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To: Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union

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Delegations will find attached document SWD(2026) 124 final.

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**COMMISSION STAFF WORKING DOCUMENT**

**2026 Addendum to the 2024 Update of the 2016 Eurostat Study on the long-term  
budgetary implications of pension costs (SWD(2025) 249 final)**

## Contents

|   |    |
|---|----|
| 1. Executive Summary.....   | 2  |
| 2. Results .....  | 4  |
| 2.1. Key findings.....  | 4  |
| 2.2. Evolution of the population .....  | 5  |
| 2.2.1. Projection of the active population .....  | 5  |
| 2.2.2. Projection of the non-active population.....   | 6  |
| 2.3. Pension expenditure .....  | 7  |
| 2.3.1. Pension expenditure for old-age pensioners .....   | 8  |
| 2.3.2. Expenditure for the beneficiaries of an invalidity pension or allowance.....               | 9  |
| 2.3.3. Pensions expenditure for widows/widowers and orphans. ....                                 | 10 |
| 2.3.4. Retirement, invalidity, survivors' pension expenditure.....                                | 11 |
| 2.3.5. Transfers-out and severance grants expenditure.....  | 12 |
| 2.3.6. Total expenditure for the non-active population and for transfers-out and severance grants | 13 |
| 2.4. Impact of the 2014 reform – synthesis of the simulations .....                               | 14 |
| 2.5. Impact of the 2014 SR reform: yearly savings .....   | 15 |
| 3. Review of Eurostat calculations .....  | 17 |

## 1. Executive Summary

In 2016 a study on the long-term budgetary implications of pension costs (SWD(2016) 268 final) was released by Eurostat. The purpose of that study was to analyse the budgetary implications of the pension costs of staff in all EU institutions and agencies over the 50-year period 2015-2064 and assess the long-term effects of the relevant legal changes introduced by the 2014 Staff Regulations<sup>1</sup> ('SR') reform.

At the Council's request<sup>2</sup>, an update of the 2016 study was released by Eurostat (SWD(2025) 249 final). The present document supplements the updated study with a sensitivity analysis of pension cost outcomes given a different growth rate of the active population<sup>3</sup> over the reference period.

Unlike the 2016 study and its 2024 update, where the number of active staff was assumed to remain stable, in this addendum it is assumed that the population size will increase by a total of 2 500 units in years 2028 to 2030. This methodological choice permits to align with the Commission's proposals for the 2028-2034 Multiannual Financial Framework (MFF).

On the assumption that the active population will increase by 2,500 units, one can observe that:

- a) the number of beneficiaries of the scheme (old-age pensioners, invalids and survivors) is expected to pass from 30 495 in 2023 to 43 032 in 2073<sup>4</sup> for a 41.1% increase, while
- b) the yearly pension expenditure for the non-active staff (at 2023 constant prices) will change from EUR 2 418 million in 2023 to EUR 1 989 million in 2073<sup>5</sup> for a 17.7% decrease.

The combination of the two findings above represents a clear demonstration of the effectiveness of the combined 2004 and 2014 reforms of the SR.

The simulations performed also reveals that without the 2014 SR reform, the expected additional pension expenditure at the last year of the projection period would have been substantially higher (+EUR 818 million<sup>6</sup>, i.e. 41.1%).

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<sup>1</sup> Regulation No 31 (EEC), 11 (EAEC), laying down the Staff Regulations of Officials and the Conditions of Employment of Other Servants of the European Economic Community and the European Atomic Energy Community (OJ 45, 14.6.1962, p. 1385, ELI: [http://data.europa.eu/eli/reg/1962/31\(1\)/oj](http://data.europa.eu/eli/reg/1962/31(1)/oj)).

<sup>2</sup> Meeting of the Working Party on the Staff Regulations) on 8 May 2023.

<sup>3</sup> 4136<sup>th</sup> meeting of the Council on 27 November 2025.

<sup>4</sup> Slightly higher than 42 532 as forecasted in SWD(2025) 249 final which assumed a stable number of actives.

<sup>5</sup> Slightly higher figure than 1 951 million as forecasted in SWD(2025) 249 final.

<sup>6</sup> Slightly lower than 857 as forecasted in SWD(2025) 249 final.

Moreover, the new measures introduced by the 2014 SR reform are expected to lead to growing annual cost savings between 2024 and 2073. Those savings will reach EUR 818 million in 2073.

Globally, the total cost savings over 50 years, at 2023 prices, are projected to be EUR 30 451 million<sup>7</sup>.

When linking the 2016 and 2024 studies, which is possible only using the same salary grid (i.e. the one at 1 July 2014 employed for the 2016 study at “2014 prices”), the estimated total savings over the 2023 to 2073 period would be estimated at EUR 24 628 million<sup>8</sup>.

Additionally, it is fundamental to highlight the circumstance that in case of inclusion of the pension expenditure related to staff currently active or under deferred status (non-active staff who have accrued at least ten years of pensionable service in the EU but have not yet reached the pensionable age), the estimated total savings over the 2023 to 2073 period would be EUR 63 710 million<sup>9</sup> at 2023 prices.

Furthermore, the referred expected savings are additional to those produced by the 2004 reform of the SR, since the present study only focused on the impact of the parameters amended by the 2014 SR reform.

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<sup>7</sup> Lower than 31 483 million as forecasted in SWD(2025) 249 final.

<sup>8</sup> Lower than 25 260 million as forecasted in SWD(2025) 249 final.

<sup>9</sup> Lower than 72 064 as forecasted in SWD(2025) 249 final.

## **2. Results**

### **2.1. Key findings**

On the assumption that the active population will increase by 2 500 units, the number of beneficiaries of the scheme (old-age pensioners, disabled staff and survivors) will pass from 30 495 in 2023 to about 43 032 in 2073, with an increase of 41.1% (see Table 2).

However, at the same time, the yearly pension expenditure for the non-active staff (at 2023 constant prices) will be EUR 2 418 million in 2023 and fall to EUR 1 989 million in 2073, thus decreasing by 17.7% (see Table 8).

This long-term decrease of the pension expenditure, analysed together with the 41.1% increase in the real number of beneficiaries estimated over the same period, is a clear demonstration of the effectiveness of the combined 2004 and 2014 reforms of the SR.

The simulation performed also reveals that, without the 2014 SR reform, the expected additional pension expenditure in the last year of the projection period would have been substantially higher (+ EUR 818 million i.e. 41.1%, see Table 9).

As mentioned above, the new measures introduced by the 2014 SR reform are expected to lead to growing annual cost savings between 2024 and 2073. Those savings will reach EUR 818 million in 2073.

The total cost savings over 50 years, at 2023 prices, are projected to be of EUR 30 451 million.

It should be noted that the referred expected savings are additional to those produced by the 2004 reform of the SR, since the present study only focused on the impact of the parameters amended by the 2014 SR reform.

## 2.2. Evolution of the population

### 2.2.1. Projection of the active population

The active population is assumed to increase by 2 500 units during the 2023-2073 period (Table 1).

**Table 1: Active Population**

| Category     | 2023<br>Headcount | 2073<br>Headcount | Difference   | Difference (%) |
|--------------|-------------------|-------------------|--------------|----------------|
| Official AD  | 20,562            | 21,210            | 648          | 3.2%           |
| Official AST | 11,191            | 6,551             | -4,640       | -41.5%         |
| Official SC  | 1,174             | 5,091             | 3,917        | 333.7%         |
| TA AD        | 10,407            | 10,735            | 328          | 3.2%           |
| TA AST       | 4,314             | 2,525             | -1,789       | -41.5%         |
| TA SC        | 919               | 3,985             | 3,066        | 333.7%         |
| CA FG I      | 2,060             | 2,166             | 106          | 5.1%           |
| CA FG II     | 2,808             | 2,953             | 145          | 5.1%           |
| CA FG III    | 4,087             | 4,297             | 210          | 5.1%           |
| CA FG IV     | 7,832             | 8,235             | 403          | 5.1%           |
| PA           | 2,041             | 2,146             | 105          | 5.1%           |
| <b>Total</b> | <b>67,395</b>     | <b>69,895</b>     | <b>2,500</b> | <b>3.7%</b>    |

## 2.2.2. Projection of the non-active population

The size of the non-active population (pensioners, disabled staff, widows/widowers and orphans) over the 2023-2073 period is expected to increase from 30 495 to 43 032 (+41.1% equivalent to a 0.8% linear yearly increase).

The non-active population is expected to increase until year 2048, whereas in the second half of the projection period, from year 2049 onwards, its size is expected to decrease.

**Table 2: Projection of the non-active population  
(pensioners, disabled staff, widows/widowers and orphans)**

| Year | Retirees,<br>Invalids,<br>Survivors | Yearly<br>Change | Year | Retirees,<br>Invalids,<br>Survivors | Yearly<br>Change | Year | Retirees,<br>Invalids,<br>Survivors | Yearly<br>Change |
|------|-------------------------------------|------------------|------|-------------------------------------|------------------|------|-------------------------------------|------------------|
| 2023 | 30,495                              | 0.0%             | 2040 | 42,559                              | 2.0%             | 2057 | 44,799                              | -0.4%            |
| 2024 | 31,617                              | 3.7%             | 2041 | 43,383                              | 1.9%             | 2058 | 44,613                              | -0.4%            |
| 2025 | 31,986                              | 1.2%             | 2042 | 44,266                              | 2.0%             | 2059 | 44,479                              | -0.3%            |
| 2026 | 32,528                              | 1.7%             | 2043 | 45,087                              | 1.9%             | 2060 | 44,327                              | -0.3%            |
| 2027 | 33,168                              | 2.0%             | 2044 | 45,784                              | 1.5%             | 2061 | 44,205                              | -0.3%            |
| 2028 | 33,947                              | 2.3%             | 2045 | 46,214                              | 0.9%             | 2062 | 44,092                              | -0.3%            |
| 2029 | 34,655                              | 2.1%             | 2046 | 46,474                              | 0.6%             | 2063 | 43,988                              | -0.2%            |
| 2030 | 35,449                              | 2.3%             | 2047 | 46,565                              | 0.2%             | 2064 | 43,883                              | -0.2%            |
| 2031 | 36,228                              | 2.2%             | 2048 | 46,589                              | 0.1%             | 2065 | 43,777                              | -0.2%            |
| 2032 | 37,044                              | 2.3%             | 2049 | 46,479                              | -0.2%            | 2066 | 43,674                              | -0.2%            |
| 2033 | 37,779                              | 2.0%             | 2050 | 46,322                              | -0.3%            | 2067 | 43,577                              | -0.2%            |
| 2034 | 38,485                              | 1.9%             | 2051 | 46,123                              | -0.4%            | 2068 | 43,481                              | -0.2%            |
| 2035 | 39,215                              | 1.9%             | 2052 | 45,879                              | -0.5%            | 2069 | 43,379                              | -0.2%            |
| 2036 | 39,873                              | 1.7%             | 2053 | 45,652                              | -0.5%            | 2070 | 43,281                              | -0.2%            |
| 2037 | 40,444                              | 1.4%             | 2054 | 45,434                              | -0.5%            | 2071 | 43,189                              | -0.2%            |
| 2038 | 41,002                              | 1.4%             | 2055 | 45,191                              | -0.5%            | 2072 | 43,105                              | -0.2%            |
| 2039 | 41,727                              | 1.8%             | 2056 | 44,980                              | -0.5%            | 2073 | 43,032                              | -0.2%            |

### **2.3. Pension expenditure**

The estimation of the pension expenditure over the 50-year period covers pension-related expenditure under Chapters 2, 3 and 4 of Annex VIII to the SR (retirement pension and severance grants, transfers-out, invalidity pensions/allowances, survivors' pensions).

Figures provided in the tables below show the major trends that are expected over the 2023-2073 period.

Tables 3 to 8 give projected expenditure broken down as follows:

- Table 3: Retirement pensions expenditure
- Table 4: Invalidity pensions and allowances expenditure
- Table 5: Survivor pensions expenditure
- Table 6: Retirement, invalidity, survivors' pensions expenditure
- Table 7: Transfers-out and severance grants expenditure
- Table 8: Total pensions expenditure.

### 2.3.1. Pension expenditure for old-age pensioners

The pension expenditure for old-age pensioners is equal to EUR 1 911 million at year zero of the projection (2023) and is estimated to be EUR 1 471 million (at 2023 prices) in the last year of the projection (2073). The forecasting model estimates a maximum value of EUR 2 810 million for retirement pension expenditure in year 2044. From 2045 onwards, this category of pension expenditure is expected to decrease and reach its minimum of EUR 1 471 million in the last year of projection (2073).

**Table 3: Projection of the pension expenditure for the old-age pensioners (EUR million)**

| Year of projection | Retirement expenditure | Yearly Change | Year of projection | Retirement expenditure | Yearly Change | Year of projection | Retirement expenditure | Yearly Change |
|--------------------|------------------------|---------------|--------------------|------------------------|---------------|--------------------|------------------------|---------------|
| 2023               | 1,911                  | 0.00%         | 2040               | 2,695                  | 1.29%         | 2057               | 2,129                  | -2.86%        |
| 2024               | 2,000                  | 4.69%         | 2041               | 2,729                  | 1.27%         | 2058               | 2,070                  | -2.79%        |
| 2025               | 2,023                  | 1.14%         | 2042               | 2,763                  | 1.22%         | 2059               | 2,012                  | -2.78%        |
| 2026               | 2,059                  | 1.79%         | 2043               | 2,790                  | 0.98%         | 2060               | 1,959                  | -2.65%        |
| 2027               | 2,124                  | 3.15%         | 2044               | 2,810                  | 0.75%         | 2061               | 1,906                  | -2.68%        |
| 2028               | 2,187                  | 2.96%         | 2045               | 2,806                  | -0.15%        | 2062               | 1,857                  | -2.60%        |
| 2029               | 2,247                  | 2.73%         | 2046               | 2,785                  | -0.77%        | 2063               | 1,809                  | -2.55%        |
| 2030               | 2,316                  | 3.10%         | 2047               | 2,749                  | -1.30%        | 2064               | 1,765                  | -2.46%        |
| 2031               | 2,380                  | 2.75%         | 2048               | 2,704                  | -1.60%        | 2065               | 1,723                  | -2.39%        |
| 2032               | 2,442                  | 2.58%         | 2049               | 2,653                  | -1.90%        | 2066               | 1,683                  | -2.30%        |
| 2033               | 2,487                  | 1.87%         | 2050               | 2,592                  | -2.32%        | 2067               | 1,646                  | -2.21%        |
| 2034               | 2,525                  | 1.52%         | 2051               | 2,528                  | -2.47%        | 2068               | 1,611                  | -2.12%        |
| 2035               | 2,561                  | 1.43%         | 2052               | 2,459                  | -2.73%        | 2069               | 1,578                  | -2.04%        |
| 2036               | 2,590                  | 1.12%         | 2053               | 2,391                  | -2.74%        | 2070               | 1,548                  | -1.93%        |
| 2037               | 2,614                  | 0.92%         | 2054               | 2,323                  | -2.84%        | 2071               | 1,519                  | -1.82%        |
| 2038               | 2,632                  | 0.72%         | 2055               | 2,257                  | -2.85%        | 2072               | 1,494                  | -1.68%        |
| 2039               | 2,661                  | 1.08%         | 2056               | 2,192                  | -2.90%        | 2073               | 1,471                  | -1.54%        |

### 2.3.2. Expenditure for the beneficiaries of an invalidity pension or allowance

The expenditure for invalidity allowances and pensions is equal to EUR 211 million at year zero of the projection (2023) and is estimated to be EUR 69 million (at 2023 prices) in the last year of the projection (2073). The forecasting model estimates a maximum value of EUR 211 million for the expenditure for invalidity pensions/allowances in 2023: from 2024 onwards, this category of expenditure is expected to decrease and reach its minimum of EUR 69 million in the last years of projection (2072 to 2073). The decrease also depends on the circumstance that the subset of beneficiaries of an invalidity pension represents a ‘closed’ group due to the 2004 SR reform, which amended the provisions on the invalidity pension.

**Table 4: Projection of the expenditure for invalidity pensions/allowances (EUR million)**

| Year of projection | Invalidity expenditure | Yearly Change | Year of projection | Invalidity expenditure | Yearly Change | Year of projection | Invalidity expenditure | Yearly Change |
|--------------------|------------------------|---------------|--------------------|------------------------|---------------|--------------------|------------------------|---------------|
| 2023               | 211                    | 0.00%         | 2040               | 119                    | -6.09%        | 2057               | 73                     | 0.10%         |
| 2024               | 209                    | -0.55%        | 2041               | 111                    | -6.50%        | 2058               | 73                     | 0.22%         |
| 2025               | 207                    | -0.98%        | 2042               | 104                    | -6.96%        | 2059               | 73                     | 0.13%         |
| 2026               | 205                    | -1.13%        | 2043               | 96                     | -7.31%        | 2060               | 73                     | -0.24%        |
| 2027               | 200                    | -2.40%        | 2044               | 89                     | -7.85%        | 2061               | 72                     | -0.15%        |
| 2028               | 196                    | -2.19%        | 2045               | 83                     | -6.04%        | 2062               | 72                     | -0.20%        |
| 2029               | 190                    | -3.16%        | 2046               | 80                     | -4.28%        | 2063               | 72                     | -0.27%        |
| 2030               | 182                    | -3.95%        | 2047               | 77                     | -3.93%        | 2064               | 72                     | -0.45%        |
| 2031               | 175                    | -3.83%        | 2048               | 74                     | -2.85%        | 2065               | 72                     | -0.38%        |
| 2032               | 168                    | -3.88%        | 2049               | 73                     | -1.39%        | 2066               | 71                     | -0.43%        |
| 2033               | 162                    | -3.56%        | 2050               | 72                     | -1.15%        | 2067               | 71                     | -0.52%        |
| 2034               | 157                    | -3.15%        | 2051               | 72                     | -0.59%        | 2068               | 71                     | -0.50%        |
| 2035               | 152                    | -3.15%        | 2052               | 72                     | -0.20%        | 2069               | 70                     | -0.47%        |
| 2036               | 147                    | -3.42%        | 2053               | 72                     | 0.12%         | 2070               | 70                     | -0.40%        |
| 2037               | 141                    | -4.34%        | 2054               | 72                     | -0.01%        | 2071               | 70                     | -0.38%        |
| 2038               | 134                    | -4.38%        | 2055               | 72                     | 0.51%         | 2072               | 69                     | -0.58%        |
| 2039               | 127                    | -5.64%        | 2056               | 72                     | 0.14%         | 2073               | 69                     | -0.26%        |

### 2.3.3. Pensions expenditure for widows/widowers and orphans.

The expenditure for the widows/widowers' and orphans' pensions is equal to EUR 243 million at year zero of the projection (2023) and is estimated to be EUR 408 million (at 2023 prices) in the last year of the projection (2073). The forecasting model estimates that this category of expenditure is expected to increase throughout the projection period and reach its maximum of 408 million in the last year of projection (2073).

**Table 5: Projection of the expenditure for the pensions to widows/widowers and orphans (EUR million)**

| Year of projection | Widows & Orphans' expenditure | Yearly Change | Year of projection | Widows & Orphans' expenditure | Yearly Change | Year of projection | Widows & Orphans' expenditure | Yearly Change |
|--------------------|-------------------------------|---------------|--------------------|-------------------------------|---------------|--------------------|-------------------------------|---------------|
| 2023               | 243                           | 0.00%         | 2040               | 287                           | 1.53%         | 2057               | 364                           | 1.15%         |
| 2024               | 245                           | 0.97%         | 2041               | 291                           | 1.41%         | 2058               | 369                           | 1.14%         |
| 2025               | 246                           | 0.56%         | 2042               | 296                           | 1.46%         | 2059               | 372                           | 1.00%         |
| 2026               | 248                           | 0.70%         | 2043               | 300                           | 1.52%         | 2060               | 376                           | 0.97%         |
| 2027               | 250                           | 0.75%         | 2044               | 305                           | 1.51%         | 2061               | 379                           | 0.90%         |
| 2028               | 252                           | 0.92%         | 2045               | 309                           | 1.57%         | 2062               | 383                           | 0.90%         |
| 2029               | 254                           | 0.62%         | 2046               | 314                           | 1.52%         | 2063               | 386                           | 0.83%         |
| 2030               | 256                           | 0.76%         | 2047               | 319                           | 1.54%         | 2064               | 389                           | 0.76%         |
| 2031               | 258                           | 0.71%         | 2048               | 324                           | 1.50%         | 2065               | 392                           | 0.74%         |
| 2032               | 260                           | 0.80%         | 2049               | 328                           | 1.45%         | 2066               | 394                           | 0.70%         |
| 2033               | 262                           | 0.95%         | 2050               | 333                           | 1.46%         | 2067               | 397                           | 0.59%         |
| 2034               | 265                           | 1.07%         | 2051               | 338                           | 1.42%         | 2068               | 399                           | 0.56%         |
| 2035               | 268                           | 1.25%         | 2052               | 343                           | 1.38%         | 2069               | 401                           | 0.54%         |
| 2036               | 272                           | 1.20%         | 2053               | 347                           | 1.33%         | 2070               | 403                           | 0.50%         |
| 2037               | 275                           | 1.25%         | 2054               | 352                           | 1.30%         | 2071               | 405                           | 0.44%         |
| 2038               | 279                           | 1.49%         | 2055               | 356                           | 1.27%         | 2072               | 407                           | 0.41%         |
| 2039               | 283                           | 1.38%         | 2056               | 360                           | 1.18%         | 2073               | 408                           | 0.39%         |

### 2.3.4. Retirement, invalidity, survivors' pension expenditure

The expenditure for the pensions of the non-active population (old-age pensioners, beneficiaries of an invalidity allowance/pension, widows/widowers and orphans) is equal to EUR 2 364 million at year zero of the projection (2023) and is estimated to be EUR 1 948 million (at 2023 prices) in the last year of the projection (2073). The forecasting model estimates a maximum value of EUR 3 203 million in year 2044. From 2045 onwards, this category of expenditure is expected to decrease and reach its minimum of EUR 1 948 million in the last year of projection (2073).

**Table 6: Projection of the expenditure for the pensions for the non-active population (old-age pensioners, beneficiaries of an invalidity allowance/pension, widows/widowers and orphans) (EUR million)**

| Year | Retirees+ Invalids+ Survivors` Exoenditure | Yearly Change | Year | Retirees+ Invalids+ Survivors` Exoenditure | Yearly Change | Year | Retirees+ Invalids+ Survivors` Exoenditure | Yearly Change |
|------|--|---------------|------|--|---------------|------|--|---------------|
| 2023 | 2,364                                      | 0.0%          | 2040 | 3,101                                      | 1.0%          | 2057 | 2,566                                      | -2.2%         |
| 2024 | 2,455                                      | 3.8%          | 2041 | 3,132                                      | 1.0%          | 2058 | 2,511                                      | -2.1%         |
| 2025 | 2,477                                      | 0.9%          | 2042 | 3,162                                      | 1.0%          | 2059 | 2,457                                      | -2.1%         |
| 2026 | 2,513                                      | 1.4%          | 2043 | 3,186                                      | 0.8%          | 2060 | 2,407                                      | -2.0%         |
| 2027 | 2,574                                      | 2.5%          | 2044 | 3,203                                      | 0.6%          | 2061 | 2,358                                      | -2.0%         |
| 2028 | 2,635                                      | 2.4%          | 2045 | 3,199                                      | -0.1%         | 2062 | 2,312                                      | -2.0%         |
| 2029 | 2,690                                      | 2.1%          | 2046 | 3,178                                      | -0.6%         | 2063 | 2,267                                      | -1.9%         |
| 2030 | 2,754                                      | 2.4%          | 2047 | 3,144                                      | -1.1%         | 2064 | 2,225                                      | -1.9%         |
| 2031 | 2,813                                      | 2.1%          | 2048 | 3,102                                      | -1.3%         | 2065 | 2,186                                      | -1.8%         |
| 2032 | 2,870                                      | 2.0%          | 2049 | 3,055                                      | -1.5%         | 2066 | 2,149                                      | -1.7%         |
| 2033 | 2,912                                      | 1.5%          | 2050 | 2,997                                      | -1.9%         | 2067 | 2,113                                      | -1.6%         |
| 2034 | 2,947                                      | 1.2%          | 2051 | 2,938                                      | -2.0%         | 2068 | 2,080                                      | -1.6%         |
| 2035 | 2,981                                      | 1.2%          | 2052 | 2,873                                      | -2.2%         | 2069 | 2,049                                      | -1.5%         |
| 2036 | 3,008                                      | 0.9%          | 2053 | 2,810                                      | -2.2%         | 2070 | 2,021                                      | -1.4%         |
| 2037 | 3,029                                      | 0.7%          | 2054 | 2,747                                      | -2.3%         | 2071 | 1,994                                      | -1.3%         |
| 2038 | 3,046                                      | 0.5%          | 2055 | 2,686                                      | -2.2%         | 2072 | 1,970                                      | -1.2%         |
| 2039 | 3,071                                      | 0.8%          | 2056 | 2,624                                      | -2.3%         | 2073 | 1,948                                      | -1.1%         |

### 2.3.5. Transfers-out and severance grants expenditure

The expenditure related to the transfers-out and severance grants is equal to EUR 54 million at year zero of the projection (2023) and is estimated to be EUR 41 million (at 2023 prices) in the last year the projection (2073). The forecasting model estimates a maximum value of EUR 54 million in 2023. This category of expenditure is expected to decrease throughout the projection period, reaching its minimum of EUR 41 million in year 2045 and then remaining stable until the last year of projection (2073).

**Table 7: Projection of transfers-out and severance grants (EUR million)**

| Year of projection | TrOut+SevGr Expenditure | Yearly Change | Year of projection | TrOut+SevGr Expenditure | Yearly Change | Year of projection | TrOut+SevGr Expenditure | Yearly Change |
|--------------------|-------------------------|---------------|--------------------|-------------------------|---------------|--------------------|-------------------------|---------------|
| 2023               | 54                      | 0.00%         | 2040               | 43                      | -1.74%        | 2057               | 41                      | 0.28%         |
| 2024               | 51                      | -6.07%        | 2041               | 43                      | -0.70%        | 2058               | 41                      | -0.64%        |
| 2025               | 51                      | 0.40%         | 2042               | 42                      | -1.09%        | 2059               | 41                      | 0.44%         |
| 2026               | 51                      | -0.51%        | 2043               | 42                      | -1.51%        | 2060               | 41                      | -0.14%        |
| 2027               | 50                      | -1.58%        | 2044               | 42                      | -0.59%        | 2061               | 41                      | 0.37%         |
| 2028               | 49                      | -1.84%        | 2045               | 41                      | -0.89%        | 2062               | 41                      | -0.21%        |
| 2029               | 49                      | 0.12%         | 2046               | 41                      | -0.13%        | 2063               | 41                      | -0.05%        |
| 2030               | 48                      | -1.06%        | 2047               | 41                      | -0.57%        | 2064               | 41                      | -0.06%        |
| 2031               | 48                      | -1.00%        | 2048               | 41                      | 0.19%         | 2065               | 41                      | 0.49%         |
| 2032               | 47                      | -1.98%        | 2049               | 41                      | -0.51%        | 2066               | 41                      | -1.31%        |
| 2033               | 47                      | -0.54%        | 2050               | 41                      | 0.23%         | 2067               | 41                      | 0.81%         |
| 2034               | 46                      | -1.23%        | 2051               | 41                      | 0.04%         | 2068               | 41                      | -0.02%        |
| 2035               | 46                      | -1.35%        | 2052               | 41                      | 0.05%         | 2069               | 41                      | 0.21%         |
| 2036               | 45                      | -1.13%        | 2053               | 41                      | 0.03%         | 2070               | 41                      | -0.57%        |
| 2037               | 45                      | -0.50%        | 2054               | 41                      | 0.31%         | 2071               | 41                      | 0.37%         |
| 2038               | 44                      | -1.81%        | 2055               | 41                      | -0.25%        | 2072               | 41                      | 0.01%         |
| 2039               | 44                      | -0.23%        | 2056               | 41                      | 0.25%         | 2073               | 41                      | -0.15%        |

### 2.3.6. Total expenditure for the non-active population and for transfers-out and severance grants

The total expenditure related to the pension for the non-active members (retirement pensions, invalidity allowances/pensions, survivors' pensions, transfers-out and severance grants) is equal to EUR 2 418 million at year zero of the projection (2023) and is estimated to be EUR 1 989 million (at 2023 prices) in the last year of the projection (2073), decreasing by 17.7%. The forecasting model estimates a maximum value of EUR 3 245 million in 2044. From 2045 onwards, this category of expenditure is expected to decrease and reach its minimum of EUR 1 989 million in the last year of projection (2073).

**Table 8: Projection of the total expenditure for the pensions to the non-active population (old-age pensioners, beneficiaries of an invalidity allowance/pension, widows/widowers and orphans) and for transfers-out and severance grants (EUR million)**

| Year | Retirees, Invalids, Survivors` & Transfers-Out Expenditure | Yearly Change | Year | Retirees, Invalids, Survivors` & Transfers-Out Expenditure | Yearly Change | Year | Retirees, Invalids, Survivors` & Transfers-Out Expenditure | Yearly Change |
|------|--|---------------|------|--|---------------|------|--|---------------|
| 2023 | 2,418  | 0.0%          | 2040 | 3,145  | 1.0%          | 2057 | 2,607  | -2.2%         |
| 2024 | 2,506  | 3.6%          | 2041 | 3,175  | 1.0%          | 2058 | 2,552  | -2.1%         |
| 2025 | 2,528  | 0.9%          | 2042 | 3,204  | 0.9%          | 2059 | 2,498  | -2.1%         |
| 2026 | 2,563  | 1.4%          | 2043 | 3,227  | 0.7%          | 2060 | 2,448  | -2.0%         |
| 2027 | 2,624  | 2.4%          | 2044 | 3,245  | 0.5%          | 2061 | 2,399  | -2.0%         |
| 2028 | 2,684  | 2.3%          | 2045 | 3,240  | -0.2%         | 2062 | 2,353  | -1.9%         |
| 2029 | 2,739  | 2.1%          | 2046 | 3,220  | -0.6%         | 2063 | 2,308  | -1.9%         |
| 2030 | 2,803  | 2.3%          | 2047 | 3,185  | -1.1%         | 2064 | 2,266  | -1.8%         |
| 2031 | 2,861  | 2.1%          | 2048 | 3,143  | -1.3%         | 2065 | 2,227  | -1.7%         |
| 2032 | 2,917  | 1.9%          | 2049 | 3,095  | -1.5%         | 2066 | 2,189  | -1.7%         |
| 2033 | 2,958  | 1.4%          | 2050 | 3,038  | -1.9%         | 2067 | 2,154  | -1.6%         |
| 2034 | 2,993  | 1.2%          | 2051 | 2,978  | -2.0%         | 2068 | 2,121  | -1.5%         |
| 2035 | 3,027  | 1.1%          | 2052 | 2,914  | -2.2%         | 2069 | 2,090  | -1.5%         |
| 2036 | 3,053  | 0.9%          | 2053 | 2,851  | -2.1%         | 2070 | 2,061  | -1.4%         |
| 2037 | 3,074  | 0.7%          | 2054 | 2,788  | -2.2%         | 2071 | 2,035  | -1.3%         |
| 2038 | 3,090  | 0.5%          | 2055 | 2,726  | -2.2%         | 2072 | 2,011  | -1.2%         |
| 2039 | 3,115  | 0.8%          | 2056 | 2,665  | -2.2%         | 2073 | 1,989  | -1.1%         |

## 2.4. Impact of the 2014 reform – synthesis of the simulations

Sensitivity analysis is highly recommended<sup>10</sup> to assess the impact of each parameter intervening in the related calculations.

Table 9 shows the extra pension costs which would be incurred by 2073 in the hypothetical scenario in which no 2014 SR reform is implemented.

The model estimates that the total pension expenditure in 2073 without the 2014 reform, would be EUR 818.3 million higher (+41.1%). This amount is split into several components each linked to a particular parameter.

Table 9 provides the related information.

**Table 9: Impact at year 2073 of the 2014 SR reform on the pension expenditure of the non-active population**

| Sensitivity Analysis                                     |              |              |
|--|--------------|--------------|
| Parameter  | Value (€m)   | Impact (€m)  |
| Expenditure Current Scenario year 50                     | 1,989.0      |              |
| Basic Salary at recruitment                              | 171.4        | 8.6%         |
| Recruitment Policy                                       | 167.5        | 8.4%         |
| General Salary Growth                                    | 117.3        | 5.9%         |
| Individual Salary Progression                            | 119.3        | 6.0%         |
| Retirement Age   | 169.1        | 8.5%         |
| Pension Accrual Rate                                     | 61.1         | 3.1%         |
| Initial Population                                       | 12.8         | 0.6%         |
| Expenditure Test Scenario year 50                        | 2,807.3      |              |
| <b>Additional Expenditure without the 2013 SR reform</b> | <b>818.3</b> | <b>41.1%</b> |

When analysing the effect of the single parameters involving savings, it is necessary to observe that some of the effects are correlated. For example, changes in the accrual rate are correlated with changes in the pensionable age.

It should be emphasised that the estimations are meaningful only at the most aggregated level, with the parameters described above being statistically interrelated.

<sup>10</sup> McGillivray (1996) and Picard (1996).

## 2.5. Impact of the 2014 SR reform: yearly savings

Table 10 and Graphs 1 and 2 provide a view of the expected savings from the 2014 SR reform.

**Table 10: Projected annual cost savings at 2023 prices**

| Year | Savings (€m) | Savings (%) | Year | Savings (€m) | Savings (%) | Year of projection | Savings (€m) | Savings (%) |
|------|--------------|-------------|------|--------------|-------------|--------------------|--------------|-------------|
| 2023 | 171          | 0.0%        | 2040 | 591          | 2.1%        | 2057               | 642          | 3.3%        |
| 2024 | 456          | 167.0%      | 2041 | 598          | 1.2%        | 2058               | 661          | 3.0%        |
| 2025 | 501          | 9.7%        | 2042 | 583          | -2.5%       | 2059               | 681          | 2.9%        |
| 2026 | 528          | 5.4%        | 2043 | 559          | -4.2%       | 2060               | 696          | 2.3%        |
| 2027 | 539          | 2.1%        | 2044 | 525          | -5.9%       | 2061               | 712          | 2.3%        |
| 2028 | 545          | 1.2%        | 2045 | 510          | -3.0%       | 2062               | 726          | 2.0%        |
| 2029 | 553          | 1.4%        | 2046 | 494          | -3.2%       | 2063               | 739          | 1.7%        |
| 2030 | 537          | -2.9%       | 2047 | 485          | -1.7%       | 2064               | 750          | 1.5%        |
| 2031 | 521          | -3.0%       | 2048 | 483          | -0.4%       | 2065               | 760          | 1.4%        |
| 2032 | 506          | -2.9%       | 2049 | 485          | 0.3%        | 2066               | 771          | 1.4%        |
| 2033 | 499          | -1.4%       | 2050 | 497          | 2.5%        | 2067               | 780          | 1.2%        |
| 2034 | 495          | -0.7%       | 2051 | 511          | 2.8%        | 2068               | 788          | 1.0%        |
| 2035 | 491          | -0.9%       | 2052 | 532          | 4.1%        | 2069               | 796          | 1.0%        |
| 2036 | 503          | 2.5%        | 2053 | 552          | 3.9%        | 2070               | 803          | 0.9%        |
| 2037 | 526          | 4.6%        | 2054 | 574          | 3.9%        | 2071               | 809          | 0.8%        |
| 2038 | 556          | 5.7%        | 2055 | 599          | 4.4%        | 2072               | 815          | 0.7%        |
| 2039 | 578          | 4.0%        | 2056 | 621          | 3.7%        | 2073               | 818          | 0.4%        |

The savings in the expenditure for the pensions of the non-active members (old-age pensioners, beneficiaries of an invalidity allowance/pension, widows/widowers and orphans), increase throughout the projection period and reach their maximum of EUR 818 million in year 2073 (last year of the projection)<sup>11</sup>.

The estimated total savings over the observed period of 50 years (2024 to 2073), due to the 2014 reform of the SR, are estimated at EUR 30.5 billion (EUR 30 451 million) at 2023 prices.

To be able to link the 2016 and 2024 studies, it is necessary to use the same salary grid (i.e. the one applicable at 1 July 2014 employed in the context of the 2016 study, where the starting

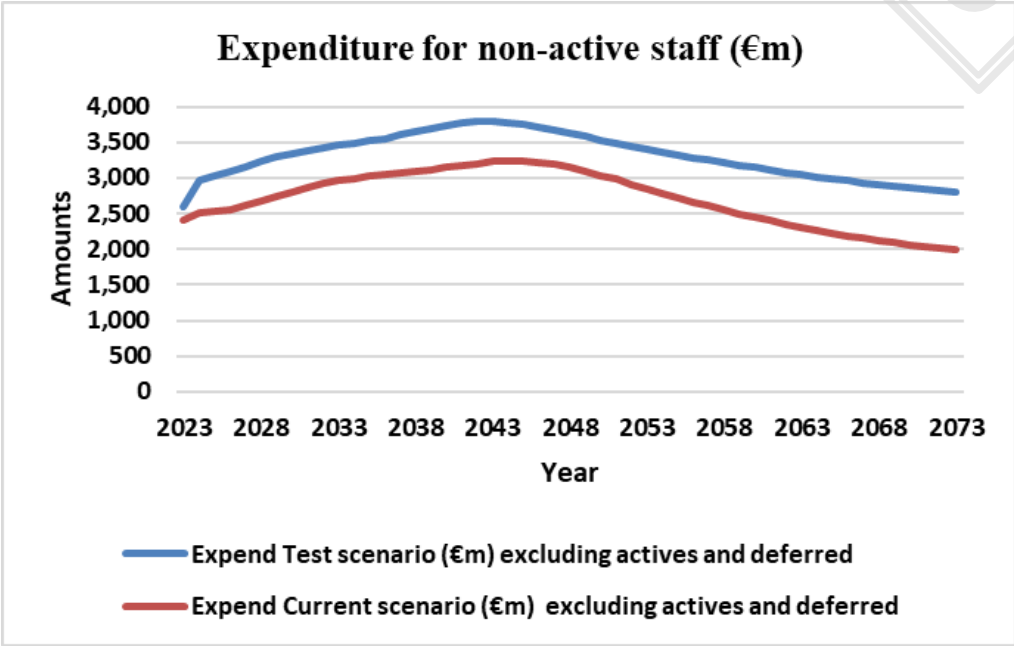
<sup>11</sup> Under the 'test scenario,' where the 2014 SR reform had not taken place, many more staff members would have retired in 2024 because the retirement age would have been lower compared to the situation where the SR reform took place. This leads to significantly higher pension costs. In contrast, under the current scenario (with the SR reform in place), fewer people retire in 2024 due to the higher retirement age, resulting in much lower pension costs. Because of this, there is a big increase in savings from 2023 to 2024. In particular, the observed big increase in savings from 2023 to 2024 is due to the combined effects of:

1. the proportion of staff members close to the 'normal' retirement ages;
2. the different assumed 'normal' retirement ages, respectively for the 'current' (64 to 66 years) and 'test' (61 to 63 years) scenarios, and
3. the larger basis of active staff who will become pensioners during the projection period as the 5% reduction in establishment plan posts did not materialise in the test scenario.

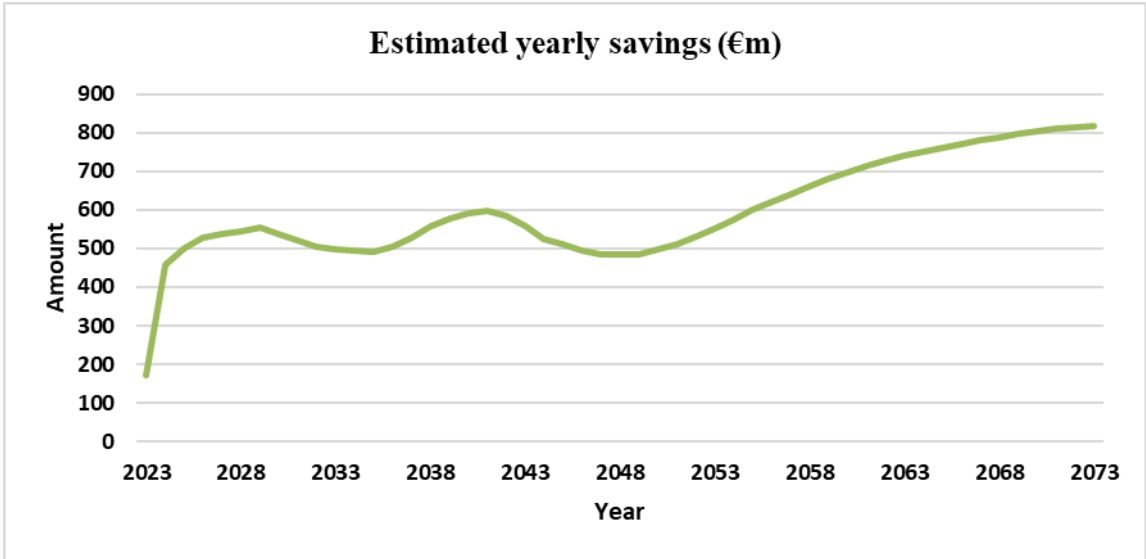
population was the one at the end of 2014). At 2014 prices, the estimated total savings over the 2023 to 2073 period would be EUR 24.6 billion (EUR 24 628 million).

It is also important to notice that if pension expenditure for current active staff and staff under deferred status is included, the estimated total savings over the 2023 to 2073 period would be EUR 63.7 billion (EUR 63 710 million) at 2023 prices.

**Graph 1: Estimated expenditure for pensioners, disabled staff, widows/widowers and orphans (at 2023 prices)**



**Graph 2: Estimated yearly savings in the expenditure for non-active staff (at 2023 prices)**



### **3. Review of Eurostat calculations**

In line with the approach for the 2016 Eurostat study on pension expenditure savings derived from the 2004 SR reform, the methodology, assumptions, and computations performed by Eurostat have been reviewed and validated by external actuarial experts.

