

Economic Policy Committee - Ageing Working Group

2024 Ageing Report

Ireland - Country Fiche

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Introduction

The present country fiche for Ireland is part of the 2024 Ageing Report, which provides long-term projections of the economic and budgetary impact of population ageing at unchanged policy. The 2024 edition is the eighth update and covers the period up to 2070.

This fiche was prepared by the Department of Finance. The pension projections presented in this fiche incorporate the macroeconomic assumptions and methodologies agreed within the *Ageing Working Group* of the *Economic Policy Committee*. The projections have been prepared by the Department of Social Protection and the Department of Public Expenditure and NDP Delivery and Reform and have been peer reviewed by the other Member States and the European Commission within the *Ageing Working Group*. The projections were finalised in the autumn of 2023 and represent the situation of the pension system on 01/12/2023.

Section 1 provides a general overview of the pension system in Ireland. Section 2 describes the demographic and labour market assumptions underlying the pension expenditure projections presented in Section 3, which also discusses the sensitivity scenarios around the baseline. Finally, Section 4 gives an overview of the model used to produce the pension projections, with complementary data provided in the methodological annex.

1. Overview of the pension system¹

This section gives an overview of the pension system in Ireland and the main changes since the last Ageing Report, published in spring 2021. While there are sizable private pensions in Ireland, the focus here remains on public pension coverage and costs.

1.1. Description of the pension system

The Irish pension system is a multi-pillar pension system.

Pillar 1: Public pension schemes (state pension)

The first pillar relates to the public or state pension, a pay-as-you-go pension system administered by the Department of Social Protection (DSP). These pension costs are the main focus of this report and are referenced as *Public Pension Schemes* throughout. Where relevant Pillar 2 occupational schemes are included, the document refers to *Total Public Pension Schemes*.

Pillars 2 and 3: Supplementary pension schemes

The second pillar consists of occupational pensions including the non-funded public service occupational pension scheme and private sector occupational schemes. Account is taken of the public service component of Ireland's second pillar in these projections, which together with the Public Pension Schemes are referred to as *Total Public Pensions* throughout the fiche.

No projections are made for private sector occupational schemes or privately funded personal pension schemes.

The third pillar is made up of privately funded personal or voluntary pensions.

Private sector occupational schemes and privately funded personal pension schemes continue to play an important role in the Irish pension system. Over Q2 2023, the value of the assets in Irish pension funds stood at €128 billion up from €121 billion over Q2 2022. Pension entitlements relating to defined benefit schemes and defined contribution schemes amounted to €60.9 billion and €57.2 billion respectively over Q2 2023.² Furthermore, the Pensions Authority's 2022 annual report states that there were 112,867 contributing members to private sector defined benefit schemes and 436,991 members in defined contribution schemes.³

The State Pension is designed in the first instance to provide basic protection against poverty in retirement. As set out in the Roadmap for Pensions Reform, 'as the 'first pillar', the State Pension is intended to be combined with individual retirement savings in the form of 'second pillar' occupational pensions and/or 'third pillar' personal pensions (DSP, 2018).⁴ However, recent analysis suggests, of those without a supplementary pension, i.e. a second or third pillar pension, approximately 57 per cent indicated they would rely on the State Pension as their sole income during retirement with a further 26 per cent being undecided.⁵

¹ For an exhaustive description of pension schemes, please consult the [PENSREF database](#).

² <https://www.centralbank.ie/statistics/data-and-analysis/pension-fund-statistics>

³ https://pensionsauthority.ie/wp-content/uploads/2023/10/the_pensions_authority_annual_report_and_accounts_2022.pdf

⁴ Department of Social Protection (2018). "The Roadmap for Pensions Reform 2018-2023". Available at: <https://www.gov.ie/en/publication/29056f-pensions-roadmap-2018-2023/>

⁵ <https://www.cso.ie/en/releasesandpublications/ep/p-pens/pensioncoverage2022/>

1.1.1 Public Pensions (social insurance and social assistance)

Under the first pillar, the State Pension provides flat rate payments based on two types of schemes - Social Insurance and Social Assistance.

Social insurance pension benefits are contributory pensions based on an individual's record of paying Pay Related Social Insurance (PRSI).⁶ In contrast, social assistance pensions are non-contributory and are available on a means-tested basis.

Overall pension payments are financed through a combination of social insurance contributions from employers, employees and the self-employed as well as general taxation. As regards the former, employers' and employees' PRSI contributions go into the Social Insurance Fund (SIF) which is managed by both the Minister of Finance and the Minister for Social Protection.⁷

For an individual to qualify for a State Contributory Pension (SCP), a number of conditions must be met. First, the State Pension Age (SPA), the age at which an individual can receive a State pension is 66. Second, the person must have begun paying PRSI before the age of 56 and must have a minimum number of weekly contributions (520 or more).⁸ The SCP is not means tested.

Applications for the Non-Contributory State Pension (SNCP) are open to all meeting the qualifying criteria. The qualifying conditions for the SNCP include a minimum age requirement (the SPA), a habitual residency requirement and a means test. An individual cannot claim both the SPC and SNCP.

In 2023, the maximum weekly payment rate for the SCP was €265.30 and €254.00 for the SNCP. The weekly SCP rates are graduated downwards depending on a person's (social insurance) payment history.⁹ SNCP rates are graduated based on means.

Aside from the maximum levels of weekly payment, a person can receive additional monies in respect of having qualified adult and child dependants, with higher rates also payable to those aged 80 and over.¹⁰

There are also a range of supplementary benefits available to State Pension recipients. These include policy measures such as fuel allowances, free travel, free television licence and utility (including telephone) allowances. These benefits are subject to qualifying conditions. Furthermore, there are also allowances for persons living alone (although these are much smaller in scale relative to the main payments).

⁶ Most employers and employees (over 16 years of age and under the state pension age, 66 in 2023) pay social insurance (PRSI) contributions into the Social Insurance Fund (SIF).

⁷ The Social Insurance Fund is projected to fall into deficit over the long term as a result of an ageing population. <https://www.gov.ie/pdf/?file=https://assets.gov.ie/251496/947e1c1b-01e4-4876-9fe9-81e1d79b31c8.pdf#page=null>

⁸ To get the maximum state pension; a yearly average of 48 contributions over 10 years is required (yearly average method) or 40 years' worth of contributions total (total contributions method). People transferring from Invalidity Pension are also automatically entitled to maximum rate.

⁹ Payment rates are set out in Table A4 in Annex.

¹⁰ Recipients receive an extra allowance of €10 per week when they reach 80 years of age.

In Ireland, social security pensions are not taxed at the point of payment as they are below the minimum tax threshold. However, where appropriate, such payments may be included in income tax assessments in conjunction with any other income and taxed accordingly.¹¹

1.1.2 Public sector occupational pensions

Public Service Occupational (PSO) pensions take the form of *defined benefit* schemes. For retirees and for staff hired up to end-2012, these schemes deliver set payments based on the individual's final salary. The benefits (pension and retirement lump sum) are calculated by reference to the individual's salary level at retirement and their length of service. There are three basic distinctions applied depending on when public servants were hired. These are:

- Persons hired up to 5 April 1995
- Persons hired on or after 6 April 1995 up to end-December 2012
- Persons hired since 1 January 2013.

Depending on which group an individual belongs to, pension payments vary.

In brief, **for those that were hired pre-1995**, retirement benefits are accrued at:

- pension of 1/80th of final salary per year of service (maximum pension 40/80ths, i.e. half pay);
- retirement lump sum of 3/80ths of final salary per year of service (maximum lump sum 120/80ths).¹²

For the middle group, those hired between 1995 and 2012, the same retirement lump sum accrual applies as for the pre-1995 cases. However, pension accrual arrangements differ:

- 1/200th of final salary per year of service up to a salary point ceiling of 3.33 times the value of the SCP;
- 1/80th of final salary per year of service on the portion of final salary (if any) above 3.33 times the value of the SCP.

This group pays standard PRSI (Class A) and qualifies for the SCP. This overall integrated pension outcome means that this group receives the SCP (at a full or reduced rate) on top of the public sector occupational pension.

The third group, those hired from 1 January 2013, are designated as members of the Single Public Service Pension Scheme. The Single Scheme applies to all new entrants to the public service from 1 January 2013 (including civil servants, teachers, healthcare workers, local government employees, police, military personnel, parliamentarians, judges). This was a radical departure from the pre-existing

¹¹ There is no mechanism for taxing social welfare pensions at source. An individual's other source of income determines how tax is levied. The most common situation is where a pensioner has both an occupational pension and a social welfare pension. If the occupational pension is paid from within Ireland, it is taxed by PAYE in the same way as a wage or salary. This means that tax credits are received in the normal way. In order to tax an individual's social welfare pension, annual tax credits are reduced by the tax liability on the social welfare pension. This means tax is effectively paid on both pensions, but it is collected from the occupational pension. The technical term for this is *coding in* of credits. The same arrangement applies if you have income from a job and a social welfare pension.

¹² Pre-1995 public servants usually pay a lower rate of PRSI but do not qualify for the full range of social insurance benefits; in particular eligibility for the SCP.

pension schemes, notably on account of the fact that members accrue pension benefits based on *career average* earnings, rather than on final salary.

The main features of the scheme include:

- Benefits based on career average earnings rather than final salary - individuals accrue annual pension and lump sum ‘referable amounts’ each year. These are ‘banked’ and revalued annually until retirement, in line with inflation increases (Consumer Price Index), to produce the pension and lump sum on retirement.
- A new minimum pension age of 66, linked to the SPA.
- A maximum retirement age of 70.
- A facility for early retirement from age 55 on a cost-neutral (actuarially reduced) basis.
- Post-retirement pension increases for Single Scheme members are linked to CPI rather than wage movements of existing public servants.

A significant reduction in longer-term PSO pension costs relative to GDP is therefore envisaged once this cohort begins to retire.

Compulsory retirement ages vary across the three different groups of existing public servants. In general, for those public servants who joined prior to 1 April 2004 the compulsory retirement age is 65. For those who joined between 1 April 2004 and 31 December 2012 there is no compulsory retirement age. Finally, for those who joined since 2013 the compulsory retirement age is 70 years.¹³

Public service pension rates are not formally indexed (to inflation or average earnings) but historically have been linked to the pay increases of equivalent public service grades. Indeed, at the beginning of the last decade, when reductions to the pay levels of the majority of public services were applied in response to the great economic crisis, deductions were also made to public service pension payments. However, for members of Single (Public Service Pension) Scheme (post-2013), pension increases are linked to inflation (the consumer price index (CPI)).

In relation to taxation, public service pensions are not subject to PRSI but they are subject to income tax and the Universal Social Charge (USC).¹⁴

¹³ Some occupations - for example, the police, firefighters and military - have provisions for much earlier retirement generally and/or on grounds of illness.

¹⁴ The Universal Social Charge (USC) is a tax on income that replaced both the income levy and the health levy (also known as the health contribution) on 1 January 2011. An individual pays the USC if their gross income is more than €13,000 per year. Once income is over this limit, the relevant rate of USC is paid on all income.

TABLE 1 – QUALIFYING CONDITIONS FOR RETIREMENT¹⁵

		2022	2030	2040	2050	2060	2070	
Qualifying condition for retiring <i>with</i> a full pension	Statutory retirement age - men	66	66	66	66	66	66	
	Statutory retirement age - women	66	66	66	66	66	66	
	Minimum requirements	Contributory period - men	40	40	40	40	40	40
		Retirement age - men	66	66	66	66	66	66
		Contributory period - women	40	40	40	40	40	40
Retirement age - women	66	66	66	66	66	66		
Qualifying condition for retirement <i>without</i> a full pension	Minimum contributory period - men	10	10	10	10	10	10	
	Minimum contributory period - women	10	10	10	10	10	10	

Source: Ireland.

1.2. Recent reforms of the pension system included in the projections

There are no reforms modelled in this Ageing Report which were not modelled in the 2021 Ageing Report.

1.2.1 Total contributions approach

The National Pensions Framework proposed that a ‘Total Contributions Approach’ (TCA) replace the current average contributions test for the contributory State pension. This is designed to ensure that the level of pension payments will be directly proportionate to the number of social contributions paid by the person over their working life, thereby removing some of the anomalies associated with the current averaging approach. The new TCA methodology means that the total number of PRSI contributions an individual has paid, instead of when they were paid, are taken into account when DSP assesses an application for a pension.

A person reaching the SPA on or after September 1st 2012 can have their pension rate calculated in 2 ways: 1) using the normal yearly average rule or 2) using the new TCA. DSP will carry out both calculations and choose whichever gives the higher proportion of full rate of pension.

As mentioned above, the National Pensions Framework has proposed that the TCA be introduced to entirely replace the yearly average rule. However, legislation would be required for this to come into effect. Therefore, in the pension expenditure projections, it is assumed that a combination of the yearly average and TCA methodologies continues to be used over the projection period.

1.2.2 State pension age

Under previous legislation, introduced in 2011, the SPA was to increase to 67 in 2021 and 68 in 2028.¹⁶ The ‘Programme for Government’ (PfG) agreed by the newly-formed Irish Government in June 2020, committed to deferring the legislated increase in the SPA in 2021, keeping the SPA at 66, pending a review on sustainability and eligibility issues by a newly established Commission on Pensions. The Social Welfare Bill 2020, enacted in December 2020, removed the previously planned increases in the SPA from legislation. As such, the pension projections described in this fiche, assume a constant SPA throughout the projection horizon.

1.2.3 PRSI Roadmap

In November 2023, the Government announced a reform, which would introduce a series of increases to the rates of PRSI contributions paid by employers, employees and the self-employed. Each rate of

¹⁵ Under the TCA, 2,080 contributions (40 years multiplied by 52 weekly contributions) are required for an individual to receive the maximum rate of SCP. Under the averaging approach, an average of at least 48 annual contributions over at least 10 years is required to receive the maximum rate of SCP.

¹⁶ Social Welfare Bill 2011.

PRSI would increase by 0.1 percentage points in 2024 and 2025 respectively, 0.15 percentage points in 2026 and 2027 respectively and 0.2 percentage points in 2028. These increases will help to provide for the long-term sustainability of the SIF and to retain the state pension age at 66. In January 2024, the Government approved the drafting of legislation to implement the multiannual increases. As this reform had not been legislated prior to the finalisation of this fiche, the increases in the rates of PRSI are not included in the baseline projections.

1.3. Description of the actual ‘constant policy’ assumptions used in the projection

There is no formal indexation mechanism for Irish social welfare pensions. Decisions in relation to the rate of pension payments are generally made as part of the annual budgetary process with discretion resting with the Government. Historically, over the medium to long term, payments have tended to increase broadly in line with whole-economy average earnings. For 2022, the value of the full rate of SCP is approximately 28 per cent of average earnings. The technical approach adopted in this exercise is to link pensions to the growth rate in nominal earnings (inflation plus productivity) from 2024 onwards.

2. Overview of the demographic and labour force projections¹⁷

This section sets out the long-term demographic and labour force projections for Ireland over the 2022-2070 period. These follow from EUROPOP2023, Eurostat's 2022-based demographic projections.

Labour force projections and the associated macroeconomic assumptions are produced by the Commission's Cohort Simulation Model (CSM). These projections are used as exogenous inputs into the Irish pension model.

2.1. Demographic projections

An overview of the main population variables for Ireland is shown in Table 2, drawing on EUROPOP2023.

Ireland's current age structure compares favourably to other EU countries. Ireland currently has the highest share of population aged under 20 years old (26 per cent), the second lowest median age (38.8 years) and is second lowest in terms of share of population aged 65 or above in the EU (15 per cent). However, the composition of Ireland's population is set to change significantly over the projection period with a notable increase in old age dependency ratios.

The share of the population aged 65 and over is set to steadily rise – almost doubling from 15 per cent in 2022 to 29 per cent in 2070.

The share of the working age population (WAP, defined here as those aged 20-64) relative to the total population is set to decline consistently over the period, from 58.7 per cent in 2022 to 52.5 per cent in 2070. Reflecting these changes, the Old Age Dependency Ratio (OADR) is set to more than double from 25.7 per cent in 2022 to 55.6 per cent in 2070. These developments will make Ireland one of the most rapidly ageing Member States in the EU.

The Irish population is set to grow by 0.9 per cent on average each year until 2030, before growing at 0.5 per cent on average per annum until the mid-point of the century, reaching 6.0 million. From then, the pace of annual population growth is expected to fall to 0.1 per cent, with the population reaching 6.1 million in 2070. Over the projection period, the population aged 65 and over is set to grow significantly faster than the population aged 20 to 64, i.e. the working age population. At the same time, fertility rates are expected to remain well below historical levels and the natural increase in the population, i.e. births versus deaths, is expected to decelerate – eventually turning negative in 2052.

Over the full period, these projections are not too dissimilar to those underpinning the 2021 Ageing Report. Strong short to medium-term migration assumptions result in robust population growth, particularly among the working age cohort, over the first decade of the projections. However, from the mid-point of the century, these trends are assumed to reverse with much slower growth in the working age population in the latter part of the projections, coupled with faster growth in the older age cohorts relative to the last report.

The demographic projections will result in a large rise in the Irish population out to 2070 coupled with significant compositional changes. The population will gradually age as Ireland moves from a relatively young to old population over the period. This will have sizable implications for the public finances given the expected demand on pension-related spending, in particular.

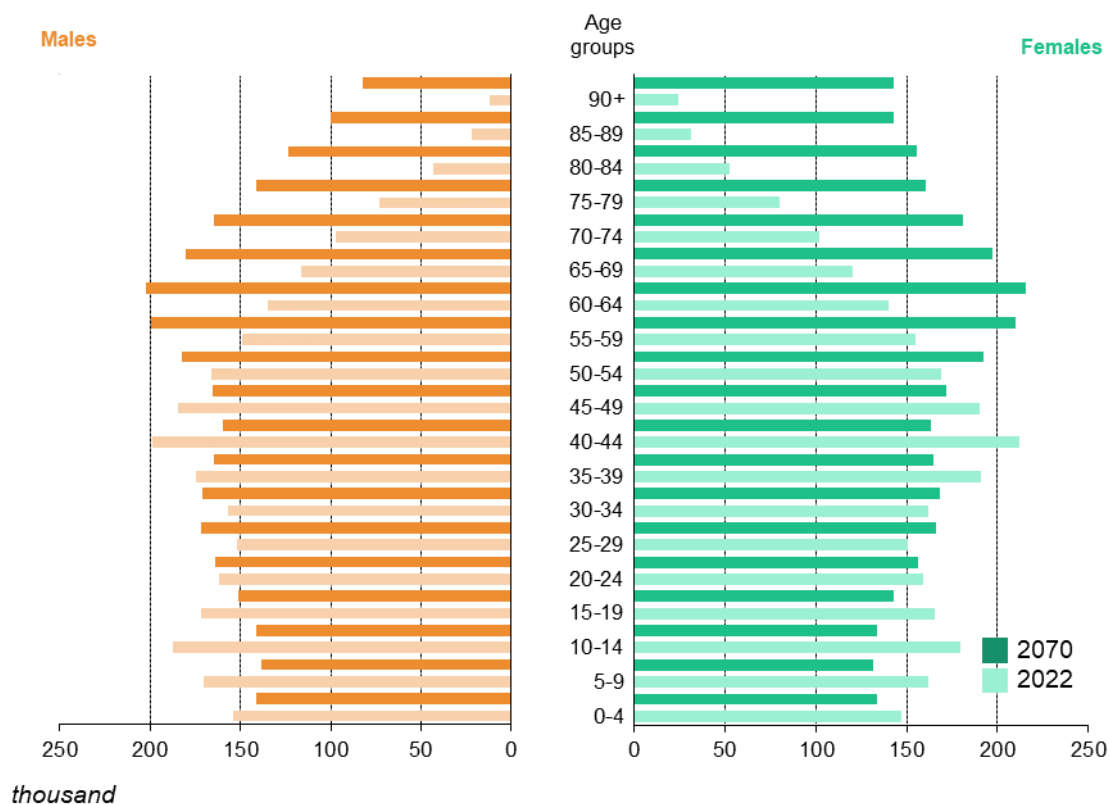
¹⁷ For more details, see European Commission and EPC (2023), ['2024 Ageing Report: Underlying assumptions and projection methodologies.'](#) European Economy, Institutional Paper 257.

TABLE 2 – MAIN DEMOGRAPHIC VARIABLES

	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Population (thousand)	5,117	5,433	5,762	6,017	6,090	6,074	6,090	2060	957
Population growth rate	1.7%	0.6%	0.6%	0.3%	0.0%	0.0%	1.7%	2022	-1.7%
Old-age dependency ratio (pop 65+ / pop 20-64)	25.7%	30.1%	37.0%	47.7%	51.5%	55.6%	55.6%	2070	29.8
Old-age dependency ratio (pop 75+ / pop 20-74)	9.8%	12.0%	15.3%	19.9%	25.8%	26.8%	26.8%	2070	17.0
Ageing of the aged (pop 80+ / pop 65+)	23.9%	26.7%	29.6%	31.9%	39.6%	42.1%	42.6%	2066	18.2
Men - Life expectancy at birth	80.8	81.7	83.2	84.5	85.7	86.9	86.9	2070	6.1
Women - Life expectancy at birth	84.6	85.6	87.0	88.3	89.5	90.6	90.6	2070	6.0
Men - Life expectancy at 65	19.4	20.1	21.1	22.1	23.0	23.9	23.9	2070	4.5
Women - Life expectancy at 65	22.1	22.9	24.0	25.0	26.0	27.0	27.0	2070	4.9
Men - Survivor rate at 65+	89.3	90.3	91.7	92.8	93.8	94.7	94.7	2070	5.3
Women - Survivor rate at 65+	93.1	93.9	94.8	95.5	96.1	96.7	96.7	2070	3.6
Men - Survivor rate at 80+	62.0	65.1	69.5	73.4	77.0	80.0	80.0	2070	18.1
Women - Survivor rate at 80+	73.5	76.2	79.8	82.9	85.6	87.8	87.8	2070	14.3
Net migration (thousand)	93.2	17.0	17.8	13.7	11.2	11.9	93.2	2022	-81.3
Net migration (% population previous year)	1.9%	0.3%	0.3%	0.2%	0.2%	0.2%	1.9%	2022	-1.7%

Source: Eurostat, European Commission.

FIGURE 1 – AGE STRUCTURE: 2022 VS 2070



Source: Eurostat, European Commission.

2.2. Labour force projections

The main labour force projections are summarised in Table 3. These flow from the demographic assumptions produced by Eurostat, explained above, and their interaction with the Commission’s Cohort Simulation Model (CSM). The starting point for the labour market in 2022 was already very strong, with labour force participation rates for those aged 20-64 standing at 81.6 per cent, an increase of 2 percentage points over the rate in 2021. The outlook for this key age-cohort is for an increase of 4.3

percentage points out to 2070. Within this, the outlook assumes a rise in the participation rates of older workers (those aged 55 to 64) of 5.8 percentage points to 74.8 per cent. A further key characteristic is a sustained rise in female participation rates across the main age cohorts and notably so for older persons.

TABLE 3 – PARTICIPATION RATE, EMPLOYMENT RATE AND SHARE OF WORKERS

	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Labour force participation rate 20-64	81.6	83.4	84.9	86.3	86.4	85.8	86.5	2057	4.3
Employment rate of workers aged 20-64	78.2	79.4	80.3	81.7	81.8	81.3	82.0	2057	3.1
Share of workers aged 20-64 in the labour force 20-64	95.8	95.2	94.7	94.7	94.7	94.7	96.1	2024	-1.2
Labour force participation rate 20-74	72.9	73.9	74.0	73.0	74.4	73.0	74.4	2061	0.1
Employment rate of workers aged 20-74	69.9	70.4	70.1	69.1	70.5	69.2	70.7	2024	-0.7
Share of workers aged 20-74 in the labour force 20-74	95.9	95.2	94.7	94.8	94.8	94.8	96.1	2024	-1.1
Labour force participation rate 55-64	69.0	69.5	71.6	72.5	75.3	74.8	75.4	2065	5.8
Employment rate of workers aged 55-64	66.7	66.8	68.5	69.3	72.0	71.6	72.1	2065	4.9
Share of workers aged 55-64 in the labour force 55-64	96.6	96.2	95.7	95.6	95.6	95.7	96.9	2024	-1.0
Labour force participation rate 65-74	13.4	15.2	16.0	15.4	15.6	16.5	16.7	2067	3.1
Employment rate of workers aged 65-74	13.0	14.7	15.4	14.9	15.1	16.0	16.1	2067	3.0
Share of workers aged 65-74 in the labour force 65-74	97.1	97.1	96.8	97.0	96.9	96.9	97.7	2024	-0.2
Median age of the labour force	40	40	40	41	43	42	43	2060	2.0

Source: European Commission.

TABLE 4 – LABOUR MARKET EXIT BEHAVIOUR

TOTAL	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Average effective retirement age*	64.2	64.2	64.6	64.7	64.5	64.7	64.9	2046	0.5
Average labour market exit age (CSM)**	64.2	64.8	64.8	64.8	64.8	64.8	64.8	2030	0.7
Contributory period	:	:	:	:	:	:	:	:	:
Duration of retirement***	18.8	21.5	22.6	23.6	24.5	25.5	25.5	2070	6.7
Duration of retirement/contributory period	:	:	:	:	:	:	:	:	:
Percentage of adult life spent in retirement****	33%	32%	33%	34%	35%	36%	36%	2070	3%
Early/late exit*****	1.2	0.9	0.9	0.7	0.8	0.7	1.2	2024	-0.5
MEN	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Average labour market exit age (CSM)**	64.3	64.8	64.8	64.8	64.8	64.8	64.8	2033	0.6
Contributory period	:	:	:	:	:	:	:	:	:
Duration of retirement***	15.5	20.1	21.1	22.1	23.0	23.9	23.9	2070	8.4
Duration of retirement/contributory period	:	:	:	:	:	:	:	:	:
Percentage of adult life spent in retirement****	31%	31%	32%	33%	34%	35%	35%	2070	3%
Early/late exit*****	0.9	0.9	0.9	0.7	0.8	0.7	1.0	2033	-0.3
WOMEN	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Average labour market exit age (CSM)**	64.1	64.8	64.8	64.8	64.8	64.8	64.8	2038	0.8
Contributory period	:	:	:	:	:	:	:	:	:
Duration of retirement***	22.1	22.9	24.0	25.0	26.0	27.0	27.0	2070	4.9
Duration of retirement/contributory period	:	:	:	:	:	:	:	:	:
Percentage of adult life spent in retirement****	34%	34%	35%	36%	37%	38%	38%	2070	3%
Early/late exit*****	1.4	0.9	0.9	0.7	0.8	0.6	1.5	2024	-0.8

* The 'average effective retirement age' is the age at which people start receiving a pension benefit (old-age, early or disability). ** 'Average labour market exit age (Cohort Simulation Model)' refers to 2023 instead of 2022. *** 'Duration of retirement' is the remaining life expectancy at the average labour market exit age. **** The 'percentage of adult life spent in retirement' is calculated as the ratio between the duration of retirement and the life expectancy minus 20 years. ***** 'Early/late exit' is the ratio between those who exit the labour market before reaching the statutory retirement age and those who exit at or beyond the statutory retirement age. For 2022, the value refers to 2023.

Source: European Commission, EPC.

The projections in Table 4 show the average effective retirement age is set to increase from 64.2 in 2022 to 64.7 in 2070, driven by increases for both male and female cohorts. However, owing to increasing life expectancy, the duration of retirement is set to increase significantly over the forecast horizon, lengthening from 18.8 years in 2022 to 25.5 years in 2070. This will push the percent of life spent in retirement up 3 percentage points, from 33 to 36 per cent, reflecting improving life expectancy over the horizon.

3. Pension projection results

3.1. Coverage of the pension projections

The pension projections covered by this exercise include public social security and assistance pensions (together public pension schemes) and public sector occupational pensions.

3.1.1 Public social insurance and assistance pensions

Public social insurance and assistance pensions (hereafter referred to as ‘social welfare pensions’) include contributory social insurance and non-contributory social assistance pensions.

3.1.1a Contributory social insurance pensions

Contributory social insurance pensions cover old-age, disability and survivors’ pensions under the social insurance system and the public service component of the second pillar. It also includes other legacy pension schemes such as contributory pensions for those who contributed before 1953.¹⁸

3.1.1b Non-contributory social assistance pensions

Non-contributory social assistance pensions cover non-contributory old-age, disability and survivor pensions under the social assistance system (non-earnings-based means-tested basic pensions).

A full list of the public pension schemes covered in the projections are included in Annex 2.

3.1.2 Public sector occupational pensions

Public sector occupational pensions are pensions paid to public servants on retirement. These projections are provided by the Department of Public Expenditure NDP Delivery and Reform (DPENDR).

TABLE 5 – ESSPROS AND AWG DEFINITION OF PENSION EXPENDITURE (%GDP)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	change 2013- last available year
Eurostat total pension expenditure	8.1	7.6	5.8	5.7	5.5	5.2	5.1	5.0	4.6	-3.5
Eurostat public pension expenditure (A)	4.7	4.4	3.4	3.4	3.2	3.1	3.0	3.0	:	-1.7
Total public pension expenditure (AWG: outcome) (B)	7.4	7.0	5.3	5.3	5.1	4.9	4.7	4.7	4.3	-3.2
Difference Eurostat/AWG: (A)-(B)	-2.7	-2.6	-1.9	-1.9	-1.9	-1.8	-1.7	-1.7		1.0
Public sector occupational	1.8	1.9	1.7	1.7	1.2	1.2	1.2	1.1	1.0	-0.9
Other pensions	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	-0.4

Source: Eurostat, European Commission. Eurostat doesn’t include ‘other’ category defined in AWG projections (includes illness benefit and carer’s allowance), or public sector occupational schemes.

¹⁸ The pre-1953 pension is payable to those who commenced insurable employment before 1953 and who had at least five years paid insurance.

3.2. Overview of projection results

Tables 6 and 7 present the main results of the pension projections exercise for Ireland. A range of technical assumptions covering demographic and labour force developments underpin the results, the details of which are provided in section 2.

As can be seen from table 6, total pension expenditure (public pension and public sector occupational pensions) is projected to increase from 3.8 per cent in 2022 to 6.6 per cent in 2070.¹⁹ Compared with the 2021 Ageing Report projections, 2070 expenditure levels are 1.0 percentage points of GDP lower.

The profiles of the two components of total pension expenditure differ significantly. Expenditure on public pension schemes increases relatively consistently over the projection period. Expenditure is projected to increase by 1.1 percentage points of GDP between 2022 and 2040, before increasing by a further 1.9 percentage points to 5.9 per cent of GDP by 2070.

TABLE 6 – PROJECTED GROSS AND NET PENSION SPENDING AND CONTRIBUTIONS (%GDP)

	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Expenditure									
Gross total public pension expenditure	3.8	4.2	5.0	6.0	6.5	6.6	6.6	2070	2.8
Private occupational pensions	:	:	:	:	:	:	:	:	:
Private individual mandatory pensions	:	:	:	:	:	:	:	:	:
Private individual non-mandatory pensions	:	:	:	:	:	:	:	:	:
Gross total pension expenditure	:	:	:	:	:	:	:	:	:
Net public pension expenditure*	2.9	3.3	4.0	5.0	5.6	5.9	5.9	2070	3.0
Net total pension expenditure*	:	:	:	:	:	:	:	:	:
Contributions									
Public pension contributions	2.7	2.8	3.0	4.0	4.5	4.8	4.8	2070	2.1
Total pension contributions	:	:	:	:	:	:	:	:	:
Balance of the public pension system (%GDP)**	-0.2%	-0.5%	-1.0%	-1.0%	-1.0%	-1.1%	-1.1%	2070	-0.9%

*Net pension expenditure excludes taxes on pensions and compulsory social security contributions paid by beneficiaries. **Public pension contributions - gross public pension expenditure (peak value/year shows most negative value).

Source: European Commission, EPC.

In contrast, public sector occupational pension expenditure is expected to increase by 0.2 percentage points to a series high by 2036, and subsequently fall 0.4 percentage points from that high by the end of the forecast horizon in 2070. This fall can be attributed to several factors. These include the shift towards ‘integrated’ pensions over the forecast horizon. As a result, there is some reallocation of expenditure from public sector occupational pension expenditure to social security pensions over the projection period. The fall is also driven by the introduction of the Single Public Service Pension Scheme for new public service entrants in 2013 (including indexation by CPI). Therefore, the rise in overall pension expenditure as a share of GDP is entirely driven by social security pension (State pension) expenditure.

The projected value of employer and employee PRSI contributions remains relatively constant over the entire timeframe, ranging from 2.7 per cent of GDP in 2022 to 2.9 per cent in 2054. State contributions are projected to increase from 0.0 per cent of GDP in 2022 to 2.0 per cent in 2070, as there is an exchequer subvention when the SIF is in deficit. It should be noted that PRSI revenue (employer and employee contributions), is used to fund a wider range of social insurance benefits beyond the component relating solely to pensions.²⁰ Projecting pension provisioning on the basis of PRSI

¹⁹ As explained in section 1.1.1, there is no mechanism for taxing social welfare pensions at source, though other sources of income such as occupational pensions are subject to tax. If an individual’s other source of income is taxed within the PAYE system, tax credits are ‘coded in’ (explained in footnote 11 in Section 1.1.1) resulting in a person effectively paying tax on both their social welfare pension and other source of income (including the public sector occupational pension). As a result, pension expenditure projections are only produced in ‘gross’ terms.

²⁰ PRSI revenue is used to fund the Social Insurance Fund (SIF). In addition to flat rate pensions (State Contributory Pension), the SIF is also used to fund jobseekers benefit, health and safety benefit, maternity

contributions could serve to overestimate the degree of pension contributions, as some of the receipts will be used to fund separate non-pension related expenditure.

Table 7 disaggregates the overall pension projections by component. The bulk of the increase in total expenditure is attributable to old age and early pensions. This component is set to increase by 2.8 p.p. of GDP between 2022 and 2070. This increase is driven by both demographics and the effect of longer contributory periods, amongst women in particular.

TABLE 7 – GROSS PUBLIC PENSION SPENDING BY SCHEME (%GDP)

	2022	2030	2040	2050	2060	2070	peak value	peak year	change 2022-2070
Total public pensions	3.8	4.2	5.0	6.0	6.5	6.6	6.6	2070	2.8
Old-age and early pensions	1.6	1.9	2.6	3.6	4.1	4.4	4.4	2070	2.8
<i>Flat component</i>	1.4	1.7	2.4	3.4	4.0	4.3	4.3	2070	2.9
<i>Earnings-related</i>	:	:	:	:	:	:	:	:	:
<i>Minimum pensions (non-contributory)</i>	0.2	0.2	0.2	0.1	0.2	0.2	0.2	2022	0.0
Disability pensions	0.6	0.7	0.8	0.8	0.8	0.9	0.9	2070	0.3
Survivor pensions	0.4	0.3	0.3	0.3	0.2	0.2	0.4	2022	-0.1
Other pensions	0.4	0.4	0.4	0.4	0.4	0.4	0.4	2057	0.0
Special pension schemes	2022	2030	2040	2050	2060	2070	Peak value	Peak year	change 2022-2070
Public sector occupational pensions	0.9	0.9	1.0	1.0	0.9	0.7	1.1	2036	-0.2

Source: European Commission, EPC.

Despite a considerable increase in the dependency ratio over the forecast period, spending on non-contributory old-age pensions is set to remain constant, while expenditure on survivor's pensions is set to decline. However, this is largely compositional as more individuals are assumed to transition to the State contributory pension over the forecast horizon.²¹

Spending on disability pensions is forecast to increase over the horizon owing to greater incidence of younger cohorts receiving disability payments; while other pensions (illness; deserted wife's benefit/allowance and carers benefit/allowance) remain constant.

3.3. Description of main driving forces behind the projection results and their implications

Breaking down the spending projections by its drivers reveals that much of the projected increase in the public pension expenditure is attributable to Ireland's changing demographic profile, where the effect of the dependency ratio is shown to dominate over other drivers (Table 8). As expected, the increasing proportion of elderly persons compared to the working age population places the most stress on spending. As discussed in Section 2, the old-age dependency ratio continues to worsen (i.e. increase in value) throughout the projection period, with the peak value being reached at the end of the horizon. This results in an upward dependency ratio effect (expenditure increasing) throughout the entire period.

benefit, adoptive benefit etc. According to the 2020 SIF Actuarial Review, pension related expenditure is projected to continue to be the predominant component of SIF expenditure. On 10 October, 2023, the Irish Minister for Finance announced his intention to establish a long-term fund entitled the Future Ireland Fund, the purpose of which is to help to offset some of the known future costs such as those relating to an ageing population and the climate transition.

²¹ It is not possible to get the SNCP or widows, widowers or surviving civil partners pension at the same time as the SCP.

As can be seen in the table below, demographic factors are the main drivers of the change in the ratio of public pensions to GDP from 2022 to 2070, as shown by the large impact of the dependency ratio effect.

Figure 2 – Disaggregation of public pension expenditure

$$\frac{\text{pension expenditure}}{\text{GDP}} = \frac{\text{population 65+}}{\text{population 20-64}} \times \frac{\text{number of pensioners}}{\text{population 65+}} \times \frac{\text{average pension income}}{\frac{\text{GDP}}{\text{hours worked 20-74}}} \times \frac{\text{population 20-64}}{\text{hours worked 20-74}} \quad [1]$$

$$\frac{\text{number of pensioners}}{\text{population 65+}} = \frac{\text{number of pensioners 65+}}{\text{population 65+}} + \left(\frac{\text{number of pensioners } \leq 65}{\text{population 50-64}} \times \frac{\text{population 50-64}}{\text{population 65+}} \right) \quad [2]$$

$$\frac{\text{population 20-64}}{\text{hours worked 20-74}} = \frac{\text{population 20-64}}{\text{employed people 20-64}} \times \frac{\text{employed people 20-64}}{\text{hours worked by people 20-64}} \times \frac{\text{hours worked by people 20-64}}{\text{hours worked by people 20-74}} \quad [3]$$

Source: European Commission, EPC.

TABLE 8 – FACTORS BEHIND THE CHANGE IN PUBLIC PENSION EXPENDITURE BETWEEN 2022 AND 2070 (PPS OF GDP) – PENSIONERS²²

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
Public pensions to GDP	0.3	0.7	1.0	0.6	0.3	3.0
Dependency ratio effect	0.5	0.8	1.1	0.4	0.4	3.2
Coverage ratio effect*	0.0	0.0	-0.1	0.1	-0.1	-0.2
Coverage ratio old-age	0.0	0.1	0.2	0.1	0.0	0.6
Coverage ratio early-age	0.0	0.2	0.3	-0.4	-0.1	0.0
Cohort effect	-0.2	-0.6	-1.2	0.2	-0.2	-2.0
Benefit ratio effect	-0.1	0.1	0.1	0.1	-0.1	0.1
Labour market effect	0.0	-0.1	-0.1	0.0	0.0	-0.2
Employment ratio effect	0.0	0.0	-0.1	0.0	0.0	-0.1
Labour intensity effect	0.0	0.0	0.0	0.0	0.0	0.0
Career shift effect	0.0	0.0	0.0	0.0	0.0	-0.1
Residual	0.0	0.0	0.0	0.0	0.0	0.0

* Subcomponents of the coverage ratio effect do not add up necessarily.

Source: European Commission, EPC.

Table 9 below show the benefit and replacement ratios and coverage rates related to social welfare pension schemes.

²² For the disaggregation based on the number of pensions, see Table A.3 in the methodological annex.

As seen below, the benefit ratio of the old age-flat component of the public pensions (known in Ireland as the State Contributory Pension) remains close to 31 per cent of average earnings throughout the projection period owing to the assumption that benefits are indexed to average wage growth.

For 2023, actual increases in pension benefits are included. As of 2024, benefits grow in line with wages, i.e., changes in inflation and labour productivity. This, combined with improvements in contribution histories, results in moderate improvements in the benefit ratio over the projection period.

Old age flat component coverage is forecasted to increase substantially throughout the projection period, with females seeing a particularly strong increase. This is driven by the improving contribution histories of females, with a rising proportion shifting from non-contributory to contributory pensions. The improvement in contribution histories also leads to recipients moving into higher levels of benefit over the projection period.

TABLE 9 – BENEFIT RATIO (BR), REPLACEMENT RATE AT RETIREMENT (RR) AND COVERAGE BY PENSION SCHEME (IN %)

	2022	2030	2040	2050	2060	2070	change 2022-2070 (pps)
Public scheme (BR)	30%	29%	29%	30%	31%	30%	1%
Coverage	100%	100%	100%	100%	100%	100%	0%
Public scheme: old-age earnings related (BR)	31%	30%	30%	31%	32%	31%	1%
Public scheme: old-age earnings related (RR)	35%	35%	35%	37%	37%	37%	2%
Coverage	45%	49%	57%	66%	69%	70%	25%
Private occupational scheme (BR)	:	:	:	:	:	:	:
Private occupational scheme (RR)	:	:	:	:	:	:	:
Coverage	:	:	:	:	:	:	:
Private individual schemes (BR)	:	:	:	:	:	:	:
Private individual schemes (RR)	:	:	:	:	:	:	:
Coverage	:	:	:	:	:	:	:
Total benefit ratio	:	:	:	:	:	:	:
Total replacement rate (earnings-related benefits)	:	:	:	:	:	:	:

Coverage of each pension scheme is calculated as a ratio of the number of pensioners within the scheme and the total number of pensioners in the country. In case data on pensioners are not available, the calculation is based on the number of pensions.

Source: European Commission, EPC.

Demographic pressures will cause the pension system dependency ratio (number of pensioners/total employment) to rise substantially between 2022 and 2070 (41 percentage points).

As the old age dependency ratio is set to more than double over the forecast horizon, the overall pension system efficiency ratio is projected to decline over most of the projection period falling from 1.66 in 2022 to 1.51 in 2070).

TABLE 10 – SYSTEM DEPENDENCY RATIO AND OLD-AGE DEPENDENCY RATIO

	2022	2030	2040	2050	2060	2070	change 2022-2070
Number of pensioners (thousand) (I)	1066	1319	1671	2036	2220	2343	1277
Employment (thousand) (II)	2499	2737	2868	2834	2831	2787	288
Pension system dependency ratio (SDR) (I)/(II)	0.4	0.5	0.6	0.7	0.8	0.8	0.4
Number of people aged 65+ (thousand) (III)	773	970	1239	1542	1664	1771	998
Working-age population 20-64 (thousand) (IV)	3006	3224	3348	3235	3232	3189	183
Old-age dependency ratio (OADR) (III)/(IV)	0.3	0.3	0.4	0.5	0.5	0.6	0.3
System efficiency (SDR/OADR)	1.7	1.6	1.6	1.5	1.5	1.5	-0.1

Source: European Commission, EPC.

In tables 11 and 12, the number of pensioners is divided by both the total and inactive population in their age cohort, respectively. The inclusion of carers allowance and deserted wives benefit recipients in the projections can result in ratios above 100 per cent for the older age groups as these benefits can be received alongside either State pension (contributory or non-contributory). In addition, the numerator

includes resident and cross-border beneficiaries whereas the denominator refers only to resident population.

TABLE 11 – PUBLIC PENSIONERS TO (INACTIVE) POPULATION BY AGE GROUP (%)

<i>pensioners / inactive population</i>	2022	2030	2040	2050	2060	2070
Age group -54	14.4	18.8	21.2	21.8	22.8	22.5
Age group 55-59	88.3	95.4	112.6	123.2	143.2	141.9
Age group 60-64	63.9	66.1	76.8	79.8	84.2	86.0
Age group 65-69	103.2	108.4	118.9	125.6	123.1	124.5
Age group 70-74	97.4	100.3	109.5	116.5	116.9	117.8
Age group 75+	96.2	95.2	95.0	99.4	105.0	106.1

<i>pensioners / total population</i>	2022	2030	2040	2050	2060	2070
Age group -54	6.2	7.2	7.7	8.1	8.3	8.2
Age group 55-59	19.7	20.9	22.4	22.4	23.0	23.0
Age group 60-64	25.9	26.6	28.5	29.2	28.6	29.2
Age group 65-69	80.1	83.3	90.4	96.0	92.8	93.1
Age group 70-74	94.7	94.6	102.4	108.5	109.2	109.5
Age group 75+	96.2	95.2	95.0	99.4	105.0	106.1

Source: European Commission, EPC.

TABLE 12 – FEMALE PENSIONERS TO (INACTIVE) POPULATION BY AGE GROUP (%)

<i>female pensioners / inactive population</i>	2022	2030	2040	2050	2060	2070
Age group -54	16.0	20.8	23.5	24.3	25.3	24.7
Age group 55-59	80.1	92.4	109.9	127.2	150.9	149.5
Age group 60-64	58.3	67.8	82.5	85.7	91.9	93.0
Age group 65-69	87.5	103.9	116.0	123.7	122.9	124.5
Age group 70-74	88.6	96.5	105.2	113.7	115.1	116.5
Age group 75+	91.7	92.2	93.6	97.4	103.4	105.5

<i>female pensioners / total population</i>	2022	2030	2040	2050	2060	2070
Age group -54	7.2	8.3	8.8	9.2	9.5	9.3
Age group 55-59	23.1	24.3	25.7	25.7	26.1	26.0
Age group 60-64	29.6	30.3	32.0	32.9	31.9	32.2
Age group 65-69	77.3	82.3	90.0	96.4	93.9	94.2
Age group 70-74	88.6	92.5	100.4	107.8	109.4	110.2
Age group 75+	91.7	92.2	93.6	97.4	103.4	105.5

Source: European Commission, EPC.

3.4. Financing of the pension system

The projected value of Pay Related Social Insurance contributions as a share of GDP (employer, employee and self-employed) remains relatively constant at the 2022 proportion (2.7 per cent to 2.8 per cent of GDP) over the entire timeframe. The split between employer and employee PRSI contributions remains constant throughout the forecast period. PRSI contributions grow in line with earnings, if the labour share remains stable then the PRSI contributions will grow in line with GDP.

The State intervenes when the SIF is in deficit, i.e. only when the expenditure on schemes funded by the SIF is higher than PRSI revenue intake. Non SIF-related pension expenditure is funded by voted

expenditure. State contributions are projected to increase by 2.0 per cent of GDP between 2022 and 2070.

It should be noted that PRSI revenue (both employer and employee contributions) is used to fund a wide range of social insurance benefits, beyond the pension component. Thus, the below figures may underestimate the potential social security pension subvention requirement throughout the forecast period.

The number of projected public contributors is a function of employment levels. The Commission projections underpinning these estimates indicate employment growth will be relatively moderate throughout the forecast period (employment growth averages just 0.2 per cent per annum over the period 2022-2070). On this basis, the number of contributors per pensioner falls significantly over the forecast horizon from 2.6 in 2022 to 1.3 in 2070.

TABLE 13 – FINANCING OF THE PUBLIC PENSION SYSTEM

	Public employees	Private employees	Self-employed
Contribution base	Income	Income	Income
Contribution rate			
Employer	11.05	11.05	
Employee	4.00	4.00	4.00
State*	The State intervenes when the SIF is in deficit		
Maximum contribution			
Minimum contribution			€500

*Includes only legislated contributions.

Rates for weekly earnings over €441 for class A employees

Source: European Commission, EPC.

TABLE 14 – REVENUE FROM CONTRIBUTIONS AND NUMBER OF CONTRIBUTORS IN THE PUBLIC SCHEME

	2022	2030	2040	2050	2060	2070	change 2022-2070 (pps)
Public pension contributions (%GDP)	2.7	2.8	3.0	4.0	4.5	4.8	2.1
Employer contributions	1.9	1.9	1.9	2.0	1.9	1.9	0.0
Employee contributions	0.9	0.9	0.9	0.9	0.9	0.9	0.0
State contribution*	0.0	0.0	0.2	1.1	1.7	2.0	2.0
Other revenues*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Number of contributors (I) (1000)	2763	3005	3119	3052	3068	3006	243
Employment (II) (1000)	2499	2737	2868	2834	2831	2787	288
(I) / (II)	111%	110%	109%	108%	108%	108%	-3%

*Includes only legislated contributions. State contribution indicates State intervention in terms of funding the Social Insurance Fund.

The number of contributors is higher than the numbers in employment because younger people are more likely to have part time jobs and because of this there will be more than one contributor per 1 person in employment. The ratio of contributors to average employed is much higher for the younger cohorts and falls dramatically as we move up the age cohorts.

The increases in the rates of PRSI discussed in section 1.2.3 are not included in the baseline, as this reform had not been legislated prior to the finalisation of this fiche. If they were to be included, employer and employee contributions would be 0.1 per cent of GDP and 0.2 per cent of GDP higher, respectively, than they are in the baseline in 2070. State contributions would be 0.3 per cent of GDP lower under the reform as the State intervenes when the SIF is in deficit.

3.5. Sensitivity analysis

In order to test the robustness of the pension projection results to a range of assumptions, a sensitivity analysis was carried out in line with the harmonised range of shocks agreed by the Ageing Working Group (AWG).²³

A fertility rate 20 per cent lower than that considered in the baseline scenario is assumed to lead to a 0.4 percentage point increase in social welfare pension expenditure as a proportion of GDP relative to the baseline by 2070.

Intuitively, a scenario that increases life expectancy by 2 years leads to an increase in social welfare pension expenditure as a proportion of GDP, as pension recipients spend longer in retirement. By 2070, social welfare pension spending under the higher life expectancy scenario is projected to be 0.3 percentage points of GDP higher than baseline expenditure.

As migration flows fluctuate considerably in Ireland, it is important to have a scenario that considers different migration assumptions. A scenario in which net migration was 33 per cent higher (lower) than the baseline assumption would reduce (increase) pension expenditure by 0.2 percentage points (0.3 percentage points) of GDP by 2070, relative to the baseline.

While pension expenditure increases (decreases) in the higher TFP (TFP risk) scenarios compared to the baseline, this impact is largely offset by the associated denominator effect as increases (decreases) in nominal GDP cancel out noticeable changes in the expenditure/GDP ratio relative to the baseline.

A scenario envisaging a higher employment rate for older workers, leads to a reduction in expenditure of 0.2 percentage points compared to the baseline in 2070.

It should be noted that the Irish pension system does not include any mechanism that links the statutory retirement age to changes in life expectancy in order to offset such cost pressures. The effects of such an approach is considered in the sensitivity analysis. A policy linking retirement age to increases in life expectancy could be expected to lead to a fall in social welfare pension expenditure of 1.2 percentage points by 2070 compared to the baseline.²⁴

TABLE 15 – EXPENDITURE PROJECTIONS UNDER DIFFERENT SCENARIOS (PPS DEVIATION FROM BASELINE)²⁵

<i>Public pension expenditure</i>	2022	2030	2040	2050	2060	2070	change 2022-2070
Baseline (%GDP)	3.8	4.2	5.0	6.0	6.5	6.6	2.8
Higher life expectancy at birth (+2y)	0.0	0.0	0.0	0.1	0.2	0.3	0.3
Higher migration (+33%)	0.0	-0.1	-0.1	-0.2	-0.3	-0.2	-0.2
Lower migration (-33%)	0.0	0.1	0.2	0.3	0.3	0.3	0.3
Lower fertility (-20%)	0.0	0.0	0.0	0.1	0.3	0.4	0.4
Higher inflation scenario (2% by 2052)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Higher employment rate of older workers (+10 pps)	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Higher productivity (TFP converges to 1%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower productivity (TFP converges to 0.6%)	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Policy scenario: link retirement age to longevity	0.0	-0.1	-0.3	-0.6	-0.7	-1.2	-1.2
Policy scenario: constant retirement age	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Policy scenario: constant benefit ratio	:	:	:	:	:	:	:

Source: European Commission, EPC.

²³ The sensitivity scenarios were applied exclusively to social welfare pensions and not the public sector occupational pension.

²⁴ Assumes state pension ages increases to 67 in 2030, 68 in 2038, 69 in 2046, 70 in 2054, 71 in 2062, and 72 in 2070 for both males and females.

²⁵ For more information on the design of the sensitivity scenarios, see Chapter 5 of Part 1 in European Commission and EPC (2023), *'2024 Ageing Report: Underlying assumptions and projection methodologies.'* European Economy, Institutional Paper 257.

3.6. Changes in comparison with previous Ageing Report projections

As Table 16 indicates, current projections together with the previous vintages point towards the dominance of demographics in terms of driving future pension expenditure. Indeed, the dependency ratio effect has worsened relative to the 2021 Ageing Report (AR 21) capturing the relative increase in the old age dependency ratio, particularly in the later years of the projections due to slower growth of the working age population and faster growth of the population aged 65 and over from the midpoint in the century.

TABLE 16 – DISAGGREGATION OF THE CHANGE IN THE PUBLIC PENSION EXPENDITURE-TO-GDP RATIO IN CONSECUTIVE AGEING REPORTS (PPS OF GDP)

	Public pension expenditure	Dependency ratio effect	Coverage ratio effect	Benefit ratio effect	Labour market effect	Residual (incl. interaction effect)
2006 Ageing Report (2004-2050)	6.5	7.9	-1.4	0.8	-0.5	-0.2
2009 Ageing Report (2007-2060)	6.1	8.0	-2.1	0.8	-0.3	-0.4
2012 Ageing Report (2010-2060)	4.1	7.2	-2.8	0.8	-0.5	-0.5
2015 Ageing Report (2013-2060)	1.1	6.0	-1.7	-2.1	-0.6	-0.5
2018 Ageing Report (2016-2070)	2.2	3.1	-0.6	-0.1	-0.1	-0.2
2021 Ageing Report (2019-2070)	3.4	4.0	-0.7	0.2	-0.1	-0.1
2024 Ageing Report (2022-2070)	2.8	4.0	-0.2	-0.7	-0.2	-0.1

- The disaggregation for 2006/2009/2012 is on the basis of the number of pensions; for the other vintages it is on the basis of pensioners.

- The projection horizon has been extended over consecutive Ageing Reports, limiting comparability over time.

Source: European Commission, EPC.

The decomposition of the differences between AR 21 and the actual public pension expenditure is set out in Table 17. The first row displays social welfare pension projections as a share of GDP as reported in the 2021 Ageing Report. The second row isolates the impact of the new macro-demographic assumptions on spending. The third row displays the effects of the coverage of the pension projections. The fourth demonstrates the impact of policy changes made since the provision of the AR 21 projections.

As evident in Table 17, the differences between the projected figures and outturn are large and relate to the variance in macroeconomic assumptions, particularly stronger nominal GDP growth than forecast with the inclusion of the annual Christmas bonus as a constant policy impact the key – if limited – upward drivers of costs.

TABLE 17 – DISAGGREGATION OF THE DIFFERENCE BETWEEN THE 2021 PROJECTIONS AND ACTUAL PUBLIC PENSION EXPENDITURE IN 2019-2022 (%GDP)

	2019	2020	2021	2022
Ageing Report 2021 projections (%GDP)	4.6	5.1	5.1	5.1
Assumptions (pps of GDP)	0.0	-0.5	-0.9	-1.3
Coverage of projections (pps of GDP)	-	-	-	-
Constant policy impact (pps of GDP)	0.1	0.1	0.1	0.1
Policy-related impact (pps of GDP)	-	-	-	-
Actual public pension expenditure (%GDP)	4.7	4.7	4.3	3.8

Source: European Commission, EPC.

Table 18 below, illustrates the differences between the future expenditure projections contained in AR 24 and AR 21. Changes to assumptions are the predominant driver of differences between both sets of projections, with GDP surprising on the upside causing a permanent ‘level effect’ in the denominator relative to the outlook in AR 21.

The other significant factors are improvements in coverage and modelling relative to AR 21, with factors such as better capture of the path for future disability payment causing a more accurate quantification

of recipients and costs over the horizon. Overall, the upturn in GDP dominates the changes to projections.

TABLE 18 – DISAGGREGATION OF THE DIFFERENCE BETWEEN THE 2021 AND THE NEW TOTAL PENSION PROJECTIONS (%GDP)

	2022	2030	2040	2050	2060	2070
Ageing Report 2021 projections	5.1	5.9	6.9	7.5	7.5	7.6
<i>Change in assumptions (pps of GDP)</i>	-1.3	-1.8	-2.0	-1.7	-1.5	-1.4
<i>Improvement in the coverage or in the modelling (pps of GDP)</i>	-	0.0	0.1	0.1	0.4	0.3
<i>Change in the interpretation of constant policy (pps of GDP)</i>	0.1	0.1	0.1	0.1	0.1	0.1
<i>Policy-related changes (pps of GDP)</i>	-	-	-	-	-	-
New projections	3.8	4.2	5.0	6.0	6.5	6.6

Source: European Commission, EPC.

4. Description of the pension projection model and the base data

4.1. Institutional context in which the projections are made

The projections presented as part of this exercise were conducted by DSP and DPENDR with assistance from the Department of Finance. The data used to run the pension model is administrative data from DSP's social insurance records and refer to the base year 2022. Administrative data on recipients for 2022 was not available at the time of the data extract and an estimate was made based on the number of recipients on 31 December 2021. The data used to run the public sector occupational pension data is collected by DPENDR and refer to the base year 2022.

4.2. Data used to run the model

The macroeconomic and demographic variables used in the projections are exogenous as agreed by the Ageing Working Group (AWG). In addition, data on pensioners by type of pension scheme (old-age and early retirement, disability, survivors and other), by sex and age (at 31 December each year) are used to run the model.

The data used to run the DSP pensions is DSP administrative data. The data used to run the DPENDR model on public sector occupational pensions is administrative data on public sector pension expenditure, collected by DPENDR.

4.3. Reforms incorporated in the model

See Section 1.2.

4.4. General description of the model(s)

Public social security and assistance pensions (social welfare pensions)

Pension Recipients: To project the number of social welfare pension recipients, the model projects the number of social insurance contributors from the projected number of persons employed from the CSM model. The link between the number of social insurance contributors and the numbers of persons employed is found by establishing the relationship between the administrative data on social insurance contributions with the average annual employment from the CSO. Improvements in employment outcomes, through increases in participation rates in the CSM projections, will lead to higher levels of contributions and increases in coverage ratios.

The model used to forecast pension projections in the 2021 Ageing Report relied on estimates of the projected pension entitlements of future retirees produced by KPMG in their actuarial review of the Social Insurance Fund. The model used in this report projects the future number of retirees by translating the contribution histories of those reaching state pension age (66) to entitlements based on the relationship in the administrative data. Distributions of numbers with a given number of paid years of contributions are projected for future calendar years. At state pension age, these distributions are used to determine the numbers of those entitled to contributory state pension and the average level of payment.

Pension Expenditure: For contributory state pensions, the level of benefit entitlement is determined by associating, by gender, a proportion of the maximum rate of state pension with the level of paid records at state pension age. Gross social welfare pension expenditure projections adopt a bottom-up approach. The projection methodology takes the most up to date rates of payment applicable to the various pension schemes plus appropriate extra allowances as the starting point and multiplies these by the number of recipients of each pension.

For this particular exercise, the actual pension payment rates in 2022 and 2023 have been incorporated. Thereafter (from 2024), all pension rates are assumed to rise at the same flat rate (nominal earnings, i.e. inflation plus labour productivity).²⁶ An estimate of overall spending is provided by multiplying the projected payment rates for each year by the number of pensioners claiming each type of payment.

Net pension expenditure projections are not provided as it is not possible to distinguish pension income from non-pension income on the basis of tax records.

Contributions: Social welfare pensions in Ireland are financed through a combination of PRSI contributions (Social Insurance pensions) and general tax revenues (social assistance schemes in the event of a shortfall in contributions).

The projected value of Pay Related Social Insurance contributions (employer, employee and self-employed) uses person-level data on earnings and PRSI income from DSP's social insurance records and uses the projected number of employed people from the CSM projections to determine the growth in the future number of contributors by sex, age and PRSI class. It combines these with the projected growth in average wages to determine the growth in the earnings base (the base for PRSI).

Number of Contributors: The projected number of employed people from the CSM projections is combined with social insurance coverage rates to determine growth in the future number of contributors, by sex, age and PRSI class.

Public sector occupational pensions

Pension Expenditure: Actual spending on public sector occupational pensions in 2022 is taken as the starting point. Reforms implemented in 1995 and 2004, including the integration of occupational and state pensions, the raising of the minimum pension age and the removal of a compulsory retirement age for newest public servants, are accounted for in the projected spending figures. In addition, the introduction of the Single Public Service Pension Scheme, which is a career average revalued earnings scheme is incorporated in the public service pension model.

As in the case of the social welfare pension projections, net pension expenditure estimates are not reported as it is not possible to distinguish public sector pension income from non-pension income on the basis of tax records.

4.5. Other features of the projection model

While the expenditure projections contained in the Ageing Report are understandably scaled by Gross Domestic Product (GDP) to allow standard assumptions and cross-country comparability, there are significant problems associated with using GDP as a measure of the size of the Irish economy. As highlighted in the Irish Country Fiche in AR 21, statistical distortions mean estimates of Irish GDP

²⁶ This is a purely technical assumption.

overstate the size of the economy and therefore ratios using GDP as the denominator can give a misleading picture, potentially overstating the repayment capacity of the economy.²⁷

The CSO publishes an alternative measure of the size of the Irish economy, commonly referred to as ‘modified Gross National Income or GNI*. Fiscal ratios, including the fiscal costs of ageing, are more meaningful when GNI* is used to scale data in Ireland.

To comply with the framework of the Ageing Report and methodologies agreed by the Ageing Working Group, all pension expenditure ratios are presented in terms of GDP, however there are significant differences when these are scaled by GNI*.

When scaled by GNI*, total pension expenditure is projected to increase by 5.1 p.p. of GNI* from 7.0 per cent of GNI* in 2022 to 12.2 per cent of GNI* in 2070.²⁸

FIGURE 3 – GDP AND GNI* COMPARISON



Source: EU Commission, Department Finance.

²⁷ A more detailed explanation can be found at: <https://assets.gov.ie/4910/181218123252-71a2c297f26b419fa3696d7349e3e788.pdf>

²⁸ Projections of GNI* are purely mechanical. For illustrative purposes, GNI* is assumed to grow in line with Commission projections for nominal GDP. While the macroeconomic forecasts from the Commission’s Spring 2023 forecasts, including GDP are used in the base year, GNI* is taken from the CSO’s 2022 National Income and Expenditure 2022 Annual Results. The 2022 GNI* figure from this release published in July 2023 is part of the outturn data published by the CSO as therefore more up to date than the Commission’s Spring 2023 forecasts. Nevertheless, this comparison is provided for illustrative purposes.

Methodological annex

Economy-wide average wage at retirement

As highlighted in Section 3.3, the benefit ratio is calculated using first, the Commission’s projections of average earnings. The replacement rate is calculated based on data provided by the Irish National Statistical Institute, the Central Statistics Office (CSO), on average wage at retirement. Data from the CSO indicates that the average wage at retirement in Ireland is much lower than the Commission estimates of the economy-wide average gross wage. The ratio of the average wage at retirement to the economy-wide average gross wage is assumed to remain constant over the projection period. Table A1 shows the difference between the two estimates.

TABLE A1 – ECONOMY-WIDE AVERAGE WAGE AT RETIREMENT (1000 EUR)

	2022	2030	2040	2050	2060	2070
Economy-wide average gross wage at retirement	39.1	60.6	85.5	120.3	167.4	231.5
Economy-wide average gross wage	46.8	72.5	102.4	144.0	200.4	277.0

Source: European Commission, EPC.

Pensioners vs pensions

It is not possible to get more than one state pension at a time. However, coverage rates can rise above 100 per cent in the model projections to allow for recipients who are abroad and claiming the state contributory pension. DSP estimates that approximately 10 per cent of recipients of the state contributory pension are residing abroad.²⁹

Pension taxation

Net pension expenditure projections are not provided as it is not possible to distinguish pension income from non-pension income on the basis of tax records.

Disability pensioners

There are no reforms to the disability pension which were modelled in this Ageing Report but not in the 2021 Ageing Report. There is a change in how the recipients of disability pensions are modelled. In the current Ageing Report, disability recipients are modelled using inception rates (as a proportion of the population) and leaver rates. For each age (over the age of 16) and gender, inception rates and leaver rates are calculated from administrative data from 2017 – 2019.

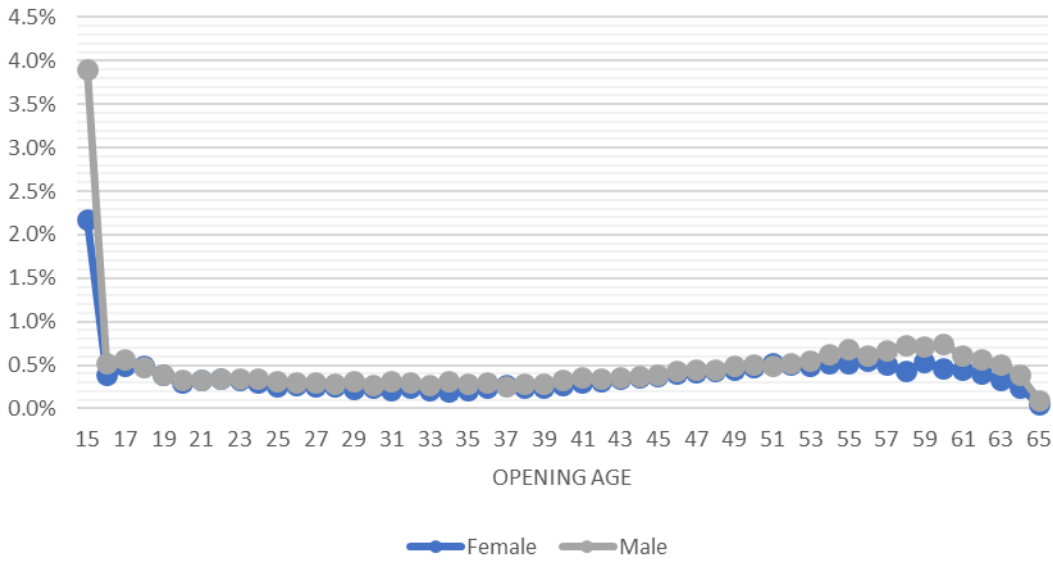
The inception rates are applied to the population in a given year and the leaver rates are applied to the population of disability pension recipients.

In the 2021 Ageing Report the number of disability recipients were modelled as a constant share of the population by age and gender.

The rates of disability pension payments are assumed to grow in line with labour productivity plus CPI.

²⁹ Department of Social Protection, Statistical Information on Social Welfare Services 2022, Table C4, available at: <https://www.gov.ie/pdf/?file=https://assets.gov.ie/262944/3bdd325b-db94-4daf-90c3-b6c00682a7d9.pdf#page=null>

FIGURE 4 – DISABILITY ALLOWANCE INCEPTION RATES



Source: Department of Social Protection.

Survivors’ pensions

There are no reforms to survivors’ pension which were modelled in this Ageing Report but not in the 2021 Ageing Report. There is a change in how the number of recipients of survivors’ pensions are modelled. In the current Ageing Report, the proportion of deaths that trigger a survivor pension are calculated by age and gender using DSP administrative data. These are assumed to decline at a rate inversely proportional to the size of the alternative pensions available, as an individual can only claim one pension at a time.

The model used in the 2021 Ageing Report set a coverage ratio which was then reduced over time.

Non-earnings-related minimum pension

The non-earnings-related minimum pension, the State Pension Non-Contributory is modelled using opening inception rates at the state pension age (as a proportion of the population) and adjusted or changes in other pension numbers (as an individual cannot claim more than one pension) and exits.

Opening inception rates are 11% for men and 13% for women at state pension age. When taking account of the alternative pool of pensions, the State Pension Contributory is reduced by 10 per cent to account for overseas recipients.

Alternative pension spending disaggregation

Table A2 is similar to Table 8 but provides a disaggregation of the change in pension expenditure based on the number of pensions as compared to the number of pensioners in Table 8.

TABLE A2 – FACTORS BEHIND THE CHANGE IN PUBLIC PENSION EXPENDITURE BETWEEN 2022 AND 2070 (PPS OF GDP) – PENSIONS

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
Public pensions to GDP	0.3	0.7	1.0	0.6	0.3	3.0
Dependency ratio effect	0.4	0.8	1.1	0.4	0.4	3.2
Coverage ratio effect*	0.0	0.0	-0.1	0.1	-0.1	-0.1
<i>Coverage ratio old-age</i>	0.0	0.1	0.2	0.1	0.0	0.6
<i>Coverage ratio early-age</i>	0.1	0.2	0.3	-0.4	-0.1	0.1
<i>Cohort effect</i>	-0.2	-0.6	-1.2	0.2	-0.2	-2.0
Benefit ratio effect	0.1	0.1	0.1	0.1	-0.1	0.3
Labour market effect	0.0	-0.1	-0.1	0.0	0.0	-0.2
<i>Employment ratio effect</i>	0.0	0.0	-0.1	0.0	0.0	-0.1
<i>Labour intensity effect</i>	0.0	0.0	0.0	0.0	0.0	0.0
<i>Career shift effect</i>	0.0	0.0	0.0	0.0	0.0	-0.1
Residual	-0.1	0.0	0.0	0.0	0.0	-0.2

Source: European Commission, EPC.

Annexes

Annex 1: additional information

TABLE A3 – RATES OF STATE PENSION CONTRIBUTORY (SPC), FOR PEOPLE WHO QUALIFIED AFTER 1 SEPTEMBER 2012³⁰

<i>Yearly average PRSI contributions</i>	<i>SPC rate per week in 2023</i>
48 or over	€265.30
40-47	€260.10
30-39	€238.50
20-29	€225.90
15-19	€172.90
10-14	€106.00

Source: Department of Social Protection.

Annex 2: public pensions covered by the projections

The public pensions included in the projections and which are paid from the SIF are: State Pension Contributory (SPC), Invalidity Pension, Widow's/Widower's Pension Contributory, Illness Benefit, Deserted Wife's Benefit and Carer's Benefit.

The public pensions included in the projections and which are not paid from the SIF are: State Pension Non-Contributory (SPNC), Disability Allowance, Blind Pension, Widow's/Widower's Pension Non-Contributory, Deserted Wife's Allowance and Carer's Allowance.

The supplementary benefits included in the projections are the Fuel Allowance, the Carer's Support Grant, Household Benefits and Free Travel.

³⁰ People can also qualify for the SPC using the total contributions approach. For the total contributions approach, the rate is calculated pro-rata based on the number of years out of 40 that a person has.