

**Economic Policy Committee -  
Ageing Working Group**

**2024 Ageing Report  
Belgium: Country Fiche**

December 2023

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# Introduction

The present pension country fiche for Belgium 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 and the projection were prepared by the Federal Planning Bureau. The pension projections presented in this fiche incorporate the macroeconomic assumptions and methodologies agreed within the *Ageing Working Group* of the *Economic Policy Committee*<sup>1</sup>. The projections 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 Belgium. 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.

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<sup>1</sup> It should be noted that these demographic and macroeconomic assumptions are different from those retained in the national projection of the Study Committee on Ageing, as is the scope of the pension definition.

# 1. Overview of the Belgian pension system<sup>2</sup>

## 1.1. Three pillars

### 1) The first pillar *(covered in the pension projections)*

Amounting to 12.7% of GDP in 2022, the first pillar or the statutory public pension scheme is the principal part of the Belgian pension system. It is a defined benefits (DB) system for 99% of the expenditure and means-tested for the assistance scheme (1% of the expenditure). The next table presents the structure and the importance of the first pillar in 2022, expressed in % of GDP, by scheme and type of pension. For the old-age and early pensions earnings-related and survivor's pensions, three schemes exist with different calculation for the pension: wage earners (including the contractual workers in the public services), self-employed and civil servants (only tenured workers). Moreover, more than half of the expenditure of the civil servants scheme concern special pension schemes, namely defence, teachers and railway crew.

**Table 1 Composition of the first pillar following the AWG definition in 2022**

	Old-age and early pensions earnings-related	Old-age non-earnings related (means-tested)	Disability	Survivor (related to the earnings of the deceased)	Total
Wage earner	6.1% GDP (including unemployment with company allowance <sup>3</sup> )	-	1.5% GDP (earnings-related)	0.4% GDP	7.9% GDP
Self-employed	0.8% GDP	-	0.1% GDP (lump-sum allowance)	0.1% GDP	1.0% GDP
Civil servants (only tenured but including disability <sup>4</sup> )	3.4% GDP (of which at least 2% GDP is covered by special schemes)	-	- (included in old-age and early pension)	0.3% GDP	3.7% GDP
Minimum non-contributory pension (assistance scheme)	-	0.2% GDP (guaranteed income for elderly persons)	-	-	0.2% GDP
<b>Total</b>	<b>10.2% GDP</b>	<b>0.2% GDP</b>	<b>1.6% GDP</b>	<b>0.7% GDP</b>	<b>12.7% GDP</b>

### 2) The second pillar *(not covered in the pension projections)*

Private occupational pensions (second pillar) are less important than first pillar pensions but are far from negligible. Thus, in January 2022 total vested reserves within the second pillar amounted to 18.4% of GDP, and in 2017 53% of recently retired employees received such a pension. In 2004 this percentage was only 35%. Note that occupational pensions are almost exclusively paid out as onetime lump sum payments.

### 3) The third pillar *(not covered in the pension projections)*

The private voluntary individual pension schemes constitute the third pillar for which data are not readily available.

<sup>2</sup> For an exhaustive description of pension schemes, please consult the [PENSREF database](#).

<sup>3</sup> Unemployment with company allowance only for non-job seekers: 0.04% GDP in 2022, phasing out scheme. This kind of benefit ends when the beneficiary goes into retirement at the statutory age or in early retirement.

<sup>4</sup> The old-age and the disability pension are calculated in the same way in the civil servants scheme.

## 1.2. Qualifying conditions for retiring in the first pillar

The following table summarizes information on the qualifying conditions for **old-age and early retirement with a full pension** as defined by the AWC<sup>5</sup> in the public pension scheme (wage earner, self-employed and civil servant), taking into account all measures mentioned in section 1.3 below. The minimum early retirement age and the minimum number of career years required for eligibility are respectively 63 and 42 years in 2022. Nevertheless, as of 2019 exceptions are still possible for people aged 61 with a career of 43 years and aged 60 with a career of 44 years. There is no penalty for early retirement. A pension bonus aimed at rewarding those who prolong their working lives is scheduled for voting in February 2024 (see Box 2). The statutory retirement age in the old-age public pension schemes in 2022 is 65 for both men and women and will rise to 66 in 2025 and to 67 in 2030.

**Table 2** Qualifying condition for old-age and early retirement in the public pension scheme (wage earner, self-employed and civil servant' schemes)

		2022	2030	2040	2050	2060	2070	
Qualifying conditions for retiring with a full pension (see footnote 5)	Statutory retirement age - men	65	67	67	67	67	67	
	Statutory retirement age - women	65	67	67	67	67	67	
	Minimum requirements	Contributory period - men	42	42	42	42	42	42
		Retirement age - men	63	63	63	63	63	63
		Contributory period - women	42	42	42	42	42	42
		Retirement age - women	63	63	63	63	63	63

Source: Belgium.

The **disability allowance** in the wage earners and self-employed schemes exists for people aged less than the statutory retirement age. This kind of benefit ends when the beneficiary retires. The minimum age for beneficiaries of a **survivor pension** is 48.5 years in 2022<sup>6</sup>, rising to 50 years in 2025. The minimum age to benefit from the guaranteed income for elderly people (minimum non-contributory pension, **assistance scheme**) is the same as the statutory retirement age. Some **minor special schemes** related to difficult working conditions (miners, seamen) still exist in the wage earners scheme (with a lower retirement age and higher accrual rate) but they are being phased-out. The **larger part of special schemes'** expenditure comes from the civil servants scheme, i.e., teachers, defence and railway crew with lower retirement ages and higher accrual rates (lower *tantième* than 60, see Box 1).

<sup>5</sup> In this table, a full pension means getting a pension without paying any penalty for retiring before the statutory retirement age and is not the same as the definition according to the Belgian legislation, i.e., the maximum number of career years taken into account in the pension calculation or 45 years.

<sup>6</sup> Only in the civil servants scheme the children of deceased have a right to an orphan pension as long as they receive a family allowance (paid up to their 25<sup>th</sup> birthday at the latest), which means that very few people are concerned.

**Box 1 The characteristics of the different public pension schemes****Pension scheme for wage earners (old-age and survivor pension)**

Formula for old-age pension:

$$P = 75\% \text{ or } 60\% \times \sum_{t=1}^n \frac{1}{45} \times \text{wage in year } t \text{ up to the wage ceiling} \times \frac{\text{price index in year } n}{\text{price index in year } t}$$

Accrual rates: 1.67% for the head of household with a dependent spouse (household replacement rate of 75% divided by 45) and 1.33% for pensioners whose pension is calculated on individual basis (single replacement rate of 60% divided by 45), applied to annual gross wages earned during the whole career (maximum career of 45 years). The annual gross wages are capped to the annual wage ceiling (for instance, ceiling of 71519.98 EUR in 2022) and adjusted only to current prices (CPI). Some periods of unemployment, disability, etc. are valued at the last corresponding earned wage and some others at the minimum claim per working year. Maximum pension for a maximum career exists due to the wage ceiling.

Increased accrual rate for low wages: 1) minimum pension (not the assistance scheme) granted to pensioners with at least 2/3<sup>rd</sup> of a maximum career in the wage earners' scheme (25038.20 EUR per year at 1/7/2023 for a maximum career for the head of household with a dependent spouse, 20036.84 EUR per year for a maximum career for other pensioners); 2) minimum claim per working year (guaranteed annual minimum wage of 30269.27 EUR at 1/12/2022) as long as the beneficiary can prove he/she has worked at least 15 years in the wage earners' scheme, and provided his/her job was at least one third of a full-time job. The total pension after application of the guaranteed minimum wage may not exceed for a full career 25831.62 EUR for the head of household with dependent spouse and 20665.28 EUR for other pensioners. These amounts are adjusted proportionally to the career fraction of the pensioner.

The survivor pension is calculated as 80% of the deceased person's pension, computed at the household rate (which means 80% of 75%), that is 60% of the reference wage.

**Pension scheme for self-employed (old-age and survivor pension)**

Formula for old-age pension:

$$P = 75\% \text{ or } 60\% \times \sum_{t=1}^n \frac{1}{45} \times \text{income in year } t \times \frac{\text{price index in year } n}{\text{price index in year } t} \times \text{correction coefficients}$$

The pension calculation is very similar to that for the wage earners' scheme (75% of the reference income for the head of household with a dependent spouse and 60% in all other cases). The working years before 1984 are valued at a fixed income, while for the working years as of 1984, the reference income is calculated on the basis of the business income used to compute social security contributions and income tax, up to an income ceiling. The correction (reduction) coefficients reflect the discrepancy between the contributions paid by wage earners and by the self-employed but only applies to income years up to 2020. A minimum pension (not the assistance scheme) exists with the same amounts as in the wage earners' scheme, which is granted to pensioners with at least two thirds of a maximum career as a self-employed and/or wage earner and in proportion to the career fraction. The survivor pension is computed in a similar way to the wage earners' scheme.

**Box 1 continued****Pension scheme for civil servants (old-age and survivor pension)**

Formula for old-age pension and disability pension (civil servants declared permanently unfit to continue their career, regardless of their age or seniority):

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$$P = \frac{\text{considered service years (max 45 years)}}{60 \text{ (reference career fraction)}} \times \text{reference wage}$$

(i. e. maximum pension of 75% x reference wage)

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Accrual rate: 1.67% (1/60) applied to the average wage of the last 10 years of work (5 years for people born before 1962).

Maximum replacement rate of 75% of the reference wage: numerator of a maximum career length of 45 years and reference career fraction of 60 (so-called *tantième*). There is also an absolute maximum pension under this scheme of EUR 93760.79 per year at 1/12/2022. Some special schemes have a preferential *tantième* (for instance, 55 for teachers and non-train crew of national railway, 50 for the military and the police, 48 for the train crew of national railway, etc.). The survivor pension is calculated as 60% of the reference wage.

**Assistance scheme (means-tested): guaranteed income for elderly persons (GIEP)**

This scheme is designed for elderly people with no income or an insufficient pension. At 1/7/2023, the maximum annual amount of the GIEP is 17870.76 EUR for singles and 11913.84 EUR for cohabitants (for each person). The GIEP is mostly a complement to other pensions.

**Unemployment with company allowance scheme for non-job seekers**

Unemployment benefit, paid by the public authorities (National Employment Office): 60% of the last gross wage earned, limited by a ceiling (different from that used in the pension scheme). The company allowance, paid by the employer, is not taken into account in the model.

**Disability**

Wage earners' scheme: 65% of the limited lost wage (limited by a ceiling different from that used in the pension scheme) for beneficiaries who are heads of household, 55% for singles, and 40% for cohabitants. A minimum amount also exists (different from the assistance scheme).

Self-employed scheme: monthly fixed (non-earnings related) benefit, different amount whether the beneficiary is a head of the household or not.

### 1.3. Recent reforms of the public pension scheme included in the 2024 Ageing Report projection

The following measures were legislated in December 2020 (not included in 2021 Ageing Report) and amended in March 2023:

- the minimum pension (in the earnings related old-age and early retirement) in the wage earners and self-employed schemes was yearly increased by 2.65% over the period 2021-2023 and will increase by 2.08% in 2024 (total increase of 10%).
- The minimum non-contributory pension (assistance scheme) was also yearly increased by 2.58% over the period 2021-2023.
- The wage ceiling which is taken into account in the calculation of the new pension in the wage earners and self-employed schemes was yearly increased by 2.38% in the period 2021-2023. Moreover, the ceiling for wage earners new pensions which are calculated with a minimum claim per career year was also yearly increased by 2.38% over the period 2021-2023 and will increase with 2.38% in 2024.
- The correction coefficients used in the calculation of the new pension in the self-employed scheme have been abolished for each income year as of 2021.

<b>Box 2</b> Pending measures (not included in the projections)
<p>The following measures were decided in July 2023 and have been voted on 4 April 2024:</p> <ul style="list-style-type: none"><li>- A pension bonus is reintroduced; however, it will be made possible to be paid out in the form of a capital amount upon retirement. This bonus can be built up during working periods as soon as the retirement conditions (early retirement or at the legal retirement age) are met and for a maximum period of 3 years. The amount of the bonus increases with the time spent at work.</li><li>- The so called perequation, or the welfare adjustment of the pension of civil servants, will be limited to 0.3% per year or 0.6% on a biannual basis (see below section 1.4 for more explanation on the system of perequation).</li><li>- A working condition to have access to the minimum pension (old-age earnings-related) is introduced: at least 16 years must have been worked.</li><li>- A gender measure provides a more generous calculation of the minimum pension (old-age earnings-related) in the wage earners scheme for those who have worked part-time (for maximum 5 years situated before 2002).</li></ul> <p>The impact of these measures on pension expenditure, on the basis of the assumptions of the 2024 Ageing Report, is estimated to -0.2 pp. of GDP in 2070.</p>

## 1.4. Description of the “constant policy” assumptions used in the projection

The long-term modelling of the social expenses is carried out according to the constant policy principle, which is largely equivalent to the constant legislation principle. All measures and reforms enacted or expected to be enacted by the government until December 2023 are incorporated in the projection.

### 1.4.1. Rules for indexation and living standards adjustment in the first pillar: legislation

All pensions are automatically adjusted to the consumer price index, CPI<sup>7</sup>, unless an index jump<sup>8</sup> is decided by the government.

In addition to the indexation to prices, pensions by scheme are also adjusted to living standards in real terms:

- **Civil servants scheme:** old-age and early pensions are automatically adjusted to an increase in the wage scales of working civil servants (the so-called perequation). Each retirement and survivor pension in the civil servants scheme is linked to a specific “basket”. There are currently 16 baskets (for instance, Federal authority, Walloon Region, Flemish Community, Brussels Capital Region, armed forces...). All the pensions in the same basket are automatically increased by a specific percentage after each 2-year reference period. The percentage for each basket is determined on the basis of the increases of the wage scales. Therefore, this welfare adjustment does not reflect one hundred percent the average wage growth (due to a difference between the average wage increases and wage scales increases).
- **Wage earners, self-employed and assistance schemes:** the “Generation Pact” of December 2005 established the principle of adjustment of the replacement benefits (not only pensions) to living standards. To begin with, the government must provide for a budget covering an annual growth of 1.25% of the wage ceilings and the minimum claim per working year, an adjustment to living standards of 0.5% for the non-lump-sum allowances and a real growth of 1% for the lump-sum allowances. Once this budget is calculated, concrete measures for the adjustment to living standards are proposed by the social partners. These measures must respect the abovementioned global financial constraint in each scheme (wage earners, self-employed, assistance). However, in each scheme, they can be aimed at specific sectors, categories of beneficiaries or types of allowances. Finally, the government decides on the final measures.

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<sup>7</sup> This is in fact the smoothed health index which corresponds to the average of the health indices of the last 4 months multiplied by a factor of 0.98. And the health index corresponds to the consumer price index excluding alcoholic beverages, tobacco and fuels (excluding LPG). In the projections, the use of the CPI instead of the health index has no impact.

<sup>8</sup> An index jump means that the adjustment to price evolution is skipped. This has been the case in 1984, 1985, 1987 and 2015. Given the 2% stepwise indexation mechanism, an index jump corresponds to a reduction by 2% of social benefits in real terms.

### 1.4.2. Rules for indexation and living standards adjustment in the first pillar: projection

The table below presents the rules for indexation and living standards adjustment in the projection. All allowances are indexed to prices (CPI) unless otherwise decided.

**Table 3** Indexation and living standards adjustment of pensions by scheme in the projection

	Indexation to prices (whole projection period)	Living standards adjustment (in addition to price indexation)	
		Till 2024	From 2025
Wage earners (including unemployment with company allowance and disability)	Automatically adjusted to price index (CPI)	All the measures decided by the government	Adjusted to living standards following the "Generation Pact": annual growth of 1.25% for the wage ceilings and the minimum claim;
Self-employed (including disability)			
Civil servants			Adjusted to the real average wage increases of the working civil servants diminished by 0.4%.
Guaranteed income for elderly persons			1% per year the first ten years, then follows the average wage growth (rule defined by the AWG)

The pension adjustments of each scheme are modelled as follows. Regarding adjustment to living standards, until 2024 the projection takes into account all the measures already enacted by the government by September 2023.

From 2025 onwards, in the wage earners and the self-employed schemes, social allowances are adjusted according to the parameters used for computing the budget devoted to the adjustment to living standards as stated in the "Generation Pact" (see 1.4.1).

Regarding the civil servants pensions, the perequation is supposed to follow the evolution of the wage growth diminished by 0,4% (which corresponds to the average historical difference between real wage increases and effective welfare adjustments of civil servants pensions)<sup>9</sup>.

The average minimum non-contributory pension or the guaranteed income for elderly persons is adapted the first ten years of the projection with 1% in real terms per year ("Generation Pact") and then follows the average wage growth as agreed in the AWG.

<sup>9</sup> The perequation cannot be negative, so the wage growth should be higher than 0.4% to have a perequation.

## 2. Overview of the demographic and labour force projections<sup>10</sup>

### 2.1. Demographic projections

The next table presents the evolution of the main demographic variables for Belgium coming from EUROPOP2023, the population projection prepared by Eurostat and released in March 2023. Population is expected to rise from 11.7 million people in 2022 to 12.7 million in 2070, meaning an annual growth rate of 0.2% between 2022 and 2070. Note that the growth rate of the population is exceptionally high in 2022 and results from the net migration due to the inflow of Ukrainian refugees. The age group 0-19 declines on average by 0.2% per year over the whole projection period, while the age group 20-64 has a zero average growth rate. Nevertheless, the population of 20-64-year-olds raises till 2042 and falls afterwards. The group aged 65+ grows over the whole projection period, particularly between 2022 and 2050 with an average annual growth rate of 1.2% (average growth rate of 0.6% per year between 2050 and 2070).

The old-age dependency ratio, which represents the ratio between the 65 aged and over and the 20-64 aged, grows with 57.3% during the whole projection period: it rises from 33.7 in 2022 to 53.0 in 2070. This means that, while we had 3 working-age people for one person aged 65 or older in 2022, this ratio falls to 1.9 in 2070. The increased ageing of elderly people (the ratio between the number of those aged 80+ compared to those aged 65+) is also important, rising from 28% in 2022 to 40% in 2070.

**Table 4** Main demographic variables evolution

	2022	2030	2040	2050	2060	2070	Peak value	Peak year	Change 2022-2070
Population (in thousands)	11,674	12,026	12,358	12,565	12,634	12,690	12,690	2070	1,016
Population growth rate (in %)	0.8%	0.3%	0.2%	0.1%	0.0%	0.1%	0.8%	2022	-0.7%
Old-age dependency ratio (65+/20-64)	33.7	39.0	43.5	46.3	49.8	53.0	53.0	2070	19.2
Old-age dependency ratio (75+/20-74)	13.5	15.6	19.7	22.1	23.4	25.9	25.9	2070	12.4
Ageing of the elderly (80+/65+)	28.1	28.7	33.4	38.2	38.4	40.2	40.2	2070	12.1
Men - Life expectancy at birth	79.5	80.8	82.4	83.8	85.2	86.4	86.4	2070	6.9
Women - Life expectancy at birth	84.6	85.5	86.9	88.2	89.4	90.5	90.5	2070	5.9
Men - Life expectancy at 65	18.7	19.7	20.7	21.7	22.7	23.6	23.6	2070	4.9
Women - Life expectancy at 65	22.3	23.0	24.1	25.1	26.0	26.9	26.9	2070	4.6
Men - Survivor rate at 65+	87.5	88.8	90.5	91.9	93.1	94.1	94.1	2070	6.7
Women - Survivor rate at 65+	92.8	93.3	94.3	95.2	95.9	96.5	96.5	2070	3.7
Men - Survivor rate at 80+	58.5	62.9	67.7	72.0	75.8	79.1	79.1	2070	20.6
Women - Survivor rate at 80+	74.4	76.8	80.3	83.3	85.9	88.0	88.0	2070	13.7
Net migration (in thousands)	115.7	37.2	36.2	32.5	30.1	28.9	115.7	2022	-86.8
Net migration over population change	1.0%	0.3%	0.3%	0.3%	0.2%	0.2%	1.0%	2022	-0.8%

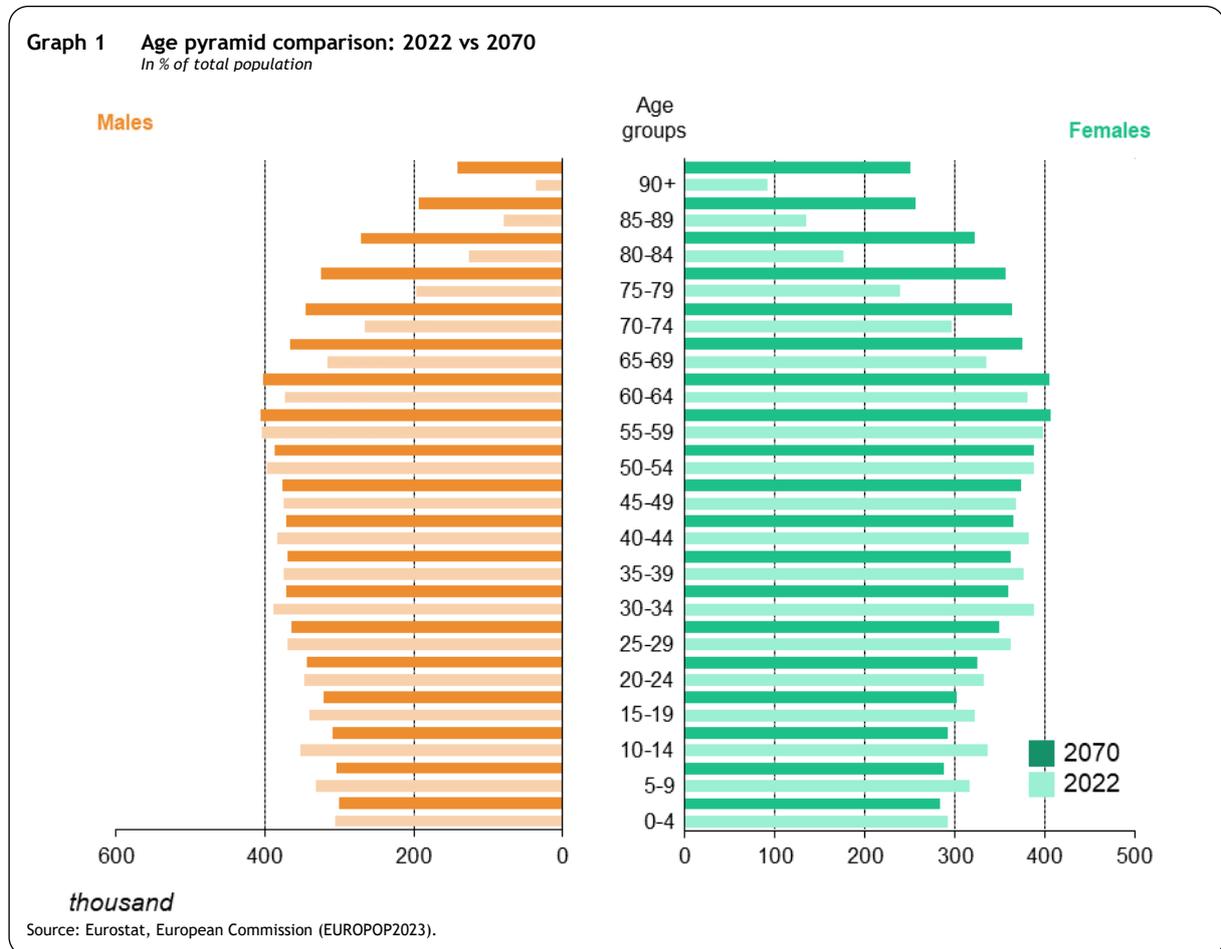
Source: Eurostat, European Commission (EUROPOP2023).

The survivor rates or the proportions of people who will survive the next year increase during the projection period. As a result, the gain in life expectancy at birth is 6.9 years for men and 5.9 years for women between 2022 and 2070, reducing the gap between men and women from 5.1 years in 2022 to 4.1 years in 2070. Life expectancy at 65 improves by around 4.9 and 4.6 years for men and women between 2022 and 2070, keeping the gap between men and women nearly unchanged during the projection

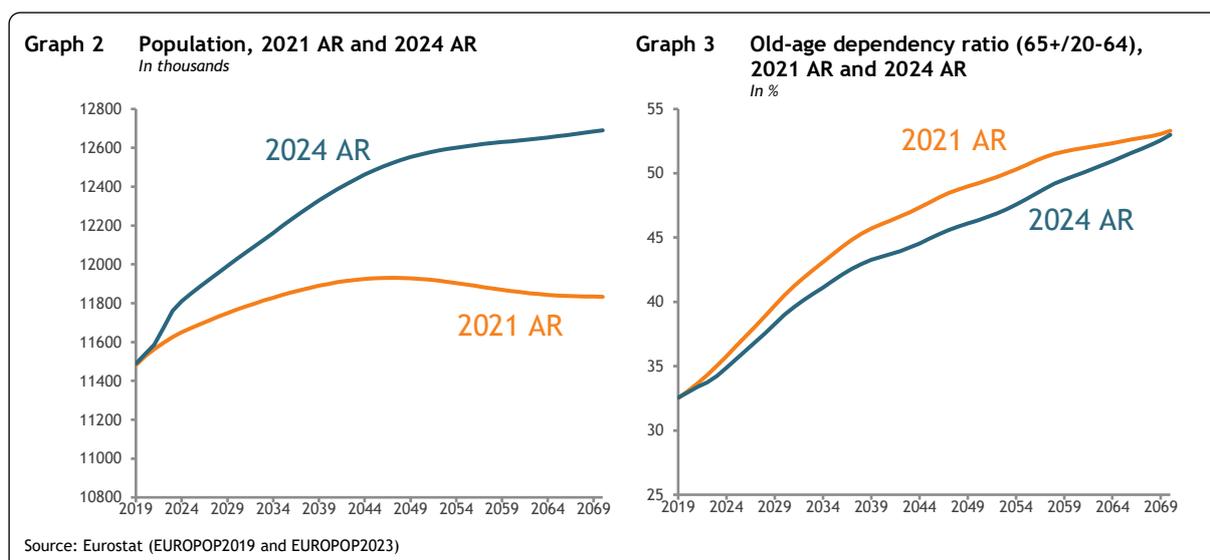
<sup>10</sup> For more details, see European Commission and EPC (2023), '[2024 Ageing Report: Underlying assumptions and projection methodologies](#).' European Economy, Institutional Paper 257.

period. The ratio of net migration to the variation of the total population shows that net migration contributes to the increase of the population.

The next graph shows the proportions of age groups as shares of the total population or the age pyramid by gender for 2022 and 2070. Already in 2022 it is not a pyramid anymore (the base has shrunk). By 2070 the pyramid has been transformed into a tube.



In comparison with the population projection used in the 2021 Ageing Report, the total population is much larger in the 2024 Ageing Report, being 7.2% higher in 2070. The old-age dependency ratio (65+/20-64) is lower during the whole projection period but nevertheless reaches the same level in 2070.



## 2.2. Labour force projections

Following the baseline assumptions of the European Commission for Belgium, using the cohort simulation model (CSM), the total participation rate (20-64) is expected to increase from 76.1% in 2022 to a peak of 80.2% in 2066, followed afterwards by a stabilisation period. Between 2022 and 2070, this total participation rate rises with 4.0 percentage points. The participation rate of the age group 55-64 substantially rises by 11.1 percentage points between 2022 and 2070. This increase is largely due to the combination between higher career conditions for accessing early retirement on the one hand and longer schooling and higher participation rates of women on the other hand. The participation rate of the age group 65-74 is also boosted with an increase by 5.2 percentage points between 2022 and 2070, due mostly to the increase of the statutory retirement age. The median age of the labour force increases by 1 year during the projection period.

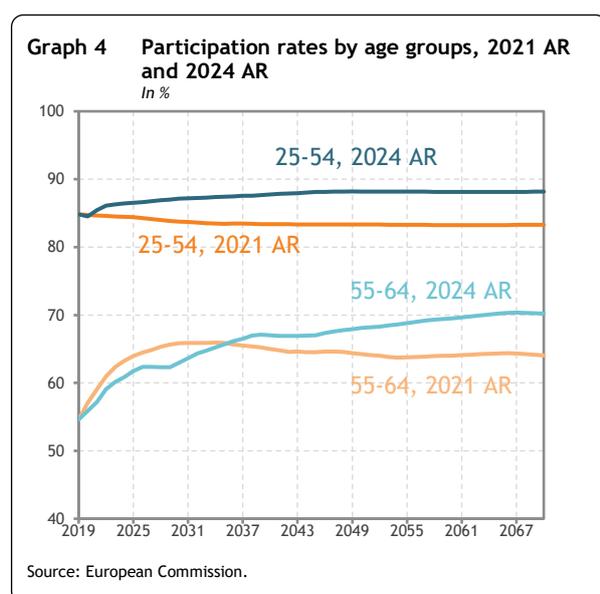
Over the whole projection period, the unemployment rate (15-64 years) increases with 0.3 percentage points, starting from 5.6% in 2022 and ending at 5.9% as of 2032 (see Box 3). The evolution of the employment rates by age group between 2022 and 2070 results from the combination of the evolutions of the participation rates and the unemployment rate, i.e., an improvement by 3.6 percentage points for the age group 20-64 and a large increase in the employment rate of the 55-64-year-olds (+10.5 percentage points).

**Table 5** Participation rate, employment rate and share of workers  
*In % and pps.*

	2022	2030	2040	2050	2060	2070	Peak value	Peak year	Change 2022-2070
Labour force participation rate 20-64	76.1	77.9	79.7	80.1	80.2	80.2	80.2	2066	4.0
Employment rate of workers aged 20-64	72.1	73.7	75.2	75.6	75.7	75.7	75.7	2066	3.6
Share of workers aged 20-64 in the labour force 20-64	94.7	94.6	94.4	94.4	94.4	94.4	94.7	2027	-0.3
Labour force participation rate 20-74	65.4	66.1	68.0	68.5	67.9	67.8	68.6	2047	2.4
Employment rate of workers aged 20-74	62.0	62.6	64.3	64.7	64.2	64.1	64.9	2047	2.1
Share of workers aged 20-74 in the labour force 20-74	94.7	94.6	94.5	94.5	94.5	94.5	94.8	2027	-0.2
Labour force participation rate 55-64	59.1	63.0	67.0	68.1	69.5	70.2	70.4	2067	11.1
Employment rate 55-64	56.9	60.6	64.4	65.4	66.7	67.4	67.5	2067	10.5
Share of workers aged 55-64 in the labour force 55-64	96.3	96.2	96.1	96.0	96.0	96.0	96.3	2027	-0.3
Labour force participation rate 65-74	5.4	8.2	10.0	10.6	10.6	10.6	10.8	2048	5.2
Employment rate 65-74	5.3	8.0	9.8	10.3	10.4	10.4	10.6	2048	5.1
Share of workers aged 65-74 in the labour force 65-74	98.3	98.1	98.0	98.0	98.0	98.0	98.4	2025	-0.2
Median age of the labour force	41	40	41	41	42	42	42	2052	1.0

Source: European Commission.

In comparison with the 2021 Ageing Report, the new projection of participation rates is generally speaking more favourable. The observed data of the Labor Force Survey between 2019 and 2022 show an increasing participation rate for the age group 25-54 years, which was not projected in the 2021 Ageing Report and is also reflected in the new projection. Although the observed participation rates of the 55-



64 years old till 2022 are a little bit lower than the projected one in the 2021 Ageing Report, resulting from the cohort effect, the participation rate of this age group in projection becomes higher than in the 2021 Ageing Report as of 2035 (by 6.2 percentage points higher by the end of the projection period).

In the 2021 Ageing Report, the unemployment rate was marked at the beginning of the projection period by the expected impact of the Covid-crisis, namely a relatively important increase in 2020, followed by a decrease and then again an increase to the level of the Belgian anchor (see Box 3). In Belgium the sanitary crisis has caused only a small increase of the unemployment rate in 2021 and the

latest ends up in 2022 with almost the same unemployment rate as in 2019. After 2022, the unemployment rate first decreases in the medium term and then rises to the Belgian anchor which is now estimated at a lower level than in the 2021 Ageing Report (5.9% instead of 6.4%).

Consequently, with a higher increase of the participation rates and a lower increase of the unemployment rate, the evolution of the employment rate is more favourable in the new projection: +3.6 percentage points between 2022 and 2070 against -0.3 percentage points for the same period in the 2021 Ageing Report.

The next table presents, among other things, the last observed average effective retirement age for the year 2021 (column 2022) by gender, calculated on the basis of administrative data on new pensioners. It also reports the average effective retirement age (total men and women) resulting from the projection,

the average labour market exit age calculated with the CSM model of the European Commission (based in observation on the Labour Force Survey data), and the evolution of the working career duration (contributory period) reported by the Member State in the pension questionnaire. The latter is a longitudinal concept that represents the past career of new pensioners in year  $t$  (up to 45 years), used to calculate pension expenditure.

**Table 6 Labour market exit age, effective retirement age and expected duration of life spent in retirement**

	2022	2030	2040	2050	2060	2070	Peak value	Peak year	Change 2022-2070
<b>TOTAL</b>									
Average effective retirement age*	62.1	62.6	64.0	64.0	64.1	64.0	64.1	2058	1.9
Average labour market exit age (CSM)**	62.8	64.0	64.1	64.2	64.3	64.4	64.4	2070	1.7
Contributory period	38.5	42.0	40.5	40.5	40.3	40.4	42.0	2030	1.9
Duration of retirement***	22.3	22.1	23.2	24.2	25.2	26.1	26.1	2070	3.8
Duration of retirement/contributory period	58%	53%	57%	60%	63%	65%	65%	2070	7%
Percentage of adult life spent at retirement****	34%	34%	35%	35%	36%	37%	37%	2070	3%
Early/late exit*****	2.0	4.3	2.4	2.4	2.3	2.1	4.3	2030	0.2
<b>MEN</b>									
Average effective retirement age (administrative data 2021)*	61.8								
Average labour market exit age (CSM)**	62.5	64.0	64.1	64.2	64.3	64.4	64.4	2070	1.9
Contributory period	40.0	41.5	40.6	40.5	40.3	40.4	41.5	2030	0.4
Duration of retirement***	20.5	20.4	21.5	22.5	23.5	24.4	24.5	2070	3.9
Duration of retirement/contributory period	51%	49%	53%	56%	58%	60%	60%	2070	9%
Percentage of adult life spent at retirement****	33%	32%	33%	34%	35%	36%	36%	2070	3%
Early/late exit*****	1.5	4.6	2.5	2.4	2.3	2.1	4.6	2030	0.6
<b>WOMEN</b>									
Average effective retirement age (administrative data 2021)*	62.5								
Average labour market exit age (CSM)**	63.0	64.1	64.1	64.2	64.3	64.4	64.4	2070	1.4
Contributory period	36.7	42.8	40.3	40.5	40.1	40.3	42.8	2030	3.6
Duration of retirement***	24.1	23.8	24.9	25.9	26.8	27.7	27.7	2070	3.6
Duration of retirement/contributory period	66%	56%	62%	64%	67%	69%	69%	2070	3%
Percentage of adult life spent at retirement****	36%	35%	36%	37%	38%	38%	38%	2070	3%
Early/late exit*****	2.4	3.9	2.4	2.4	2.4	2.2	4.6	2025	-0.2

Source: European Commission.

\* The effective retirement age shows the age at which people on average start receiving an old-age or disability pension benefit. It is calculated on the basis of administrative data on new pensioners for 2021, showing projected data for the other years for the total.

\*\* The labour market exit age is calculated based on Labour Force Survey data for the base year and estimated by the Cohort Simulation Model thereafter. For 2022, the value refers to 2023.

\*\*\* '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.

The average labour market exit age between 2022 and 2070 increases by 1.9 years and 1.4 years for men and women respectively. These increases are primarily driven by the statutory retirement age reform and results from the cohort simulation model (CSM).

The average contributory period or the past career length of new pensioners improves by 0.4 years for men and 3.6 years for women. The years of increase of the statutory retirement age (2025 and 2030) are outliers in the projection (as it can be seen from table 6) where the newly retired have a sufficiently long contributory period, while as the rest postpones the retirement decision. Given that men have on average a longer contributory period than women in the first two decades of the projection period, a lower percentage of men than women does not fulfil the conditions for early retirement and has to postpone the retirement decision when the statutory retirement age increases. Moreover, among those who retire

early, by assumption, a percentage will postpone the retirement decision which leads to an increase in the ratio of those who retire early to those who retire late.

**Box 3 Assumptions on structural unemployment, labour productivity and potential GDP**

In order to get a comprehensive view of the macroeconomic scenario elaborated by the European Commission, we give an overview of the assumptions concerning the structural unemployment rate, the labour productivity growth and, consequently, the potential GDP growth. The short-term evolution is based on the Spring 2023 Economic Forecast by the European Commission. The medium term (until 2032) is based on the T+10 methodology developed by the Output Gap Working Group (OGWG), attached to the EPC.

The estimation of the structural unemployment rate is based on the results of the OGWG. The actual unemployment rate (Eurostat definition) is assumed to converge to the NAWRU rate (or non-accelerating wage rate of unemployment) in five years, by 2027, corresponding to the closure of the output gap. Afterwards, the NAWRU rate is assumed to gradually converge in T+10 (2032) to an anchor, which is a country-specific value for the NAWRU. The anchor is calculated assuming that non-structural variables are set at their average value and that structural variables remain unchanged at their last observed value. In observation, the Belgian unemployment rate (15-64 years) is of 5.6% in 2022. It would go up to 5.9% in 2032 (the Belgian anchor) and remains stable at this value thereafter.

To project potential GDP over the long term, a Cobb-Douglas production function is used. GDP growth results from the evolution of employment and labour productivity. In the long term, the growth of labour force leads the growth of employment. The evolution of the labour productivity results from the total factor productivity and the capital stock per worker. With respect to total factor productivity, the baseline scenario presents a convergence to a TFP growth rate of 0.8% in 2070. With regard to capital deepening, the capital to labour ratio is assumed constant in the long run.

The real GDP growth rate for Belgium is 1.3% per year between 2022 and 2070, like in the 2021 Ageing Report. Productivity growth is lower but compensated by a higher employment growth.

Average annual growth rate 2022-2070 <i>In %</i>	2024 AR	2021 AR	2024 AR - 2021 AR
Population	0.2	0.0	0.1
Productivity	1.2	1.3	-0.2
Employment	0.1	-0.1	0.2
GDP	1.3	1.3	0.0

Source: European Commission.

## 3. Pension projection results

### 3.1. Extent of the coverage of the pension schemes in the projections

The Belgian pension projection covers the statutory public pension scheme (first pillar), which comprises the old-age and early pension schemes (wage earners – including the unemployment with company allowance scheme for non-job seekers, self-employed and civil servants), disability benefits, survivor pension and guaranteed income for elderly persons (assistance scheme), according to the AWG definition of pension expenditure. The table below shows the pension expenditure in percent of GDP between 2013 and 2020, according to Eurostat's ESSPROS database and data provided by Belgium to the Ageing Working Group.

**Table 7 Eurostat (ESSPROS) vs Ageing Working Group definition of pension expenditure  
% of GDP**

	2013	2014	2015	2016	2017	2018	2019	2020	Change 2013- 2020
1. Eurostat total pension expenditure	12.3	12.3	12.5	12.3	12.4	12.6	12.6	13.6	1.3
2. Eurostat public pension expenditure	12.0	12.0	12.2	12.0	12.1	12.3	12.3	13.3	1.3
3. Public pension expenditure AWG outcome	11.8	11.8	11.8	11.9	12.0	12.1	12.0	13.0	0.5
4. Difference (2-3)	0.1	0.1	0.4	0.1	0.1	0.2	0.3	0.3	0.2

Source: Eurostat, European Commission.

The small differences between ESSPROS public pension expenditure and those accounted in the context of the AWG exercise stem from differences in classification of various expenses. For example, certain expenses for handicapped persons and occupational diseases are counted towards disability pension expenditure in the ESSPROS database, while as they are not categorised as public pensions according to the AWG definition.

### 3.2. Overview of projection results - public pension scheme

Gross public pension expenditure increases by 3.5 percentage points of GDP between 2022 and 2070 (see Table 8). Almost half of this increase occurs between 2022 and 2040 (+1.7 pp.). This period is followed by a small increase of 0.4 pp. between 2040 and 2050. After this respite, the cost of pensions would again increase, and this increase amounts to 1.4 pp. between 2050 and 2070.

The net public pension expenditure (gross expenditure excluding contributions and taxes paid by the pensioners) represents around 85% of the gross public pension expenditure.

However, contributions paid by workers and employers to finance pensions are not available since all contributions paid by workers and employers are gathered by the 'Global management' and redistributed among the different social allowance categories according to their needs (see section 3.4).

**Table 8** Projected gross and net pension spending and contributions  
% of GDP

	2022	2030	2040	2050	2060	2070	Peak value	Peak year	Change 2022-2070 (pps)
<b>Expenditure</b>									
Gross public pension expenditure	12.7	13.6	14.4	14.8	15.4	16.2	16.2	2070	3.5
Private occupational pensions	:	:	:	:	:	:	:	:	:
Private individual mandatory pensions	:	:	:	:	:	:	:	:	:
Private individual non-mandatory pensions	:	:	:	:	:	:	:	:	:
Gross total expenditure	12.7	13.6	14.4	14.8	15.4	16.2	16.2	2070	3.5
Net public pension expenditure*	10.9	11.7	12.4	12.7	13.2	13.9	13.9	2070	3.0
Net total pension expenditure	10.9	11.7	12.4	12.7	13.2	13.9	13.9	2070	3.0
<b>Contributions</b>									
Public pension contributions	:	:	:	:	:	:	:	:	:
Total pension contributions	:	:	:	:	:	:	:	:	:
<b>Balance of the public pension system (% of GDP)**</b>	:	:	:	:	:	:	:	:	:

Source: European Commission, EPC.

\* Net pension expenditure excludes taxes on pensions and compulsory social security contributions paid by beneficiaries.

\*\* Public pension contributions - gross public pension expenditure.

The following table offers a more comprehensive overview of the public pension spending by scheme.

**Table 9** Projected gross public pension spending by scheme  
% of GDP

	2022	2030	2040	2050	2060	2070	Peak value	Peak year	Change 2022-2070 (pps)
<b>Total public pension scheme</b>	12.7	13.6	14.4	14.8	15.4	16.2	16.2	2070	3.5
<i>Old-age and early pensions</i>	10.4	11.3	12.4	12.9	13.7	14.5	14.5	2070	4.1
<i>Flat component</i>	:	:	:	:	:	:	:	:	:
<i>Earnings related</i>	10.2	11.2	12.2	12.8	13.5	14.3	14.3	2070	4.1
<i>Minimum pension (non-contributory)</i>	0.2	0.1	0.2	0.2	0.2	0.2	0.2	2070	0.0
<i>Disability pensions</i>	1.6	1.6	1.6	1.5	1.5	1.5	1.7	2031	-0.1
<i>Survivor pensions</i>	0.7	0.6	0.5	0.3	0.3	0.2	0.7	2022	-0.5
<i>Other pensions</i>	:	:	:	:	:	:	:	:	:
<b>Public pension by scheme</b>									
- Wage earners scheme	7.9	8.7	9.3	9.5	9.8	10.1	10.1	2070	2.3
old-age and early pensions <sup>a</sup> - earnings related	6.1	6.9	7.7	8.0	8.3	8.6	8.6	2070	2.6
disability	1.5	1.6	1.5	1.4	1.4	1.4	1.4	2070	-0.1
survivor	0.4	0.3	0.2	0.1	0.1	0.1	0.4	2022	-0.3
- Self-employed scheme	1.0	1.1	1.3	1.4	1.4	1.5	1.5	2070	0.6
old-age and early pensions - earnings related	0.8	0.9	1.1	1.2	1.3	1.4	1.4	2070	0.6
disability	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2031	-0.0
survivor	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2022	-0.0
- Civil servants scheme	3.7	3.7	3.7	3.8	4.1	4.4	4.4	2070	0.7
old-age and early pensions - earnings related	3.4	3.4	3.5	3.6	4.0	4.3	4.3	2070	0.9
survivor	0.3	0.2	0.2	0.2	0.1	0.1	0.3	2022	-0.2
- Minimum pension (non-contributory)	0.2	0.1	0.2	0.2	0.2	0.2	0.2	2070	0.0

Source: European Commission, EPC.

The total increase in pension expenditure of 3.5 pp. of GDP between 2022 and 2070 comes entirely from the earnings-related old-age and early pensions (+4.1 pp. of GDP), while the expenditure for survivors and disability declines respectively by 0.5 and 0.1 pp. of GDP. By scheme, the earnings-related old-age and early pensions increase by 2.6 pp. of GDP in the wage earners scheme, 0.9 pp. of GDP in the civil servants scheme and 0.6 pp. of GDP in the self-employed scheme.

The fall of the survivors' expenditure has several reasons. Firstly, in the projection, survivors' expenditure concerns "pure" survivor pensions in the wage earner and self-employed schemes (people who cumulate an old-age pension and a survivor pension are included in the category "old-age pension")<sup>11</sup>, which reduces the number of survivor pension beneficiaries. Secondly, there is a limit to the combination of an old-age pension and a survivor pension. In the wage-earner's scheme, for example, the combination between these two pensions cannot exceed 110% of the survivor pension for a full career (45 years). With an increase of the female participation rates, implying an increase of their average career length and of their old-age pension, the amount of the survivor pensions will decrease, sufficiently to dominate the effect of a higher life expectancy. Thirdly, it is necessary to have been married in order to receive a survivor pension and the number of married pensioners decreases in the projection. This last factor plays a minor role to the decline in survivor pension expenditure.

Over the whole projection period 2022-2070, disability expenditure slightly diminishes with -0.1 pp. of GDP. However, it slightly increases until 2031, followed by a very light decrease until the mid-2040s and stabilization afterwards. The increase is explained by the cohort simulation methodology and the raise of the statutory retirement age that implies a rise in the number of disabled. The decline of the disability expenditure expressed in % of GDP after 2031 is due to firstly an assumption of a slight decrease as of the mid-2020s of the entry probabilities and the probabilities of remaining disabled until the end of the 2030s, which ensures consistency between the evolution of participation rates (given by the CSM model) and the retirement rates. The second reason is that more than two thirds of the disability benefit amount comes from the minimum amount (not the minimum non-contributory pension) that is adjusted by 1% per year in real terms, i.e., this amount grows more slowly than the GDP, decreasing the weight of the disability expenditure expressed in % of GDP over the whole projection period.

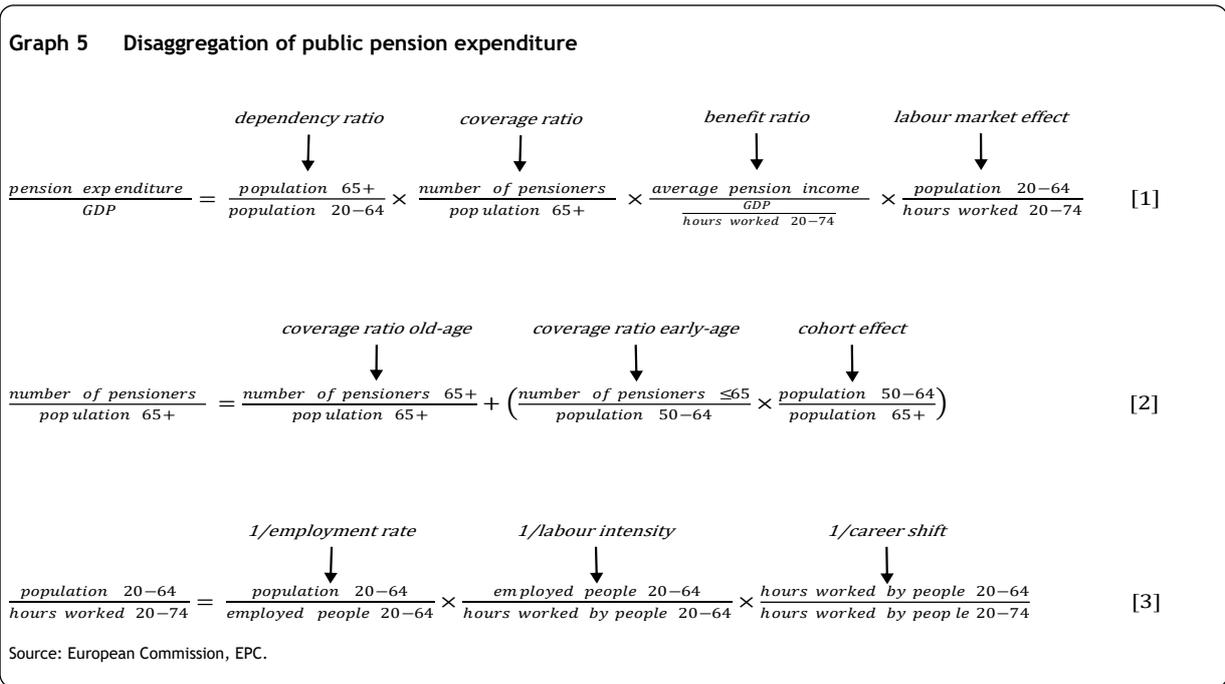
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<sup>11</sup> This is not the case in the civil servants scheme where survivors' expenditure concerns pure survivor pensions as well as cumulation of old-age and survivor pensions.

### 3.3. Description of the main driving forces behind the projection results

#### 3.3.1. Factors behind the change in public pension expenditure

The breakdown of the increase in public pension expenditure is shown in Table 10 according to 5 explanatory factors: the dependency ratio, the coverage ratio, the benefit ratio, the labour market effect and a residual. The following picture shows this breakdown from a theoretical point of view as well as the further decomposition of the coverage ratio and the labour market ratio.



Between 2022 and 2070, the rise in public pension expenditure (+3.5 pp. of GDP) results from the large positive contribution of the dependency ratio (+6.5 pp.), while all other ratios contribute negatively (-1.6 pp. for the coverage ratio, -0.4 pp. for the benefit ratio and -0.8 pp. for the labour market effect). As previously mentioned, almost half of the increase takes place between 2022 and 2040 (+1.7 pp.) because of the rise in the dependency ratio (+3.5 pp.) and the benefit ratio (+0.4 pp.), partially compensated by the declining coverage ratio (-1.3 pp.) and labour market effect (-0.7 pp.).

Between 2040 and 2050, the pension expenditure only increases by 0.4 pp. of GDP, due to the positive contribution of the dependency ratio (+0.9 pp.) being partially offset by the negative contribution of the benefit ratio (-0.4 pp.) and labour market effect (-0.1 pp.).

After 2050, pension expenditure still increases by 1.4 pp. until the end of the projection. This is due to the contribution of the dependency ratio (+2.1 pp.) while the contributions of the three other factors are negative (-0.3 pp. for the coverage ratio, -0.3 pp. for the benefit ratio and -0.1 pp. for the labour market effect).

**Table 10 Factors behind the change in public pension expenditure between 2022 and 2070 - number of pensioners<sup>12</sup>**  
*In percentage points of GDP*

	2022- 2030	2030- 2040	2040- 2050	2050- 2060	2060- 2070	2022- 2070
<b>Public pensions to GDP</b>	0.9	0.8	0.4	0.7	0.8	3.5
<b>Dependency ratio effect (pop. 65+/pop. 20-64)</b>	1.9	1.6	0.9	1.1	1.0	6.5
<b>Coverage ratio effect (pensioners/pop. 65+)</b>	-1.0	-0.3	0.0	-0.2	-0.1	-1.6
<i>Coverage ratio old-age (pensioners 65+/pop. 65+)*</i>	-0.2	0.4	0.2	0.0	0.0	0.3
<i>Coverage ratio early-age (pensioners &lt;=65/pop. 50-64)*</i>	-1.0	-1.6	-0.4	-0.3	0.0	-3.3
<i>Cohort effect (pop. 50-64/pop. 65+)*</i>	-2.3	-1.5	-0.4	-0.7	-0.6	-5.6
<b>Benefit ratio effect (average pension/(GDP/hours worked 20-74))</b>	0.4	0.0	-0.4	-0.2	-0.1	-0.4
<b>Labour market effect</b>	-0.4	-0.3	-0.1	-0.1	0.0	-0.8
<i>Employment ratio effect (pop.20-64/employment 20-64)</i>	-0.3	-0.3	-0.1	0.0	0.0	-0.7
<i>Labour intensity effect (employment 20-64/hours worked 20-64)</i>	0.0	0.0	0.0	0.0	0.0	0.1
<i>Career shift effect (hours worked 20-64/hours worked 20-74)</i>	-0.1	0.0	0.0	0.0	0.0	-0.2
<b>Residual</b>	-0.1	0.0	0.0	0.0	0.0	-0.2

Source: European Commission, EPC.

\* Sub-components of the coverage ratio effect do not add up necessarily.

The coverage ratio is subdivided between the old-age coverage ratio (number of pensioners 65+ divided by the population 65+), the early-age coverage ratio (number of pensioners younger than 66 divided by population 50-64) and a cohort effect (the population 50-64 divided by the population 65+). The decrease of the coverage ratio seems mainly due to the early-age coverage ratio decline, as well as the cohort effect.

### 3.3.2. Replacement rate at retirement and benefit ratio

The evolution of the replacement rate at retirement (defined as the average first pension divided by the average wage earned before retirement) and of the benefit ratio (the average pension benefit divided by the economy-wide average wage) are illustrated in table 11. The replacement rate at retirement only refers to old-age earnings-related pensions, while the benefit ratio is also calculated for the total pension benefits (including the disability allowances, the survivor's pensions and the non-earnings-related benefits). The average wage at retirement is provided by the Member State (see point 5.1 of the methodological annex) while the economy-wide average wage is given by the European Commission in the pension projection questionnaire.

**Table 11 Public scheme: replacement rate at retirement (RR), benefit ratio (BR) and coverage\***  
*In %*

	2022	2030	2040	2050	2060	2070	Change 2022-2070 (pps)
Public scheme (BR)	46%	46%	46%	45%	44%	44%	-3%
<i>Coverage</i>	100%	100%	100%	100%	100%	100%	0%
Public scheme: old-age earnings related (BR)	48%	48%	47%	46%	45%	45%	-3%
Public scheme: old-age earnings related (RR)	35%	35%	37%	36%	35%	35%	-1%
<i>Coverage</i>	77%	79%	82%	84%	86%	86%	9%

Source: European Commission, EPC.

\* Coverage is calculated as a ratio of the number of pensioners within the scheme and the total number of pensioners in the country.

One particular feature is that the level of the benefit ratio is higher than the level of the replacement rate at retirement. This is due to a large difference between the average wage at retirement (seniority wage scale) and the economy-wide average wage, while the average pension of the new pensioners is not that much higher than the average pension of all pensioners.

<sup>12</sup> For the disaggregation based on the number of pensions, see Table 26 in the methodological annex.

The replacement rate shows an increase till 2034 due to the raise of the statutory retirement age in 2025 and 2030. This induces a postponement of entry into retirement and consequently an increase of the average contributory period and the replacement rate at retirement.

The replacement rate then decreases until the end of the projection, due to four factors:

- The average career length stabilizes as of the mid-2030s (see the average contributory period in Table 6).
- Before 2035, the relatively low average wage growth between 2000 and 2022 tends to raise the replacement rate at retirement in the wage earners scheme and in the self-employed scheme. Indeed, the reference wage of new generations of pensioners in these schemes (the wages earned during the whole career) grows faster than the last wage. Conversely, in the longer term, when average wages grow faster again (converging to their long-term real growth rate of 1.2%), a downward effect on the replacement rate at retirement will occur.
- In the wage earners scheme and in the self-employed scheme, the living standards adjustment of the minima and ceilings by respectively 1% and 1.25% per year (see section 1.4.2), in a context of rising wage growth, will tend to decrease the replacement rate at retirement.
- Finally, in the wage earners scheme and in the self-employed scheme, the decreasing proportion of male pensioners with a dependent spouse benefiting from a higher pension (rate of 75%), given the growing participation of women in the labour market and the decreasing number of married persons, results in a decreasing replacement rate at retirement over the whole period.

The evolution of the benefit ratio follows broadly the evolution of the replacement rate at retirement, meaning an increase till the mid-2030s, followed by a decrease. Moreover, in the wage earners scheme and to a lesser extent in the self-employed scheme, its evolution is also influenced by the partial adjustment of the non-lump-sum social benefits to living standards (0.5% per year in projection). This system of adjustment was introduced during the mid-2000s and will reach maturity around the mid-2020s. This adjustment has a positive impact on the benefit ratio as long as the system has not reached maturity, in this case in a context of a low wage growth. The subsequent wage growth recovery will tend to reduce the benefit ratio given the fixed adjustment of 0.5% per year for non-lump-sum social benefits.

### 3.3.3. System dependency ratio and old-age dependency ratio

Table 12 presents indicators that shed light on the dependency of the public pension system (system dependency ratio or SDR) through the ratio between the number of pensioners and the number of workers and on the efficiency of the system by comparing the system's dependency ratio with the demographic old-age dependency ratio (OADR = 65+ over the 20-64).

**Table 12 System dependency ratio and old-age dependency ratio**

	2022	2030	2040	2050	2060	2070	Change 2022-2070
Number of pensioners in thousands (I)	3068	3296	3614	3835	4031	4222	1155
Employment in thousands (II)	5030	5214	5377	5401	5362	5308	278
Pension system dependency ratio (SDR) (I)/(II)	0.6	0.6	0.7	0.7	0.8	0.8	0.2
Number of people aged 65+ in thousands (III)	2290	2663	2996	3184	3381	3564	1274
Working age population 20-64 in thousands (IV)	6786	6829	6888	6873	6792	6726	-60
Old-age dependency ratio (OADR) (III)/(IV)	0.3	0.4	0.4	0.5	0.5	0.5	0.2
System efficiency (SDR/OADR)	1.8	1.6	1.5	1.5	1.5	1.5	-0.3

Source: European Commission, EPC.

The pension system dependency ratio (SDR) increases from 61% in 2022 to 80% in 2070 (+19 percentage points), due to the rise in the number of pensioners, being higher than the improvement of the employment. The old-age dependency ratio (OADR) increases from 34% in 2022 to 53% in 2070, which represents a rise of 19 percentage points. The system efficiency, namely the ratio between the SDR and the OADR, decreases from 181% in 2022 to 150% in 2070.

### 3.3.4. Number of pensioners in proportion to (inactive) population

The next two tables present respectively the ratio of the number of pensioners to the inactive population (Table 13) and the ratio of the number of pensioners to the population (Table 14). The inactive population<sup>13</sup> is calculated as the difference between the total population and the labour force, as defined in the "Labour Force Survey", while the number of pensioners is based on administrative data. These two different statistical concepts make it sometimes difficult to compare the number of pensioners and inactive persons. We would also like to point out that the number of pensioners has been estimated in an attempt to eliminate the maximum amount of double counting (see section 5.2).

**Table 13 Pensioners (public schemes) to inactive population ratio by age group**  
In %

	2022	2030	2040	2050	2060	2070
Age group -54	8.3	8.2	7.9	7.7	7.9	7.7
Age group 55-59	80.2	81.0	82.2	85.1	87.0	88.3
Age group 60-64	87.7	85.1	83.4	82.2	86.9	89.9
Age group 65-69	105.4	103.8	107.0	108.0	108.4	108.1
Age group 70-74	100.5	101.6	106.4	107.5	107.3	107.1
Age group 75+	97.6	97.7	100.6	102.1	102.3	102.2

Source: European Commission, EPC.

<sup>13</sup> Inactive population of -54 is the population aged between 0 and 54 years diminished with the labour supply 15-54.

**Table 14 Pensioners (public schemes) to population ratio by age group**

<i>In %</i>	2022	2030	2040	2050	2060	2070
Age group -54	3.7	3.5	3.3	3.2	3.3	3.2
Age group 55-59	19.6	19.8	18.2	17.4	17.2	17.2
Age group 60-64	51.3	41.8	36.8	35.7	35.5	35.4
Age group 65-69	97.2	89.1	88.7	88.9	88.9	88.4
Age group 70-74	97.8	100.3	103.6	104.5	104.4	104.2
Age group 75+	97.6	97.7	100.6	102.1	102.3	102.2

Source: European Commission, EPC.

For those aged under 59, the evolution of the participation rate explains the declines of the presented ratios during the projection period.

In the age group 60-64, the total number of pensioners declines until 2040 as a result of the 2015 pension reform and despite the rising disability rate during this period. After 2040, the total number of pensioners remains relatively stable.

The total number of pensioners to population ratio for the age group 65-69 decreases between 2022 and 2030 because of the raise in the statutory retirement age in 2025 and 2030. Afterwards, this ratio is stable.

It should be noted that ratios for the 70-74 and 75+ age groups exceed 100% most of the time due to the pensioners living abroad (not counted in the population).

The analysis of the ratio of female pensioners to (inactive) population (Table 15 and Table 16) is similar to the analysis of the global ratio.

**Table 15 Female pensioners to inactive population ratio by age group**

<i>In %</i>	2022	2030	2040	2050	2060	2070
Age group -54	9.9	10.2	10.0	9.8	10.0	9.7
Age group 55-59	74.5	84.1	86.1	92.0	93.2	94.0
Age group 60-64	80.3	81.7	81.5	80.4	85.3	87.8
Age group 65-69	94.7	95.3	98.2	99.6	100.0	99.4
Age group 70-74	89.7	95.1	98.8	100.4	100.2	99.8
Age group 75+	91.1	93.4	97.2	98.0	97.8	97.4

Source: European Commission, EPC.

**Table 16 Female pensioners to population ratio by age group**

<i>In %</i>	2022	2030	2040	2050	2060	2070
Age group -54	4.7	4.6	4.3	4.3	4.3	4.2
Age group 55-59	22.7	23.6	21.4	20.5	20.3	20.2
Age group 60-64	50.1	42.5	37.6	36.6	36.2	36.1
Age group 65-69	90.1	82.3	82.2	82.6	82.6	82.0
Age group 70-74	88.6	93.9	96.1	97.5	97.5	97.0
Age group 75+	91.1	93.4	97.2	98.0	97.8	97.4

Source: European Commission, EPC.

### 3.3.5. New public pension expenditure disaggregation

Table 17 illustrates the disaggregation of the new public pension expenditure by gender (old-age and early earnings-related) between the number of new pensions, average contributory period, average accrual rate and average pensionable earning. The average accrual rate is an average of the accrual rates by scheme: 1.67% (1/60) in the civil servants scheme, 1.33% (60%/45) in the wage earners and the self-employed schemes (1.67% for head of a household with dependent spouse (75%/45)) (see Box 1). Taking into account the average contributory period and the average accrual rate as separate factors in the calculation of the new pension expenditure, the average pensionable earning can be considered as a reference wage for a maximum career of 45 years. In the pension questionnaire, the new pension expenditure is given for a full year, namely 12 months, although in reality, not all new pensioners receive a pension in all 12 months the first year. The monthly average wage at retirement is based on the National Accounts.

For men, the average contributory period increases with 0.4 year over the whole projection period as a result of the 2015 pension reform (increasing the statutory retirement age). The number of new pensions rises till the end of the projection period. The years 2025 and 2030 are outliers, being years when the statutory retirement age increases. Over the whole projection period, the average accrual rate declines very slightly due to the replacement of male pensioners heads of household with a dependent spouse (75% of the reference wage) by pensioners whose pension is calculated at singles' rate (60% of the reference wage) in the wage earners and self-employed schemes.

For women, the evolution of the number of new pensions is similar to that of men. The average contributory period of women improves by 3.6 years, due to the growing female participation rate and to the 2015 pension reform. The average accrual rate remains stable.

In total, the average contributory period rises by 1.9 years between 2022 and 2070, thanks to the increase of the female participation rate and to the 2015 pension reform. The average accrual rate falls very slightly in the beginning of the projection period due to the slight decrease in the average male accrual rate.

**Table 17 Projected and disaggregated new public pension expenditure (old-age and early earnings-related pensions)**

	2022	2030	2040	2050	2060	2070
<b>MEN</b>						
Projected new pension expenditure (million EUR)*	1650.0	1777.4	3154.5	4384.7	6202.2	8756.4
I. Number of new pensions (in thousands)	77.1	65.4	84.1	86.5	90.3	92.8
II. Average contributory period (years)	40.0	41.5	40.6	40.5	40.3	40.4
III. Average accrual rates (%)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
IV. Monthly average pensionable earnings ('000 EUR)	3.1	3.9	5.5	7.4	10.1	13.9
V. Sustainability/Adjustment factor**	1.0	1.0	1.0	1.0	1.0	1.0
VI. Average number of months paid the first year	12.0	12.0	12.0	12.0	12.0	12.0
Monthly average pensionable earnings/Monthly economy-wide average wage	77%	72%	75%	73%	71%	71%
Monthly average pensionable earnings/Monthly average wage at retirement***	65%	62%	65%	62%	61%	60%
<b>WOMEN</b>						
Projected new pension expenditure (million EUR)*	1320.2	1053.4	2707.9	4069.4	5823.9	8202.6
I. Number of new pensions (in thousands)	69.6	41.6	73.8	79.2	82.8	84.4
II. Average contributory period (years)	36.7	42.8	40.3	40.5	40.1	40.3
III. Average accrual rates (%)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
IV. Monthly average pensionable earnings ('000 EUR)	3.1	3.6	5.5	7.6	10.5	14.4
V. Sustainability/Adjustment factor**	1.0	1.0	1.0	1.0	1.0	1.0
VI. Average number of months paid the first year	12.0	12.0	12.0	12.0	12.0	12.0
Monthly average pensionable earnings/Monthly economy-wide average wage	77%	68%	75%	74%	74%	73%
Monthly average pensionable earnings/Monthly average wage at retirement***	65%	58%	65%	64%	63%	63%
<b>TOTAL</b>						
Projected new pension expenditure (million EUR)*	2970.2	2830.8	5862.2	8453.8	12026.2	16960.0
I. Number of new pensions (in thousands)	146.7	107.0	157.9	165.7	173.1	177.2
II. Average contributory period (years)	38.5	42.0	40.5	40.5	40.3	40.4
III. Average accrual rates (%)	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
IV. Monthly average pensionable earnings ('000 EUR)	3.1	3.8	5.5	7.5	10.3	14.1
V. Sustainability/Adjustment factor**	1.0	1.0	1.0	1.0	1.0	1.0
VI. Average number of months paid the first year	12.0	12.0	12.0	12.0	12.0	12.0
Monthly average pensionable earnings/Monthly economy-wide average wage	76%	70%	75%	73%	72%	72%
Monthly average pensionable earnings/Monthly average wage at retirement***	65%	61%	65%	63%	62%	61%

\* new pension expenditure = I x II x III x IV x V x VI

\*\* Meaning of the value of 1: no such factor exists in Belgium.

\*\*\* average wage at retirement: provided by the Member State.

Source : European Commission, EPC.

### 3.4. Financing of the pension system

The first pillar is based on the pay-as-you-go financing (PAYG) principle. Since 1/1/1995, the financing of all social expenses for the wage earners and self-employed schemes in Belgium is carried out through an overall financial management (the so-called “global management”). This global management essentially consists in 1) a single contribution rate for all branches of the social security (pensions, healthcare, disability, primary incapacity, maternity leave, unemployment, etc.) and 2) financing to each branch according to its expenditure. The main financial resources consist of social security contributions, a government grant and alternative financing or dedicated tax revenues. So, the government finances the public pension deficit if necessary<sup>14</sup>. In the civil servants scheme, most social benefits, among which pensions, are financed through the general budget of the federal government. All of this explains why Table 8 and Table 19 do not present figures for the pension contributions due for working people.

**Table 18 Financing of the pension system**

	Public employees	Private employees	Self-employed
Contribution base	Wages taken into account for the calculation of the pension	All gross earnings	Gross annual income minus professional expenses
Contribution rate/contribution			
Employer	The vast majority of tenured civil servants pension expenditure is financed by the public treasury. It can be noted that for most local and provincial governments, a basis contribution rate of 41.5% exists, sometimes increased by a responsibility contribution.	24.92% for all social security sectors*	In 2023, 20.5% for revenues up to 70858 EUR and 14.16% for revenues between 70858 EUR and 104722 EUR.
Employee	7.5%	13.07% for all social security sectors**	
State Other revenues	Budget of the federal government	Social security spending is also funded by State subsidies (around 19% of total revenue) and alternative funding (around 16% of total revenue), mainly VAT revenues.	Social security spending is also funded by State subsidies (around 19% of total revenue) and alternative funding (around 16% of total revenue), mainly VAT revenues.
Maximum contribution			
Minimum contribution			

Source: European Commission, EPC.

\* Many contribution reductions exist, whether structural reductions or reductions in favour of target groups (old workers, young workers, first commitments, etc.).

\*\* Reduced contributions for low-wage earners, known as “employment bonus”: the reduction consists of a lump-sum amount that gradually decreases according to the level of the wage. Reduced contributions also exist for dismissed workers as a result of restructuring when they return to work.

Every worker is a contributor. Some beneficiaries of a social allowance also pay a very small contribution but there is no data on their number. So, in the next table, the number of contributors is equal to the number of working people, as assumed in the projections.

<sup>14</sup> <https://www.onssrapportannuel.be/2019/fr/activites-principales/financer/index.html>; “With the authorization of the Minister of Finance and the supervisory minister, the NSSO-Global Management may take out loans to guarantee the financing of all branches.”

**Table 19 Revenue from contribution (million), number of contributors in the public scheme (in 1000), total employment (in 1000) and related ratios (%)**

	2022	2030	2040	2050	2060	2070	Change 2022-2070 (pps)
Public contribution	:	:	:	:	:	:	
Employer contribution	:	:	:	:	:	:	
Employee contribution	:	:	:	:	:	:	
State contribution	:	:	:	:	:	:	
Other revenues	:	:	:	:	:	:	
Number of contributors (I)	5030	5214	5377	5401	5362	5308	278
Employment Labour force survey (II)	5030	5214	5377	5401	5362	5308	278
Ratio (I)/(II)	100%	100%	100%	100%	100%	100%	0.0

Source: European Commission, EPC.

### 3.5. Sensitivity analysis

Table 20 shows the sensitivity of public pension expenditure to various scenarios, expressed in deviation from the baseline in percentage points of GDP. In all scenarios, the parameters regarding the living standards adjustment are the same as in the baseline.

**Table 20 Public pension expenditures under different scenarios (pp. deviation from the baseline)<sup>15</sup>**  
*Baseline in % of GDP; sensitivity analysis in percentage points of GDP*

	2022	2030	2040	2050	2060	2070	Change 2022-2070 (pps)
<b>Public pension expenditure</b>							
Baseline in % of GDP	12.7	13.6	14.4	14.8	15.4	16.2	+3.5
Sensitivity analysis: deviation from the baseline in percentage points of GDP							
Higher life expectancy at birth (+2y)	0.0	0.0	0.2	0.4	0.6	0.8	+0.8
Higher migration (+33%)	0.0	-0.1	-0.3	-0.5	-0.5	-0.4	-0.4
Lower migration (-33%)	0.0	0.1	0.3	0.5	0.6	0.5	+0.5
Lower fertility (-20%)	0.0	0.0	0.0	0.2	0.7	1.3	+1.3
Higher inflation scenario (2% by 2052)	0.0	0.4	0.4	0.4	0.4	0.5	+0.5
Higher employment rate of older workers (+10 pps)	0.0	-0.6	-1.0	-1.0	-1.0	-1.1	-1.1
Higher TFP growth (convergence to 1%)	0.0	0.0	0.0	-0.1	-0.3	-0.6	-0.6
Lower TFP growth (convergence to 0.6%)	0.0	0.0	0.1	0.4	0.8	1.1	+1.1
Policy scenario: linking retirement age to change in life expectancy	0.0	0.0	-0.2	-0.6	-1.0	-1.6	-1.6
Policy scenario: constant retirement age	0.0	0.5	0.8	0.8	0.9	1.1	+1.1
Policy scenario: constant benefit ratio				Non relevant			

Source: European Commission, EPC.

It can be noted that the policy scenario relating to the constant benefit ratio has not been simulated. In fact, this scenario had to be carried out if the benefit ratio in the baseline decreased by more than 10% relative to the base year. In such a scenario, the benefit ratio would have been kept constant at this 10% lower point for the remainder of the projection period. In the Belgian baseline, the benefit ratio decreases by 3% between 2022 and 2070.

#### 3.5.1. Demographic scenarios: higher life expectancy, higher/lower migration and lower fertility rate

The higher life expectancy (by 2 additional years) scenario generates higher public pension expenditure compared to the baseline scenario (+0.8 percentage points of GDP in 2070), because of the higher number of pensioners (higher old-age dependency ratio).

<sup>15</sup> For more information on the design of the sensitivity scenarios, see Chapter 5 of Part I in European Commission and EPC (2023), *'2024 Ageing Report: Underlying assumptions and projection methodologies.'* European Economy, Institutional Paper 257.

With a higher (lower) migration of 33% compared with the baseline assumption, public pension spending decreases (increases) by -0.4 (+0.5) percentage points of GDP with respect to the baseline in 2070. A higher (lower) working-age population leads to higher (lower) employment, hence higher (lower) economic growth, which decreases (increases) the relative weight of pension expenditure as a percentage of GDP.

In the lower fertility scenario (-20%), public pension expenditure is higher by 1.3 percentage points of GDP in 2070 compared to the baseline. With unchanged participation rates, a lower population aged between 0 and 66 years diminishes the labour supply, and thus employment and GDP.

### 3.5.2. Higher inflation scenario

In Belgium, pensions (and other social allowances) are automatically indexed with the consumer prices index (see section 1.4). In this higher inflation scenario, the pension expenditure expressed in % of GDP is higher with 0.5 pp. of GDP in 2070 in comparison with the baseline. This results from a higher growth of the consumer price index than the growth of the GDP deflator from 2025 till 2031. This difference between the two deflators heavily depends on the start year of the scenario. For example, the scenario begins in 2025 with a large negative gap between the GDP deflator and the consumer price index. With another starting year or another medium-term projection, it could have been the opposite scenario, resulting in lower expenditure in % of GDP than in the baseline, and to a different extent. So, we cannot conclude that a higher inflation scenario will always lead to a higher increase of pension expenditure in % of GDP, nor can we say how big the impact will be.

### 3.5.3. Higher and lower TFP scenarios

The assumptions of the higher/lower TFP growth are not symmetrical. Indeed, the higher TFP growth scenario is aligned with the assumption of the baseline used in the 2021 Ageing Report, namely an annual growth of TFP of 1% as from 2040 (as of 2037 in the 2021 Ageing Report). There is no difference between the baseline and the higher TFP scenario in the period 2022-2040. In the lower TFP growth scenario, the TFP growth follows the same pattern as in the baseline of the 2024 Ageing Report, but at a lower level: the TFP growth increases to 0.8% in 2040 (instead of 1% in the baseline) and then declines to 0.6% in 2070 (instead of 0.8% in the baseline). The higher (lower) TFP growth scenarios result in an average annual productivity growth between 2022 and 2070 being higher (lower) than the baseline with +0.1 (-0.2) percentage points.

Public pension expenditure decreases (increases) by -0.6 (+1.1) percentage points of GDP in 2070 in the higher (lower) total factor productivity scenario in comparison with the baseline. This comes from the wage earners and self-employed schemes, where pensions are calculated on the basis of the income earned over the whole career, meaning that the pension only progressively reflects the effect of a higher (lower) productivity, whereas GDP rises (declines) immediately. In result, the weight of these pensions expressed as a percentage of GDP is lower (higher).

In the civil servants scheme, the change in wages are directly mirrored in pensions, so that the change in the TFP assumptions have practically no impact on the cost of pension for the civil servants.

### 3.5.4. Higher employment rate of older workers

The scenario of a higher employment rate of ten percentage points for older workers leads to a decrease of public pension expenditure by -1.1 percentage points of GDP by 2070 compared to the baseline. The reasons for this deviation are the change in economic growth and the reduction of the number of pensioners.

### 3.5.5. Policy scenarios: linking retirement age to increases in life expectancy and constant retirement age as of 2022

In the scenario of linking retirement age, an increase of one year in life expectancy leads to 0.75 years increase in the effective retirement age. The pension expenditure would fall by -1.6 percentage points of GDP in 2070 due to a decrease in the number of pensioners and to an increase of employment and GDP.

The policy scenario of a constant labour market exit age as of 2023 increases the pension expenditure by 1.1 percentage points of GDP in 2070.

## 3.6. Description of the changes in the different vintages of the Ageing Reports

In the new pension projection, the public pension expenditure increases by 3.5 percentage points of GDP between 2022 and 2070. This rise results from the increase of the old-age dependency ratio with a positive contribution of 6.5 percentage points of GDP, while all other factors contribute negatively.

**Table 21** Disaggregation of the change in the public pension expenditure-to-GDP ratio in consecutive Ageing Reports  
*In percentage points of GDP*

	Public pension expenditure	Dependency ratio effect	Coverage ratio effect	Benefit ratio effect	Labour market effect	Residual (incl. interaction effect)
AR 2006 (2004-2050)	5.1	7.7	-0.4	-1.2	-0.9	-0.1
AR 2009 (2007-2060)	4.8	7.4	-0.9	-1.0	-0.5	-0.3
AR 2012 (2010-2060)	5.1	7.4	-1.1	-0.5	-0.5	-0.2
AR 2015 (2013-2060)	1.3	5.0	-2.1	-0.3	-1.1	-0.2
AR 2018 (2016-2070)	2.9	6.6	-1.9	-0.7	-0.9	-0.2
AR 2021 (2019-2070)	3.0	7.2	-1.8	-1.8	-0.3	-0.2
<b>AR 2024 (2022-2070)</b>	<b>3.5</b>	<b>6.5</b>	<b>-1.6</b>	<b>-0.4</b>	<b>-0.8</b>	<b>-0.2</b>

Source: European Commission, EPC.

- The disaggregation for 2006/2009/2012 is on the basis of pensions; for 2015/2018/2021/2024 it is on the basis of pensioners.

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

The cost of public pensions in the current projection is slightly higher (+0.5 pp.) than in the 2021 Ageing Report<sup>16</sup> but it should be noted that the compared periods are different. On the same period, for instance 2022-2070, the cost of pensions is 1.3 pp. higher in the 2024 Ageing Report than in the 2021 Ageing Report (see Table 23). Although the contribution of the dependency ratio is still the explanatory factor of this cost, it is lower than in the 2021 Ageing Report, due to the new population projection of Eurostat (see Graph 3). The negative contribution of the coverage ratio is practically identical. On the other hand, the contribution of the benefit ratio is much less negative (higher benefit ratio due to lower wages following the change in the productivity assumption and higher average pension in some schemes

<sup>16</sup> [https://www.plan.be/uploaded/documents/202105171033170.AWG\\_Country\\_fiche\\_Belgium\\_2020\\_12255\\_March2021.pdf](https://www.plan.be/uploaded/documents/202105171033170.AWG_Country_fiche_Belgium_2020_12255_March2021.pdf)

resulting from revalorisation measures), while the employment rate contributes more negatively (due to the more favourable evolution of the participation rates and the lower increase of the unemployment rate).

When comparing all Ageing Reports, the following common features are apparent: the dependency ratio (i.e. population ageing) is always the explanatory factor of the cost of public pensions and the other factors always contribute negatively to this cost, to a different extent.

There is practically no difference in the cost of public pensions between the 2021 and 2018 Ageing Reports<sup>17</sup>. However, the benefit ratio contributes more negatively in the 2021 Ageing Report (lower average pension due to a lower average contributory period) while the employment effect contributes less negatively (less favourable evolution of the participation rates and increase of the unemployment rate).

In the 2015 Ageing Report<sup>18</sup>, the increase in the pension expenditure amounted to only 1.3 percentage points of GDP between 2013 and 2060, while it is of 2.9 percentage points of GDP in the 2018 Ageing Report. The difference lies in the much lower demographic dependency ratio.

The large difference between the 2015 Ageing Report and the 2012 Ageing Report in the pension expenditure (1.3 versus 5.1 percentage points of GDP) is mainly explained by two factors: the gap between the population projections from Eurostat and the incorporation of the 2015 pension reform in the 2015 Ageing Report.

There are no significant differences between the 2006, 2009 and 2012 exercises in terms of cost of pension. The slight difference between the 2012 and 2009 exercises (+0.3 percentage points of GDP) is attributable to a less negative contribution of the benefit ratio due to a change of the assumption regarding productivity growth (1.5% annual growth between 2010 and 2060 instead of 1.7% in the 2009 projection). The slightly smaller cost of pension in the 2009 round (4.8 percentage points of GDP) than in the 2006 exercise (5.1 percentage points of GDP) is mainly due to a lower positive contribution of the dependency ratio.

The two next tables present the factors behind the difference between the 2021 Ageing Report projection and the new 2024 Ageing Report: firstly, in the period between 2019 and 2022 (differences between the observations and the old projection) and secondly, in the period 2022 - 2070.

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<sup>17</sup> [https://www.plan.be/uploaded/documents/201805251442290.AWG\\_Country\\_fiche\\_Belgium\\_2017\\_11597.pdf](https://www.plan.be/uploaded/documents/201805251442290.AWG_Country_fiche_Belgium_2017_11597.pdf)

<sup>18</sup> [https://www.plan.be/uploaded/documents/201511271708080.Country\\_fiche\\_Belgium\\_20151126.pdf](https://www.plan.be/uploaded/documents/201511271708080.Country_fiche_Belgium_20151126.pdf)

**Table 22** Disaggregation of the difference between the 2021 projections and actual public pension expenditure in 2019-2022  
% of GDP

	2019	2020	2021	2022
<b>2021 Ageing Report projections (% of GDP)</b>	12.2	13.3	12.8	12.9
<i>Assumptions (pps of GDP)</i>	-0.2	-0.3	-0.5	-0.3
<i>Coverage of projections (pps of GDP)</i>				
<i>Constant policy impact (pps of GDP)</i>				
<i>Policy-related impact (pps of GDP)</i>			+0.1	+0.1
<b>Actual public pension expenditure (% of GDP)</b>	12.0	13.0	12.3	12.7

Source: European Commission, EPC.

The actual public pension expenditure in % of GDP is lower than the projected expenditure in the 2021 Ageing Report for the years 2019-2022. There was no change in the coverage of the projections nor in the constant policy impact. The difference comes from the assumptions which lower the expenditure, while a policy-related impact increases the expenditure. Regarding the assumptions, a revision of the National Accounts has occurred, resulting in a higher GDP. This revision was amplified for the years 2020-2021 by an overestimation of the negative effect of the COVID-19 pandemic on the GDP in the 2021 Ageing Report. Concerning the policy-related impact, some measures taken in December 2020 (see section 1.3) have increased public pension expenditure.

**Table 23** Disaggregation of the difference between the 2021 and the new public pension projections  
% of GDP

	2022	2030	2040	2050	2060	2070	2022-2070 (pps)
<b>2021 Ageing Report projections</b>	12.9	14.0	14.9	15.2	15.2	15.2	<b>+2.3</b>
Change in assumptions	-0.3	-0.7	-0.9	-0.8	-0.3	+0.5	+0.8
Improvement in the coverage or in the modelling							
Change in the interpretation of constant policy							
Policy related changes	+0.1	+0.3	+0.4	+0.5	+0.5	+0.6	+0.5
<b>New projection 2024 Ageing Report</b>	12.7	13.6	14.4	14.8	15.4	16.2	<b>+3.5</b>

Source: European Commission, EPC.

The projected increase in pension expenditure between 2022 and 2070 is 1.26 percentage points of GDP higher in the 2024 Ageing Report than in the 2021 Ageing Report. There is no improvement in the coverage or modelling, nor change in the interpretation of constant policy between the two projections exercises. The policy-related changes concern the measures voted since the 2021 Ageing Report (see section 1.3), namely the measures legislated in December 2020 and amended in March 2023 which lead to a supplementary cost of +0.5 percentage points of GDP on the period 2022-2070. The rest is due to the changes in the assumptions (almost 2/3 of the increase of the cost of pension between the two exercises).

However, it should be noted that pension expenditure in % of GDP is lower in the new projection than in the 2021 Ageing Report till the mid-2050s. For instance, the cost of pensions on the period 2022-2050 is of 2.1 percentage points of GDP in the 2024 Ageing Report while it was of 2.3 percentage points of GDP in the 2021 Ageing Report. This lower cost results from the impact of more favourable assumptions, partially compensated by the cost of some measures. From the mid-2050s till 2070, pension expenditure in % of GDP is higher in the 2024 Ageing Report than in the previous one, due to the impact of less favourable assumptions and the impact of the cost of measures.

## 4. Description of the pension projection model and its database

### 4.1. Institutional context

The Belgian projection of first pillar pensions is made with the macro-budgetary MALTESE model, developed by the Federal Planning Bureau<sup>19</sup> (FPB), relying on the AWG scenarios in the context of the AWG exercise.

The FPB started developing the MALTESE model in 1987 at the request of the government, in order to estimate all long-term social expenditure (not only pension) within the overall framework of public finance. Since its creation in 1987, the MALTESE system has undergone permanent improvement and adjustment to the changing legislative environment. Between 1987 and 2001, MALTESE was used several times, either at the initiative of the FPB or as an aid to decision-making (especially for estimating the impact of the public pension reforms of 1990 and 1996).

In 2001, the Act “guaranteeing a continuous reduction in public debt and the setting up of the Ageing Fund” created the Study Committee on Ageing (SCA), which is assigned the task of publishing a yearly report on the budgetary and social implications of ageing (budgetary cost of ageing, living conditions of pensioners, etc.). The yearly “Memorandum on Ageing” of the Federal Government is based on the annual report of the SCA, as well as the long-term aspect of the Stability Programme. Given that the FPB has been entrusted with the technical and administrative work of the SCA, the MALTESE model is used every year to produce a long-term projection of all social expenditure for the SCA report<sup>20</sup>. Note that the Act of 18 December 2016 abolished the Ageing Fund but confirmed the SCA.

Moreover, the Knowledge Centre, created by the Law of 21 May 2015, gathers all knowledge on the Belgian pension system available within administrations and public bodies. The secretariat of its steering committee is managed by the FPB and the MALTESE model is frequently used for various reports by the Knowledge Centre.

### 4.2. Reforms incorporated in the model (older than indicated in section 1.3)

- A raise of the statutory retirement age from 65 to 66 years in 2025 and to 67 years in 2030, as well as an extension of the access to the disability or unemployment schemes until these ages (2015 pension reform<sup>21</sup>).
- A raise of the minimum early retirement age as well as the minimum number of career years required for eligibility since 2012 (pension reforms in 2011 and 2015). The conditions for some more favourable special schemes have been tightened. In the civil servants scheme, the service credit allocated to

<sup>19</sup> Belgian Independent Fiscal Institution.

<sup>20</sup> Yearly Report 2023 of the SCA:

[https://www.plan.be/uploaded/documents/202307110905350.REP\\_CEVSVCV2023\\_12855\\_F.pdf](https://www.plan.be/uploaded/documents/202307110905350.REP_CEVSVCV2023_12855_F.pdf)

A comparison between the results of the AR 2024 and the SCA 2024 will take place in the SCA 2024.

<sup>21</sup> Act of 10 August 2015 “aimed at raising the legal retirement age, conditions to early retirement pension and the minimum age for survivor’s pension”, Belgian Official Journal of 21 Augustus 2015.

higher education degrees, which was accounted for in the career condition for early retirement, is being phased out as of 2015.

- The validation of higher degree study periods for the pension calculation<sup>22</sup> in the three old-age pension schemes is harmonized as of 1/12/2017. The validation in the civil servants scheme was cost-free before the reform. After the reform, civil servants must pay contributions if they want these periods to be validated.
- Survivor pension: no minimum age before 2015; minimum age of 45 years as of 2015 and gradually raised to 50 years in 2025.
- Unemployment with company allowance scheme: firstly, a raise of the minimum access age from 60 to 62 years in 2015 for new entries<sup>23</sup> and an increase of the minimum career length requirement to 40 years (in 2015 for men and in 2024 for women). Moreover, since 1/1/2015, the new beneficiaries of unemployment with company allowance must be available on the labour market and are therefore counted in the labour supply, unless they are considered as non-job seekers, for which the requirement of a career length of at least 43 years must be satisfied<sup>24</sup>.
- Abolishment of the pension bonus as of 1/1/2015 (for people working after the age of 60 while complying with the requirement for early retirement): lump-sum amount for each additional effectively worked day as of the second year, increasing with the number of additional working days.
- As of 2015, the months in the calendar year in which a person retires are included in the pension calculation in the wage earners and self-employed schemes.
- Valuation of some periods from the career year 2012 onwards (third period of unemployment<sup>25</sup>, some periods of unemployment with company allowance before the age of 60, some periods of career break or time credit) in the wage earners scheme according to the minimum claim per working year, instead of a notional wage<sup>26</sup>. The limitation of the periods of career break is taken into account for pension entitlements.
- In the civil servants scheme, some periods of career break and absence have been limited after 31 December 2011 in the pension rights. In the pension calculation within this scheme, the reference wage corresponds to the average wage over the last 10 career years (instead of the last 5 years).
- Introduction of a mixed pension in the public sector (except education) starting from 1 May 2018 for new pensioners: contractual periods of service before appointments from 1 December 2017 will be taken into account according to the pension calculation in the wage earners scheme. Introduction of a second pension pillar for contractual civil service staff (excluding education), abolition of the five-year career requirement for an entitlement to a public sector pension (from 1 May 2019).

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<sup>22</sup> Act of 2 October 2017 “Loi relative à l’harmonisation de la prise en compte des périodes d’études pour le calcul de la pension”, Belgian Official Journal of 24 October 2017.

<sup>23</sup> In the special scheme for companies in difficulty or undergoing restructuring, the entry age has increased from 55 years in 2015 to 60 in 2021.

<sup>24</sup> To be considered as a non-job seeker in the special scheme for companies undergoing restructuring, the new beneficiary must be 62 years old or have a career length of 42 years in 2019 (65 years old or 43 years career length in 2020).

<sup>25</sup> Period of unemployment from 48 months of unemployment (or earlier depending on the length of the professional career).

<sup>26</sup> For periods not worked but assimilated for the pension, a notional wage is calculated on the basis of the total wage for the career year immediately preceding the assimilated period. For certain assimilated periods, from the career year 2012 onwards, the notional wage is limited to the guaranteed minimum wage or the minimum claim per working year.

- Abolishment of career unity<sup>27</sup> in the wage earners and self-employed schemes, modification of the valorisation of assimilated periods of unemployment in the wage earners scheme.

### 4.3. General description of the macro-budgetary MALTESE model

MALTESE consists of a central model and several specific peripheral models (computing the number of pensioners, average pensions, health care expenditure, etc.). These are macroeconomic accounting models, adequate to estimate long-term budgetary implications, especially of the public pensions. The global accounting framework relies on the National Accounts. The model is based on administrative data<sup>28</sup> for numbers of persons as well as for detailed average allowances.

The national projection (for the yearly report of the SCA) proceeds in five steps:

- 1) Projection of the population by age and gender.
- 2) Socio-economic projection: the population is split up into different socio-economic groups by gender and age groups and, in some cases, by age (school population, labour force, unemployed with company allowance job seeker and non-job seeker, people on a full-time career break, disabled persons, pensioners and other). The socio-economic projection results from transition probabilities from one status to another. The participation and retirement behaviour of different generations by age and gender is based on assumptions regarding participation rates and on present retirement behaviour, incorporating the effects of the reforms.
- 3) The social expenditure is projected by branch, gender, age group (or age) and category on the basis of the number of beneficiaries and average benefits (according to the calculation rules such as wage ceilings, adjustment to living standards, etc.), except for healthcare and long-term care expenditure, which are estimated using econometric modelling in the national projection.
- 4) The dynamics (and not the level) of the expenditure obtained in the third step is applied to the corresponding aggregate of the National Accounts.
- 5) Social expenditure takes place in a projection of the public budget because it is financed by contributions, taxes and transfers from the federal budget and civil servants pensions are financed by the public budget. The evolution of all revenues and primary expenditure leads to the calculation of public debt and interest payments.

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<sup>27</sup> The principle of career unity meant that the number of days considered in the pension calculation was limited to 14040 full-time equivalent days or 45 years. If this limit was exceeded, the most advantageous days in terms of income were taken into account, which in practice meant the last 45 years. The new measure implies that more than 14040 career days would be taken into account if they are days worked. If the number of days exceeding 14040 days are days not worked, they would not be included in the pension calculation. If these non-worked days were spent in unemployment or unemployment with company allowance, the first 45 career years would count towards the pension calculation, as opposed to before when the 45 most advantageous years were considered.

<sup>28</sup> In contrast to this approach, socio-economic categories may be based on a single source like the Eurostat Labour Force Survey. However, not all types of socio-economic categories (and social security beneficiaries) can be distinguished in this survey.

**Box 4 Coverage of the MALTESE model (social expenditure retained for the AWG pension projection are in bold)**

*Pensions*

- **wage earner**
- **self-employed**
- **civil servants**
- **guaranteed income for elderly (assistance)**

*Health care*

- acute care
- long-term care

*Disability allowances (wage earner and self-employed)*

- primary incapacity allowances (first year of disability)
- **disability allowances (subsequent years of disability)**
- maternity leave

*Unemployment benefits (wage earner)*

***Unemployment with company allowance non-job seekers (wage earner) – phasing out***

*Unemployment with company allowance job seekers (wage earner)*

*Family allowances*

*Other social expenditure (mainly subsistence support, accidents at work, occupational diseases, hand-icapped persons)*

*Education*

#### 4.4. Pension data used to run the model

The following table presents the data sources used in the MALTESE model for the pension expenditure (National Accounts) and the number of beneficiaries (administrative sources). Administrative sources are also used for the detailed benefits (gender, age, minimum or not, etc.).

<b>Expenditure: National Accounts</b>	
Old-age, survivor, assistance scheme, disability	National Accounts
<b>Administrative data concerning beneficiaries and benefits</b>	
Old-age pension and survivor:	
- wage earners scheme by category (and details about the career)	Federal Service of Pensions
of which unemployment with company allowance non-job seekers	National Employment Office
- self-employed scheme by category	Federal Service of Pensions
of which details about the career	National Institute for the Social Security of the Self-Employed
- civil servants' scheme by category (and details about the career)	Federal Service of Pensions
Guaranteed income for elderly people (assistance scheme)	Federal Service of Pensions
Disabled population (wage earners and self-employed schemes)	National Institute for Health and Disability Insurance

#### 4.5. Assumptions made in the AWG labour market projection

The labour market projection produced by the cohort simulation model (CSM) of the Commission is based on the Labour Force Survey (Eurostat statistics). Importing this AWG projection into the MALTESE model raises a methodological issue given that the “classical” socio-economic projection of MALTESE provides a breakdown of the population by age and gender on the basis of administrative data. Therefore, the projection of administrative employment and unemployment is aligned with the AWG labour force projection at two levels: the participation rate of the population aged 55 to 71 and the global employment rate. The administrative participation rate of the population aged 55 to 71 is

assumed to follow, over the 2022-2070 period, a similar evolution to that simulated in the AWG projection for this age group. This assumption ensures the greatest possible consistency between the evolution of labour force and evolution of the retired population. The trend of the administrative participation rate of the younger age groups is also aligned with that of the AWG projection. The administrative unemployment rate is adjusted, such that global administrative employment and global employment from the AWG projection grow at the same rate between 2022 and 2070.

## 4.6. Assumptions and methodologies applied in the pension model

All pension expenditure is projected in the MALTESE model. The vast majority of pension expenditure is made by projecting the number of beneficiaries (new entrants and existing pensioners) and the corresponding average amount (according to the calculation rules, such as ceiling, minimum, indexation rules, etc.), by scheme, age, gender and category (old-age, survivor, pension based on the rate for individuals “with dependants” and pension based on the rate for singles).

### 4.6.1. Number of pensions

The key principle used to model the number of pensions is to let the existing number of pensions grow old and to add new pensions based on recent “entry behaviour” and historical participation rates.

#### a. Entries in the old-age pension system

The statutory retirement age is 65 years before 2025, 66 years from 2025 to 2029 and 67 years from 2030 onwards. For men **the overall pension rate at the statutory retirement age** (number of pensions in the first pillar to population aged 65 before 2025, 66 between 2025 and 2029 and 67 from 2030 onwards) is kept constant, because of the almost universal coverage of the legal pension. For women, a “total coverage rate” at the statutory retirement age is defined and assumed to be constant throughout the projection period. This “total coverage rate” is the ratio of the number of women benefiting either from their own pension (old-age or survivor pension) or their husband’s pension (calculated at the household rate<sup>29</sup>) to the overall number of women aged 65, 66 or 67.

The **distribution by scheme** (wage earner, self-employed and civil servant) **of the beneficiaries at the statutory retirement age** is determined according to the historical evolution of labour market participation by scheme of the corresponding generation.

A first step is to establish the entries in old-age pension (mainly between 60 and 65 years) in a scenario without raising the legal statutory retirement age. The **entry profile for old-age pension between 60 and 65 years** depends on the socio-economic status (employment, unemployment, unemployment with company allowance or disability) and on the future pension scheme from which the population aged between 59 and 64 years will draw pension. Implicitly, retirements occur at varying ages; for example, wage-earners retire at a younger age than beneficiaries of a disability allowance.

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<sup>29</sup> The household rate (75%) in the wage-earners and self-employed pension schemes exceeds the singles rate (60%, see Box 1). It is used in the pension calculation if it results in a higher than the combined pension of both spouses calculated at the singles’ rate.

In a second step, this entry profile explicitly takes into account the rise in the statutory retirement age in 2025 and 2030. The effect of this reform on entry to retirement is in line with the labour force projection of the AWG, using an assumption. We assume that the reform has an effect both on the population that retires early and on the population that must retire at statutory retirement age. The effect of the reform on the former population is spread over a period of five years, such that in the first year of the reform only a percentage of those who prior the reform retired early (or at the old statutory retirement age while fulfilling the career condition of 42 years for early retirement) postpone their retirement by one year. In the course of the following four years, this percentage gradually increases, such that after five years a maximum assumed percentage of those who could previously early retire postpone their retirement by one year.

#### **b. Entries in the survivor pension system**

Before the age of 60, (female) entries in the survivor pension system are determined by scheme (wage earner, self-employed and civil servant) and 5-year age group, in function of the evolution of the female labour force, the widowed population and the distribution of the male labour force of the same age group by scheme. The projection also takes into account the survivor pension reform with the gradual increase of the minimum entry age to 50 in 2025. From the age of 60 onwards, the number of new female pensions in the survivor pension system is determined by the number of pensions attributed to deceased married men in the scheme concerned.

#### **c. Entries into unemployment with company allowance non-job seeker (phasing out)**

Entries into the unemployment with company allowance system for non-jobs seekers are calculated on the basis of an entry probability by age and gender based on the number of wage earners.

#### **d. Entries into disability**

The disability rates (the shares of disabled persons per gender and age category in the population) are calculated using the principle of cohorts. As a first step, the entry probabilities in the primary incapacity benefit system (the disabled for less than one year, which are not taken into account in the pension expenditure) are calculated from the potential labour force<sup>30</sup>. Subsequently, the entry probabilities in the disability benefit system (after one year of primary incapacity) are calculated from the primary disabled category. Finally, probabilities of remaining in the disability system are calculated. These probabilities are adjusted in order to take into account the rise in the statutory retirement age. The number of primary disabled and disabled persons by age category and gender is computed by applying these rates to the population projection. The distribution of the number of primary disabled and disabled persons in the wage earners scheme and the self-employed scheme is carried out proportionally to the number of workers in the respective schemes.

The entry probabilities (20-64) are kept constant at their last observation (2021) during the whole projection period. The probabilities of remaining disabled (20-64) are kept constant at their last observation

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<sup>30</sup> Working and unemployed people, people in unemployment with company allowance for non-job seekers and people on a full-time career break.

(2021) until 2025. As of 2025 till the end of the 2030s, the assumption of a very slight decrease of these probabilities is made to ensure consistency between the evolution of participation rates (given by the CSM model) and the retirement rates. From 2040 onwards, the probabilities of remaining disabled remain constant. Note that the increase of the statutory retirement age in 2025 and 2030 is taken into account with a rise in the disabled in the age group 65-69.

The next table shows the disability rates by age group (ratios of the disabled to the corresponding population). The maximum age to receive a disability allowance is 64 till 2024, 65 between 2025 and 2029 and 66 from 2030 onwards (beyond that age, the beneficiary gets an old-age pension). At the end of the projection period, the disability rate is slightly lower than in the base year for the people younger than 59 years and higher than the base year for people older than 59 years. The disability rate 55-59 (60-64) age group still increases during the first ten (twenty) years of the projection due to the cohort methodology.

**Table 24 Disability rates by age group**  
In %

	2022	2030	2040	2050	2060	2070	Change 2022-2070 (pps)
Age group -54	3.5	3.4	3.2	3.1	3.2	3.1	-0.4
Age group 55-59	15.2	16.1	15.1	14.5	14.4	14.4	-0.8
Age group 60-64	12	15.4	16.9	15.8	15.4	15.5	3.5
Age group 65-69	0	2.1	3.3	3.0	2.9	3.1	3.1
Age group 70-74	0	0	0	0	0	0	0
Age group 75+	0	0	0	0	0	0	0

Source: FPB, Belgian pension model

#### 4.6.2. Average pension

The average pension amount in the different pension schemes is estimated by modelling as accurately as possible the main legislative parameters for successive cohorts of persons entitled to a pension. For each pension scheme (wage earner, self-employed, civil servant), an average pension is estimated for each career profile, each category (old-age, survivor) and according to the legal replacement rate (pension at the household rate of 75% or pension at the rate of a single person of 60% in the wage earners and self-employed schemes).

The evolution of the profile of the new pensioners depends namely on the socio-economic and macro-economic projections. For instance, the increase in the female participation rate results in a growing number of women building up full pension rights. As a consequence, a growing number of pensioners, both in the wage earners and self-employed schemes, claim a single pensioner's allowance, which is calculated at a lower legal replacement rate (60%), instead of a household rate (75%).

The assumption concerning the productivity growth has also an impact on the evolution of the average pension amounts through the evolution of average wages. This effect occurs faster in the case of pensioners from the civil servants scheme because their reference wages are calculated on the basis of their incomes over the last ten working years. As for the wage earners and the self-employed, this wage evolution is reflected in the long run, as their pension is calculated on the basis of the average income

over their whole career. At the start of the projection period, this average income is almost entirely calculated on the basis of observed data.

The income distribution remains constant in the projection. It is used, among other things, to compute the percentages of recipients with incomes above the wage ceiling and below the minimum pension.

In the wage earners scheme, the average unemployment with company allowance for non-job seekers (only the part paid by the National Employment Office) and disability benefits are calculated per gender and age group, taking into account the respective ceilings. Disability allowances in the self-employed scheme are lump-sum benefits.

#### **4.6.3. Career length or contributory period**

In a scenario without the 2015 pension reform, it was assumed that the average career length of men taking their pension depended on the participation profile of the generation (historical participation rate for 5-year age groups). For women, the average career length was assumed to converge to that of men (without actually reaching that level). These trends were adjusted to reflect the postponed entries in old-age pension due to the increase in the statutory retirement age.

## 5. Methodological annex

Information about survivor and disability pensions is mentioned in sections 4.6.1.b and 4.6.1.d.

### 5.1. Economy-wide average wage at retirement

The next table presents the economy-wide average wage given by the Commission and the average wage at retirement provided by the Member State, which is a weighted average of the average wages at retirement by scheme.

**Table 25 Economy-wide average wage**  
*In thousand euro*

	2022	2030	2040	2050	2060	2070	% change 2022-2070
Economy-wide average wage (AWG)	48.9	64.7	87.4	122.8	170.9	236.3	483%
Economy-wide average wage at retirement	57.7	74.8	101.6	143.3	200.0	277.0	480%

Source: European Commission, EPC.

In the wage earners scheme, the average wage at retirement is based on the gross average wage multiplied by the ratio of the average wage of people aged between 60 and 64 years to the global average wage. The latter ratio changes in parallel with the development of the ratio men-to-women and blue-to-white-collar workers.

In the self-employed scheme, we use coefficients that express how the self-employed income, by 5-year age groups, compares to the overall average. These coefficients are different for men and women and are differentiated over various types of professions (agriculture and fishing, industry and crafts, commerce, liberal professions and services). The coefficients are assumed to be constant throughout the whole projection period but linking them to the average projected income of each projection year results in an average “end of career income” that is both gender- and profession-specific. These gender- and profession-specific averages are then aggregated into an overall “end of career” average for each projection year.

The observed average wages that civil servants receive at the end of their career are provided by the Federal Service of Pensions – Civil Servants. These reference wages are used to calculate the pensions of the new pensioners and are available by type of civil servant employment (public administration, education). The FPB corrects these wages to take into account mixed careers, since the Federal Service of Pensions provides wages of workers with pure career as tenured civil servants.

### 5.2. Number of pensioners vs number of pensions

The methodology behind the calculation of the number of pensions is presented in section 4.6.1. This number of pensions combines number of pensions and number of pensioners. Double counting of pensioners receiving benefits from both the wage earners and the self-employed scheme is avoided, such that when pensioners receive a pension from both schemes, pensions are classified either in the wage earners scheme or in the self-employed scheme, taking into account the average benefit in both schemes

for “mixed” pensions. However, double counting between pensioners of the civil servants scheme and pensioners of the wage earners and self-employed schemes could not be avoided.

To obtain the number of pensioners, we firstly assume that there is no double counting in the ages below 60. For the ages above 59, the number of pensioners is obtained on the basis of observed data related to double counting by gender (before and after the statutory retirement age) between pensions of the civil servants scheme and the wage earners scheme (between 6 and 10% of wage earners pensions) and between pensions of the civil servants scheme and the self-employed scheme (around 5% of the self-employed pensions). In the civil servants scheme, the percentages of double counting are between 19 and 47%.

In the assistance scheme (guaranteed income for the elderly), the double counting rates with the other schemes are much higher (78% for women, 92% for men and 83% globally) because this minimum non-contributory pension represents in most of the cases a complement to another pension.

We assume that all the double counting rates remain unchanged during the whole projection period.

### 5.3. Pension taxation

Gross pension is subject to contributions: 3.55% for health care if the pension benefit exceeds a threshold, solidarity contribution between 0 and 2% according to the pension benefit and contribution of 0.5% for funeral expenses in the civil servants scheme. The implicit contribution rate is 2.5% in 2022.

Pension benefit is taxed if above a minimum amount varying according to the number of dependent children. We use the OECD database which provides detailed information on the impact of the tax system on social expenditure<sup>31</sup>. The implicit tax rate is 13.3% in 2022. It should be noted that the guaranteed income for elderly persons (minimum non-contributory pension) is not taxed.

The implicit contribution rate and tax rate remain unchanged through the projection period.

### 5.4. Non-earnings-related minimum pension

The non-earnings-related pension is the guaranteed income for elderly persons (the assistance scheme). The driving forces behind its expenditure are the number of beneficiaries and their average benefit amount. The number of beneficiaries is dependent on the growth of older population and number of pensioners. Given that almost two thirds of the beneficiaries are women, the increasing participation rates of women which lead to a higher average pension for women diminish the effect of the demographic evolution on the number of beneficiaries.

Since the minimum income guarantee is a means-tested scheme and is mostly a complement to the other pensions (more than 80% of its beneficiaries also receive a pension benefit, almost exclusively in the wage-earners or self-employed scheme), the average benefit amount is affected by the maximum amount of this social assistance scheme and the development of pension benefits in the wage earners and self-employed scheme. In the AWG exercise, the growth of the average effective amount of the

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<sup>31</sup> <https://www.oecd.org/els/soc/expenditure.htm>; OECD-Social-Expenditure-Update-Tax-Data-by-Country.xlsx.

minimum income guarantee during the first ten years of the projection is based on the stipulations foreseen in the “Generation Pact” for the maximum amount, which is 1% per year in real terms, and on the evolution of pension benefits. Afterwards, the average amount grows with the average wage growth according to the AWG assumption.

## 5.5. Contributions - See section 3.4

## 5.6. Alternative pension spending decomposition

Table 10 is calculated using the number of pensioners. The following table presents the same decomposition using the number of pensions, the analysis of which is similar to the one regarding Table 10.

**Table 26** Factors behind the change in public pension expenditures between 2022 and 2070 - number of pensions  
*In percentage points of GDP*

	2022- 2030	2030- 2040	2040- 2050	2050- 2060	2060- 2070	2022- 2070
<b>Public pensions to GDP</b>	0.9	0.8	0.4	0.7	0.8	3.5
<b>Dependency ratio effect (pop. 65+/pop. 20-64)*</b>	1.8	1.6	0.9	1.1	1.0	6.3
<b>Coverage ratio effect (pensions/pop. 65+)</b>	-1.0	-0.5	-0.1	-0.1	0.0	-1.7
<i>Coverage ratio old-age</i>	-0.3	0.1	0.0	0.0	0.0	-0.1
<i>Coverage ratio early-age</i>	-1.1	-1.5	-0.4	-0.3	0.0	-3.4
<i>Cohort effect</i>	-2.1	-1.5	-0.4	-0.7	-0.6	-5.4
<b>Benefit ratio effect (average pension/(GDP/hours worked 20-74))</b>	0.4	0.1	-0.3	-0.2	-0.2	-0.3
<b>Labour market effect</b>	-0.3	-0.3	-0.1	-0.1	0.0	-0.8
<i>Employment ratio effect (pop.20-64/employment 20-64)</i>	-0.2	-0.3	-0.1	0.0	0.0	-0.6
<i>Labour intensity effect (employment 20-64/hours worked 20-64)</i>	0.0	0.0	0.0	0.0	0.0	0.0
<i>Career shift effect (hours worked 20-64/hours worked 20-74)</i>	-0.1	0.0	0.0	0.0	0.0	-0.2
<b>Residual</b>	0.1	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.

## Federal Planning Bureau

The Federal Planning Bureau (FPB) is a public agency that carries out, in support of political decision-making, forecasts and studies on economic, social-economic and environmental policy issues and examines their integration into a context of sustainable development. It shares its expertise with the government, parliament, social partners, national and international institutions.

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