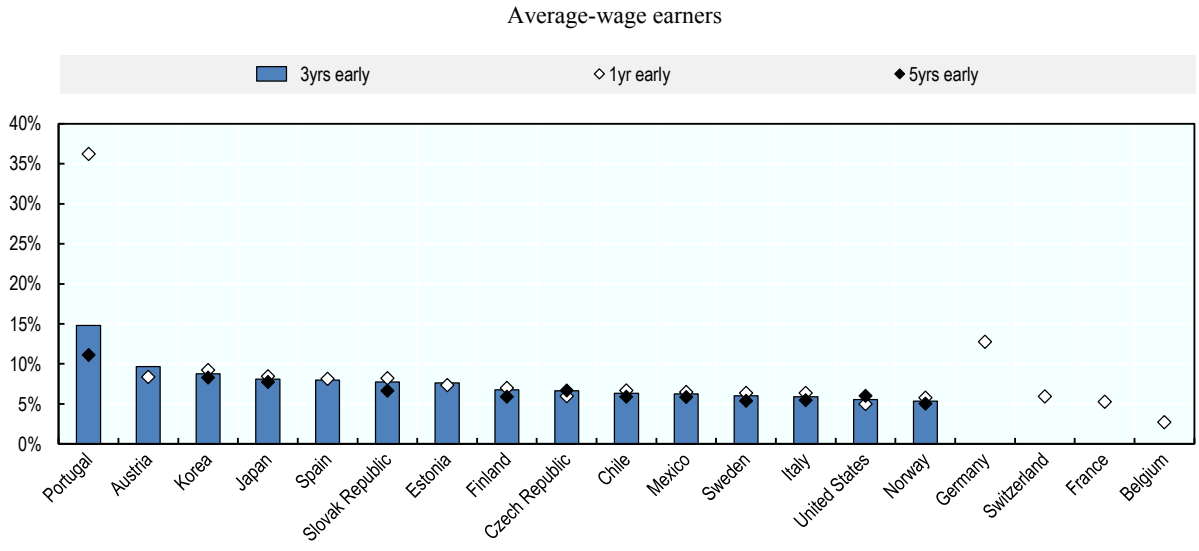
Early retirement because of long-term unemployment results in a lower penalty. Only the sustainability factor is applied in the case of retiring because of long-term unemployment after the age of 62. Someone retiring between ages 57 and 62 because of long-term unemployment will only have a reduction of 0.5% for each month of retirement before age 62 on top of the sustainability factor.

Portugal stands out among other OECD countries in terms of penalties for early retirement. Retiring one year earlier than the normal retirement age in Portugal will lead to a permanent benefit reduction of 36.2% (Figure 3.19).[21] The largest part of the penalty in Portugal comes from the sustainability factor, which now applies to early retirement only. On top of the sustainability factor the benefits are reduced by 0.5% per month of early retirement. The country with the second highest penalty for one year of early retirement is Germany with a 12.8% penalty.

Since the sustainability factor is applied for early retirement regardless of the distance to the retirement age, the average penalty per year of early retirement goes down with the number of anticipation years. With more months of early retirement, the direct monthly penalty gains in importance. Overall, three years of early retirement will reduce the pension with 14.8% per year of early retirement (or 44.5% in total). On average for other countries where such early retirement is possible (the 14 countries which appear with Portugal on the left of Figure 3.19), the average impact of retiring three years earlier on benefits will be a loss of 7% per year of anticipation, less than half the penalty in Portugal. In these countries, this allows older workers to choose the retirement age more flexibly several years before the normal retirement age, with adjustments of benefits which lower or neutralise the financial cost without overly penalising early retirees. In Portugal, future penalties are prohibitively large. Early retirement without additional penalty beyond the sustainability is possible from age 62 through unemployment (Chapter 5).

Given longer life expectancy, the age of 60 for the eligibility to standard early retirement is too low. This age reference contributes to shaping social norms and influencing behaviours by both employees and employers about working at older ages; it is not consistent with other efforts to enhance the labour supply of older workers. Moreover, as it is associated in Portugal with very detrimental penalties, maintaining such a low age threshold could induce people to make bad choices. This is difficult to justify by the saving of public money generated.

Figure 3.19. Negative impact on annual total benefits when claiming pensions early

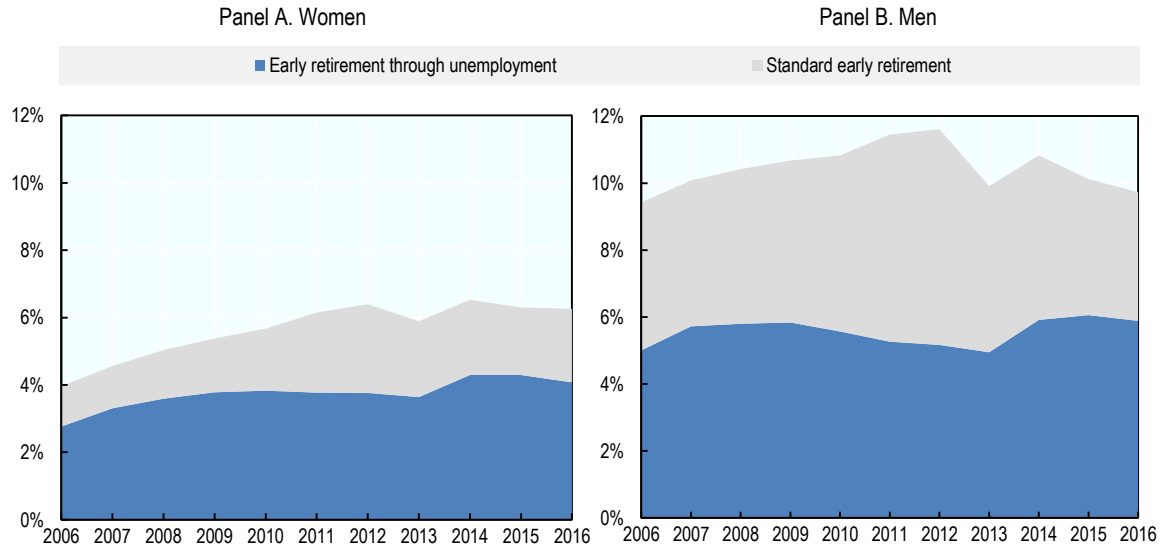


Source: OECD calculations.

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The share of people taking early retirement has gone up since 2006 among women. In 2006, 9.4% of men and 4.0% of women aged 55-69 received early-retirement benefits (either standard early-retirement benefits or because of long-term unemployment) (Figure 3.20). By 2016, these numbers rose to 9.7% and 6.3%, respectively.[22] Only the incidence of normal early-retirement for men was lower, but this decline was more than offset by the increase in early retirement because of long-term unemployment. One potential reason for the divergent directions of the two early-retirement schemes is the heavy penalty associated with standard early retirement compared to the reduced penalty for early retirement because of long-term unemployment. For women both forms of early retirement have risen.

Figure 3.20. Share of 55-69 receiving early retirement benefits



Source: OECD calculations based on Portuguese social security data.

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Rules for late retirement

It is also possible to defer retirement and remain in the labour market beyond the legal retirement age.[23] In Portugal 6.8% of the 55-69 year olds even combine working and receiving a pension, slightly more than in the EU on average (6.2%) (OECD, 2017[4]). When deferring retirement, the old-age pension is increased by a bonus per month of deferral (Table 3.3), which rate varies between 0.33% and 1% according to career length. The 1% bonus seems large, but as discussed above, pension entitlements before any bonus applies stop accruing after 40 years of contributions. Moreover, pension benefits including bonus cannot exceed 92% of the reference wage.

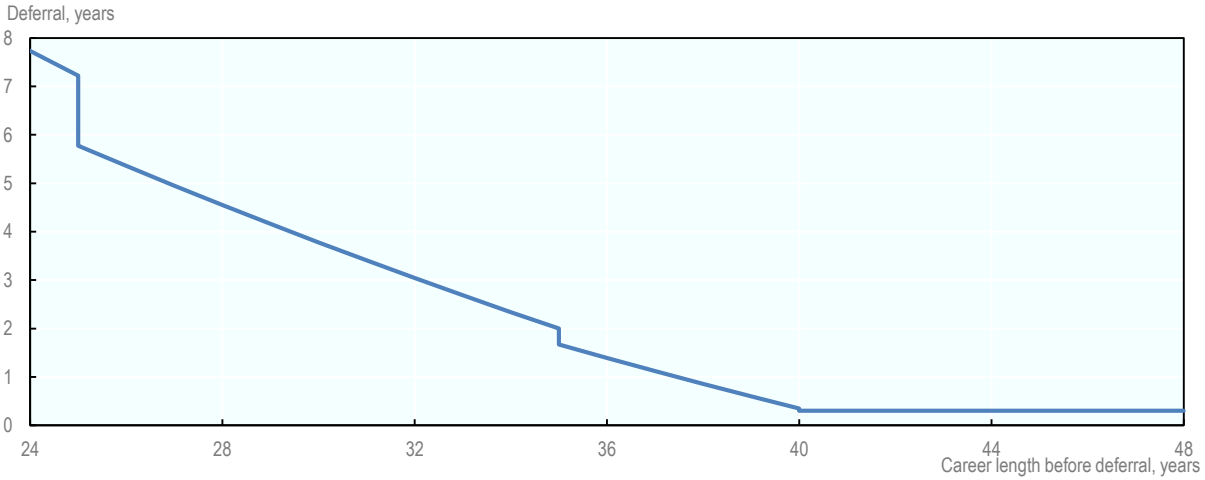
Table 3.3. Bonus per month of deferred pension

Contribution years	Monthly bonus rate
From 15 to 24	0.33%
From 25 to 34	0.50%
From 35 to 39	0.65%
40 or more years	1%

The combination of this bonus structure and the 92% cap blurs the picture of the actual incentives to work longer after the retirement age. Depending on the career length, given the bonus rules, the 92% cap is reached in some cases after a short extension only (Figure 3.21). For example after a career of 27 years, given the annual accrual rate of 2.22% (Figure 3.11 above), the ceiling is reached after five years (60 months) of deferral. Someone with a 40-year (or longer) career is eligible for the maximum deferral rate (1% bonus per month of deferral), but the ceiling applied to total accruals is already reached after deferring for 0.3 years (four months). After that accruals stop.

Figure 3.21. Years of deferral until 92% accrual ceiling is reached

Average-wage earners



Reading note: The 92% cap is reached by postponing retirement by five years after a 27-year career. After a career of 27 years, the annual accrual rate for an average-wage worker is 2.22% (Figure 3.11, Panel A), leading to 59.9% total accruals. Postponing retirement for five years (60 months) would lead to a bonus of 5*12*0.5% = 30% and 5*2.22%=11.1% additional accrual, implying that the maximum accrual of 92% is exceeded (92% < (59.9%+11.1%)*130%=92.4%).
Source: OECD calculations.

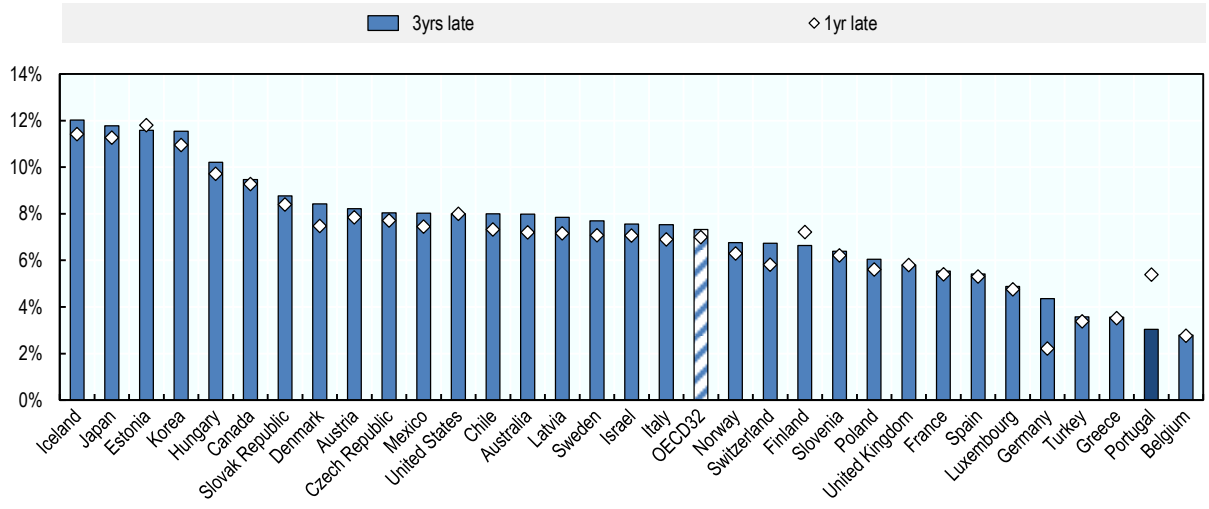
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Deferring a pension beyond the retirement age increases benefit levels in many countries significantly (OECD, 2017[4]). Figure 3.22 shows the impact of deferring pensions and continuing to work for a full-career worker on annual benefits summed over all pension schemes. Across OECD countries, the combined overall increase – from the deferral rate, additional entitlements and benefit indexation - averages about 7.5% per year of deferral, and the yearly average bonus depends only slightly on the length of the deferral. Four countries record a large impact of working longer on pensions, with bonuses much larger than implied by actuarial neutrality (OECD, 2017[4]): Estonia, Iceland, Japan and Korea.

In Portugal, given high accrual rates and the 92% cap, delaying retirement increases benefits only slightly as the uprating of past wages is slightly more favourable than indexation of pensions in payment. This means that for the first year of continuing to work and deferring pensions an average-wage worker receives 5.4% extra, less than in most other countries. For someone at half the average wage the bonus is even lower as accrual rates are higher at lower wages, which makes the 92% ceiling more quickly binding.

Figure 3.22. Impact on annual total benefits when working and deferring pensions by up to three years after the normal retirement age

Full-career average earners



Note: Figures for three years late have been annualised, so a 6% increase shown in the chart means a total of 18% for three years. It is not possible to defer the basic pensions in Ireland, the Netherlands or New Zealand so they are not included in the chart. In France, the one-year bonus applied to the occupational pension, between 10 and 30% depending on the length of deferral, has been spread across the entire retirement period based on the annuity factor.
Source: OECD pension models.

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3.5. Other pension schemes

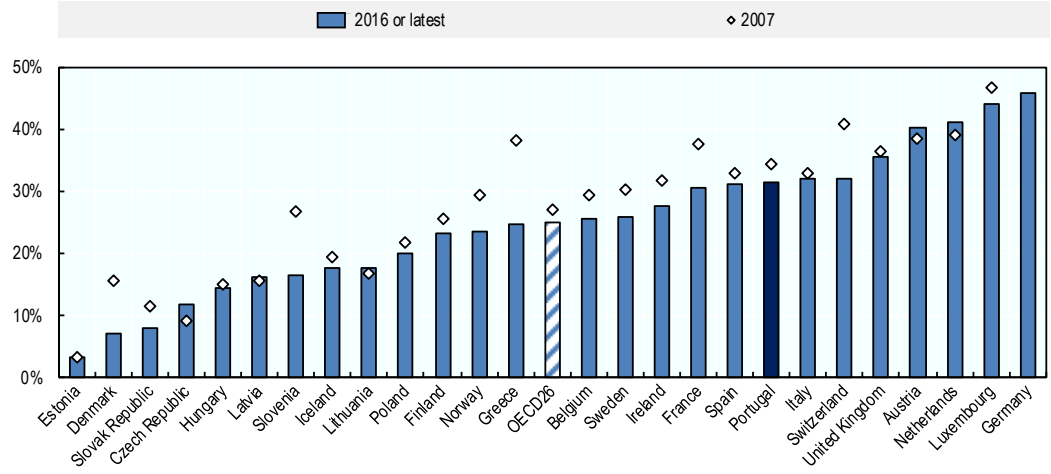
3.5.1. Survivor pensions

Women's employment rates have historically lagged behind men's and female pensioners are typically more reliant on first-tier pensions, their partner's pensions or survivor pensions. As a result, poverty levels are higher among older women than among older men in all OECD countries, with the over-75s more at risk of poverty than the 66-to-75 year-olds due to cohort effects and indexation (OECD, 2017[6]).

The average gender pension gap, measuring how much lower pensions are for women compared to men, was 31% in Portugal in 2016, above the OECD26 average of 25%. Austria, Germany, Luxembourg and the Netherlands record a gender gap that is larger than 40% (Figure 3.23). However, with growing female employment women's entitlements to earnings-related pensions have been increasing which will contribute to narrowing the gap in many countries.

Figure 3.23. Gender gap in pensions

2016 or latest



Note: The gender gap in pensions is defined as: (1-(women's average pension / men's average pension))*100. "Pensions" include public pensions, private pensions, survivor's benefits and disability benefits. The gender gap in pensions is calculated for people aged 65 and older only.
Source: OECD calculations based on EU-SILC 2017 data for all countries except Germany; European Commission calculations based on EU-SILC for Germany.

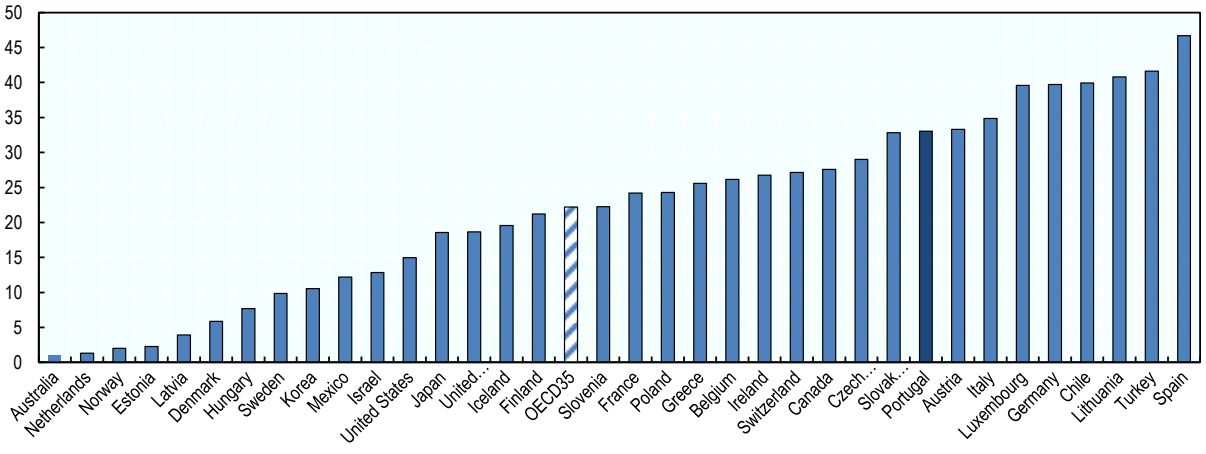
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Survivor pensions, like old-age pension in general, have historically pursued two main goals. First, they protect widows or widowers from poverty risks when the pension income of a spouse is no longer available. Survivor pensions prevent disposable income from falling to low absolute levels. Second, they contribute to consumption smoothing, insuring against the decrease in standards of living relative to the situation before the death of a spouse.

Survivor benefits, in particular, play an important role in reducing gender pension gaps as almost 90% of recipients of survivor pensions in the OECD are women (OECD, 2018[7]). This is because women accrue less own pension entitlements, live longer and are generally the younger partner in couples. On average across OECD countries, there is one recipient of survivor pensions for each 4.5 recipients of old-age pensions (Figure 3.24). While there are few recipients of survivor benefits in Australia and Northern Europe, there is close to one recipient for each two old-age pension recipients in Spain and one in three in Portugal where 82% are women.

Figure 3.24. Number of recipients of survivor pensions in 2014

Recipients of survivor pensions per each 100 recipients of old-age pensions



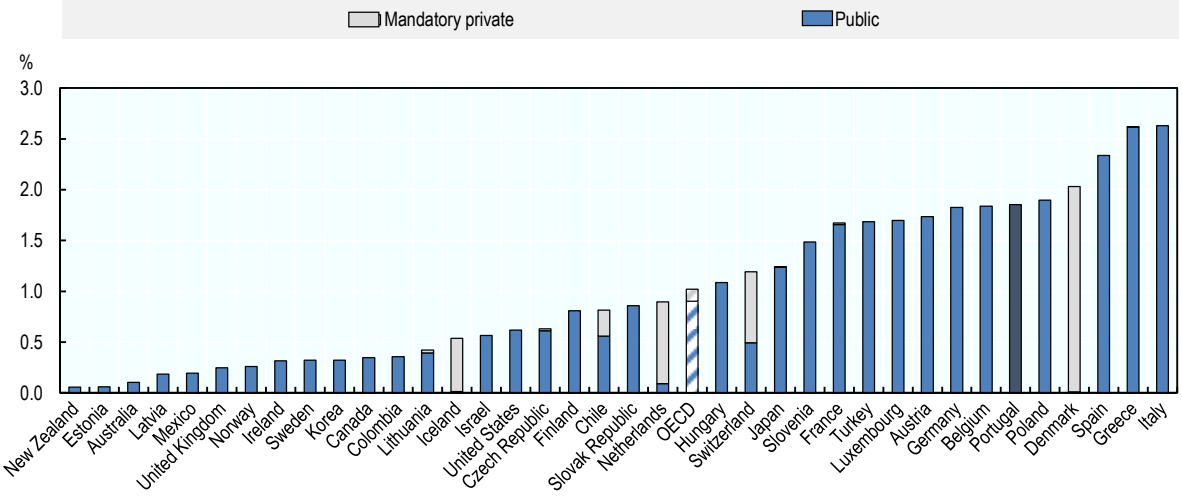
Note: See (OECD, 2018[7]).
Source: (OECD, 2018[7]).

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Spending on survivor pensions is a substantial category of social expenditure in Portugal, amounting to 1.9% of GDP against 1.0% on average in the OECD. Only Denmark, Greece, Italy and Spain spend substantially more (Figure 3.25).

Figure 3.25. Expenditures on survivor benefits

Total expenditures from mandatory schemes, % of GDP, 2015 or latest



Note: Data on survivor pensions in mandatory private schemes in Australia, Denmark (ATP), Estonia, Israel, Mexico, Norway, the Slovak Republic and Sweden are not available.
Source: (OECD, 2018[7]).

StatLink http://dx.doi.org/10.1787/888933926811

In Portugal, in case of death of a spouse, the surviving spouse, ex-spouses, civil partner and descendants are entitled to a survivor pension.[24] In order to receive survivor benefits, the deceased should have contributed for at least three years. Spouses should have been married for at least one year at the time of death, ex-spouses should receive alimony at the time of death and civil partners of the deceased should have been a legal partner for two years at least. Remarriage or a new civil partnership leads to the termination of survivor benefits.

Consistent with the OECD average (OECD, 2018, p. 228[7]), survivor benefits are equal to 60% of the deceased's pension in Portugal, but with no means-testing. However, if the deceased had ex-partners they receive 70% jointly, which is equally split.[25] Survivor pensions are received for a period of five years if the surviving (ex-) partner is under the age of 35. If the surviving (ex-) partner is 35 or older, the survivor pension is paid until death.[26]

Ten OECD countries provide no lower age limits to access survivor pensions for spouses.[27] Among the 19 OECD countries which do so, only Austria and Portugal grant survivor pensions to widowed persons younger than 40 years (OECD, 2018, p. 227[7]). Survivor pensions received at such young ages provide disincentives to work and incur costs for public finances. For widowed persons, who have not reached the retirement age, benefits should be temporary – rather than a life-long pension – to help adjust to the new financial situation.

Survivors cannot benefit from economies of scale in the cost of living which couples enjoy. Indeed, living costs do not drop by half upon the partner's death, even when downsizing accommodation. In Portugal, a spouse who never worked would thus experience a drop of about 15% in standards of living, compared to a 24% average drop among OECD countries (OECD, 2018[7]). This calculation accounts for first-tier benefits and means-testing of survivor pensions in many countries.[28]

In the Portuguese survivors' scheme, similar to many other countries, total entitlements of individuals living in a couple including survivor pensions, are larger than those of single individuals with the same contribution history. Hence, singles partly finance survivor benefits without benefiting from it, and such a redistribution from singles to couples might have unintended consequences affecting both equity and total employment (OECD, 2018[7]). This feature can be eliminated by requiring couples to finance survivor pensions. For example, ensuring self-financing of survivor pensions at the 60% replacement rate would correspond to an about 10% reduction of the initial pension level of a person in a couple *compared to* the pension of a single individual with the same contribution history (OECD, 2018[7]).[29] The internalisation of the cost of survivor pensions within couples in a budget-neutral way would thus lead to higher pensions for singles and lower pensions for couples.

3.5.2. Civil servants

Pensions for civil servants are governed by a special regime, the *Caixa Geral de Aposentações* (CGA). Before 1993, a civil servant in Portugal could retire with a full pension at 60 with 36 years of service (versus 65 and 40 years of service for the general social security regime). The minimum years of service to receive a pension was five years (versus ten years in the general regime in 1993). Early retirement was possible from the age of 55 with 30 years of contributions until 1985 and afterwards with 36 years of contributions regardless of age. The benefit calculation was also more generous with higher earnings-related pensions and a higher minimum pension than in the general

regime. Benefits were calculated based on the last wage rather than the best ten years of the last 15. The accrual rate was 2.5% of the wage (net of social security contributions) versus 2% in the private sector.

In 1993, it was decided that the CGA and the general regime would converge and that the civil service scheme would be closed for new entrants by 2006. For new retirees among civil servants the retirement age would gradually converge by 2015, the minimum years of service and the career length, after which maximum accrual is reached, would be equalised, and the benefit calculations would follow the rules of the private sector. Pensions of civil servants who entered before 1993 would still be governed under the old rules.

The 2006 reform sped up the convergence and the new rules also apply to civil servants who entered before 1993. From 2006, all accruals have been calculated following private-sector rules, while past entitlements were not touched. The full-career length reached 40 years in 2013. However, for certain civil-service professions the convergence is slower. The retirement age for nurses and primary school and kindergarten teachers will only reach 65 by 2019 and 2022, respectively, and will remain at that age, not following the general increase in the retirement age with life expectancy. From age 70 retirement is mandatory for all civil servants.[30]

To summarise, civil servants who retired before 2006 were the ones not affected by the reform. The rules have converged to the general regime over time and, even for civil servants who entered service before 2006, rules have been fully aligned to those in the general regime. Only the administration of pensions differs.

Although the transition to fully phase out the civil-servant scheme takes time and past entitlements cannot be adjusted, the consolidation of CGA with the private-sector scheme is assured under current legislation. Assuming that no one entered public service younger than 18 in 2006, it is expected that the last civil servant retiring at the official retirement age under the old regime will retire in 2057 on a pension in line with the general regime. Yet, this means that CGA will operate for the most part of the 21st century, generating administrative duplication and costs. Overall, the average pension in the civil-servant scheme is still (at EUR 1 074 in 2016) more than double the average pension in the general scheme.

With the gradual closing down of the civil servant scheme Portugal has moved in the direction of most OECD countries. Countries who recently integrated the civil servant scheme to the private-sector scheme include Italy, Japan, Greece, New Zealand, Spain and Turkey. Currently, only Belgium, France, Germany and Korea have entirely separate schemes for civil servants. Ten OECD countries have integrated schemes, offering a top up for civil servants, which is large in some countries, including the United Kingdom and the United States (OECD, 2016[8]).

3.5.3. Special regimes

Old-age pensions are available without additional penalty (but with the sustainability factor applied) between age 45 and 60 for some professions considered arduous, such as seafarers and sea-fishermen (age 55), underground miners (50), air traffic controllers (58), professional dancers (classical ballet and contemporary – 45) and embroiderers from the island of Madeira (60).

3.6. Policy options

Portugal has profoundly reformed its pension system over the past decades, thereby enhancing its financial sustainability. Major reforms include: increasing the period to calculate the reference wage; aligning the retirement age between women and men; linking the retirement age to life expectancy; and gradually integrating the scheme for civil servants with the general regime. Moreover, the introduction of minimum pensions was an important step to provide adequate pensions while and indexation rules were formalised which will stabilise benefits in real terms.

However, the current pension system can still be improved. First, the current practice in the benefit calculation of uprating past wages with a combination of prices and wages instead of the standard wage uprating generates savings and improves finances. However, it has a serious downside. While pension revenues evolve in line with wages, uprating based mostly on prices makes spending (and pension benefits) less responsive to real-wage growth. This makes the financial balances of the pension system and pension replacement rates highly dependent on real-wage growth, i.e. on long-term productivity gains. This dependence is an undesirable property, because productivity developments are difficult to predict and difficult to influence by policies. With the same objective in terms of financial balances and pension levels, it is preferable to shift to wage uprating and lower accrual rates accordingly – which are currently very high.

As for pensions in payment, medium pension levels (between two and three times the IAS) should be price-indexed instead of price minus 0.5 percentage points currently (when real GDP does not grow faster than 2%). An indexation of less than prices erodes standards of living during retirement and jeopardises pension adequacy. Since pensions between two and three times the IAS are not high, this should be avoided. Here also, lower accrual rates in the contribution phase can help increase indexation in a budget neutral way. In addition, the current design of indexation rules based on real-GDP growth creates unnecessary steps in the level of indexation, and could be smoothed to eliminate abrupt changes to mildly differing real-GDP growth rates.

The link between the retirement age and life expectancy now plays a key role and should be implemented as planned, and extended to the minimum age of early retirement, which at 60 years is currently too low. Special retirement ages for certain professions should be abolished. Instead, life-long learning should facilitate late career switches from arduous jobs to jobs suitable to be maintained at an older age. Moreover, early retirement through unemployment should be abolished (Chapter 5).

Abolishing the sustainability factor only for retirement at or after the normal retirement age in 2014 created very large differences in pension benefit levels for those retiring before the normal retirement age. Moreover, these differences will grow with life expectancy gains which are built into the sustainability factor. Generating financial savings now crucially depends on the increase in the retirement age, the heavy penalty for early retirement and the indexation of pension in payments. Indeed, as it currently stands, early retirement is legally possible, but with extremely high future penalties. This can lead to fiscal savings when people make short-sighted decisions and end up with very low pension entitlements. Instead, early retirement should be discouraged by raising the current 0.5% penalty per month of early retirement while the sustainability factor, properly recalibrated, should be used to adjust all pensions across the board as an ultimate instrument to ensure financial sustainability.

The vesting period of 15 years to be eligible to a pension excludes individuals with very short careers, whether they made high or low contributions. As discussed in Chapter 2 about the recommendation to remove the vesting period for minimum pensions, each year of contribution should generate pension rights from the earnings-related scheme.

Since new pension entitlements for civil servants who remained in the CGA scheme are in all but name the same as pension entitlements of the general scheme, the administration of both schemes should be merged. There is no reason to separate pensions in payment and contributions of both schemes. The merger would create a more accurate picture of pension finances and facilitate the management of the system in a more transparent way while reducing administrative costs.

Survivor pensions should more clearly focus on smoothing survivors' standards of living (OECD, 2018[7]). In particular, recipients should not be eligible to a permanent survivor pension before the retirement age while surviving partners or ex-partners older than 35 are eligible to survivor pensions until death in Portugal. At these younger ages, a temporary benefit only would be more suitable following the partner's death to help adapt to the new situation. When the survivor reaches the retirement age, the full survivor pensions can kick in.

Key recommendations

- Duly implement the link between increases in the retirement age and life expectancy gains.
- Link the minimum age of early retirement to life expectancy gains. Abolish special retirement ages for specific professions.
- Modify the way the sustainability factor is applied as its current use overly penalises early retirement. Instead, use the sustainability factor to adjust pension benefits across the board as an ultimate instrument to ensure financial sustainability given the other pension parameters. Once implemented, increase penalties per month of early retirement
- In the benefit calculation, uprate past wages with wage growth rather than a combination of price inflation and wage growth while lowering accrual rates.
- Index intermediate pensions (e.g. between 2 and 3 IAS) at least with prices and use lower accrual rates to finance this more generous indexation.
- Merge the administration of the CGA with the general scheme covering private-sector workers.
- Raise the eligibility age to a permanent survivor pension to the retirement age.

Notes

[1] Healthy life years are estimated on the basis of self-reported health. The reported figures should therefore be interpreted with caution.

[2] This review includes reforms up to and including 2018. Later reforms were not taken into account in this section, nor in the simulations in this review.

[3] The adjustment programme was implemented under the supervision of the Troika (European Commission, the European Central Bank and the International Monetary Fund).

[4] The Portuguese pension system does not have a cap on pension levels.

[5] For pensions between EUR 600 the thirteenth and fourteenth month were partially suspended.

[6] After the cut-off date for reforms to be taken into account for this review, the rules concerning the sustainability factor changed. From January 2019 the sustainability factor will not be applied for workers aged 63 or more with a contribution record of at least 40 years at age 60. From October 2019 this measure will be extended to workers aged 60 or more with a contribution record of at least 40 years at age 60. The normal penalty for early retirement, of 0.5% per month of early retirement, will still be applied.

[7] This is the same rate at which voluntary contributions can be made to the social security pension system by the self-employed.

[8] With the numbers shown here, the gender pension gap is equal to about 43%. Based on EU-SILC data, which allow for a cross-country comparison, the 2016 gender gap is lower in Portugal at about 31%, but still much higher than the unweighted OECD 26 average of 25% (Section 3.5.1).

[9] These numbers are based on data underlying Figure 3.7.

[10] Reference wages before 2002 were determined by the best ten years of the last 15 years of earnings. Reference wages of those who started work before 2002 will gradually be determined the full-carrer wage from a weighted average between the best ten out of the last 15 years and the full career.

[11] Moreover, uprating past wages mostly with prices essentially gives lower weights to wages earlier in someone's career, creating path dependence.

[12] This means that if two people contributed for 110 days in year one and that in year two the first one contributed for ten days while the second one had a full year, both will then record one single year.

[13] This lower bound of 65 will become less and less relevant as the official retirement age keeps increasing.

[14] At age 65 the official retirement age can be reduced by 20 months because of an excess of five years over a 40-year career. This means that the projected official retirement age of 66 and four months can be reduced to 65.

[15] Lowest pensions were typically the lowest level of minimum pension (Chapter 2) and just above.

[16] Technically this was not indexation for most of the period since the increases were discretionary before 2007 but it served the same purpose as indexation, even if it lacked a transparent rule.

[17] Assumptions are 2% for annual inflation rate and 1.25% for real wage growth.

[18] Other assumptions are: price inflation at 2% per year, real earnings growth at 1.25% per year (nominal wage growth of 3.275%). Individual earnings are assumed to grow in line with the economy-wide average.

[19] The amount of taxes withheld from pension income is lower than from labour income, but the difference has to be paid by May of the next year.

[20] Moreover, workers aged over 65 with 40 years or more contributions (and their employer) pay a reduced social security contribution rate: 16.4% for the employer and 7.5% for the employee against the usual 11% employee and 23.75% employer contribution.

[21] This is based on baseline case in which someone enters the labour market at age 20 in 2018 and retires one year before the normal retirement age (i.e. the age at which there would be no pension reduction). The normal age in 2065 is 67 years and two months. The full reduction of the pension compared to someone working until the normal age is 36.2%, which comes from (1-0.690*0.94*0.983) $\approx$ 36.2%. First, the sustainability factor is applied (0.690) then pension benefits are reduced by 6% because of twelve months of early retirement (0.94) and finally pension indexation is less generous than wage growth, which lowers pensions compared to additional entitlements from people who keep working (0.983).

The 2019 reform discussed in endnote 6 significantly lowers the estimates of the penalties for someone entering the labour market at age 20 and retiring early. However, the penalties presented in this section apply for anyone entering the labour market after age 20 since they do not fulfil the 40 years of contributions requirement at age 60.

[22] Labour force participation of this age group rose by 0.7 and 1.4 percentage point for men and women, respectively.

[23] A partial retirement scheme (with partial pension and/or reducing working hours) is currently under discussion. Details on special conditions for partial pensions have not yet been presented.

[24] In case none of these relatives exist an ascendant can also receive survivor pensions if they were dependent on the deceased.

[25] Moreover, a survivor pension cannot exceed the amount of alimony payments received at the time of death.

[26] Those surviving a (safety-net) social-pension recipient are also eligible to 60% of the partner's social pension on top of their own social pension in case they do not receive any type of earnings-related pension themselves and receive no income other than social pension higher than 40% of the IAS. A single child receives 20%, two children receive 30% jointly (equally split) and three children or more receive 40% jointly. In case there is no surviving partner or ex-partner the children receive the double amount. Children receive survivor benefits until they are 18 or up to 27 if they attend higher education. In case of being granted a disability status the survivor benefits continue to be paid. For ascendants the following shares hold: 20%, 50% or 80% for one, two and three or more ascendants respectively.

[27] Chile, Ireland, Italy, Korea, Luxembourg, Mexico, the Netherland, Norway Spain and Turkey provide no lower age limits for survivor pensions.

[28] Portugal is among the few countries where a survivor in a dual-earner couple of two average earners can expect an increase in the standards of living upon the death of the partner (OECD, 2018[7]).

[29] The exact estimate for the same-age couple retiring at age 66 in Portugal is an 11.4% lower pension relative to a single individual. Calculation is based on the 2015-20 mortality rates, UN (2017).

[30] Mandatory retirement is the practice of requiring workers to retire at a statutory age. As a result, employers can re-employ them only if they have retired and on a new contract. From 2019 it is possible for civil servants in Portugal to be reemployed after mandatory retirement at age 70 on six-month renewable contracts for a maximum of five years total.

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Annex 3.A. Extraordinary solidarity contribution

Annex Table 3.1. Extraordinary solidarity contribution (CES)

Year	Pension income tier (in EUR per month)	Extraordinary Solidarity Contribution (CES), marginal rate unless stated otherwise
2011	≤ 5 000	0.0%
	> 5 000	10%
2012	≤ 5 031	0.0%
	> 5 031 and ≤ 7 546	25%
	> 7 546	25%
2013	≤ 1 350	0.0%
	> 1 350 and ≤1 800	3.5%*
	> 1 800 and ≤ 3 750	16%
	> 3 750 and ≤ 5 031	10%*
	> 5 031 and ≤ 7 546	15%
	> 7 546	40%
2014	≤ 1 000	0.0%
	> 1 000 and ≤ 1 800	3.5%*
	> 1 800 and ≤ 3 750	16%
	> 3 750 and ≤ 4 611	10%*
	> 4 611 and ≤ 7 127	15%
	> 7 127	40%
2015	≤ 4 611	0.0%
	> 4 611 and ≤ 7 127	15%
	> 7 127	40%
2016	≤ 4 611	0.0%
	> 4 611 and ≤ 7 127	7.5%
	> 7 127	20%

Note: Thresholds rounded to nearest full Euro. * This rate is applied over the full pension.
Source: Ministry of Labour, Solidarity and Social Security.

Chapter 4. Voluntary funded pension arrangements

This chapter examines Portugal's voluntary funded pension system and proposes ways to improve it. It discusses the different aspects of public and private voluntary funded schemes such as coverage and contribution levels, tax, assets and investments, funding, withdrawals, and competition. The Portuguese voluntary funded pension system is evaluated against OECD international best practice. The last section provides guidelines on how to improve the voluntary funded pension system in Portugal.

4.1. Introduction

Portugal's voluntary funded pension system complements the mandatory pay-as-you-go (PAYG) public defined benefit scheme.

Improving the voluntary pension system is an important way Portugal can be better aligned with some of the OECD's main policy messages on pensions. The OECD recommends that countries should diversify the sources financing retirement, have funded private pension arrangements to complement public pensions, and improve the design of defined contribution pension plans (OECD, 2018[1]).

This chapter examines Portugal's voluntary funded pension system design and policy settings. It explores coverage, tax, assets and investment, withdrawals, funding and competition. It suggests ways to improve the system to achieve higher coverage and contributions and build confidence in the system.

4.2. Structure of the funded pension system

Portugal's voluntary funded pension system consists of a public funded scheme and various private personal and occupational funded schemes.

4.2.1. Public scheme

The public voluntary funded scheme, *Regime Público de Capitalização* ("RPC"), offers a personal pension plan. The Portuguese government established it to help individuals save voluntarily for retirement when it introduced social security reforms in 2007. As discussed in Chapter 3, those reforms involved a number of changes, one of which was the introduction of a sustainability factor in the public pension scheme's benefits formula.[1] The sustainability factor reduced pension benefits as life expectancy increases. To preserve their benefits at pre-reform levels, individuals could either work longer or voluntarily increase their personal contributions. The government created the RPC to cater to people choosing the latter option.

The Institute of Management of Capitalisation Funds of the Social Security (*Instituto de Gestão de Fundos de Capitalização da Segurança Social,* "IGFCSS") is responsible for the administration and investment management of the RPC. The IGFCSS is a unit within the Ministry of Labour, Solidarity and Social Security.

4.2.2. Private schemes

The legal framework for voluntary funded private schemes has existed since 1985.[2] The objective of these schemes is to promote long term saving behaviour in order to help fund individuals' retirement. Private schemes can be occupational pension plans or personal pension plans.

Occupational pension plans can be delivered through closed pension funds, open pension funds (through collective membership) or collective insurance contracts. Closed pension funds are established by private companies, groups of social or professional associations, or by agreement between workers' associations and trade unions. Open pension funds differ in that they do not require a business or association link between employers.

The occupational plans can be defined benefit ("DB") or defined contribution ("DC") plans. In 2017, DB plans represented about 92% of assets under management for occupational plans. DB arrangements are further classified as:

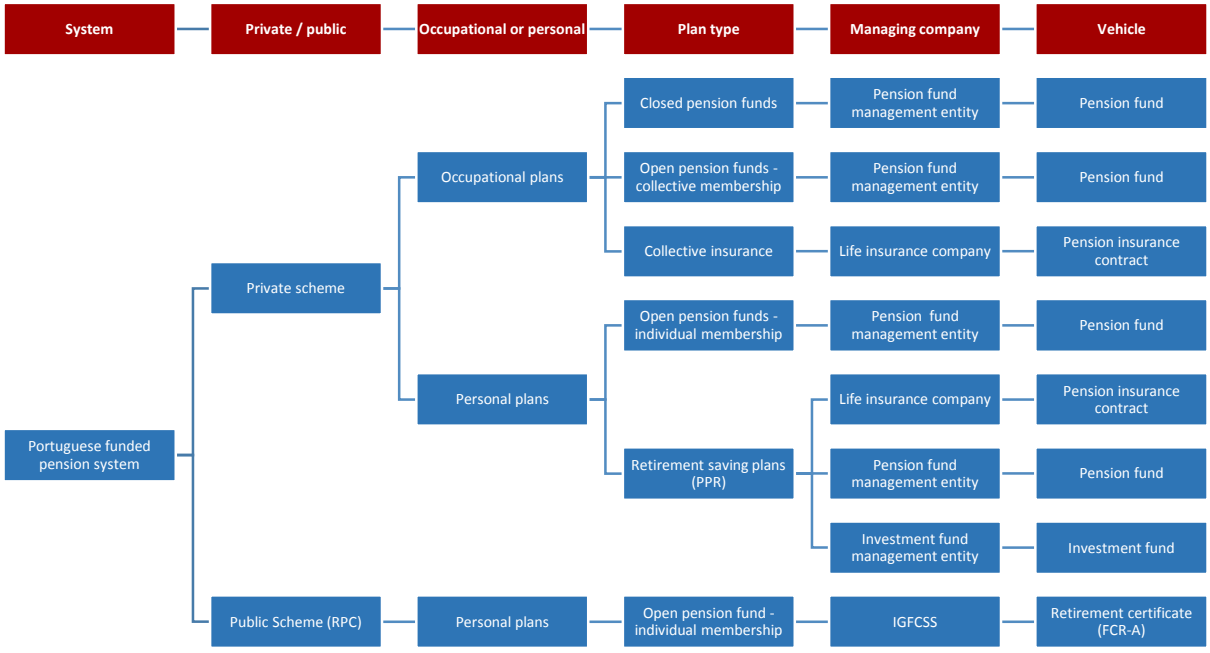
1. integrated complementary, where established pension amounts are complementary to the social security pension
2. non-integrated complementary, where plan sponsors cap pension amounts to reduce exposure to volatility from the social security scheme's pension liabilities
3. independent plans, where pension payments are independent of the social security pension

Most private DB plans are independent plans, accounting for 67% of the number of DB pension plans and 85% of DB assets under management in 2017.

Personal pension plans come in the form of open pension funds (individual membership) or Retirement Savings Plans (*Planos Poupança-Reforma*, "PPR"). PPRs were introduced in 1989 to promote long-term savings to finance individuals' retirement and to improve the development of the Portuguese capital market. Most personal pension plans (around 96%) come in the form of PPRs. Personal pension plans are usually based on individual membership but employers can also make contributions to these plans on behalf of their employees.

There are three types of financing vehicles for private pension schemes: pension funds, insurance contracts and investment funds. Providers of these vehicles include pension fund management entities, life insurance companies and investment funds management entities, as shown in Figure 4.1.

Figure 4.1. Portuguese Funded Pension System



Oversight of the voluntary funded private schemes varies depending on the underlying financing vehicle. Pension funds and insurance contracts are regulated and supervised by the Portuguese Insurance and Pension Funds Supervisory Authority (*Autoridade de Supervisão de Segros e Fundos de Pensões*, "ASF"). Investment funds are regulated and supervised by the Portuguese Securities Market Commission (*Comissão do Mercado de Valores Mobiliários*, "CMVM").

4.3. Coverage and contributions

4.3.1. Voluntary funded public scheme

The RPC has around 9 000 members. Of this membership pool, only about half are active members who contribute monthly to the fund. Membership has also been falling gradually by around 100 individuals per year since the Portuguese economic crisis in the early 2010s. This underutilisation is not surprising, since the scheme is not heavily publicised. The fall in membership is consistent with overall trends of declines in personal plan membership since the crisis began.

Individuals covered by one of the mandatory social protection schemes are qualified to enrol in the RPC.[3] Participation in the RPC is based on individual membership, although the administration body (the IGFCSS), has recently approved a change which allows employers, through a collective agreement with their employees, to pay contributions to individuals' accounts.

The contributions rate is set at a statutory rate of 2% or 4% of a base amount equivalent to the average gross wage used to calculate contributions to social security in the previous year.[4] Individuals aged 50 and above can opt for a rate of 6% of the base amount. As of 2017, 45% of active members chose to make contributions at a rate of 4%. Fewer selected the other options. 34% selected a 2% contribution rate, and 21% selected the higher 6% contribution rate.

Like other investment funds, monthly contributions are converted into units of participation in a common investment fund. This fund is called certificate of pension fund (*Fundo de Certificados de Reforma,* "FCR"). The fund consists of two segregated portfolios to separately manage the assets for the accumulation phase ("FCR-A") and the pay-out phase ("FCR-U"). The value of all units of the fund portfolio is calculated monthly after subtracting management expenses.

4.3.2. Voluntary funded private schemes

The coverage rate of voluntary private pension plans in Portugal is typically lower than other OECD countries with voluntary funded private pension systems (both occupational and personal plans). However, the coverage figures for Portugal are indicative due to data limitations for personal pension plans (see notes to Table 4.1).

Table 4.1. Voluntary pension plan coverage rates in selected OECD countries

Active members as a percentage of the working-age population (15-64 years)

	Occupational	Personal	Total
Austria	13.9	18.0	..
Belgium	59.6	..	..
Canada	26.3	25.2	..
Czech Republic	x	52.6	52.6
Denmark	x	18.0	18.0
Estonia	x	12.3	12.3
Finland	6.6	19.0	25.6
France	24.5	5.7	..
Germany	57.0	33.8	70.4
Greece	1.3	..	..
Hungary	..	18.4	..
Iceland	x	45.2	45.2
Ireland	38.3	12.6	46.7
Italy	9.2	11.5	20.0
Japan	45.4	13.4	50.8
Korea	x	24.0	24.0
Latvia	0.3	11.4	..
Lithuania	..	..	69.5
Luxembourg	5.1	..	..
Mexico	1.7	..	..
Netherlands	x	28.3	28.3
New Zealand	6.8	74.8	..
Norway	..	26.7	..
Poland	1.6	66.6	..
Portugal	2.5	14.7 - 17.2	17.2
Slovak Republic	x	19.0	19.0
Slovenia	7	..	37.8
Spain	..	..	26.1
Sweden	X	24.2	24.2
Turkey	1.0	13.9	..
United Kingdom	..	..	43.0
United States	40.8	19.3	..

Note: ".." = Not available; "x" = Not applicable. Countries were included in the table if they had a voluntary pension system (personal, occupational or both) and data was available for those countries.

Coverage results for Portugal are an approximation partially based on survey data (Instituto Nacional de Estatística, 2013[2]), since administrative data for personal pension plans is only available at an account level and cannot be aggregated to the individual level. Data for Portugal's occupational plan coverage is based on administrative data provided by the ASF, and the range estimated for personal plan coverage is calculated using the survey data on total pension plan coverage for households *minus* occupational plan coverage. The estimate for personal plan coverage is expressed as a range to account for the possibility of duplicate cover between personal and occupational plans. As such, the figures for Portugal in this table should be treated as indicative for the purpose of showing country comparisons only.

Coverage rates are provided with respect to the total working-age population (i.e. individuals aged 15 to 64 years old), with the exception of Czech Republic (under 65), Germany (employees aged 25 to 64), Iceland (citizens and foreign workers in Iceland between 16 and 64), Ireland (workers aged between 20 and 69), New Zealand (above 17 for personal plans), Sweden (income earners aged 20 to 64).

In most cases, data refer to 2016, with the exception of Austria (2012), Belgium (2013), Canada (2015), France (2015), Germany (2015), Greece (2014), Korea (2011), Lithuania (2017), Netherlands (2010), New Zealand (2014 for occupational and 2016 for personal), Portugal (2017), Spain (2014), Sweden (2015), United Kingdom (2015/16) and United States (2013). However, please refer to OECD Pensions at a Glance 2017 and OECD Pension Markets in Focus 2018 for more country-specific notes.

Source: OECD Pension Markets in Focus 2018 (Lithuania and Spain); ASF (Portugal occupational plan coverage), Instituto Nacional de Estatística (Portugal personal plan coverage), OECD Pensions at a Glance 2017 (all other countries).

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Occupational pension plans

Voluntary occupational pension plan coverage is low compared to other OECD countries with voluntary funded pension systems (Table 4.1). There were about 166 000 active members registered to the plans in 2017, representing only 2.5% of the working-age population (15-64 years). Coverage has been relatively stable for the past 10 years, at between 2.4-2.8% of the working-age population.

There is a wide disparity between the average contribution level to DB and DC occupational schemes. The data provided to the OECD by the Portuguese authorities suggests that in 2017, the average contribution per active DB member represented more than half the Portuguese annual average wage.[5] For members of DC schemes this figure was about 5%. One possible reason for this large disparity is that voluntary DB members tend to be employed in highly remunerated industries, such as banking, insurance and large multinational companies. Another reason is that employers that set up voluntary occupational DB plans often contribute with the intention to provide higher retirement income to retirees than those setting up voluntary DC plans.

Total contributions to DC plans have been relatively stable since 2010, but contributions to DB plans have fluctuated (Figure 4.2). These fluctuations are, to a large extent, due to the changing funding needs of these plans. This is particularly evident in the 2014 outcome, when contributions appear to have increased threefold. However, that year reflected one-off contributions to some closed pensions funds following a change to the discount rate used to value their liabilities (Autoridade de Supervisão de Seguros e Fundos de Pensões, 2014[3]). Contribution levels alone therefore do not give strong indications of trends in occupational plans' prominence to the voluntary funded income scheme.

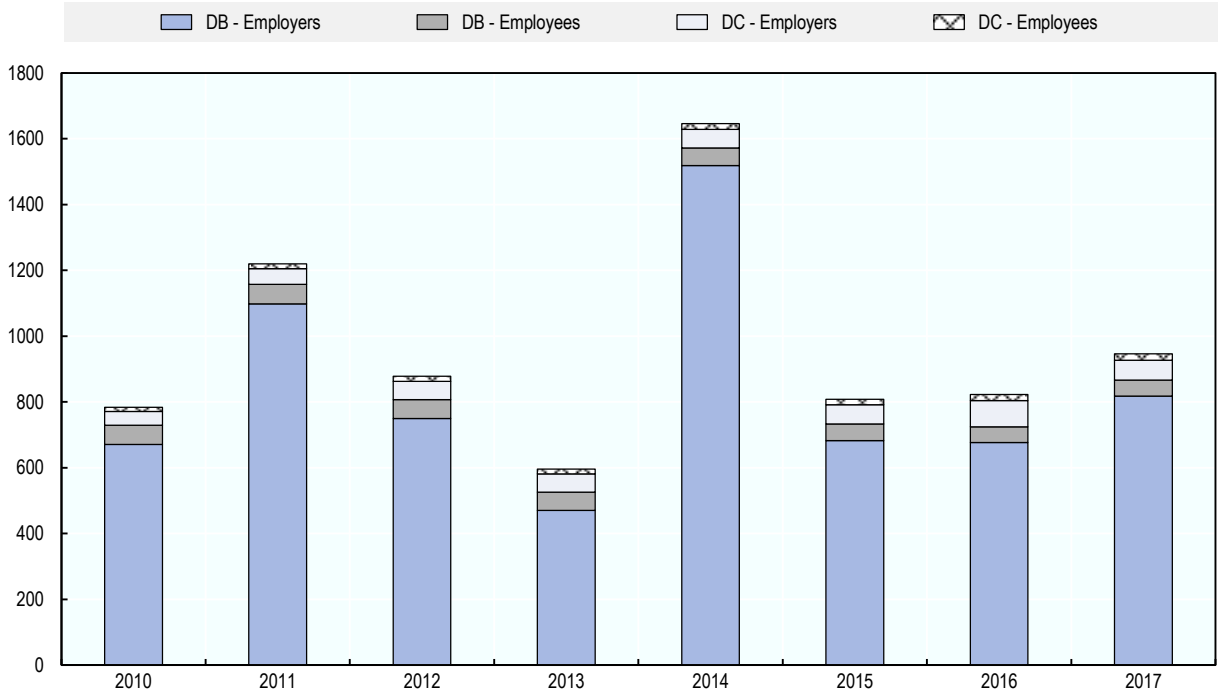
Employers contribute more than employees in Portugal's DB and DC occupational plans. Employer contributions represented an average of about 94% and 78% of total contributions to DB and DC occupational pension plans respectively since 2010. These splits have also remained fairly stable since 2010.

The mix of coverage between DB and DC plans has been changing since 2007. The number of active DB members has declined while active DC membership has risen. In 2007, DB plans had about 75% of occupational plan members but by 2017 this figure fell to less than half (Figure 4.3). DB membership also declined in absolute terms.

The share of contributions has not switched from DB to DC schemes in the same way as membership, but this is not necessarily a cause for alarm. As the proportion of DB membership falls in favour of DC membership, the share of contributions should switch in the same way if occupational plans' total asset levels are to be maintained. Recent trends do not show this happening (Figure 4.3). While there are signs of a small shift in total contributions from DB to DC plans, the magnitude is much smaller than the shift in membership. If this trend continues, when existing DB members start to retire, overall assets and contributions to occupational pension plans will decline. This is not a problem if the DB plans that are not being replaced are simply high income individuals' generous retirement plans, since they are at a lower risk of retirement income inadequacy. However, if this trend is symptomatic of declining assets from voluntary occupational funds for at-risk people, there may be a case for the government to do more to support occupational plans.

Figure 4.2. Contributions to occupational plans by type, 2010-2017

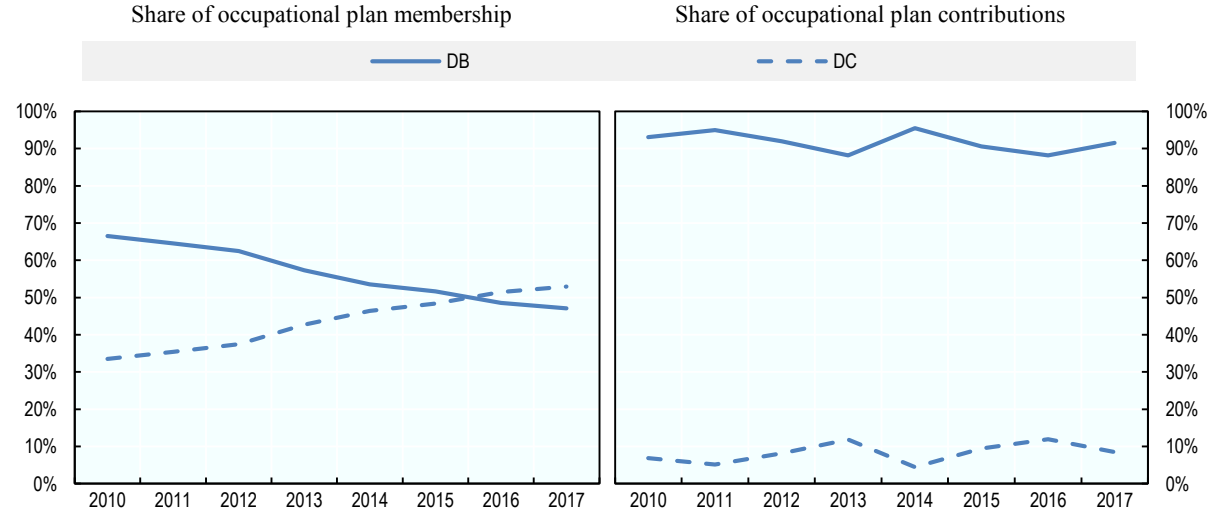
Real contributions to occupational plans by type in millions of EUR (2017 EUR).



Note: Figures are expressed in real terms, deflated using average gross wage.
Source: ASF.

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Figure 4.3. Occupational pension plans –contributions and membership



Source: ASF publications of Estatísticas de Fundos de Pensões (Membership); ASF (contributions).

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Personal pension plans

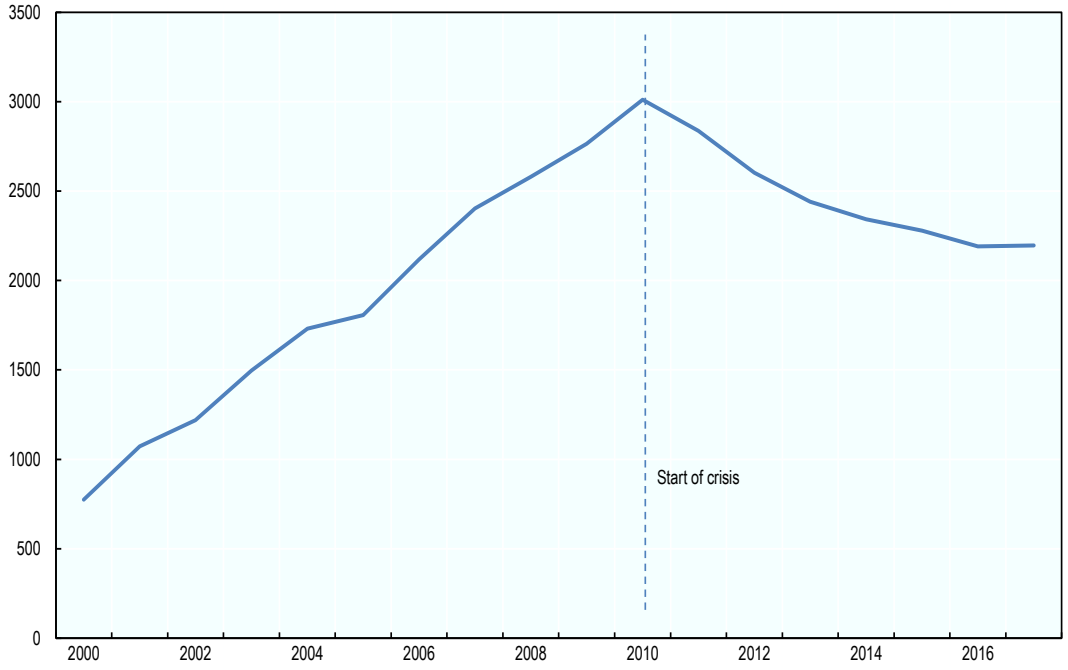
Personal pension plans come in the form of individual membership of open pension funds and PPRs, which are the most common types of personal plan. Pension funds are the financing vehicle for pension plans under individual membership, but three different financing vehicles can finance PPRs. These are insurance contracts (84% of accounts), investment funds (13% of accounts), and pension funds (3% of accounts). Most PPR members are registered under insurance contracts because the public sees them as appealing for their conservative investment strategies and guaranteed capital or returns.

The coverage rate of personal plans is higher than for occupational pension plans, but is still lower than most other OECD countries with voluntary pension systems. As a rough estimate, personal pension plan coverage is around 14.7-17.2% (Table 4.1).

This estimate is based on a 2013 survey, which found that the proportion of households with financial assets in the form of voluntary pension plans was 17.2% (Instituto Nacional de Estatística, 2013[2]). Subtracting coverage of occupational plans, which is around 2.5% of working age individuals, and allowing for duplicate cover, suggests that personal pension plan coverage could be around 14.7-17.2%. The survey is used because the administrative data is at an account level and cannot be adjusted for double-counting of people with multiple accounts.[6] The 14.7-17.2% coverage range is indicative, but shows that coverage is likely lower than in most other OECD countries with voluntary pension systems (Table 4.1).

The account-level data shows that the number of personal plan accounts has been falling since the start of the crisis. The number of personal pension plan accounts was growing strongly in the first decade of the 2000s, on average 15% per annum. The biggest growth was in PPR insurance contracts. However, there has been a steady decline since the economic crisis, when numbers of accounts began to drop off gradually (Figure 4.4).

Figure 4.4. Number of personal plan accounts, 2000-2017



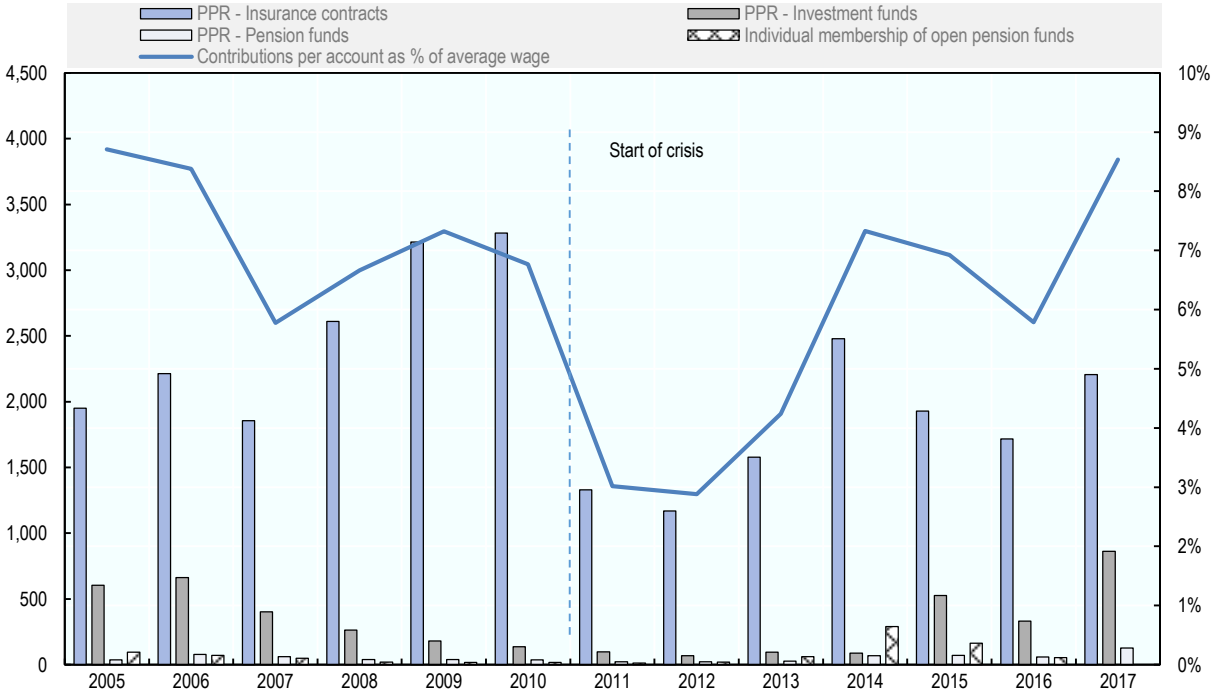
Source: ASF.

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Contributions similarly fell once the crisis hit, but there have been recent signs of a recovery (Figure 4.5). Contribution levels have picked back up from the 2011-2012 lows, although total contributions to PPR insurance contracts still remain below pre-crisis levels. The average contribution similarly fell to around 3% of the average wage in the economy following the crisis, then picked up again. Over the past 3 years, the average contribution has been between 6% and 8.5% of the average annual wage in the economy. Since some individuals have multiple PPR accounts, the average contribution rate per private pension *member* is likely to be a bit higher.

Figure 4.5. Contributions to personal pension plans, 2005-2017

Real personal contributions by type in millions of EUR (2017 EUR) and average contributions per account as a percentage of the average annual wage in the economy.



Source: ASF annual reports (contributions), average wage is based on average annual wages per full-time and full-year equivalent employee in the total economy published in OECD.Stat Average Annual Wages dataset. Data not available for individual membership of open pension funds in 2017.

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4.4. Tax treatment of pension savings

The tax treatment of retirement saving is tEt and EET, depending on whether contributions were made by individuals or their employers. Contributions from individuals receive preferential tax treatment. For assets accrued from these individual contributions, returns are exempt from tax and pension benefits receive preferential tax treatment. Employer contributions are exempt from tax, as are returns, but the corresponding pension benefits are taxed at marginal rates. By international comparison, the tax advantage provided to retirement savings in Portugal is around the middle of the OECD range.

4.4.1. Contributions

Employer contributions to both personal and occupational plans are not taxable income for employees and are tax deductible from the employer's taxable profits if certain conditions are met.[7]

Employee contributions to both personal and occupational pension plans are taxable income, but individuals can deduct 20% of their contributions up to a deduction limit. The limit applicable to the individual depends on their age and whether their plan is with

the private or public scheme (Table 4.2). For both private and public schemes, deductions by individuals under 35 are capped at EUR 400 each year. This is the most generous deduction level available. For members of the public scheme (RPC), the limit for persons aged over 35 is EUR 350 each year. For members of the private schemes, the limit for people aged 35-50 is EUR 350 and EUR 300 for people over 50.

Table 4.2. Deduction limits by scheme and age

	Public scheme	Private schemes
Under 35	EUR 400	EUR 400
35-50 (inclusive)	EUR 350	EUR 350
Over 50	EUR 350	EUR 300

Further to these deduction limits, there is an overall cap on total deductions from personal income tax for certain social purposes. Social purposes include expenses such as health, health insurance, aged care and contributions to voluntary funded pension arrangements. As at 2018, for people with an annual income between EUR 7 092 and EUR 80 640, the upper limit varies between EUR 2 500 and EUR 1 000 (subject to a formula). For an annual income above EUR 80 640, the maximum deduction is EUR 1 000.

The tax treatment of retirement savings has become less generous since the early 2000s, but the changes probably affected few people. The upper limit on tax deductions for contributions was initially the lower of EUR 2 500 and 20% of total gross income. In 2001, this limit was reduced to the lower of 5% of total gross income or EUR 560. Eventually, the ceiling was further reduced and a new set of limits that varies according to the employees' or individuals' age was introduced during the 2008 fiscal reform, as outlined in Table 4.2. Notwithstanding, it is unlikely that these reforms tightening contributions rules would have affected many people. For example, a person earning around the average income would have to contribute more than about 10% of their income to reach the personal pension plan deduction limit under the current rules. The Portuguese tax treatment of retirement savings therefore still provides a tax advantage to save for retirement when compared to alternative savings vehicles (OECD, 2018[4]).

4.4.2. Investment returns

Investment returns from assets in funded public and private schemes are exempt from tax.

4.4.3. Benefits

Pension benefits from funded public and private schemes are at least partially included in an individual's taxable income. The conditions under which pension benefits are taxed depend on the pension benefit option and whether or not the contributions were exempt during the accumulation phase. The different tax treatments are set out in Table 4.3.

Table 4.3. Tax treatment of benefits from funded public and private schemes in Portugal

	If the contributions were taxed	If the contributions were exempt
Annuities	The "contributions part" is exempt and the "gains and other returns on investment part" is taxable at an individual's marginal rate of income tax. If it is not possible to distinguish between contributions and returns, 15% of the annuity is subject to tax at an individuals' marginal rate of income tax.	Benefits are taxed at an individual's marginal tax rate. A maximum deduction of EUR 4 104 applies to total pension income. However, if compulsory contributions to social protection schemes and to legal health subsystems exceed that limit (EUR 4 104), the deduction is equal to the total amount of contributions.
Lump sums	The "contributions part" is exempt. The "gains and other returns on investment part" is taxed at a rate of 4% or 8% depending when the contributions that generated the income were made (4% for contributions made before 1 January 2006 and 8% for contributions made thereafter).	One-third of the "contributions part" is exempt up to a maximum of EUR 11 704.70. The remainder is taxed at the individual's marginal rate of income tax. The "gains and other returns on investment part" is taxed at a rate of 4% or 8% depending when the contributions that generated the income were made (4% for contributions made before 1 January 2006 and 8% for contributions made thereafter).

Note: Exempt contributions are those that were employer contributions to occupational pension plans that met the criteria for favourable tax treatment. Taxed contributions are employee contributions, as well as employer contributions that did not meet the criteria for favourable tax treatment. The 'contribution part' refers to the capital component.
Source: ASF.

There are some exceptions to these tax rules which apply when members of PPR schemes withdraw funds outside the ordinary withdrawal rules subject to penalties (see Section 4.7.2). In these circumstances, individuals would have to add to their personal income tax in the year both:

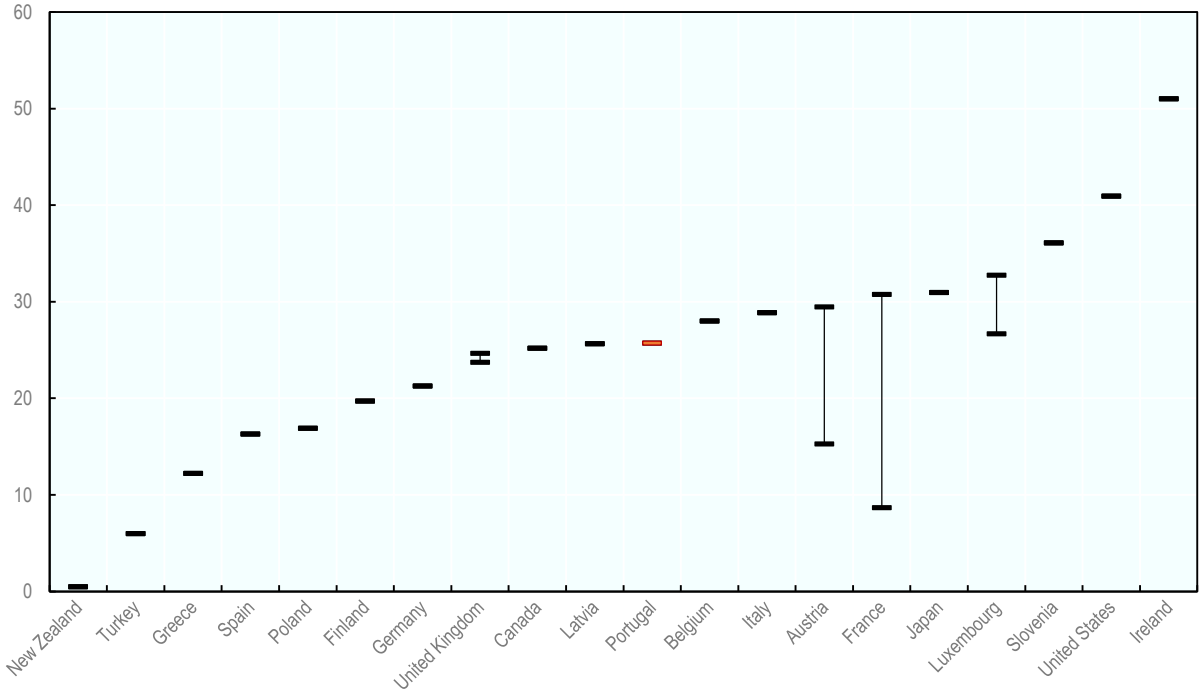
- the amount originally claimed as a tax deduction
- 10% of the original tax deduction for every year since the deduction was claimed.

4.4.4. Tax advantage

Portugal offers a tax advantage towards the middle of the range of voluntary occupational and personal pension plans in OECD countries (Figure 4.6 and Figure 4.7). A tax advantage of around 25% generally offers a good incentive for individuals to use these schemes.

Figure 4.6. Overall tax advantage for funded occupational pension arrangements in selected OECD countries

Present value of taxes saved over a lifetime by an average earner using a voluntary occupational plan, as a percentage of the present value of contributions



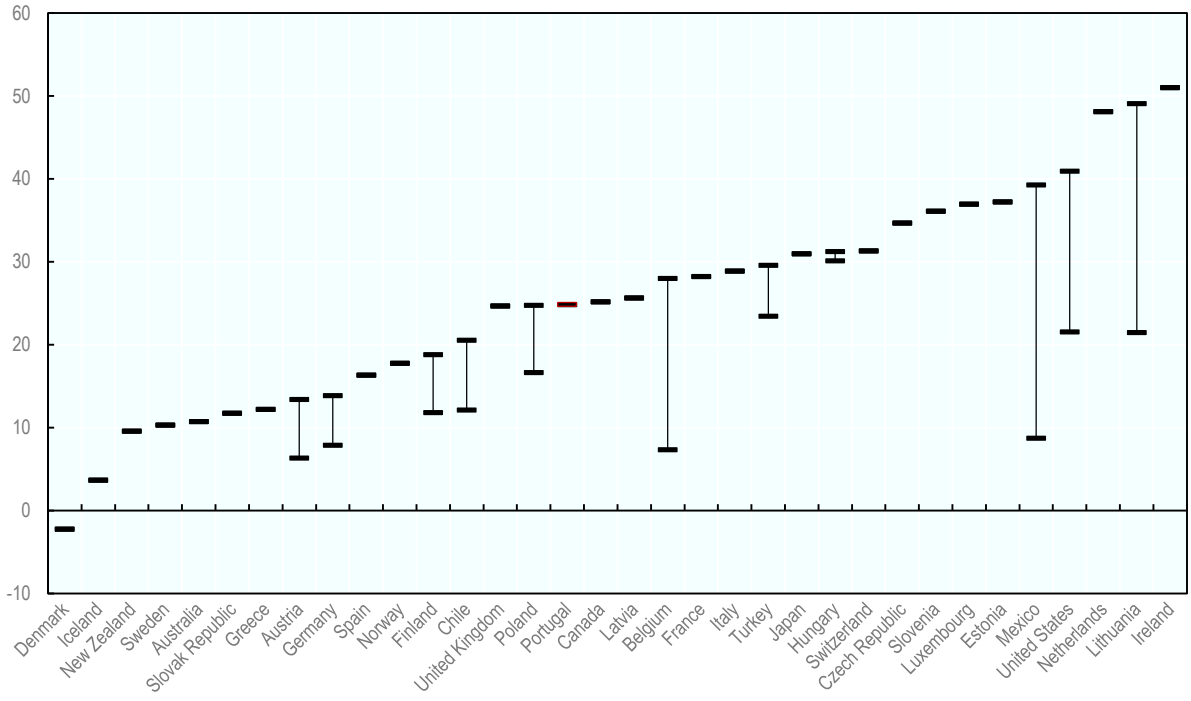
Note: Lines indicate the range of tax advantage outcomes available for a particular country. The calculations assume that the average earner enters the labour market at age 20 in 2018 and contributes 5% of wages yearly until the country's official age of retirement. At retirement, total assets are converted into an annuity certain with fixed nominal payments. Inflation is set at 2% annually, productivity growth at 1.25%, the real rate of return on investment at 3% and the real discount rate at 3%.
Source: OECD (2018[4]).

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The tax advantage calculation differs between occupational and personal plans because pension tax settings depend on whether the contributions were made by individuals or employers. Occupational plans mostly receive contributions paid by employers, while personal plans mostly receive contributions paid by employees. Overall, under the assumptions outlined in the note to Figure 4.6 and Figure 4.7, the tax advantage does not differ much between the two types of plans for Portugal, at about 26% (occupational) and 25% (personal) (Table 4.4).

Figure 4.7. Overall tax advantage for funded personal pension arrangements in selected OECD countries

Present value of taxes saved over a lifetime by an average earner using a voluntary personal plan, as a percentage of the present value of contributions



Note: Lines indicate the range of tax advantage outcomes available for a particular country. The calculations assume that the average earner enters the labour market at age 20 in 2018 and contributes 5% of wages yearly until the country's official age of retirement. At retirement, total assets are converted into an annuity certain with fixed nominal payments. Inflation is set at 2% annually, productivity growth at 1.25%, the real rate of return on investment at 3% and the real discount rate at 3%.
Source: OECD (2018[4]).

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Table 4.4. Overall tax advantage by component, Portugal

Present value of taxes saved over a lifetime by an average earner, as a percentage of the present value of contributions

	Contributions	Returns	Withdrawals	Total
Occupational plans	28.5	21.6	-24.4	**25.7**
Personal plans	5.7	21.6	-2.5	**24.8**

Note: See notes to Figure 4.6 and Figure 4.7 above. The personal plan withdrawal tax treatment assumes that it is not possible to distinguish between contributions and returns, so 15% of the annuity is subject to tax at the marginal rate of income tax.
Source: OECD (2018[4]).

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Investment returns are not taxable in either case, so the small difference in the tax advantage outcome depends on how contributions and withdrawals are taxed. For occupational plans, there is a big up-front tax advantage since most contributions are employer contributions and therefore tax free. However, much of the tax advantage from the contributions stage is unwound in the withdrawal phase. On the other hand, the tax advantage due to contributions is small if the contributions are made by the individual, as is often the case in personal plans, but again this is somewhat unwound at the withdrawal stage. Ultimately, most of the tax advantage under either case comes from the tax-exempt status of investment returns.

There is a case to simplify and standardise the tax treatment of voluntary pensions in Portugal. It is important to address complexity, since it deters people from participating in voluntary schemes. Indeed, there does not appear to be a strong rationale for taxing different contributions differently. Rather, it can be a deterrent and can impose administrative costs on funds and regulators.

Portugal should therefore consider harmonising the tax rules by applying one set of tax rules to all voluntary funded pension plans. That is, a choice could be made between the tEt and EET systems. The EET system is likely to be preferable to individuals, since timing of a tax concession remains important and can affect contribution rates. Of course, a number of factors would influence individuals' decisions to contribute to a pension plan. However, people do tend to weigh immediate benefits more heavily than future benefits. This is even more important when people are uncertain whether existing tax settings are likely to persist decades into the future.

4.5. Assets and investment

4.5.1. Assets under management

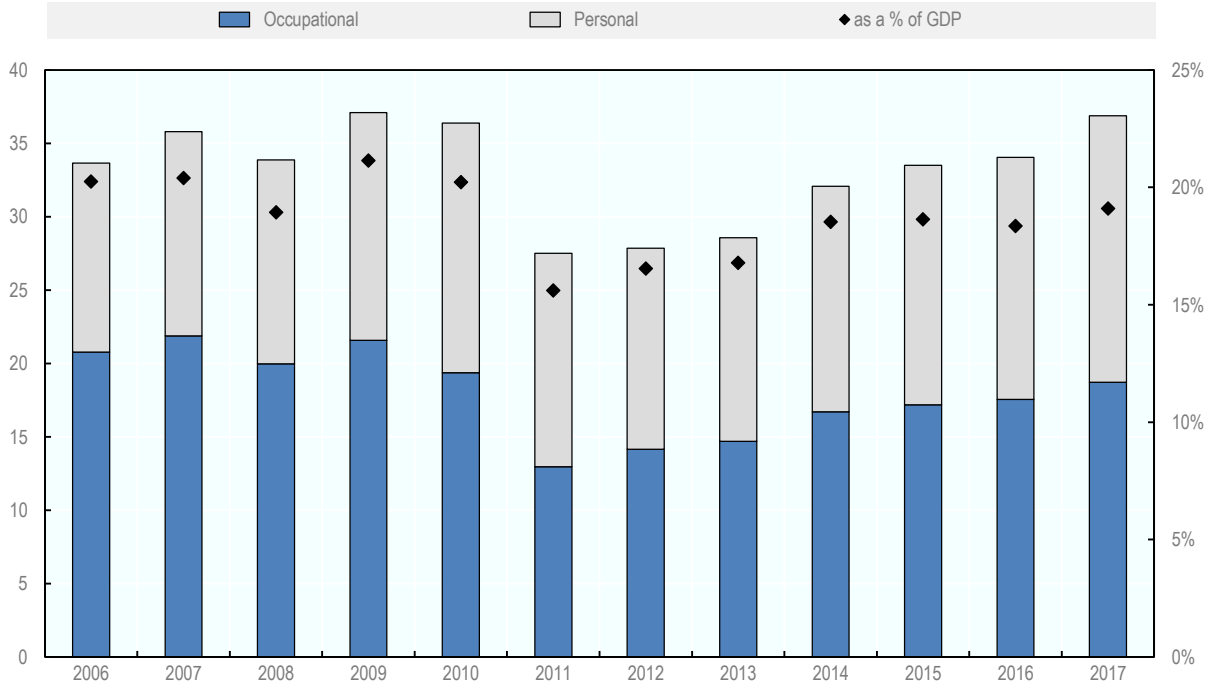
Assets under management in voluntary funded pension schemes represented around 19% of GDP in 2017 (Figure 4.8).[8] This 19% of GDP is lower than the average pension assets as a percentage of GDP for other OECD countries with voluntary funded pension systems, which is 28%.[9] Total assets under management are about evenly split between the personal and occupational pensions schemes. Of those schemes, the most assets are held in occupational DB funds and PPR insurance contracts (Figure 4.9).

The pool of assets in voluntary funded pensions would have been higher if the assets of some occupational plans had not been transferred to the public PAYG system between 2003 and 2015. The Portuguese Association of Investment Funds, Pension Funds and Asset Management (*Associação Portuguesa de Fundos de Investimento, Pensões e Patrimónios*, "APFIPP") estimates that more than EUR 12 billion of assets has been transferred out of the system (Table 4.5).

The largest transfers were in 2004, 2010 and 2011 in the telecom and banking sectors, in order to help meet budget deficit targets. One reason for these transfers was that during the crisis, the banking sector needed a bailout. Some banks' occupational plan assets were transferred to the social security system which then took the responsibility for the corresponding pension liabilities. This agreement let the government receive assets during a crisis and helped the banking sector which could no longer afford the DB liabilities. At the same time, employees of the sector may have felt more secure about their future pension. Another explanation for asset transfers during this time was the 2007 social security reform. That reform set the goal of subsuming occupational plans that were partially covered by the public PAYG system fully into the PAYG system.[10] [11]

Figure 4.8. Assets under management in voluntary funded pension schemes, 2006-2017

Total assets under management in billions of EUR and as a percentage of GDP.

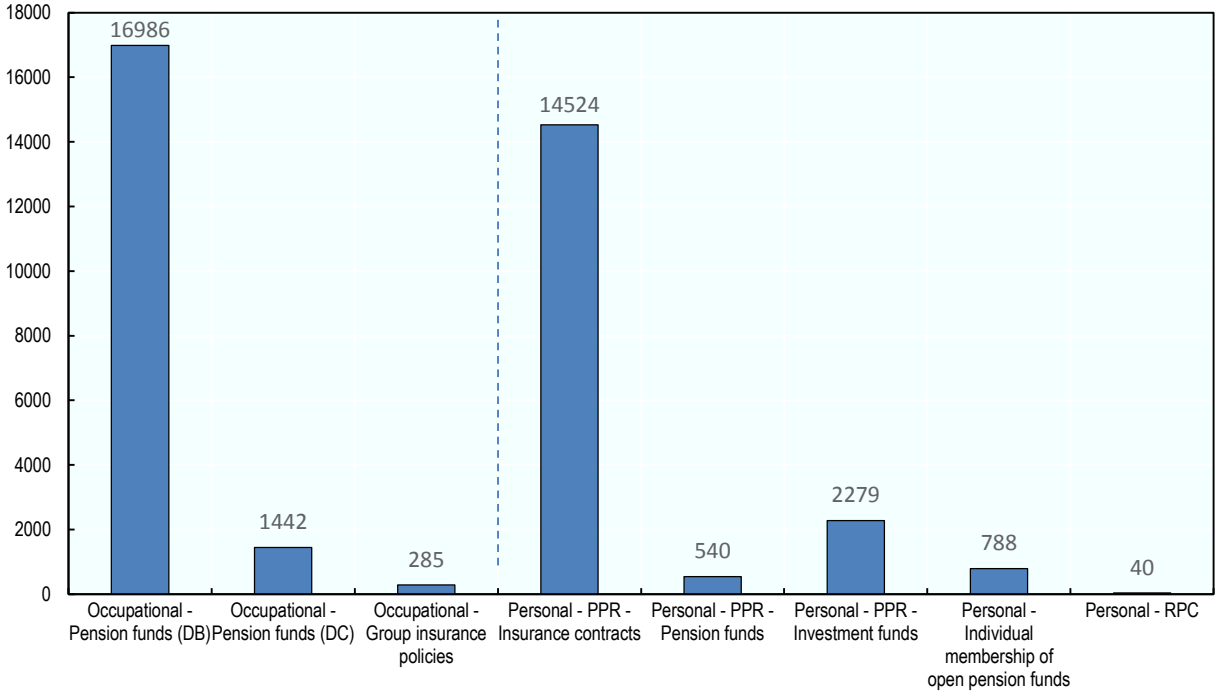


Note: Data based on PPR Insurance Contracts refer to technical provisions. Totals may differ slightly from those reported in the OECD Global Pension Statistics due to variations in categorising assets.
Source: ASF.

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Figure 4.9. Assets under management by plan type, 2017

Total assets under management in millions of EUR by plan type.



Note: Data for PPR Insurance Contracts refer to technical provisions. Figures may differ slightly from those reported in the OECD Global Pension Statistics due to variations in categorising assets.
Source: ASF, RPC

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Table 4.5. Total assets transferred to the public PAYG system, 2003-2015

	Pension Fund	Total Assets (EUR Millions)
2003	Radiodifusão Portuguesa (RDP)	48
	Correios de Portugal (CTT)	1 350
2004	Caixa Geral de Depósitos (CGD)	2 500
	Aeroportos de Portugal (ANA)	114
	Navegação Aérea (NAV)	203
	Imprensa Nacional Casa da Moeda (INCM)	82
2010	PT Comunicações	1 575
	Companhia Portuguesa Rádio Marconi	224
2011	Millennium BCP	2 900
	Banco Português de Investimento	1 400
	Banco Espírito Santo	1 000
	Santander Totta	400
	Other Bank Pension Funds	300
2013	Instituto de Financiamento e Apoio ao Desenvolvimento da Agricultura e Pescas	7
2014	Militares das Forças Armadas	2
2015	Estaleiros Navais de Viana do Castelo (ENVC)	24
	Serviços Indústrias (Gestnave)	100
	Total assets transferred to public PAYG system	**12 229**

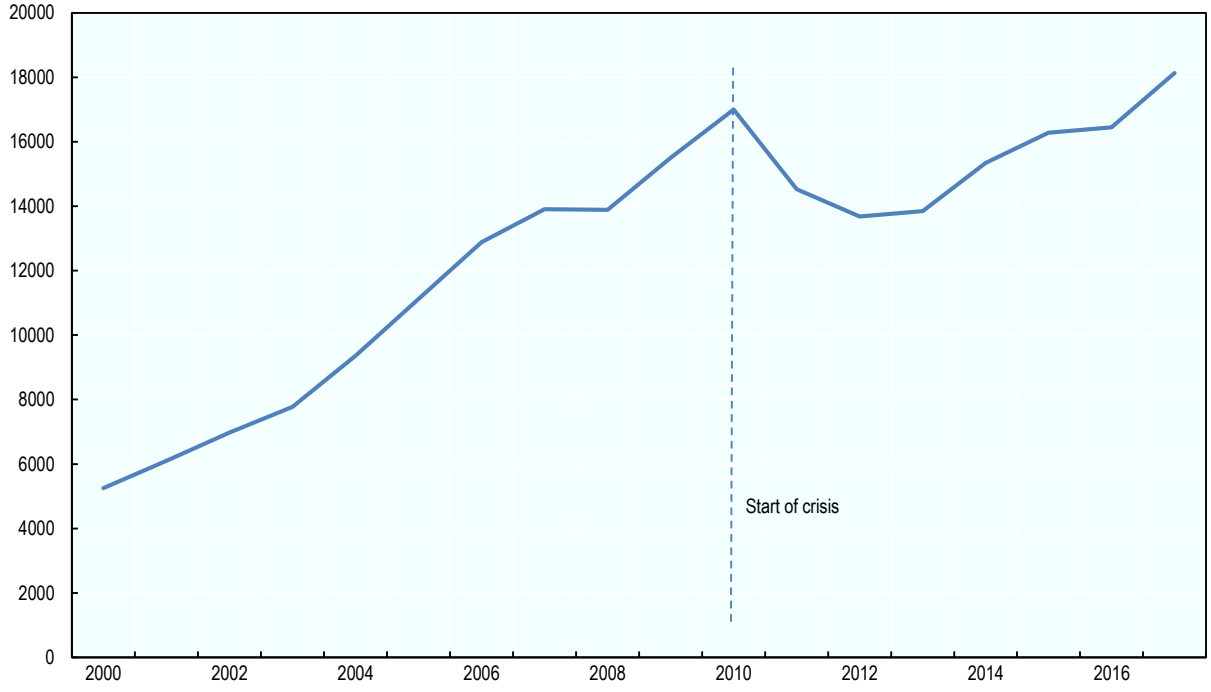
Source: APFIPP.

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Assets in personal pension plans also experienced volatility over the past decade (Figure 4.10). Assets grew strongly in the years prior to the economic crisis, but this trend reversed when economic conditions worsened. Assets dropped from about EUR 17.0 billion in 2010 to EUR 13.7 billion in 2012. This decline in assets under management was driven by a number of interacting factors which affected the stock of assets as well as the flow of contributions.

Figure 4.10. Personal plan assets, 2000-2017

Total personal plan assets under management in millions of EUR



Source: ASF

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The stock of assets was hit by negative real rates of return in 2008, 2010 and 2011, which reduced their value (discussed in Section 4.5.3). It is also possible that individuals withdrew assets from their funds as they faced the financial pressures of a fall in household disposable income and rising unemployment.

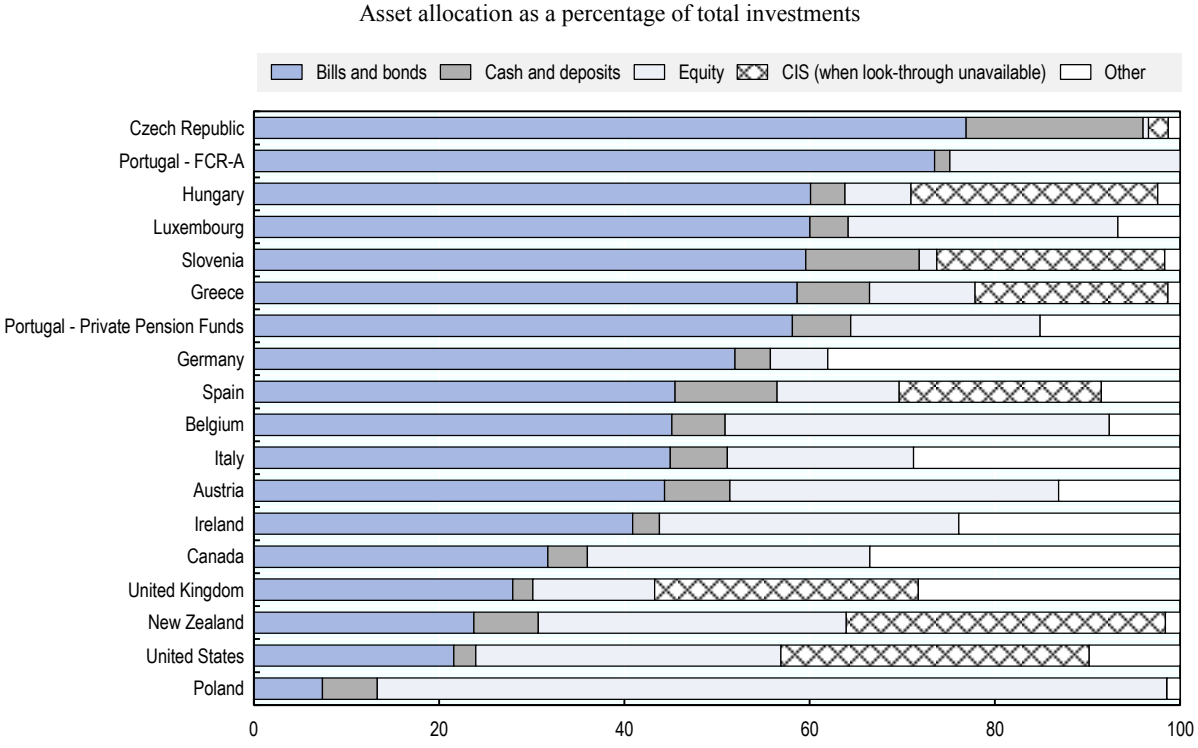
At the same time, contributions fell, affecting the flow of assets into personal pension funds (Figure 4.5). Worsening economic conditions and a fall in the savings rate naturally led to a decrease in personal contributions to voluntary pension plans. The government also tightened deduction limits for private pensions, which may have further reduced the incentives to utilize personal pension plans on the margins, especially for higher contributors.

Assets under management in personal plans have seen a gradual recovery since the 2012 low, but only exceeded pre-crisis levels in 2017 (EUR 18.1 million).

4.5.2. Asset allocation

Portuguese pension funds invest relatively conservatively compared with other OECD countries. Overall, investment in less risky assets (e.g. cash, bills and bonds) exceeds investment in higher risk assets (e.g. equity). As of 2017, the public pension scheme's accumulation phase portfolio had the second-highest (73%) investment allocation to bills and bonds when compared with OECD countries with only voluntary pension plans. The investment allocation to bills and bonds for private pension funds was relatively lower (58%). However, the percentage share was still above the average of investment allocation to bills and bonds (45%) by private pension providers in the OECD.

Figure 4.11. Allocation of pension assets in selected OECD countries, 2017



Note: Countries were selected for inclusion in the chart if they had only voluntary retirement savings schemes. Figures reflect only the asset allocation of pension funds (and not of other pension providers such as life insurance companies). The "Other" category includes loans, land and buildings, unallocated insurance contracts, hedge funds, private equity funds, structured products, other mutual funds (i.e. not invested in equities, bills and bonds or cash and deposits) and other investments. For full notes please refer to Pension Markets in Focus 2018 (OECD, 2018[5]).
Source: Pension Markets in Focus 2018 (OECD, 2018[5]), Instituto de Gestão de Fundos de Capitalização da Segurança Social (2017[6]).

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FCR-A (the accumulation phase portfolio within the public scheme) invests under a stringent investment allocation policy which is geared toward less risky assets. It must satisfy a minimum investment requirement for public debt of OECD countries (minimum 50%), Portuguese public debt (minimum 25%), and limits on other investments: private

debt (maximum 40%); shares (maximum 25%); real estate or infrastructure (maximum 10%); and uncovered foreign exchange (maximum 15%).

Funds managed by private entities have fewer investment restrictions. In 2018, a limit on equity investments by PPRs was also lifted. There are no investment restrictions for foreign investment within the OECD or the European regulated market. Outside these markets, the foreign investment limit is set at 15% for closed and open pension funds and 10% for PPRs. Other limits are a currency exposure limit (30% for both closed and open pension funds as well as PPRs), ownership concentration (5% only for closed and open pension funds), and issuers' investment limit (varies by asset class).[12]

The use of default strategies is not common. There is no legal requirement to establish default funds or to offer default investment strategies. There are also no regulations governing the design or use of default funds. However, it is becoming more common for funds to offer default options when they offer investment options. Default options include:

- A conservative investment policy, which invests intensively in low risk asset classes and limits investments in stocks;
- A life-cycle strategy, where a member's allocation to different constituent funds with different investment strategies / risk profiles changes based on a member's age to alter their investment risk;
- Strategies that guarantee the capital invested and/or a minimum return

The industry association (APFIPP) is promoting the life cycle approach and the establishment of a default investment strategy through its quality label initiative. To access a 'quality label' a fund must offer at least two investment options, including a default option.

4.5.3. Investment performance

Investment returns in Portuguese pension schemes have been positive but were below the OECD average over the ten years to 2017 (Table 4.6). This is likely due to Portuguese funds' more conservative asset allocation policy.

Since its inception, the accumulation phase of the RPC averaged 3.5% annual nominal return, or 2.3% in real terms (Figure 4.12). The years of negative real returns (2010 and 2011) coincided with the economic slowdown of the Portuguese crisis. Post-crisis investment performance broadly recovered to pre-crisis levels.

The average annual rates of return of the privately managed funds were positive over the last ten years, at 2.1% nominal or 0.9% in real terms (Figure 4.12). However, like the publicly managed fund, their investment performance was negatively affected by the Portuguese crisis as well as the global financial crisis in 2008. These years of negative return reduced assets. Since then, real investment rates of return have returned to positive territory.

Table 4.6. Nominal and real geometric average annual investment rates of return of pension assets, net of investment expenses, over the last 5 and 10 years

	5-year average, in %		10-year average, in %	
Selected OECD countries	**Nominal**	**Real**	**Nominal**	**Real**
Australia	9.6	7.5	4.9	2.5
Austria	4.8	3.3	2.9	1.1
Belgium	6.4	5.1	3.9	2.1
Canada	8.1	6.5	5.6	4.0
Chile	7.5	4.0	5.1	2.0
Czech Republic	1.1	-0.1	1.6	-0.1
Denmark	5.3	4.6	5.8	4.4
Estonia	3.2	2.1	1.0	-1.3
Finland	6.3	5.6	..	..
Germany	4.0	2.9	3.9	2.6
Hungary	6.8	5.9	..	..
Iceland	7.1	4.8	5.6	0.8
Israel	6.0	5.9	5.5	4.0
Italy	3.5	3.0	3.0	1.7
Korea	3.5	2.3	4.0	1.8
Latvia	2.9	2.0	2.6	0.5
Lithuania	4.8	3.7	..	..
Luxembourg	3.9	2.9	2.9	1.3
Mexico	4.8	0.7	6.2	1.9
Netherlands	7.1	6.0	6.0	4.4
Norway	7.0	4.6	5.3	3.2
Portugal – private schemes	4.1	3.5	2.1	0.9
Portugal – FCR-A	3.6	3.1	3.5	2.3
Slovak Republic	2.1	1.7	1.2	-0.3
Slovenia	6.0	5.5	5.9	4.6
Spain	4.4	4.0	3.0	1.7
Switzerland	4.9	5.1	3.0	3.0
Turkey	8.1	-0.8	9.9	1.3
United States	5.7	4.2	2.1	0.5
Simple average (selected OECD countries)	**5.3**	**3.8**	**4.1**	**1.9**

Note: For detailed notes please refer to OECD Pension Markets in Focus 2018 (OECD, 2018[5]). The simple averages are calculated including Portugal private pension fund results but excluding the RPC. For FCR-A, rates of return reflect accumulation phase returns.
Source: OECD Pension Markets in Focus 2018 (OECD, 2018[5]), data for Portugal's FCR-A were derived from information sheets available on the IGFCSS website (Segurança Social, 2019[7]).

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Figure 4.12. Public and private pension scheme investment rates of return



Note: For FCR-A: rates of return reflect accumulation phase returns. Real investment rates of return are calculated using the nominal investment return published by IGFCSS and the consumer price index. The real investment rates of return for 2008 represent only three months' investment performance. For the private pension funds: Dashed lines represent averages limited to 10 years of returns for comparison purposes (long dashes for nominal average and short dashes for real average). Real investment rates of return are calculated using the nominal investment returns adjusted using the consumer price index.
Source: OECD Global Pension Statistics, data for Portugal's FCR-A were derived from information sheets available on the IGFCSS website (Segurança Social, 2019[7]).

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Comparing the public and private schemes' performance shows that during economic downturns, the public scheme outperformed private pension funds, while the opposite was true under more normal conditions. Both types of schemes averaged positive investment performance over a 10 year cycle, but the public scheme appears to have performed better over that time period. However, this is likely because its more conservative asset allocation allowed it to weather economic downturns better than the private pension funds which were more exposed to the equities market. That is not to say that investing conservatively is better, as the economic downturns of the last 10 years are not typical economic events. Rather, over time it is likely that the privately managed pension funds' investment strategies will yield higher assets overall, as evidenced by the last 5 years' performance which outperformed the public schemes (Table 4.6).

4.6. Solvency and funding requirements

Portugal's regulatory framework imposes solvency requirements at the pension fund management entity level and, for DB pension plans, funding requirements at the fund

level. Pension plans that are financed by an insurance contract (most DC plans) are not subject to specific regulation on solvency and funding beyond what Solvency II requires of all insurance companies.

4.6.1. At the management entity level

All pension fund management companies are required to have a guarantee fund and an adequate solvency margin that varies depending on the entity assuming the investment risks:

- In cases where the management company bears the investment risk, the solvency margin should be equal to 4% of pension assets.
- In cases where the management company does not bear the investment risk, the solvency margin should be equal to:
  - 1% of the pension assets, as long as the amount intended to cover management expenses is fixed for a period of more than five years;
  - 25% of the total net administrative expenses of the previous financial year, as long as the amount intended to cover management expenses is not fixed for a period of more than five years;

The amount of the solvency margin may not, however, be less than the total of:

- 1% of fund assets up to EUR 75 million; and
- 0.1% of fund assets greater than EUR 75 million.

Pension fund management companies are required to maintain a guarantee fund that corresponds to one-third of the solvency margin and should not be lower than EUR 800 000.

Pension provider solvency does not affect a pension fund's funding since pension funds are autonomous entities. The management entity may not be dissolved without first ensuring management of the fund continues by another authorised pension provider.

The winding-up of a pension fund is subject to authorisation by the ASF. However, if a pension fund is wound up and the assets are insufficient to cover all pension liabilities, a particular order governs the priority of claims.[13]

4.6.2. At the fund level

DB occupational pension plans are usually funded based on an independent actuary's valuation of a fund's pension liabilities. This is known as the 'funding scenario'. The pension regulator does not set general assumptions or common formulas to do this. However, the independent actuaries commonly calculate pension liabilities using the projected benefit obligation ("PBO") method (i.e. with a salary projection), discount rates that are based on AA corporate bond yield and French mortality tables (noting the life expectancy at 65 is aligned with the life expectancy estimated by *Instituto Nacional de Estatística* [Statistics Portugal]). In practice, assumptions can vary by plan and fund.

Mortality tables should be up-to-date and based on Portuguese population data. The most commonly used mortality table is TV 88/90, but other fairly old mortality tables also based on the French population are also common (Autoridade de Supervisão de Seguros e Fundos de Pensões, 2016[8]). While relying on other countries' mortality tables can give reasonable estimates of liabilities if adjusted appropriately, best practice is to use up-to-

date mortality tables based on a country's own population. The government collects information on the Portuguese population and mortality rates which it can use to develop its own tables. The government should take steps to develop tables based on the Portuguese population and once they are available, pension funds should be required to use them to value liabilities.

In most cases, discount rates used to value DB liabilities under the funding scenarios appear appropriate, but there may be some cases where they are set too high. The most common discount rates used are below 2.5%, but about 20% of schemes continue to use discount rates higher than 3.5% (Autoridade de Supervisão de Seguros e Fundos de Pensões, 2016[8]). Discount rates should not be above the expected rate of return of the portfolio. Given returns have been somewhat low in recent years, funds should take care to ensure that expectations around future returns reflect recent investment performance.

Funds are also subject to a 'minimum funding scenario', whose purpose is to set a minimum 'safety net' funding rule as established by a 1996 ASF Regulation.[14] The regulation applies to all DB occupational pension plans financed by pension funds. The minimum funding ratio is calculated using an accumulated benefit obligation ("ABO") method (without salary projection), a fixed discount rate of 4.5% and mortality table TV 73/77.

There are further funding rules applicable to pension plans offered by the banking sector. The Portuguese Central Bank has issued a sectorial regulation setting additional terms for calculating the amount of liabilities, provided that the resulting amount is not lower than the 'minimum funding scenario'. Under the regulation, the value of liabilities can be calculated according to the 'funding scenario' but only the following value needs to be totally funded:

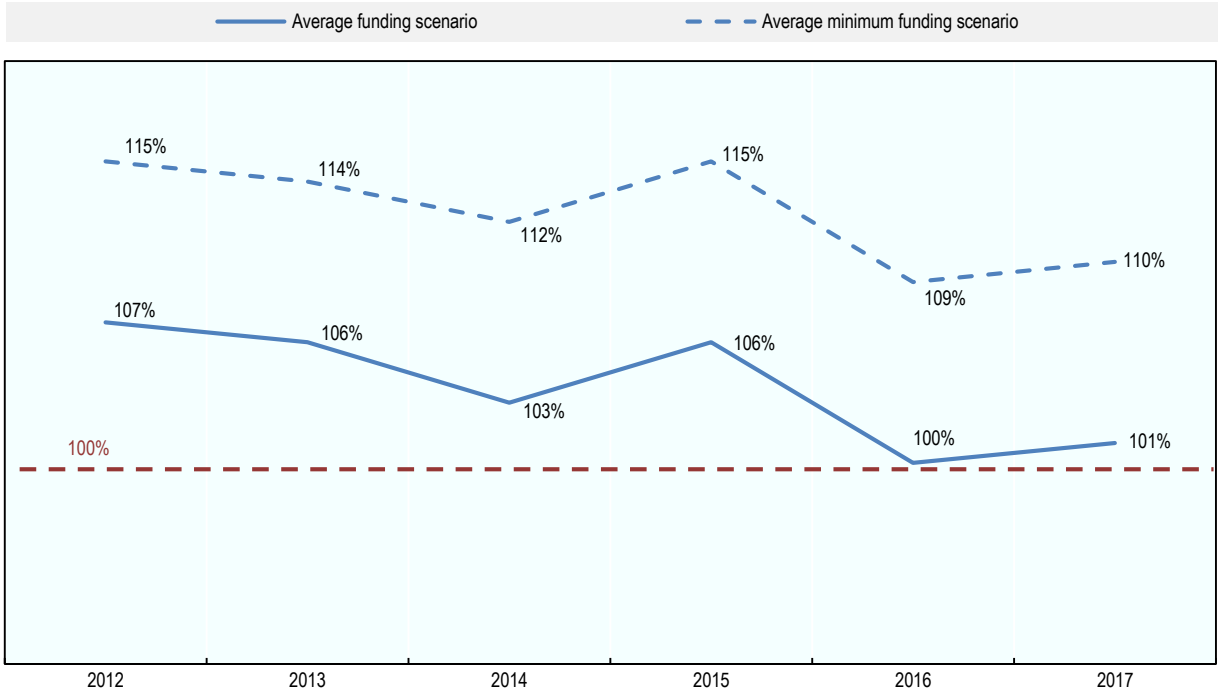
- 100% of the present expected value of pensions in payment
- 95% of the present expected value of liabilities related to past service.

The minimum funding scenario assumptions should be revised as they may lead to pension funds' liabilities being undervalued if relied on. Figure 4.13 shows that on average these assumptions yield minimum funding ratios that have recently been 8-10 percentage points higher than the independent actuaries' average funding ratios. This is because they are based on assumptions that could be updated for current economic trends and life expectancies:

- The 4.5% discount rate appears to be relatively high given the current low yield environment.
- TV 73/77 is not the best mortality table for measuring pension liabilities. Similar to the concerns raised relating to the funding scenario, this table is fairly old and represents the French population. It therefore may not appropriately represent the current mortality profile of the Portuguese pensioner population.

Although most 'funding scenarios' apply more appropriate assumptions to value their liabilities, since the minimum funding scenario establishes safety net assumptions, those assumptions should be appropriate. The ASF's strategic plan includes a study of how to improve the minimum funding rules. This review will be a good opportunity to update the minimum funding scenario.

Figure 4.13. Average minimum funding scenario and funding scenario, 2012-17



Source: ASF.

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Updating the minimum funding scenario is important to ensuring the financial health of the funded DB system. However, updating these assumptions may not be easy. The change may force some funds (albeit a minority) to revise their discount rate down or to use mortality figures that increase their liability estimates. Average funding ratios have decreased to nearly 100% recently **(**Figure 4.13**)**, so some funds' financial situation may be particularly vulnerable if minimum funding assumptions are revised. Funds that face a worsening financial situation due to the changes could be given a transitionary period to increase their funding. Chile faced a similar situation when insurance companies issuing annuities gradually increased their insurance reserves over a transition period after revising the assumptions behind their liability calculations.

4.7. Pay-out phase

4.7.1. Public scheme

The RPC retirement age follows the statutory retirement age, which is adjusted every year with reference to the evolution of life expectancy at 65. In 2018, the normal age of retirement was 66 years and 4 months. Retirement due to permanent incapacity is allowed at any age.

There are several options available to RPC scheme members for withdrawing benefits from the scheme:

1. receiving a pension, provided that the monthly value is equal to or greater than 2.5% of the public support index (*Indexante dos apoios sociais,* "IAS"). As at 2018, the IAS value is EUR 428.90
2. taking a lump sum
3. taking benefits partially as a lump sum and partially as a pension. In this case, the monthly value of the pension income must be at least 10% of the IAS
4. transferring all accumulated pension assets to a child or spouse's pension plan
5. transferring part of the accumulated pension assets to a child or spouse's pension plan and converting the remainder to a pension. In this case, the monthly value of pension income must be at least 10% of the IAS

Retirement benefits in the form of life annuities must be guaranteed by an insurance contract. An insurance company is selected through a tender mechanism by IGFCSS. Since 2014, there has only been one tender and Fidelidade-Mundial Insurance has held the contract.

Most RPC members choose to take a lump sum at retirement. In 2017, total lump sums paid were EUR 1.7 million, or 96% of total yearly benefits (by 99% of beneficiaries). The remainder was taken as lifetime monthly income (i.e. monthly life annuity). Based on the latest data from the IGFCSS, no individuals have taken up the partial lump sum option.

This high rate of lump sum utilisation suggests that savings derived from using the RPC are not necessarily being used to supplement retirement income over time. This is unsurprising since the scheme is still relatively young (it was introduced in 2008) and therefore has low assets under management.

4.7.2. Private personal pension plans

Individuals registered to personal pension plans may choose to either convert part or all of the accumulated assets into a life annuity product or to cash out their savings by taking a lump sum.

Generally, the retirement age in the voluntary funded private system varies according to the terms defined by the respective plans. However, PPRs have different rules – the legislation establishes criteria under which individuals can withdraw pension assets without penalties. These include:

1. old age retirement
2. attaining the age of 60
3. long term unemployment of the participant or any member of their household
4. permanent disability of the participant or any member of their household
5. severe illness of the participant or any member of their household
6. for the payment of instalments of mortgage-backed credit on the participant's permanent residence

These criteria are the result of incremental policy changes which loosened access requirements over time. For example, before 2002, the criteria only applied to participants registered to the plans and not their family members. Before 2012, participants were not able to withdraw pension assets to finance mortgage repayments.

The reasons why people have accessed pension assets has changed since the economic crisis. According to the data available for PPR pension funds, since 2011, individuals accessing funds for reasons such as long-term unemployment and survivorship have been a growing share of people accessing funds. Conversely, the share of people accessing benefits at retirement has been shrinking. As of 2017, withdrawals due to retirement, survivorships, and long-term unemployment (which also includes critical illness) represented 34.2%, 40.6% and 21.1% of total pension benefits, respectively. Accessing pensions to repay mortgages was about 1% and 3% of total amount of withdrawals, for PPR insurance contracts and PPR pension funds respectively between 2013 and 2015.

Individuals can also redeem part of their PPR assets outside these criteria, subject to penalties. The tax deduction previously claimed when the contribution was made plus penalties will be added to individual's taxable income and will be taxed at marginal rates. The penalties are calculated as 10% of the deduction received for every year it was in the fund.

There is a fine balance when allowing individuals to withdraw benefits prior to retirement. Although measures to provide flexibility and access to pension assets during financial difficulties can be justified, this flexibility should be balanced against the overarching purpose of a voluntary retirement income system, which is to supplement income in retirement. Where policy settings are overly flexible, such as allowing withdrawals from private pension plans without meeting the specific conditions, those policy settings should be tightened.

However, on the contrary, part of the attractiveness of these types of funds may be that they permit the early withdrawal of funds, albeit subject to penalties. Any changes to this incentive structure should therefore be supplemented by a corresponding change elsewhere in the system to encourage people to contribute to these schemes.

4.7.3. Private occupational pension plans

Benefit options for occupational DB and DC plans are subject to more stringent pay-out requirements than personal plans. At least two-thirds of accumulated pension assets from employer contributions must be converted into a regular income stream product while the remainder can be paid as a lump sum.

Pension income from DC occupational plans needed to come in the form of a life annuity guaranteed by an insurance contract until recently. When income is guaranteed by an insurance contract, upon retirement, the pension fund management entity must give beneficiaries information on at least three different insurance contract options unless beneficiaries themselves choose the insurance company. The pension fund management entity then transfers the corresponding amount to the insurance company.

A legislative amendment and subsequent regulation recently allowed for income to be paid directly by the pension fund.[15] Under this reform, pension funds are able (but not obliged) to provide:

- regular payments up to the limit of the available assets in an individual's account; and/or
- an income stream where the scheme sponsor guarantees any payments to the individual beyond the limit of the available assets.

This recent reform is positive insofar as it increases choice of income stream products for workers, but it may lead to a misalignment of incentives. There are few incentives for

employers that have opted for DC schemes over DB schemes to provide guaranteed income stream payments because they may not wish to assume that extra risk. It is particularly unlikely that the level of those payments could rival those available from a life insurance company's annuity product. The more likely outcome of this reform is that individuals will ultimately utilise the option offering regular payments up to the limit of the account's assets.

Retirement benefits for DBs are usually provided by the pension fund, although a life annuity can also be purchased from an insurance company.

4.8. Competition

Core Principle 10 of the OECD Core Principles of Private Pension Regulation (OECD, 2016[9]) states that competitive markets should be promoted in pension provision to provide a greater choice amongst financial services and promote cost-efficient provision of pension services. Individuals should be able to search, compare and, where appropriate, switch between products and providers easily and at reasonable and disclosed costs.

4.8.1. Market structure

How Portugal's market structure affects competition is an open question.

Available data suggest that there is concentration in the banking sector in the occupational pension plan market (Table 4.7). However, this is unlikely to present competition issues because most occupational plans are DB schemes offered by closed pension funds sponsored by banks (as employers) and managed by them.

Competition is more likely to be an issue in the personal pension plan market, as there are signs of market concentration in the banking sector. More than 80% of the market share is with the top five providers for PPR insurance contracts (Table 4.7). More than half of those providers are owned by the banking industry, since they are able to benefit from distribution channels that smaller management entities may not have access to. This is unsurprising, since the public relies heavily on the banking sector for its financial services. A survey conducted by BBVA Pensions Institute indicates that about two-thirds of respondents obtain information on retirement saving products from their banking agents (Instituto BBVA de Pensões, 2018[10]). Accordingly, the main barriers to entry for new management entities are a lack of demand for new private pension funds coupled with the small size of the private pension fund market.

Competition could be an issue if banks use their position anti-competitively, but this may not necessarily happen. On the one hand, the market concentration of the top few providers, and the heavy reliance on the banks, can discourage new entrants to the market. Without a threat of new entrants, incumbents have lower incentives to deliver good value to members. On the other hand, there are multiple large providers and not all of them are from the banking industry. These industry players have the potential of posing competitive threats to one another. That threat of competition can come from customer pressure, which in turn could arise through improved disclosure / financial knowledge. If that is the case, then structural change in the industry may not be necessary. Notwithstanding, it is worthwhile to monitor the voluntary pension market structure to ensure a healthy level of competition overall.

Table 4.7. The voluntary funded pension market, 2016

	Market share	Parent company	Parent company industry
Open /closed pension fund providers			
Ocidental SGFP	28%	Millenniumbcp Ageas Grupo Segurador	Insurance
CGD Pensões	19%	Caixa Geral de Depósitos	Banking
BPI Vida e Pensões	13%	Banco Português de Investimento	Banking
GNB SGFP	11%	Novo Banco	Banking
SGFP do Banco de Portugal	10%	Banco de Portugal	Central bank
Total market share	**80%**		
PPR insurance contract providers			
Fidelidade	42%	Fosun international	Conglomerate and investment company
Ocidental Vida	19%	Millenniumbcp Ageas Grupo Segurador	Insurance
GNB Seguros Vida	13%	Novo Banco	Banking
BPI Vida e Pensões	5%	Banco Português de Investimento	Banking
CA Vida	5%	Caixa Central de Crédito Agrícola Mútuo	Banking
Total market share	**84%**		

Note: The table only lists the top five providers by market share for each category of provider.
Source: ASF, companies' websites.

4.8.2. Fees, costs and margins

One sign of healthy competition is if fees or charges to customers converge to the cost of providing a product or service. More generally, falling costs is also a sign that competition is improving. However, neither of these signs is definitive.

The RPC's costs are about 0.03% of assets under management. It is able to achieve these low costs from economies of scale since the cost is split with the reserve fund.

Members of the funded private pension market are subject to subscription fees, transfer fees, exit fees, and performance fees. Pension providers can set fees freely apart from transfer fees for PPRs, which are capped at 0.5% of transferred assets if there is a capital or return guarantee and cannot be charged otherwise.

Regulation does not require pension providers to report fees and costs in a systematic way, so the available data may not always give a complete picture of individual-level fees. However, aggregate figures show the general trends in fees, costs and fund margins.

Aggregate figures for open and closed pension funds illustrate that the wedge between costs to funds and fees charged to members is widening. Between 2012 and 2017, fund costs as a share of assets under management fell from 0.15% to 0.11%, but fees as a share of assets under management in open and closed pension funds only declined from 0.22% to 0.20%. Similarly, the average fee per active member remained relatively unchanged while per member fund costs decreased by about 15%. Fund margins trended upwards from 2012 to 2017, increasing from 34% to 43%, subject to some volatility.[16]

Less information is readily available about costs and fees to annuity products. However, they are generally expensive and there is little competition as the industry is small.

The results above suggest that funds are not fully passing on cost savings to consumers, and there is room for more competitive pressure to push prices down. However, much of this pressure should come from customer pressure. Several indicators help show whether members can and do put pressure on pension providers. These are member engagement, availability of information and financial knowledge of members.

4.8.3. Member engagement

People tend to use the plan offered by their bank (same financial group) and tend not to shop around for the best plan. The competition therefore typically happens at the stage at which people select banks, which may not lead to an optimal decision about their retirement income provider.

Switch rates are an indicator of member engagement. In the PPR market, people can switch between different providers without paying fees (except when the provider offers guarantees) which should theoretically encourage competition. However, switch rates are relatively low (Table 4.8), signalling low member engagement. However, there is little available data on these statistics for plans other than PPRs.

Table 4.8. Switch rates for PPR insurance contracts

	Percentage of PPR insurance product members who switched provider
2006	2.79%
2007	0.51%
2008	0.96%
2009	0.95%
2010	0.69%
2011	0.65%
2012	0.61%
2013	0.42%
2014	0.57%
2015	1.56%
2016	0.71%
2017	0.84%

Source: ASF.

4.8.4. Financial advice

Another indicator of potential consumer pressure is the use of financial advice. The BBVA Pension Institute suggests that the number of individuals receiving financial advice on retirement planning from their banking agents has risen over the past two years. Furthermore, the proportion of people who received financial advice specifically related to retirement products increased from 48% of respondents to 64% of respondents between 2016-2017. This suggests that individuals are trying to become better informed about retirement options. However, it is important that the financial advice they receive is independent and of good quality.

4.8.5. Plans' communication structure

Individuals generally receive information regarding their accumulated pension assets and investment returns annually. However, disclosure rules vary depending on the type of financing vehicle.

There is no single platform where members can compare all different types of products and funds under different financing vehicles. However, members can get information related to voluntary retirement products through some different channels:

- The ASF website provides information relating to PPR (non unit-linked) insurance contracts. For each product, the information details its performance, fees charged to members, providers, and type of guarantee provided by the product.
- The website of the Portuguese Association for Consumer Protection (DECO) offers a PPR fund comparator and simulator tool which is commonly used by the public.
- The CMVM website provides information relating to PPR investment funds. These include charges, the fund's risk indicator, and the fund's investment return.
- The Portuguese Investment Funds Association (APFIPP) website provides information relating to the historical and current performance of all open pension funds.
- The APS (Portuguese Association of Insurers) website provides information about the returns and risks of PPR (unit-linked) insurance contracts and open pension funds managed by insurance undertakings.

APFIPP also has an initiative to promote transparency and the development of the voluntary funded pension market, especially for DC occupational pension plans. It has introduced a standardised certificate of responsibility for retirement (*Certificados de Responsabilidade para a Reforma*, "CERR"). The programme gives a 'quality label' to DC Pension Plans whose characteristics and outcomes the APFIPP deems to meet the existing best practices in relation to occupational pension plans. The introduction of this CERR should help members compare funds in a standardised format. The initiative is exclusively the responsibility of the APFIPP but is supported by the ASF.

4.8.6. Financial knowledge of members

A lack of financial knowledge is an issue when it comes to retirement planning. Individuals often do not voluntarily save for retirement, although they may be aware of a need to do so. For example, the BBVA Pension Institute recently found that most people in Portugal did not expect their retirement savings to be adequate and that they needed to save for retirement (Instituto BBVA de Pensões, 2018[10]). Furthermore, nine out of ten respondents considered it was "advisable that each one save to complement the Social Security reform". 77% of respondents were partial to a direct contributions product where retirement income would be linked to the amount accumulated in that product.

Notwithstanding these findings, the survey also showed that people exhibited behavioural biases. Few stated that they save voluntarily for retirement, citing financial constraints and a view that retirement is too far away as the reasons. Even when they were saving, the survey found that most people who saved for retirement use weak savings tools - more than half use traditional bank deposits to save for retirement.

One of the ASF's duties is to promote financial education initiatives, in order to improve the level of financial knowledge on insurance and pension fund issues. In recent years, the ASF developed a specific area to promote education on risk, insurance and pension funds. It is also part of the National Plan for Financial Education, along with the CMVM and the Portuguese Central Bank.

The ASF has many initiatives like the development of educational and teaching materials to support the Core Competencies for Financial Education:

- a teacher training programme;
- training initiatives to support the Core Competencies for Financial Training of Micro, Small and Medium Enterprises;
- the dissemination of financial training through digital resources to reach a wider and more diversified population.

However, more can be done to specifically target financial education relating to retirement income decisions.

4.9. Policy options to improve Portugal's voluntary funded pension system

Portugal's voluntary pension system can be improved to better align it with the OECD's main messages for pensions. It is important for pension systems to diversify the sources financing retirement, have funded private pension arrangements to complement public pensions, and improve the design of DC pension plans.

Policy settings around the voluntary system are not currently encouraging enough participation, and are not markedly improving retirement income outcomes for people who do participate. There is therefore a need to implement measures to increase coverage, ensure better savings outcomes and build confidence in the voluntary funded pension system. These measures include: improving the incentives to contribute to the scheme; changing withdrawal settings; supporting growth in occupational pension plans; improving regulation; and raising awareness of the system. Each of these reforms is discussed below.

4.9.1. Improving incentives to contribute to voluntary pension schemes

Incentives to contribute to the voluntary pension scheme can be improved by simplifying the tax system and introducing non-tax financial incentives.

Portugal's **pension tax system could be simplified** by selecting one set of tax rules and applying it to all schemes and all types of contributions. This is important because the tax system for voluntary pension savings is complex, and differs depending on the origin of the contribution. Indeed, complexity can be a strong deterrent for utilisation.

Portugal could consider transitioning the entire voluntary funded pension system to EET. The EET tax regime for amounts contributed by the employer and the tEt tax regime for amounts contributed by an individual deliver similar tax advantage outcomes. However, since the EET system delivers immediate full tax relief at the time of the contribution, it could be perceived as providing a better incentive to contribute.

Changing the timing of tax concessions is not without its shortcomings. It will have a higher short-term fiscal cost to the government, and the government will wait longer to recover that cost at the withdrawal tax stage. Furthermore, if this change achieves the

goal of incentivising more contributions, the total fiscal cost will be higher than the current fiscal cost of providing tax incentives. Another potential shortcoming is that if existing contributions (i.e. accounts that have already been taxed under the tEt regime) are grandfathered, there would be two parallel systems, making administration harder. It may also create the perception of added complexity, although this could be managed through a clear communication strategy about how tax rules for all new contributions will be streamlined.

Non-tax financial incentives can also be introduced to better promote savings for retirement. For example, other jurisdictions have introduced fixed nominal subsidies or matching contributions. These initiatives have helped improve coverage rates, particularly for low income individuals. These types of initiatives could be useful to raise the profile and coverage of the voluntary pension system in Portugal.

These non-tax incentives should be designed to improve retirement income outcomes with reference to the retirement income system as a whole. That is, they should be restricted to at-risk groups who are likely to see genuine retirement income improvements as a result of the initiative.

4.9.2. Changing withdrawal settings to improve retirement incomes

The Portuguese government should consider **tightening the rules for withdrawals from PPRs**. The conditions currently permitting withdrawals from PPRs are, in some respects, lenient. For example, applying the long term unemployment criterion of release to members of an individual's household can capture some cases which would not reasonably warrant a withdrawal from pension savings. It is better to reform the criteria for early withdrawal so that an individual is required to exhibit severe financial hardship before being able to withdraw funds prior to retirement.

There should be no permissible circumstances of withdrawals from the voluntary pension system outside the general conditions (even with penalties). Early access to pension assets is contrary to the goal of generating a complementary income during retirement and should be strictly limited.

Of course, the option of being able to withdraw savings prior to retirement may contribute to the appeal of PPRs. In a system which already suffers from low coverage, it can be tempting to preserve aspects of the system which individuals find attractive. However, these short-term benefits should be weighed against the longer-term benefits of having a system that is seen to deliver on the outcomes it was established for. One way to maintain the attractiveness of PPRs is to introduce this change to withdrawal rules as a package alongside the reforms to improve incentives to contribute discussed in Section 4.9.1 above. On balance, it is likely that the incentives to utilise PPRs will be preserved if the changes are introduced at the same time.

It is also important to manage any perception that a change to PPR withdrawal rules is being made retrospectively. Some people may have contributed to PPRs expecting that they would be able to withdraw those savings early if necessary. The perception of retrospectivity can harm the system if it makes individuals expect that there will be more retrospective changes in the future. This may deter people from participating in pension plans. For this particular reform, the perception of retrospectivity can be overcome by allowing for a reasonable 'grace period' (for example, five years). During this time, people could be permitted to withdraw funds with reduced penalties before which early release of funds would no longer be permitted.

The government should also **align retirement age rules with the statutory retirement ages**. Individuals are currently able to withdraw savings from some voluntary pension funds prior to the statutory retirement ages. This can be problematic as it incentivises people to withdraw funds for purposes other than to provide a stable income to fund retirement. Permitting withdrawals only after the statutory ages would strengthen the retirement income system's goal of aiding people to achieve an adequate income in retirement.

Another important reform is to **encourage at least partial annuitisation** in retirement. Portugal's annuity market is relatively underutilised, especially by members of voluntary personal pension funds. Most personal pension fund withdrawals are taken in the form of lump sums. This is unsurprising given the relatively low level of assets in these funds. And indeed, annuities are not the best financial product for people with low levels of saving, especially when those annuities have high fees.

However, if the voluntary pension market gains prominence and average assets per individual grows, individuals could be encouraged to better utilise products such as annuities. This would allow them to smooth retirement income over their lifetimes. However, these measures should be accompanied by government monitoring of the industry to ensure that gains from scale are passed on to customers.

4.9.3. Supporting growth in occupational pension plans;

The government can do more to **support the growth of occupational pension plans**. Growing occupational plans can be more effective than growing personal pension plans when it comes to achieving higher retirement savings. This is because having occupational plans as part of an employment contract can increase coverage by establishing saving schemes where individuals may not otherwise take the initiative themselves. Contractual agreements stipulating the terms of contributions to occupational pension plans can also secure a steady stream of regular payments to the plan. These contractual agreements can be arranged through collective agreements between employers and workers' associations.

The government could promote these terms as a mutually beneficial part of contractual agreements. Improving the terms of employment through better retirement benefits could help employers attract and retain good workers while receiving a tax deduction for making these payments. Employees benefit as well, through the higher incomes they will ultimately receive.

To help small employers set up occupational plans, the government could encourage them to utilise multi-employer plans.

Another way of using occupational plans to grow retirement income assets is by promoting employer matching contributions (i.e. conditional on the employee contributing). This could encourage participation from employees and help boost contribution levels.

4.9.4. Improving regulation

Regulation of voluntary pensions can be reformed to strengthen the system and encourage growth.

The Portuguese government should **improve funding rules for defined benefit plans**. The 'funding scenarios' for DB plans are typically calculated using French mortality

tables adjusted for Portuguese mortality outcomes. The Government has data on the Portuguese population and also monitors mortality rates for the pensioner population. It should use this information to develop mortality tables based on Portuguese pensioner data as a base table. Further, it should take into account mortality improvements to better estimate future liabilities.

The rules governing the 'minimum funding scenario' should also be revised. The assumptions currently rely on a fixed discount rate of 4.5% and the French mortality table TV 73/77. The 4.5% discount rate is high given recent low interest trends and should be revised to one that better reflects market conditions. The mortality tables used to value liabilities should also be changed to tables based on the Portuguese population once they are available. These changes may lead to changes to the way a minority of pension funds value liabilities, which may be disruptive to some DB funds if enforced too quickly. Therefore, appropriate transitional measures should be considered to ensure the ongoing financial stability of the funds.

The government should **promote the establishment of a default fund framework**. The OECD Roadmap for the Good Design of Defined Contributions Pension Plans encourages the establishment of life-cycle investment strategies as a default option to protect people close to retirement against extreme negative outcomes. This is important as there has been a trend away from DB to DC plans. Many DC plan members are not able or willing to choose how to select investments. Life-cycle strategies are a good way to manage this issue. However, people should still be given a choice between investment options with different risk profiles and investment horizons.

To help ensure default options, and indeed all investment options, deliver good value to members, **costs and fees should be subject to common and standardised reporting requirements and closely monitored** by the relevant authorities. Pension funds are not subject to standardised reporting requirements around fees and do not tend to voluntarily disclose fees and charges transparently because there is not enough competitive pressure for them to do so. It is important to ensure better disclosure of fees and margins, especially since pension funds appear not to have been passing on cost savings to customers. One way to achieve this is to require funds to send members an annual fund performance report, where they provide information about the status and future trajectory of their savings, with clear disclosure of specific fees.

4.9.5. Raising awareness of the system

More should be done to improve **financial knowledge** around retirement income. While Portugal already has financial education programmes, more can be done to specifically focus on how financial decisions today relate to retirement income outcomes in the future.

Financial knowledge programmes could equip people with the tools to understand the relationship between the different schemes that can provide them income in retirement. People could be helped to assess their personal circumstances with reference to this system, and to decide to what extent contributing to the voluntary pension system would be beneficial to their individual circumstances.

Financial knowledge programmes could also aim to improve the public's **understanding of relative risks and returns** from different asset allocations. This is important because Portuguese pension funds generally invest less in higher return assets like equities compared to other OECD countries. This is mostly because the public is generally risk

averse. While investing in higher return assets increases investment risks, these risks can be managed by diversifying those risks and establishing an investment risk management process (Principles 4.6 and 4.9 of the OECD Core Principles of Private Pension Regulation). Establishing education programmes which explain these strategies is one way to generate demand for investments that generate higher overall returns.

To complement financial knowledge programmes, providers need to **improve communication with members**. This could involve a range of initiatives like providers sending members regular updates, providing tools for individuals to calculate their estimated balance at retirement under different options, or providing financial advice services. The government could also initiate a pension dashboard, which is a platform where the individual can see all their pension entitlements, from public and private sources.

Key recommendations

- Improve incentives to contribute to the voluntary pension scheme by, for example, simplifying the tax system and introducing non-tax financial incentives.
- Tighten rules that allow early withdrawals from PPRs and align retirement age rules with the statutory retirement ages.
- Support the growth of occupational plans to increase coverage and encourage steady contributions to pension plans.
- Improve funding rules for defined benefit plans by developing Portuguese mortality tables for funding ratio calculations and updating the minimum funding scenario assumptions.
- Introduce financial knowledge programmes that focus on retirement income planning and decision-making.

Notes

[1] The sustainability factor has since been abolished for retirement at or after the normal retirement age, as discussed in greater detail in Chapter 3.

[2] See Decree-Law no. 323/85 of August 6th

[3] The mandatory social protection schemes are the general regime of social security scheme, the pension scheme for public sector employees (*Caixa Geral de Aposentações*, CGA) and the pension scheme for lawyers and solicitors (*Caixa de Previdência dos Advogados e Solicitadores*, CPAS).

[4] The wage used to calculate contributions to social security is the *Base de incidência contributiva*, "BIC". See Law no. 26, February 22nd 2008.

[5] This calculation uses average annual wage figures from OECD.Stat Average Annual Wages (https://stats.oecd.org/). In that dataset, the figures reflect average annual wages per full-time and full-year equivalent employee in the total economy. Average annual wages per full-time equivalent dependent employee are obtained by dividing the national-accounts-based total wage bill by the average number of employees in the total economy, which is then multiplied by the ratio of average usual weekly hours per full-time employee to average usually weekly hours for all employees.

[6] If the administrative data based on number of accounts were used without adjusting for duplicate membership, coverage would be overestimated at a figure around 33%.

[7] Employer contributions are tax deductible from employers' taxable profit if:

- All permanent workers of the company are enrolled in the pension plan and the benefits are established in accordance with an objective criteria that applies to all workers;
- The annual contributions made by the employer do not exceed 15% of the annual total costs with wages and salaries (the limit is 25% if employees are not covered by social security such as pension plans under a collective agreement in the banking sector). If the contributions exceed the limit, the excess part is not considered as a cost for the company for tax purposes, unless the amounts are included in the employee's taxable income;
- At the time of retirement, at least two thirds of the benefits are paid as annuities;
- The pension plan covers exclusively benefits in case of retirement, early retirement, supplementary retirement, health (post-work), disability or survivorship and follows, in what concerns age and holders/beneficiaries, the general social security framework;
- The management and disposal of these employer contributions do not belong to the company itself;
- They are not considered income from employment under the Personal Income Tax Code.

[8] Pensions assets as a percentage of GDP as published in this chapter differ to the figures that appear in the OECD Pension Markets in Focus 2018 publication (OECD, 2018[5]). The figures in that publication did not include PPRs financed by insurance contracts and occupational plans delivered through collective insurance contracts. In this chapter, assets as a percentage of GDP are higher, as the Portuguese authorities have provided more data on assets from voluntary pension schemes. The data they have provided cover assets from closed and open pension funds (including occupational plans with collective insurance contracts) and personal retirement saving funds including PPRs with pension insurance contracts.

[9] OECD countries were selected for this calculation if all their pension assets were accumulated from voluntary contributions. Portugal was included in the calculation but countries with auto-enrolment programmes were excluded. The average was calculated as the simple average of assets

as a percentage of GDP for those countries using the percentages from the OECD Pension Markets in Focus 2018 publication (OECD, 2018[5]).

[10] See Law No. 4/2007, article 102.

[11] One example is an occupational plan established under the Banking Collective Labour Agreement. The social protection of employees in the banking sector originated in a collective labour agreement enacted in 1944. Participation in these plans was mandatory both for employees and employers in the banking sector and was considered a substitute for the public PAYG scheme. Several changes were gradually introduced to these plans between 2009 and 2011: (i) the enrolment of employees within the banking sector hired after March 2009 into the public PAYG system and closing the schemes to new entrants; (ii) the enrolment of the remaining employees within the banking sector hired before March 2009 into the public PAYG system, specifically in relation to future service of retirement benefits whereas illness payments and leave, disability and death-related grants and survivors' pensions, future indexation benefits are remained under the responsibility of the banks' pension funds and employers; (iii) the enrolment of most of the beneficiaries within banking sector into public PAYG system but leaving the responsibility of pension indexation and post-retirement benefits to the banks' pension funds and employers.

[12] More information is at OECD (2018[15]).

[13] Priority of claims is as follows: (i) management and custodian fees and other expenses relating to the fund; (ii) in the case of contributory plans, refund of members' own contributions; (iii) annuity premiums to guarantee pensions in payment; (iv) annuity premiums to guarantee the payment of pensions related to members whose age is equal or higher than the normal age of retirement established in the scheme; (v) the amount relative to the fully funded value of liabilities resulting from vested rights in respect of which the conditions set forth in the scheme have already occurred at the date of termination; (vi) the amount related to the fully funded value of liabilities resulting from vested rights in respect of which the conditions set forth in the scheme have not occurred at the date of termination; (vii) pensions is formation, for schemes without vested rights; (viii) indexation of pensions in payment provided that it is contractually specified.

[14] ASF Regulation No. 21/1996.

[15] ASF Regulation No. 8/2018.

[16] Figures are OECD's own calculations using management company income statement tables available in the annual ASF publication, *Estatísticas de Fundos de Pensões*.

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Chapter 5. Labour market developments and pensions

This chapter analyses labour market developments in Portugal that are relevant from a pension perspective. It shows that while short career histories are uncommon among current retirees, risks of short careers have been building up for future generations of retirees, among other things as a result of the economic crisis. The chapter also describes the different pathways into retirement in the Portuguese pension system, including specific early retirement regulation for long-term unemployed people. It then shows that some forms of non-standard work, such as work on temporary contracts, are frequent in Portugal and discusses the impact of changing labour markets on old-age protection systems.

5.1. Introduction

When the global financial crisis and the European debt crisis hit Portugal in the late 2000s and early 2010s, the country's economy was deeply affected, with severe repercussions for its labour market (OECD, 2017[1]). Unemployment surged, reaching about 17% of the labour force in 2013, and barriers to labour market entry grew larger, especially for young people. The unemployment rate among 20-24 year-olds spiked at 39% in 2013 and the rate of youth not in employment, education or training (NEET) climbed to its highest level in decades, at 18% in 2014. Worries arose that these labour market difficulties could have knock-on effects and result in disrupted careers, eventually causing low pensions. Despite remarkable improvements over the last years, the Portuguese labour market still faces major challenges.

This chapter takes stock of the employment situation from a pension perspective, acknowledging the tight link between labour market experiences and pension entitlements. In a first step, it documents the prevalence of short careers and summarises how interrupted careers impact on old-age provisions in Portugal. After that, it analyses pathways into retirement, stressing that early retirement, including after spells of unemployment, is relatively frequent. The chapter then discusses how non-standard forms of employment have been evolving over the last years in Portugal and how workers in such jobs are covered by old-age social protection. Finally, building on this analysis, the last part proposes policy options to improve pension outcomes.

5.2. Career length, career interruptions and pensions

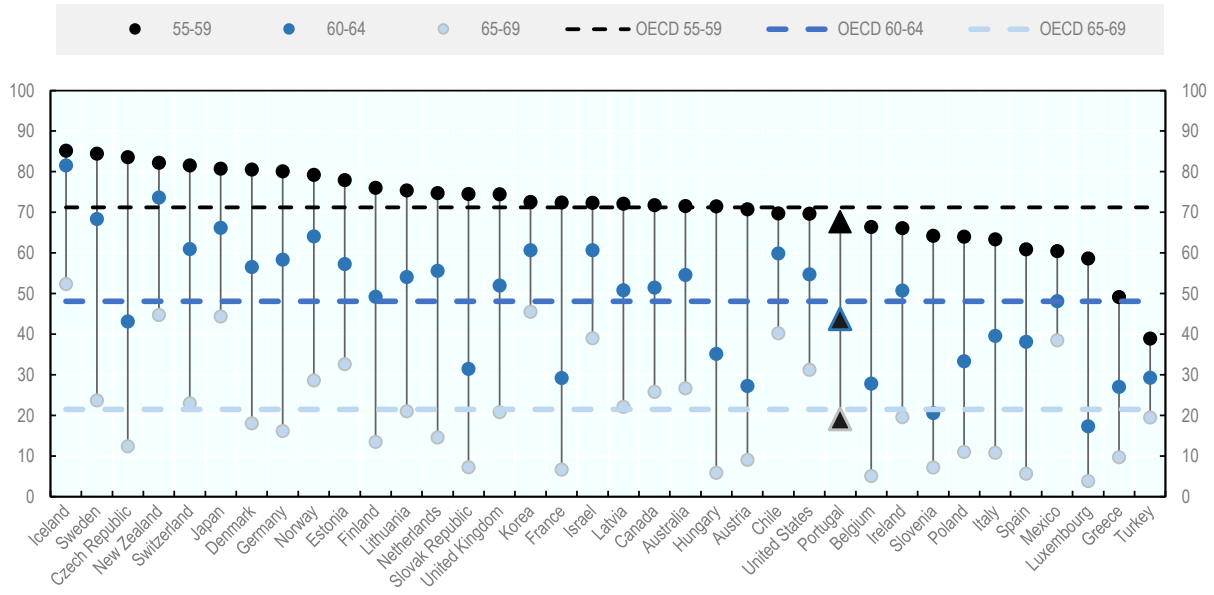
As most other OECD countries, Portugal has a contributory pension system in which career length, the frequency of career interruptions and the age at which workers stop working are decisive factors for the level of pension entitlements. Pension schemes generally pay higher pensions to workers with extended working lives, thereby creating incentives to work longer. Conversely, workers with short contribution histories face penalties and may be at risk of low old-age income. Especially when contributory schemes are the primary source of old-age income, long career breaks and early labour market exits can be a hurdle to adequate pension levels. In the OECD, both the frequency of short careers and the impact of career breaks on pension entitlements vary considerably across countries.

5.2.1. Short careers are uncommon among older workers, but risks have grown

Employment rates at older ages fall quickly with age in Portugal as in the OECD on average. The employment rate among the 55-59 year-olds was 68% in 2017 against 71% on average across OECD countries (Figure 5.1). It reaches 44% among 60-64 year-olds and 19% among 65-69 year-olds in Portugal, compared with 48% and 22%, respectively, on average in the OECD. Some non-EU countries, including Iceland, Japan and New Zealand, are able to avoid such a sharp fall and have much higher employment among the 65-69. Moreover, there is a stark employment gender gap in Portugal, of about 10-15 percentage points in the age-groups 55-59, 60-64 and 65-69, which is also in line with the OECD average.

Figure 5.1. Employment rates at older ages are slightly lower than the OECD average

Employment rate by age, in %, 2017



Source: OECD Labour Force Statistics.

StatLink http://dx.doi.org/10.1787/888933927134

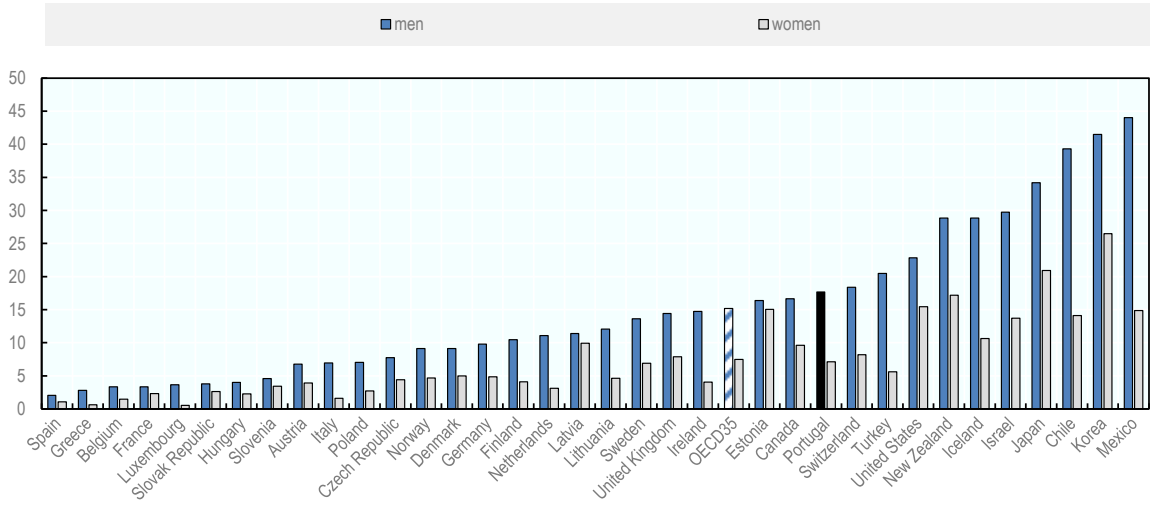
While employment among people in their late 50s and 60s is close to, but below the OECD average, a comparatively large proportion of workers in Portugal remains employed beyond age 70 (Figure 5.2). Among 70-74 year-old men, 18% still work in Portugal – very close to the level for the 65-69 age group - while they are only 15% in the OECD.[1] Among women, the employment rates of 70-74 year-olds in 2017 stood at 7% both in Portugal and the OECD average. These levels are high compared to other EU countries.

Short careers are relatively rare in Portugal among people who are currently close to retirement age (Figure 5.3). Only 11% of 65-69 year-olds report a professional experience of less than 30 years, suggesting that long career breaks are not widespread. In Luxembourg, Italy and Greece, for example, short careers are by far more frequent, with shares of over 30%. Only few countries report lower levels than Portugal, reaching a low of 6% in the Czech Republic and the Slovak Republic.

As with differences in labour market exit ages across genders, short careers are more frequent among women in Portugal. While only 3% of 65-69 year-old men report careers of less than 30 years, the level is much higher among women of the same age, at close to 17%. Therefore, pension penalties for short and interrupted careers affect substantially more women than men. Accordingly, old-age poverty is more frequent among women, with the relative income poverty rates – defined as living on less than 50% of median disposable household income - reaching 12% among women over 65 against 7% among men over 65 (OECD, 2017[2]). This compares to 14% and 9% on average in the OECD, respectively.

Figure 5.2. Employment rates among 70-74 year-olds are high

Employment rates among 70-74 year-olds, 2017

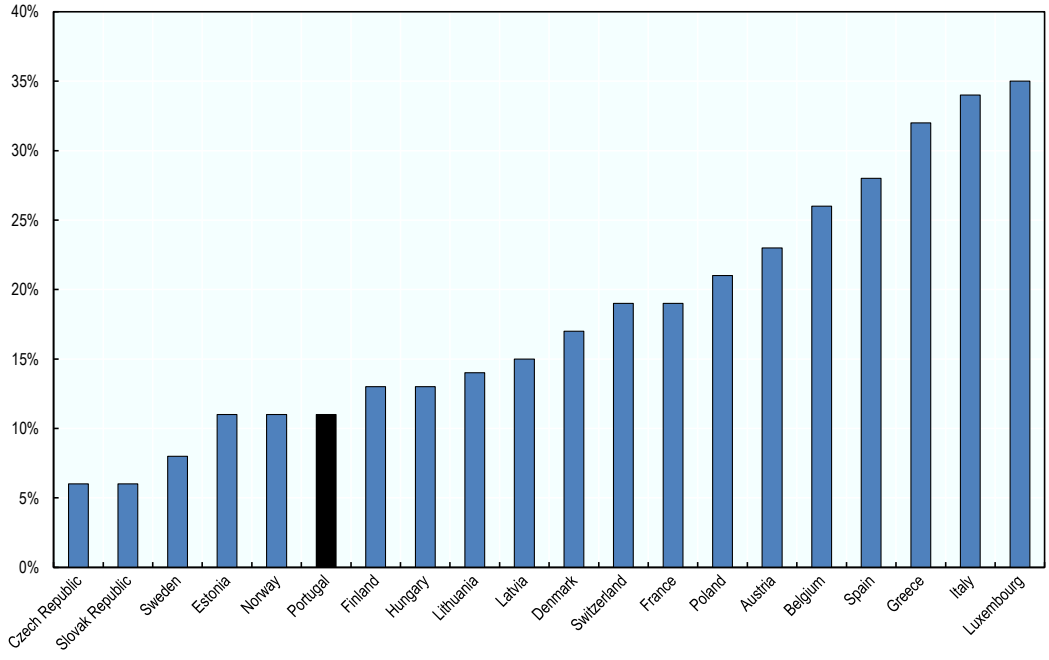


Source: OECD Labour Force Statistics.

StatLink http://dx.doi.org/10.1787/888933927153

Figure 5.3. Short careers are rare among older people in Portugal today

Share of 65-69 year-olds with less than 30 years of professional experience, 2016



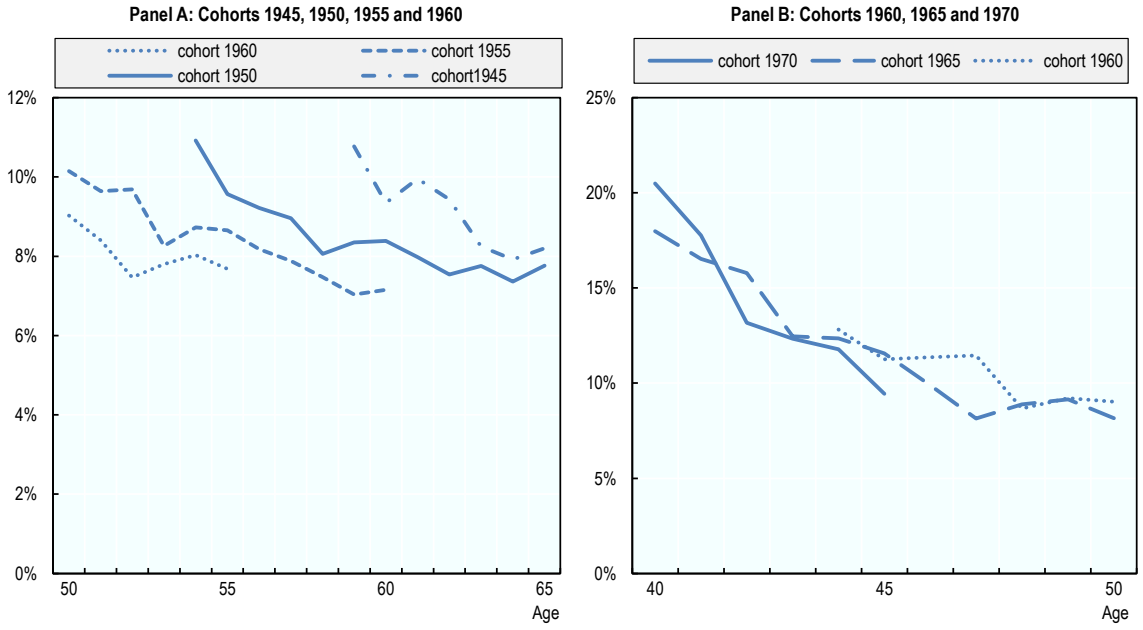
Source: EU-SILC 2016.

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The relatively limited incidence of short careers results from long-term extensions in career length. The share of the population with very short careers at a given age fell from one birth cohort to the next in Portugal among those born between 1945 and 1960 (Figure 5.4, Panel A). However, in recent years, such improvements have come to a halt; the share of people with a career length of less than 15 years at a given age has been very similar for those born in 1960, 1965 and 1970 (Panel B). While longer periods of education partly explain why such improvements have not been extended for younger generations, other factors seem to be at play.

Figure 5.4. Short careers are now less frequent, but improvements have come to a halt

Share of Portuguese population with less than 15 years of work experience at a given age, by birth cohort



Source: EU-SILC, different waves.

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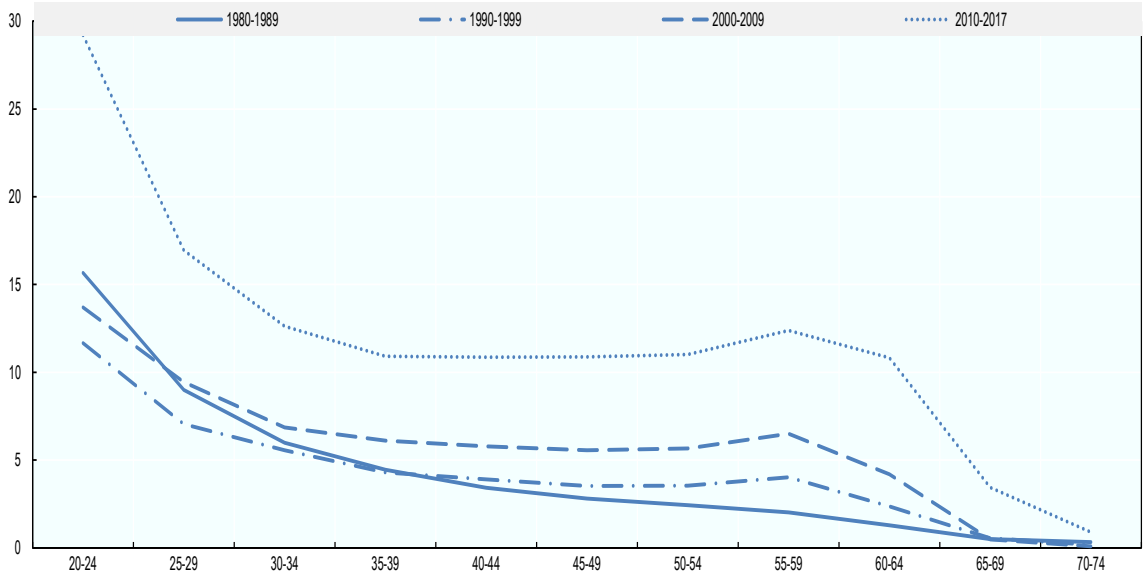
The Great Recession deteriorated employment prospects markedly at least in the short-to-medium term, thus increasing the risk of short careers among future generations of retirees. Unemployment rates at all ages surged during the crisis (Figure 5.5), triggering longer and repeated career breaks. Unemployment rates had already been higher in the 2000s than in the 1990s, growing from about 4% among 35-55 year-olds in the 1990s to close to 6% in the 2000s. When the economic effects of the crisis set in, unemployment spiked, raising the average unemployment rate of 35-55 year-olds between 2010 and 2017 to 11%.

The negative labour market effects were strongest among young people. The average unemployment rate between 2010 and 2017 reached 17% among 25-29 year-olds and 29% among 20-24 year-olds, up from 9% and 14% a decade earlier, respectively. High unemployment rates among young people are worrisome by themselves, but even more so as career difficulties early in life can have knock-on effects, with repercussions on career prospects later in life and ultimately low pension entitlements. While unemployment

among young people has fallen since the peak of the crisis, it is still high today (Chapter 1).

Figure 5.5. Unemployment soared due to the crisis, especially among the young

Average unemployment rate by decade and age



Source: OECD Labour Force Statistics.

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5.2.2. Impact of career breaks on pensions

Career length is an important factor for pension entitlements and short and interrupted careers usually lead to lower pension levels. Pension entitlements are not equally sensitive to incomplete careers across the OECD, however. While very short career breaks tend to reduce future pension levels to a limited extent only in most OECD countries, longer breaks pose serious challenges for old-age income levels in some countries.

On average across the OECD, average-wage workers who enter the labour market at age 25 and experience a 10-year unemployment spell during their career face a pension reduction of 20% in mandatory schemes compared to workers with a full career from age 20 (Figure 5.6). In most OECD countries, the loss ranges between 15% and 30%, exceeding 30% in three OECD countries. Conversely, in Ireland, New Zealand and the United Kingdom, such career breaks are fully cushioned as the mandatory schemes only include flat-rate benefits in these countries.

If there was no offsetting mechanism to limit the impact of short careers on pension levels, such an incomplete career scenario would lead to a drop of about 35% in pension benefits (OECD, 2017[3]). This means that redistributive and stabilisation devices in the OECD on average offset more than one-third of the shortfall, bringing it down from 35% to 20%.

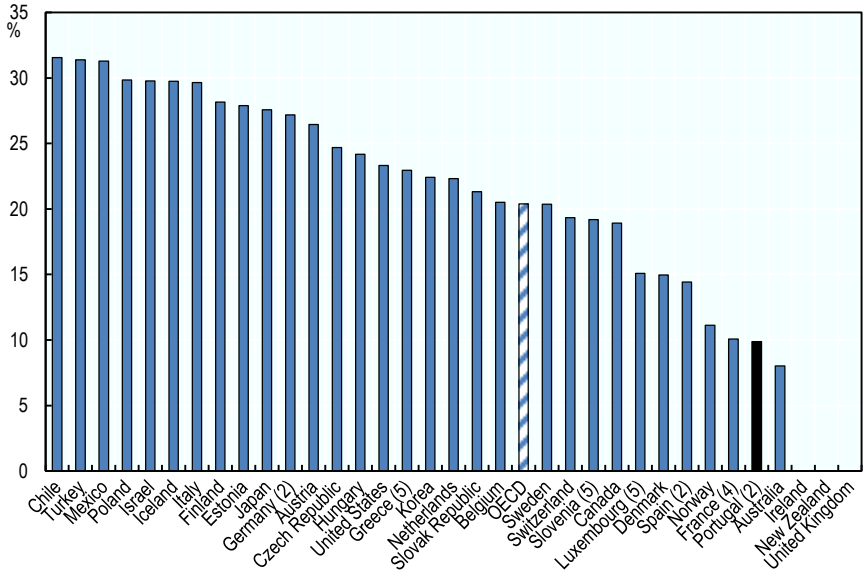
Portugal is among the OECD countries, along with among others France, Germany and Spain, where individuals with such a career break have to work longer than full-career workers to avoid additional penalties beyond lost accrual. While full-career workers entering the labour market in 2018 will be able to retire at age 67 and two months with a full pension (Chapter 3), workers with such a break will have to work two more years. Retiring later and the fact that accruals stop after 40 years of contributions for full career workers, limits the impact of an incomplete career on pension benefits to 10% in Portugal. Pension credits granted during periods of unemployment benefit receipt on the basis of previous earnings also help cushioning the effect. Because of these offsetting mechanisms in the pension system, almost two-thirds of the shortfall in lifetime earnings are not passed on to lower pensions. However, retiring at the same age as the full-career worker would generate a pension reduction of about 50%, more than half of which comes from the sustainability factor.

During unemployment spells, social security contributions corresponding to full-time employment are registered for pension accrual, thereby preventing an interruption of people's contributory period and buffering the effects of career shocks. The maximum duration of unemployment benefit allowance, and hence of the period for which pension credits are granted, is not identical for all unemployed in Portugal. It depends on how long workers have contributed to the system since their last unemployment period and on their age, ranging from 150 days for people under 30 with short contributory histories to 540 days for people aged 50 or older with at least 24 months of contributions since their last unemployment spell. Beyond this maximum period, the unemployed do not accrue further pension entitlements.

As for career breaks due to childcare, periods of maternity and paternity leave (*Licença parental*) of usually up to 150 days (180 days if shared with the possibility of an extension of three months) are considered as periods of actual work and are taken into account to determine pension entitlements. Periods of childcare leave (*Licença para assistência a filho*) of up to two years (three years if three children or more) are considered as contributory periods, too. Beyond that, childcare-related crediting mechanisms do not exist, which generates fairly large cuts in pensions in case of long breaks due to childcare.

Figure 5.6. Loss in pension benefits due to incomplete careers is below the OECD average

Entry at age 25 with 10-year unemployment versus full career from age 20, average-wage workers, mandatory schemes



Note: The numbers in parenthesis in the country labels indicate the extra years individuals with incomplete careers need to work to access a full pension, i.e. without actuarial penalty although the pension might be lower than for a full-career worker. The incomplete-career case is based on entry at age 25 versus 20 in the baseline with a ten-year unemployment period between age 35 and 45.
Source: (OECD, 2017[3]).

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5.3. Pathways into retirement

Given its link to life expectancy, the statutory retirement age in Portugal is expected to increase, thereby encouraging people to work until older ages. However, not all workers pursue a standard work-to-retirement transition at the statutory retirement age, some rather enter retirement early or follow alternative pathways into retirement. In Portugal, several early-retirement schemes permit retirement entry before the statutory retirement age, including an early-retirement scheme for long-term unemployed workers. While alternative pathways into retirement were widely used in many OECD countries 25 years ago, most countries have made sizable efforts to restrict their availability in an attempt to strengthen the financing of social security systems in general and pension systems in particular.

5.3.1. Standard early retirement

Workers aged between 60 and the official retirement age can claim a reduced pension if they have contributed at least 40 years. Until recently, 55-59 year-olds were also entitled to a reduced pension if they fulfilled a minimum of 30 contributory years. Between 2012 and 2015 the early retirement path for 55-59 year-olds was interrupted, and it was abolished in March 2016.

While permitting to draw pensions early, these schemes involve strong monetary penalties, leading to permanently reduced retirement benefits. For example, if legislated pension rules remain unchanged, currently young workers who will retire early at age 62, i.e. about 6 years short of the future retirement age, will face a pension reduction of about 60% at age 68. This very pronounced reduction is the result of three different types of penalties that add up. First, a sweeping 31% reduction will come into effect because the sustainability factor is applied when people retire early (Chapter 3).[2] Second, benefits are reduced by 6% per year of early retirement. Finally, the indexation of benefits in payment to price inflation is less generous than based on wage growth according to long-term assumptions in the OECD pension model, resulting in an additional reduction of 1.25% per year of anticipation.

In contrast to the majority of employees, some groups of workers are exempt from such reductions and benefit from specific conditions that allow retirement at younger ages without penalties. Retirement entry is possible at earlier ages for workers in occupations that are considered as arduous. Seafarers (55 years), underground miners (50 years), classical ballet and contemporary professional dancers (45 years) and a few other precisely defined occupations fall into this category (Chapter 3). The number of workers in these types of occupations is limited, however.

5.3.2. Unemployment-related early retirement

Early retirement is also possible from age 62 if a worker has been unemployed since age 57, conditional on having made 25 years of contributions. While the sustainability factor takes effect in this case and reduces pensions, exiting employment through the unemployment route does not lead to a 6% penalty per year of early retirement, as is the case of the standard early-retirement scheme discussed above. This makes unemployment-related early retirement substantially more attractive financially.

A reduced pension is also payable to unemployed workers from age 57 if they have been unemployed since age 52 and have paid contributions for at least 22 years. In this case, in addition to the pension reduction through the sustainability factor, a penalty of 6% for each year of early retirement before age 62 also applies. This additional penalty is lower than in the case of standard early retirement, however, because it is not calculated up to the full retirement age, but only to age 62.

Such early-retirement options for unemployed workers might be intended to address the problem that older workers with unemployment histories tend to have difficulties to find new employment. However, they blur the signalling role of the normal retirement age and also bear the risk of both reducing job-search efforts among older unemployed people and limiting the willingness of employers to maintain older workers. They make dismissing older workers more socially acceptable and hardly serve as an incentive for the older unemployed to actively search for work.

Entering retirement before reaching the statutory retirement age is relatively common (Table 5.1). In 2016, over 30 000 people retired early, half of them through the unemployment-related schemes. This represents 45% of the total number of 66 700 new retirees in the general pension scheme. The number of new pensions in the unemployment-related early-retirement scheme has been high and relatively stable over time whilst the number of new pensions in other early retirement schemes has varied greatly, from very low levels in 2006 to high levels in 2011. Anticipated and actual legislative changes such as frozen access to standard (not unemployment-linked) early

retirement and the introduction of the sustainability factor might explain much of this variation.

Table 5.1. New retirees in the general scheme and new early retirees (in thousands)

	2006	2011	2016	Annual average 2006-16
Average single-year population size, 60-69 year-olds	109.5	120.0	126.7	119.1
New retirees in general scheme, of which:	76.4	88.6	66.7	72.8
New early retirees, unemployment-linked	22.4	12.6	15.6	16.9
New early retirees, not unemployment-linked	3.3	25.8	14.6	11.4

Source: Portuguese administrative records.

5.3.3. Disability-to-retirement transition

Disability pensions are payable to permanently disabled workers below retirement age. The Portuguese system distinguishes between partial disability (workers unable to earn more than one-third of their normal wage, i.e. the wage that could be expected without disability in this occupation), complete disability and disability due to specific conditions with a high likelihood of impacting on work capacity, such as cancer and multiple sclerosis. Disability cases need to be confirmed by the Verification Committee for Permanent Incapacity (*Commissão de verificação da incapacidade permanente*, CVIP) and subsequent revisions of the disability status are possible, both at the initiative of the relevant institutions or upon request of the person concerned. In recent years, Portugal has intensified medical checks in order to supervise the use of disability benefits. For instance, the "National Plan to Combat and Prevent Welfare Benefits Fraud and Contributory Evasion" was introduced in 2010, leading to greater care in cross-checking and more frequent medical assessments. (OECD, 2018[4])

When beneficiaries reach retirement age, disability pensions are automatically transformed into old-age pensions. From the beginning of 2018, the sustainability factor no longer applies when a relative disability pension is converted into an old-age pension. As the sustainability factor applies to the early-retirement schemes discussed above and reduces retirement benefits substantially, individuals may have an incentive to attempt exiting the labour market through the disability scheme rather than early retirement.

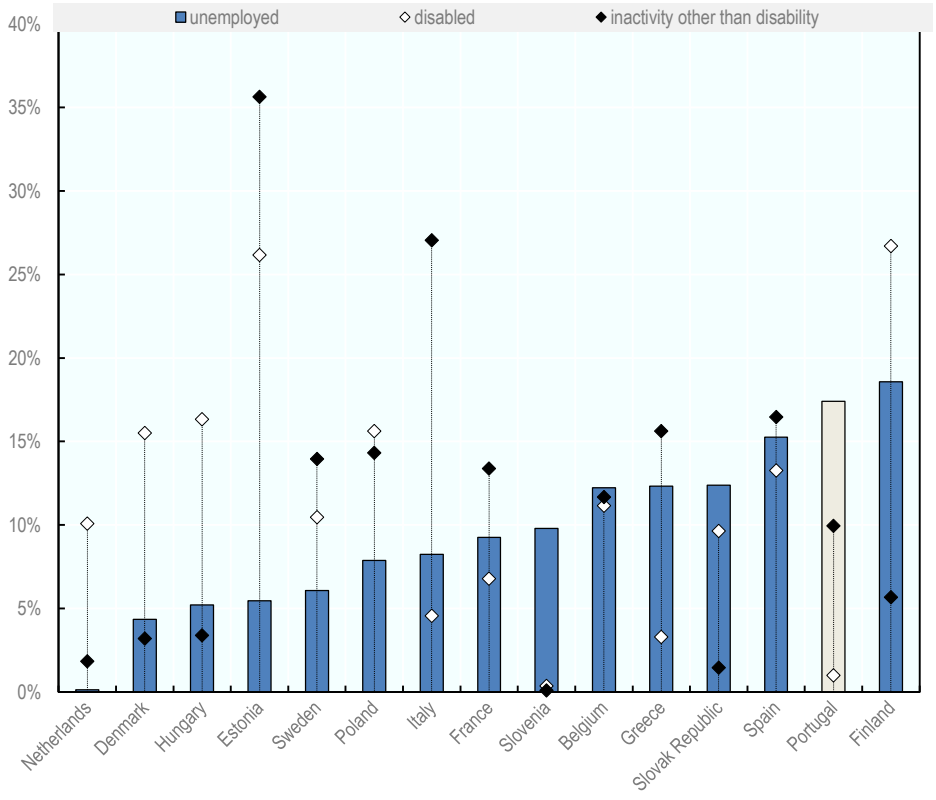
5.3.4. Retirement entry after unemployment, disability and inactivity

Compared to other EU countries, Portugal is among those with the highest share of people transiting from unemployment to retirement, at 17% of all new retirees (Figure 5.7). Only Finland reports a higher level while the average across the 13 other countries for which data are available is 9.6%. Transitions from disability or other forms of inactivity to retirement are less widespread in Portugal. This situation contrasts with the case of a few other countries in which disability-to-retirement transitions are very common, such as Estonia and Finland. However, although only few retirees self-declare that their last labour force status prior to retirement was inactivity due to disability (Figure 5.7), according to administrative records disability pensions are paid to about 12 000 people for each birth cohort aged 55-64 on average, against an average birth-year

cohort size of about 140 000 people, i.e. they are paid to about 8.6% of 55-64 year-olds. These numbers should therefore be interpreted cautiously.

Figure 5.7. Unemployment is a common pathway into retirement in Portugal

Last self-declared labour-force status (other than work) before retirement among 55-69 year-olds, 2016



Note: The remainder of pathways into retirement are direct work-to-retirement transitions (not shown).
Source: EU-LFS.

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5.4. Non-standard employment and pensions

Most pension systems were designed with the case of workers with stable full-time careers in mind. Non-standard forms of employment such as self-employment, part-time work and temporary work are not marginal phenomena in OECD countries, and workers in such jobs are often less covered in terms of old-age provisions. This section focuses on recent trends in non-standard work in Portugal and describes the pension coverage of non-standard workers. It also discusses how future labour market developments may affect the frequency of non-standard work.

5.4.1. Self-employment rates have fallen in Portugal, but remain above-average

As in most other OECD countries, self-employment as a share of total employment has been decreasing over the last years, from 26% in 2000 to 17% in 2017 in Portugal

(Figure 5.8). While this drop was among the largest in the OECD, Portugal's current level of self-employment remains slightly above the OECD average of 15%. Only few OECD countries report higher self-employment rates, with the highest rates in Turkey (33%) and Greece (34%).

Self-employment as a share of total employment rises with age in Portugal. Self-employment rates are below 10% among people under 35 while they are considerably higher among older age groups, especially among workers close to the retirement age. About one-third of workers in their early-60s declare themselves as self-employed according to OECD calculations. Employment in agriculture, which is a sector many self-employed work in, has been declining in Portugal much more rapidly from a high level over the last years than in most other OECD countries, thus contributing to the decrease in self-employment.

It is uncertain whether the share of self-employment will continue to fall. Digitalisation, automation and globalisation can affect the functioning of labour markets and might trigger fundamental changes, possibly leading to higher levels of self-employment (OECD, 2018[5]). This might apply to younger workers who currently have a low rate of self-employment, for instance through platform work.

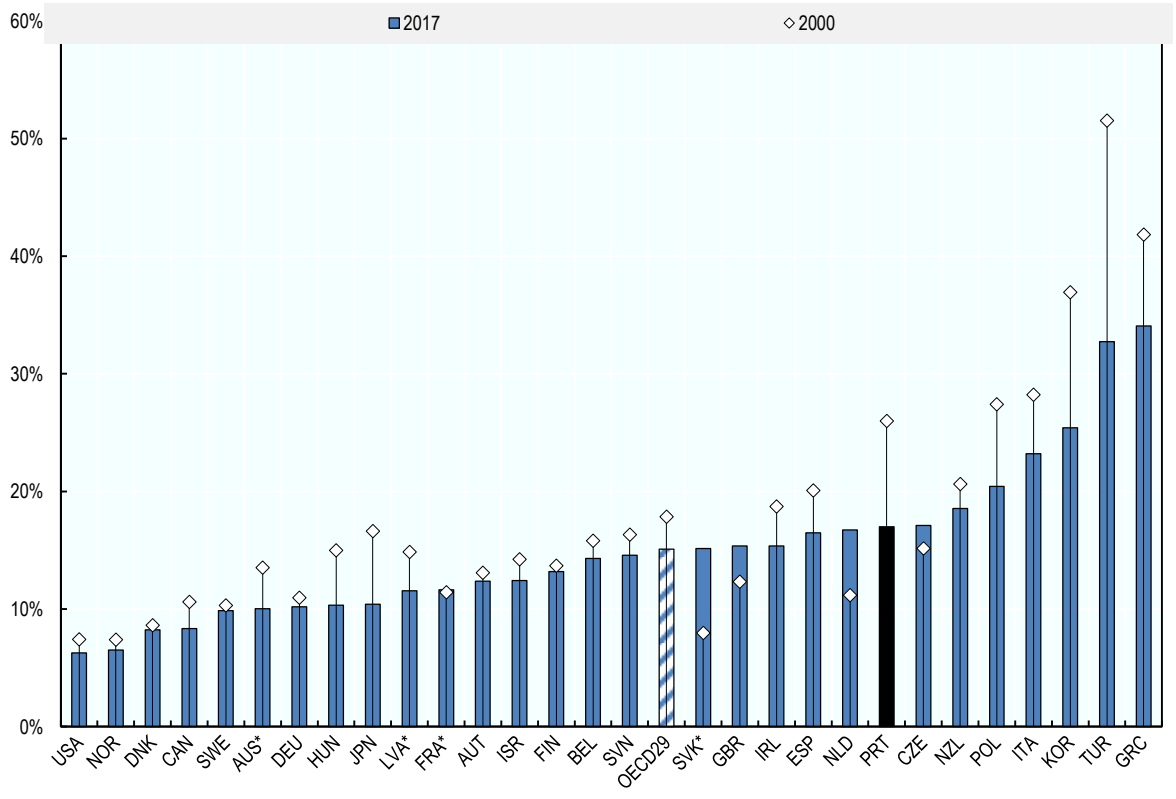
So-called "false" self-employment (*falsos recibos verdes*) is a matter of concern in Portugal (OECD, 2017[6]). This term refers to workers who are officially self-employed, but work de facto as dependent employees. While employers face lower risks and costs when they employ "false" self-employees, the workers face lower job security and a lower degree of social protection. There are legal mechanisms to detect and regularise such cases, but systematic monitoring is currently not guaranteed. However, ongoing modernisation processes may help facilitate the identification of such situations, namely by enhancing the interconnection between Social Security data and Tax Authority data.

While dependent employees pay a social security contribution rate of 34.75% on their earnings (including the employer and employee part) – 22.65 percentage points go to pensions and 5.14 p.p. to unemployment insurance – self-employed workers are subject to specific regulations. The rules regarding their pension insurance were reformed in the summer of 2018, with the goal of extending coverage and of increasing the overall transparency of the scheme.

According to the new regulation, most types of self-employed workers pay social security contributions amounting to 21.41% of their average reference income while the contribution rate is higher for specific types of self-employed workers with an entrepreneurial activity, at 25.17%. These contribution rates are applied to the average reference income over the last three months which is defined as 70% of the total value of the service provision and 20% of the total amount of income associated with the production and sale of products. Freelancers in the service industry, for instance, have a contribution base of 70% of their service provisions while sole traders in the production sector have a contribution base of 20% of their sales. In some occupations, this may lead to low contribution levels even after the reform. Prior to the reform, self-employed workers paid higher contribution rates (29.6% for most types of self-employed workers and 34.75% for some types of self-employed workers with an entrepreneurial activity) but could self-rank into income categories to determine the contribution base, i.e. it was very easy for them to pay very low contributions by choosing a low contribution base. Using average reference income over the past months aims to ensure that contributions are commensurate with actual earnings but do not react too sensitively to income fluctuations.

Figure 5.8. Self-employment rates have decreased in Portugal, but remain above-average

Self-employment as % of total employment, 2000 and 2017



Note: Countries marked by * refer to years shortly after 2000 or shortly before 2017. Estimates including people until 65 rather than all ages may vary.
Source: OECD (2018), Self-employment rate (indicator), http://dx.doi.org/10.1787/fb58715e-en.

StatLink http://dx.doi.org/10.1787/888933927267

From a policy perspective, it might be desirable to ensure that social security in general and pension insurance in particular are aligned between self-employed workers and dependent workers. Contribution rates that are much lower for the self-employed provide implicit subsidies for self-employment; the policy objective pursued by this mechanism might be questionable. However, identifying the labour income part of self-employed revenues is not easy, and harmonising total contribution rates between self-employment and dependent-employment might encourage underreporting of income. Several countries use the minimum wage as the contribution base of the self-employed to cope with this problem.

When self-employed workers depend significantly on one single contracting entity – the so-called ordering customer - the latter is legally obliged in Portugal to pay social security contributions for the self-employed worker, at a rate that depends on the degree to which the worker relies on the ordering customer. Portugal is one of only few OECD countries with a legal definition of dependent self-employment (OECD, 2018[7]). When self-employed workers receive between 50% and 79% of their income from one single

ordering costumer, a social security contribution rate of 7% applies. The rate increases to 10% when they receive 80% of their income or more from one ordering customer. Below 50%, customers do not pay contributions. Prior to the reform, ordering customers paid a contribution rate of 5% in case self-employed workers received at least 80% of their income from them and nothing if it was less. The reform thus extended the definition of dependency and increased the contribution rate of ordering customers.

The specific regulation for self-employed workers concerns a large number of older workers as self-employment is particularly frequent among people close to retirement age. The new measures, such as an increase in contributions by ordering customers, reduce the attractiveness of "false" self-employment, which is in part generated by lower contributions paid by the self-employed. However, the regulation is relatively complex and introduces discontinuities. Other ways to counteract self-employment that is in fact dependent employment may be more efficient, e.g. through improved processes to facilitate labour inspections.

5.4.2. Many workers are on temporary contracts

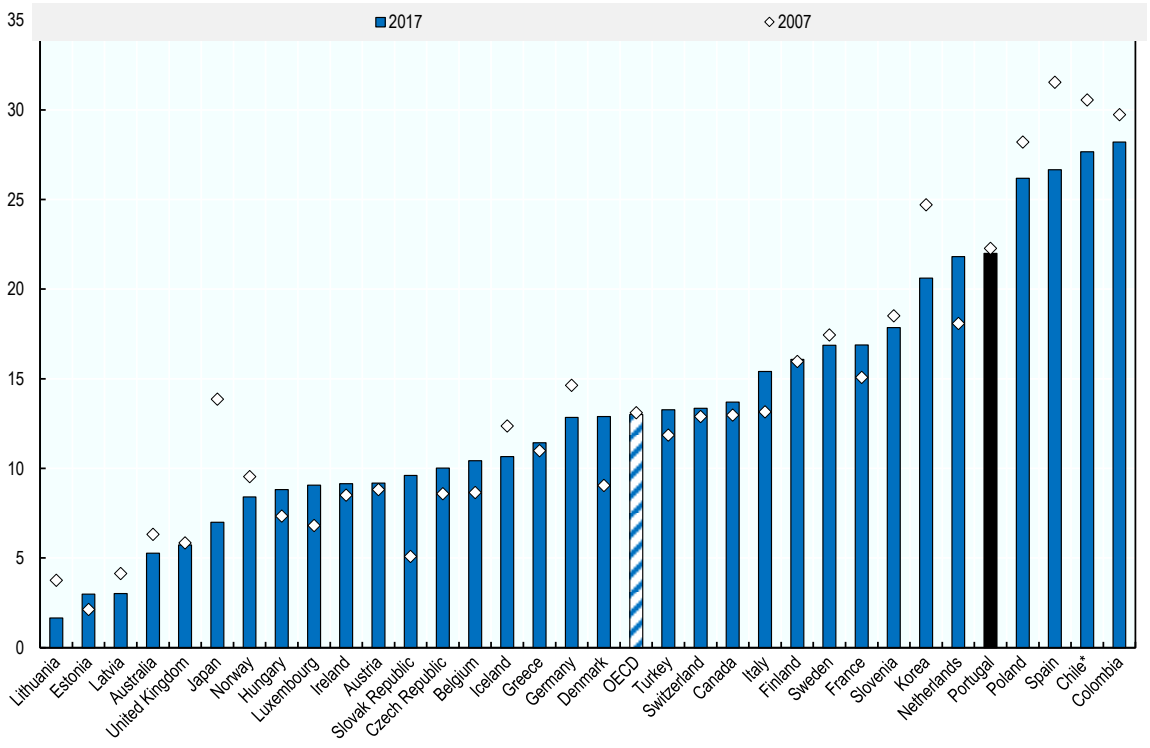
The Portuguese labour market remains highly segmented (OECD, 2017[6]). Over recent years, labour market reforms have reduced the stringency of regulations related to both permanent and temporary contracts. Given the large regulatory gap between both types of contracts, temporary work is widespread: 22% of workers are on temporary contracts, against 13% in the OECD on average (Figure 5.9). Most OECD countries report substantially lower rates of temporary employment, reaching a low of under 2% in Lithuania. While the use of temporary contracts shifts risks away from firms, potentially favouring their willingness to make new hires, workers on temporary contracts face a low degree of stability, with a higher risk of unemployment and interrupted contribution histories.

Men and women are equally likely to be on temporary contracts (22.3% and 21.7%, respectively). However, differences across age-groups are marked in Portugal. Two-thirds of workers under 25 are on temporary contracts, against one-fifth of 25-54 year-olds and one-tenth of 55-64 year-olds. These figures underpin that especially young people are exposed to a lack of stability, weakening their ability to develop professionally and build a long-term future.

Temporary workers are covered by the general Portuguese social protection scheme. Pension entitlements are identical for temporary and permanent contracts. As in the case of permanent contracts, the contribution rate for workers on temporary contracts amounts to 34.75% and is split between employers and employees. There is an exception for very short fixed-term contracts, however, with contributions reduced to 26.1%. In this case, contributions are entirely financed by employers. Apart from this exception, workers on temporary contracts and workers on permanent contracts are treated identically from a pension perspective. However, temporary work indirectly impacts on pension entitlements, as it increases the risk of career breaks and working less than 120 days, which are necessary to validate a contributory year (see above).

Figure 5.9. Temporary work is widespread in Portugal

Share of workers with temporary contracts



Source: OECD Statistics.

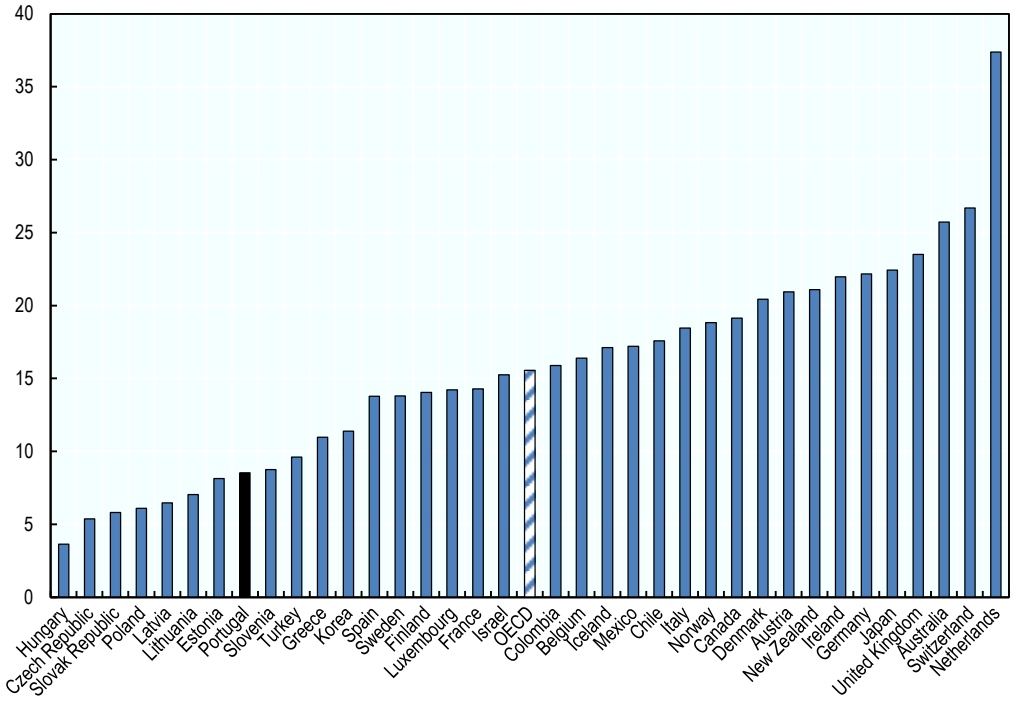
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5.4.3. Part-time work is infrequent, but has been rising among the young

Part-time work is not a frequent phenomenon in Portugal. Only 9% of dependent employees are in part-time work in Portugal, against 16% in the OECD (Figure 5.10). Portugal belongs to the countries with the lowest shares of part-time work, contrasting with Australia (26%), Switzerland (27%) and the Netherlands (37%). Only few OECD countries, all of which are located in Central and Eastern Europe, report lower shares of part-time work than Portugal. The use of flexible working-time practices is likely to remain low in Portugal as long as there is a high share of temporary employment, which makes it easier for firms to adjust labour inputs by not renewing temporary contracts (OECD, 2017[6]).

Figure 5.10. Part-time is infrequent in Portugal

Share of part-time workers among dependent workers in OECD countries, 2017



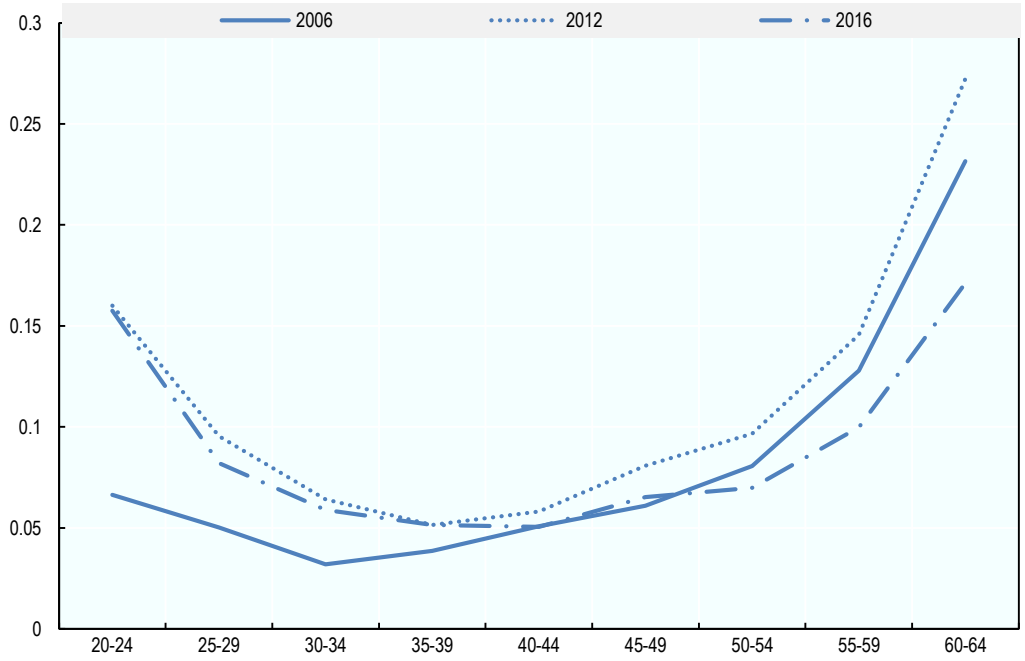
Source: OECD statistics.

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Working part-time is more widespread among women (11%) than among men (6%) in Portugal. With almost two-thirds of part-time workers being female, women are more exposed to the financial consequences in terms of lower pension entitlements. The frequency of part-time work also changes considerably with age (Figure 5.11). In the past, part-time work was primarily concentrated among older age-groups close to retirement age. However, during the crisis part-time work increased sharply among people in their 20s and has remained at high levels ever since, reflecting labour market difficulties among the youth. When the economic crisis hit the country, part-time work increased among older age-groups too, but rates have fallen significantly since 2012. Today, part-time is almost equally prevalent among 20-24 year-olds and 60-64 year-olds.

Figure 5.11. Part-time work increased among the young, but declined among older workers

Share of part-time workers by age in Portugal, 2006, 2012 and 2016, in %



Source: EU-LFS.

StatLink http://dx.doi.org/10.1787/888933927324

The financial consequences of working less than full-time are marked. Part-time workers are more likely to be at risk of poverty than full-time workers in all OECD countries for which data is available (Figure 5.12). In Portugal, the difference is particularly wide. Less than 10% of full-time workers in Portugal are at risk of poverty when poverty risk is defined as having a disposable income below 60% of the national median, against over 30% of part-time workers, suggesting that working part-time is often not a matter of choice. Only in Greece are poverty risks among part-time workers (slightly) higher than in Portugal, while they are significantly lower in most other countries.

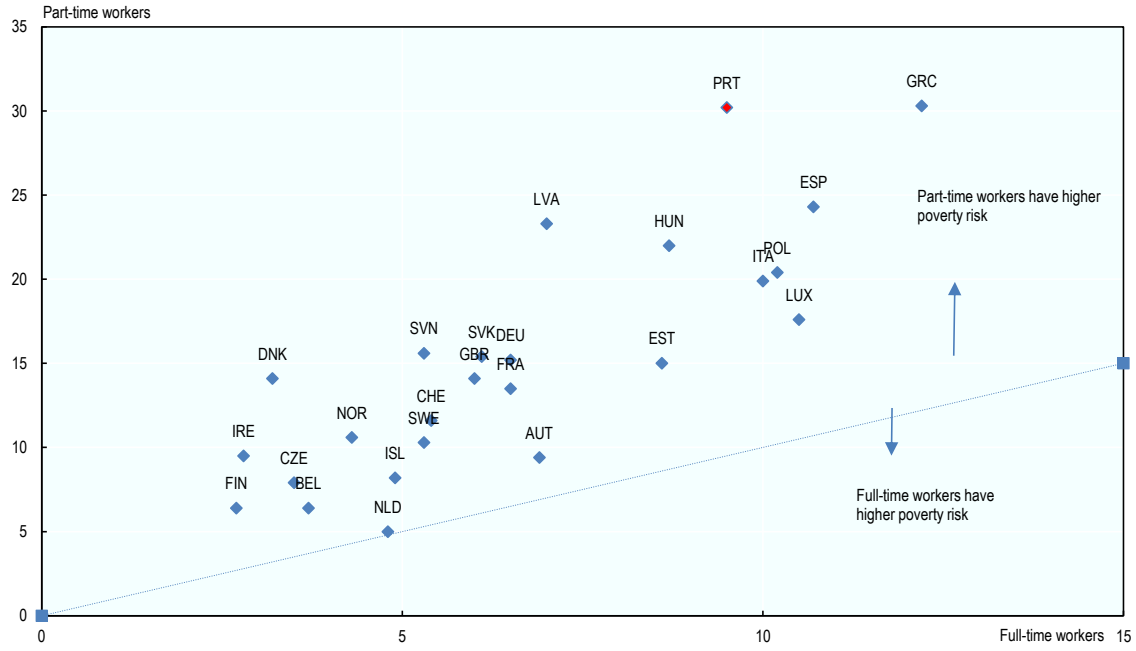
The fact that part-time work has increased strongly among young workers is worrisome because of the high poverty risk that part-time workers face. It also raises concerns regarding young people's ability to accumulate long-term savings early on and build pension entitlements. Long-term savings are essential to facilitate the resilience to adverse financial shocks and ultimately boost income levels at older ages. An increasing share of part-time work among young workers bears the risk of repercussions on their financial stability later in life and the pension levels they will have access to.

Part-time workers in Portugal are covered by the general social protection scheme, as are workers in standard employment. The social security contribution rate is identical at 34.75% for all types of employment contracts, be they part-time or full-time. To validate a calendar year of contributions, 120 working days are necessary. At least six hours of work are needed to validate one working day. Part-time workers working less than six hours per day are granted a number of working days that corresponds to a sixth of their

total monthly working hours. For instance, a person working three hours per day and 22 days per month, i.e. 66 hours per month, will be granted 11 working days. Part-time workers working fewer than 120 days per year can aggregate the days worked in several years to validate one contributory year. However, days worked beyond the threshold of 120 days/year cannot be counted for another year (Chapter 3).[3] While part-time workers are at high risk of poverty during their working lives, they are relatively well covered in terms of pensions, as the threshold of 120 days/year is low.

Figure 5.12. Part-time workers are at a much higher risk of poverty than full-time workers

Share of people at risk of poverty, by working status, 2016



Note: Risk of poverty is defined as working and having a disposable income below 60% of the national median equivalised disposable income (after social transfers).
Source: EU-SILC.

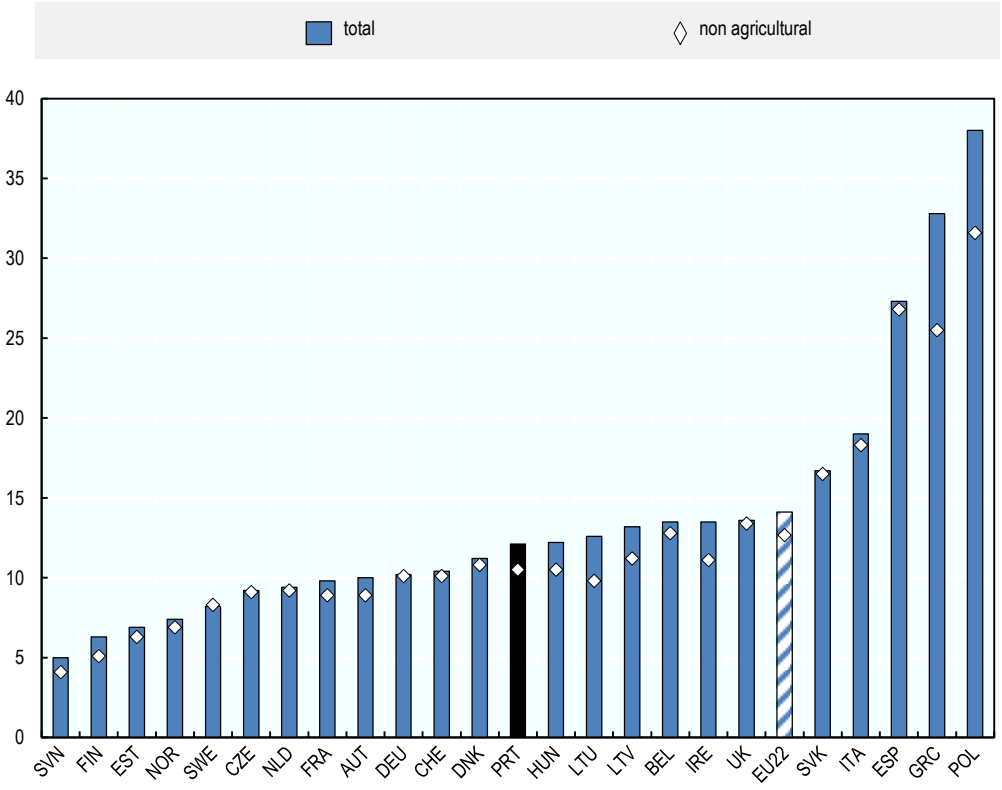
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5.4.4. Informal economy workers are excluded from the social security system

While workers in non-standard employment are in general covered by the social security scheme, informal economy workers are excluded from earnings-related pension schemes, thus facing a higher risk of inadequate old-age income. The informal economy is a matter of concern in Portugal, as in many other OECD countries (Figure 5.13). Currently about 12% of workers are in the informal economy according to ILO estimates, which is lower than the EU average (14%), but considerably higher than in the best-performing countries such as Estonia (7%), Finland (6%) and Sweden (5%). Workers in the informal economy may also face very unstable professional circumstances and often experience long career breaks. Integrating informal workers in the formal sector is an important step towards attenuating old-age poverty risks and improving the financial long-run stability of pension systems.

Figure 5.13. Informal employment is below average, but is not a marginal phenomenon

Share of informal employment in total employment, 2016



Source: International Labour Office (ILO).

StatLink http://dx.doi.org/10.1787/888933927362

5.5. Automation and digitalisation will contribute to shaping future labour markets

Digitalisation and automation can change labour markets at a fast pace and will contribute to shaping future jobs. While there is a large uncertainty on how exactly the future of work will look like, it could be that these trends contribute to an increasing number of non-standard workers and that workers will be required to adapt their skills more often to remain competitive in the labour market.

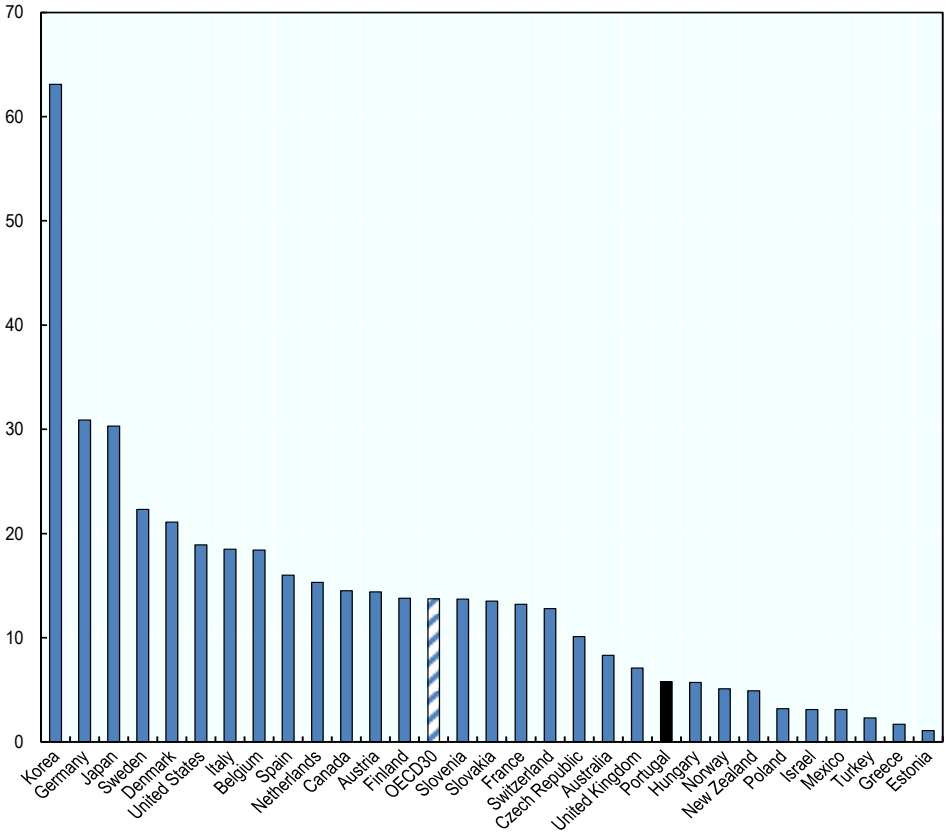
5.5.1. Automation and digitalisation in Portugal

As of today, the Portuguese economy relies less on automated processes than most other OECD countries. In the manufacturing sector, firms in Portugal currently use 5.8 robots per 1 000 workers, against an OECD average of 13.8 (Figure 5.14). These figures suggest that regardless of further technological developments an increase in automation could occur if Portugal were to catch up with other OECD countries. In quickly ageing societies with a shrinking labour force, the prospects of automation seem to be particularly marked: Germany, Japan and Korea are currently the OECD countries where automation is the most pronounced (Figure 5.14). While automation provides ripe growth

opportunities, it also raises concerns that finding employment might become more difficult for some groups of workers, including low-skilled and vulnerable workers.

Figure 5.14. Automation in the Portuguese industry is, for now, less pronounced than in other OECD countries

Number of robots per 1000 workers in the manufacturing sector, 2016



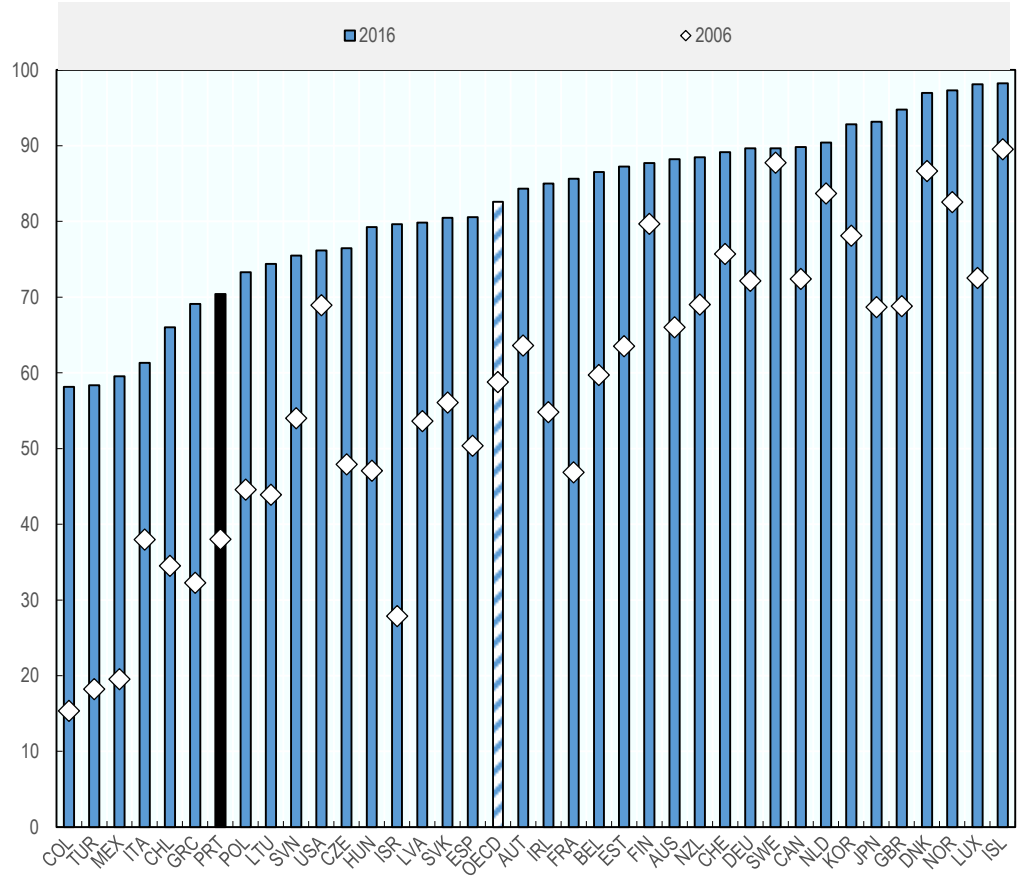
Source: World Robotics 2017, International Federation of Robotics.

StatLink http://dx.doi.org/10.1787/888933927381

Similarly, digitalisation is gaining pace. Currently the percentage of the population using the internet in Portugal is below the OECD average, at 70% against 83% (Figure 5.15). However, the gap was much bigger a decade ago when only 38% of people in Portugal accessed the internet while they were 59% in the OECD. This trend indicates that Portugal is catching up quickly with other countries. The strong increase in digitalisation can be expected to spill over to the business area and expand digital use at work.

Figure 5.15. Internet use is below average, but Portugal is catching up

Individuals using the internet (%), 2006 and 2016



Source: World Development Indicators, World Bank.

StatLink http://dx.doi.org/10.1787/888933927400

5.5.2. Changing labour markets raise questions for old-age protection systems

Future labour market prospects raise questions regarding the social protection of non-standard workers. Especially if digitalisation and automation lead to an increase in self-employment, temporary work, part-time work or platform work, ensuring that workers in these types of occupations benefit from a sufficient level of old-age insurance might be of paramount importance. Diverging rules regarding the pension insurance of non-standard workers exist in OECD countries (OECD, 2018[8]) and non-OECD countries (ILO, 2018[9]). In light of the fundamental labour market changes ahead of us, discussions on new social protection rules for non-standard workers have started in many countries.

While automation and digitalisation provide ripe job opportunities, including for people who struggle to find employment in the traditional labour market, they also bear risks. Companies may become reluctant to offer standard employment, aiming to reduce their social security contributions. If increasingly many firms outsource work tasks to workers

in non-standard forms of employment, however, the effectiveness of pension systems might be undermined through a shrinking number of contributors. Fostering pension coverage among non-standard workers is thus crucial, not only to ensure pension adequacy among future retirees but also to guarantee the functioning of pay-as-you-go pension systems themselves.

While most forms of non-standard work such as self-employment and part-time work are not new and OECD countries have experience in dealing with these types of jobs in terms of social security, the situation of platform work is different. Platform work is a relatively new phenomenon. As of today, the number of platform workers is still very low in OECD countries, accounting for a small part of the labour force only. However, up until recently their number was growing very rapidly, at least in some countries, as the example of the United States points out (Katz and Krueger, 2016[10]).

In Portugal, non-standard jobs in general and platform work in particular have the potential of becoming widespread due to digitalisation for several reasons. First, wages in standard employment are low compared to other countries and incentives to engage in other forms of activities might be higher. Second, unemployment rates among young people are high, both as a remaining consequence of the crisis and due to structural factors, and non-standard forms of employment offer alternatives for job seekers struggling to find employment. Third, Portugal is a major tourist destination (OECD, 2018[11]). The high number of tourists may contribute to a sound demand for certain types of non-standard work, including platform work. These specific characteristics suggests that ensuring adequate pension insurance for non-standard workers could be even more important in Portugal than in other countries.

5.6. Policy options

Overall labour market conditions have improved remarkably since the Great Recession, with rapidly decreasing unemployment and higher labour market participation. According to ILO (2018[12]) job-creation and training policies have substantially contributed to the recovery after the crisis. Efforts should be continued to ensure that the Portuguese labour market offers today's working-age population sufficient opportunities to pursue successful careers and prepare for retirement.

With fast population ageing ahead, policy action should favour longer working lives. This goal is achievable through a combination of policy measures in different areas. Standard early-retirement rules should be improved to reduce the number of early labour market exits and the minimum age of early retirement should be automatically linked to life expectancy gains, as the normal retirement age is.

Furthermore, sustainability factor rules should be reformed, as discussed in Chapter 3. The sustainability factor does not currently apply to retirement at the normal retirement age, which implies that early retirement triggers sweeping benefit reductions. Retiring early does not seem rational in most cases given these very strong penalties. This suggests that people who retire early despite these rules either do not understand the drastic consequences of their decision or have no other choice, for example due to bad health conditions. In both cases, the policy objective pursued by penalising early retirees so strongly is unclear. Furthermore, the sustainability factor does not apply to disability pensions, thereby creating financial incentives to exit employment through a disability spell. The sustainability factor should be recalibrated and apply to all pensions - including pensions granted at the official retirement age - as an ultimate instrument ensuring

financial sustainability given all the other pension parameters. Then, the penalties for each month of early retirement should be increased as needed to deter early retirement in a close to actuarially neutral way.

Moreover, the labour market has to be sufficiently sound to absorb a larger number of older workers and these workers need to have the skills and ability to work longer. Appropriate health policies and lifelong learning possibilities for workers of all socio-economic groups and ages are essential. Over the past years, Portugal has made sizable efforts to provide workers with more training and upskilling possibilities. The *Qualifica* adult learning programme, for instance, came into force in 2017 and aims to increase lifelong learning activities by offering specialised courses in a large number of centres throughout the country (OECD, 2018[4]). Such programmes should be continued and extended when appropriate while their efficiency should be assessed on a regular basis. This is particularly important in light of automation and digitalisation prospects that point to a future of work in which skill needs might change rapidly and workers will have to adapt their skills continuously to remain competitive in the labour market.

Policy measures should also ensure that unemployment schemes do not encourage early retirement. More than 50% of new early-retirement entries occurred through an unemployment-retirement transition in 2016. Rather than permitting older long-term unemployed to enter retirement very early with lower penalties, the unemployment benefit system should be adapted to offer good protection against unemployment while providing effective active labour market programmes to strengthen job-search efforts and employability before the retirement age. Such policies can consist of job-search assistance through intensive counselling interviews of high quality, including in the form of tailored guidance in job search and potentially mandatory interviews. All programmes should be monitored to evaluate their cost-efficiency (OECD, 2015[13]). In recent years, Portugal has taken steps to reinforce activation policies. For example, the way the eligibility criteria for unemployment benefits are applied was tightened, leading to some success in increasing unemployment exits (OECD, 2017[6])

Younger age-groups were hit hardest by the economic crisis and still struggle to recover, with persistently high rates of unemployment and a high frequency of part-time work and temporary positions. These difficulties undermine young people's ability to accumulate pension entitlements and start savings early on, thereby increasing the risk of financial woes later in life. Improving the situation of today's young is thus particularly important, also from a pension perspective. The high number of temporary contracts, especially among young workers, bears the risk that career breaks will become more common. Indeed, workers on temporary contracts do not benefit from the same stability as workers in standard employment and are particularly vulnerable in case of economic downturns.

The economic crisis led in particular to career interruptions and major difficulties to enter the labour market. The impact of short and interrupted careers on pension levels are fairly strong, close to the OECD average, but Portugal was hit harder than the average OECD country. In order to cushion the long-run effects of the crisis on pension entitlements of those who had to cope with such strong career shocks, policy makers should consider granting pension rights to people who were unable to find employment during the crisis, for example during the 2009-14 period. This would be an exceptional measure offsetting the negative pension consequences of exceptional employment difficulties encountered during the crisis.

Self-employment is more widespread than in other OECD countries. Self-employed workers in Portugal face specific regulation regarding their social security, including their

pension insurance. The 2018 reform reduced the social security contribution rate for self-employed workers from 29.6% to 21.41%, against 34.75% for dependent employees. Except for unemployment insurance, social security including pension insurance for self-employed workers should in principle be aligned to the case of dependent employees. The current rules imply that self-employment is subsidised, which might be difficult to justify. However, the grey line separating capital from labour income for the self-employed makes this general principle difficult to implement fully in practice.

"False" self-employment (*falsos recibos verdes*), i.e. self-employed work that is de facto dependent work, is a matter of concern in Portugal. When self-employed workers depend significantly on one ordering customer, the latter pays parts of their social security contributions. This measure may help to discourage "false" self-employment to some extent – which low contribution rates for self-employment encourage - but is not a sufficient policy tool. In order to counteract the rise in "false" self-employment in recent years, labour inspectors have been given additional tools to detect abusive "false" self-employment cases and to regulate them. Due to limited resources, however, a systematic detection of such cases might not be guaranteed. The capacity of the labour inspectorate force should be strengthened further to improve and extend their monitoring capacities (OECD, 2017[6]).

Key recommendations

- Modify the way the sustainability factor is applied as its current use overly penalises early retirement and provides incentives to exit the labour market through alternative routes (e.g. disability). Instead, use the sustainability factor to adjust pension benefits across the board as an ultimate instrument to ensure financial sustainability given the other pension parameters.
- Restrict early retirement by linking the minimum retirement age to life expectancy gains and by increasing penalties per month of early retirement once the sustainability factor has been reshaped.
- Eliminate the option for long-term unemployed people to enter retirement very early and without the full penalties applied to other early-retirement entries. Provide effective active labour market programmes to strengthen job-search efforts and employability of older workers in particular.
- Consider granting pension rights to people who were unable to find employment during the crisis, e.g. for the period 2009-14, as an exceptional measure to cushion the long-run effects on pension entitlements of those who unluckily had to face such strong career shocks.
- Avoid social protection rules that create distortions and encourage self-employment unless they are justified by a clear policy objective.

Notes

[1] The proportion of older workers is particularly high in the agricultural sector.

[2] The 2019 reform discussed in endnote 6 in Chapter 3 significantly lowers the estimates of the penalties for someone entering the labour market at age 20 and retiring early. However, the penalties presented in this section apply for anyone entering the labour market after age 20 since they do not fulfil the 40 years of contributions requirement at age 60.

[3] Two workers working 60 days in 2017 and 180 days in 2018 (worker A) and 60 days in 2017 and 60 days in 2019 (worker B) will both be granted 1 contributory year even though worker A worked twice as much as worker B over the period 2017-18.

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