13 Actuarial review of the Social Insurance Fund

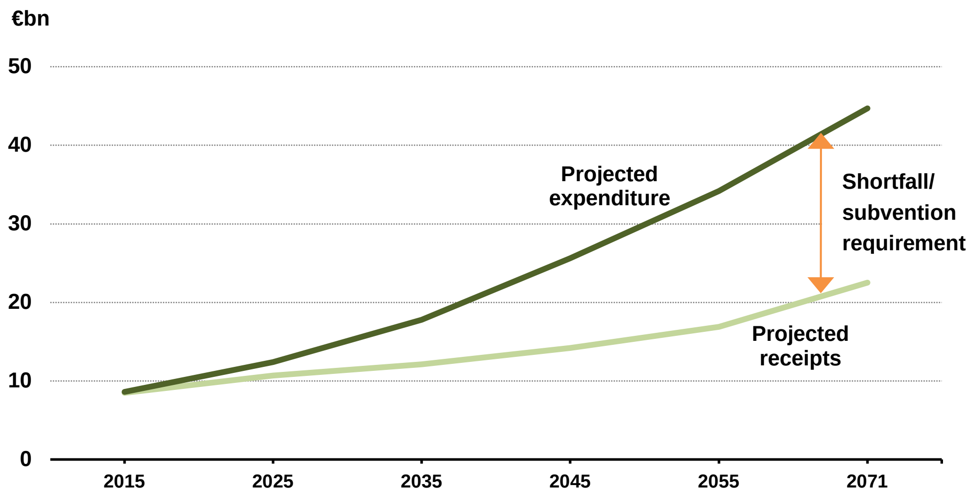
13.1 The Minister for Employment Affairs and Social Protection is required by law to commission and publish actuarial reviews of the financial condition of the Social Insurance Fund (SIF) at least every five years.[1] The review of the Fund's position as at 31 December 2015 included projections from 2016 to 2071.[2] The projected 'base case' Fund receipts and expenditure are shown in Figure 13.1.

13.2 The review projects that there will be an increasing annual shortfall in the Fund from 2021 up to 2071, and that sizeable Exchequer subvention will be required in the long-term to meet ongoing expenditure requirements in the absence of reductions in expenditure levels or increases in Pay Related Social Insurance (PRSI) income. The review projects an Exchequer subvention requirement, in 2017 real price terms, of €1.7 billion in 2025, €5.6 billion in 2035 and €11.4 billion in 2045. The net present value of the aggregate future projected shortfalls to 2071 is €335 billion based on a real discount rate assumption of 1.5% per annum.[3]

13.3 In the medium to long-term, pension-related expenditure is projected to be the predominant component of the Fund expenditure, rising from 70% in 2016 to approximately 80% in 2071. This projected increase is attributed to Ireland's changing population structure, and in particular the large rise in those over **State pension age** - currently 66 years of age and due to rise to 68 in 2028. The proportion of the population over the State pension age is projected to increase from 12% in 2015 to 17% in 2035, and to 23% in 2055.

13.4 Simultaneously, the **pensioner support ratio** is projected to decline from 4.9 workers for every individual over age 66 to 2.9 workers in 2035 and to 2 workers by 2055. The report notes that this position will be alleviated somewhat by the planned increase in the State pension age to 67 in 2021, and to 68 in 2028. This is expected to increase the support ratio to 3.4 for every individual over age 68 in 2035, and to 2.3 workers for every individual over age 68 in 2055.

Figure 13.1 Projected SIF receipts and expenditure, 2015 to 2071



Source: Actuarial review of the Social Insurance Fund 31 December 2015 (September 2017)

1 Section 10 of the Social Welfare Consolidation Act 2005.

2 The review was completed in September 2017 and laid before the Houses of the Oireachtas on 18 October 2017.

3 An alternative measure of the Social Insurance Fund future liability is the accrued-to-date liability which is required by the EU for reporting purposes, and used by the CSO in its report entitled *Estimates of Irish Pension Liabilities 2015*. The accrued-to-date liability for State pension schemes at 31 December 2015 as per that report was €231 billion. Chapter 10 of the SIF actuarial review compares both measures.

13.5 The actuarial review included an analysis of the sensitivity of the deficit projections to changes in the key underlying assumptions (see Figure 13.2). Changes in the assumptions for real earnings growth and life expectancy have the most significant impact on the projected SIF shortfall.

Figure 13.2 Key assumptions used in SIF actuarial review[a]

1. Real annual GDP growth was assumed to be 5.2% in 2016, 4.3% in 2017, 3.7% in 2018 and between 1.5% and 3.1% thereafter.
2. The annual rate of inflation was assumed to be between 1% and 2% up to 2018, 2.1% up to 2021 and 2% thereafter.
3. Life expectancy at age 66 was assumed to increase by 7 years for males and 5.9 years for females between 2015 and 2071.
4. Real earnings growth was assumed to be 1.9% in 2016, 1.4% in 2017 and between 1% and 1.1% in the period 2018 to 2021. It was assumed that real earnings would grow at a rate of 1.8% a year between 2022 and 2025, 1.2% a year from 2026 to 2030, 1.4% a year from 2031 to 2035 and 1.5% a year for the remainder of the projection period. It was assumed that benefits would increase in line with real earnings growth.
5. Employment growth was estimated to fall significantly from a high of 2.9% in 2016 to 1.4% in 2021 and to be 0.4% a year between 2022 and 2030, between 0.2% and 0.5% a year between 2031 and 2040, with a decline in employment rates of 0.1% per annum between 2041 and 2050 before returning to growth of between 0.1% and 0.6% thereafter.
6. The pensioner support ratio was projected to decrease from 4.9 workers for every individual over pension age in 2015 to 2.1 workers per pensioner by 2071. This position is alleviated by the increase in State pension age to 67 and 68 respectively in 2021 and 2028 such that the support ratio improves to 2.4 workers per pensioner by 2071.
7. The unemployment rate was assumed to decrease significantly from a high of 7.9% in 2016 to 6.4% in 2017, 5.8% in 2018 and 5.5% in the period 2019 to 2021 before rising to 5.7% between 2022 and 2025 and remaining constant at 6.2% for the remainder of the projection period.

Source: Actuarial review of the Social Insurance Fund 31 December 2015 (September 2017)

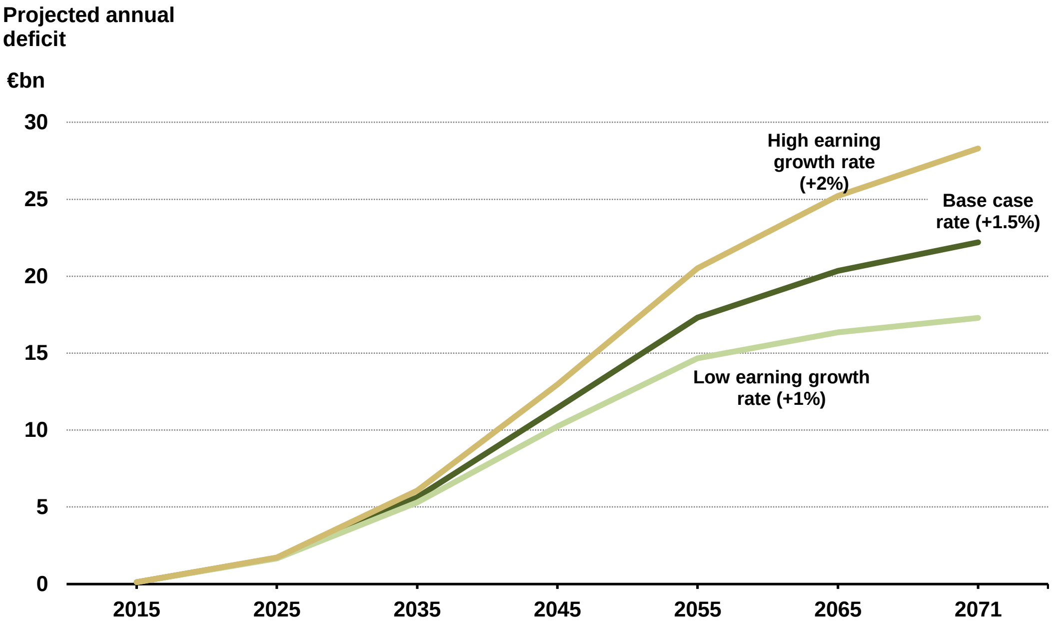
Note: a The review used 2016 estimated outturn figures and 2017- 2021 short-term projections as set out by the Department of Finance in the Stability Programme Update of April 2017.

The assumptions underpinning the long-term projections (2022+) were based on projections run by the European Commission and formed the basis for the 2018 Ageing Report. Mortality improvement factors are based on those used by the CSO in their most recent population projections (Population and Labour Force Projections (2016 - 2046), dated April 2013). Other assumptions reflect macroeconomic and other demographics (e.g. labour force) assumptions provided by the Department of Finance.

Real earnings growth

13.6 The review assumed that real earnings would grow over the projection period and that SIF benefits would increase in line with that growth. This means that earnings in the economy (and by extension, contributory benefit rates) would grow at a margin above the rate of general price inflation. The base case assumption was that real earnings would grow at an average annual rate of 1.5% for the majority of the projection period. As shown in Figure 13.3, if real earnings grow by just 1% per annum, the projected deficit in 2071 is €17.3 billion rather than the €22.2 billion deficit projected under the base case.

Figure 13.3 Sensitivity of projected SIF deficit to changes in real earnings growth rates



Source: Actuarial review of the Social Insurance Fund 31 December 2015 (September 2017)

Life expectancy

13.7 Based on the CSO's *Population and Labour Force Projections (2016 to 2046)*, the review assumed that, between 2015 and 2071, life expectancy at age 66 would increase by 7 years for males and by 5.9 years for females. When improvements in life expectancy are assumed to be at half those rates, the deficit for 2071 is projected at €16 billion (rather than €22.2 billion). This is because life expectancy impacts on the length of time for which the projected pension payments (the most material benefits of the SIF) are expected to be paid.

Impact of Brexit

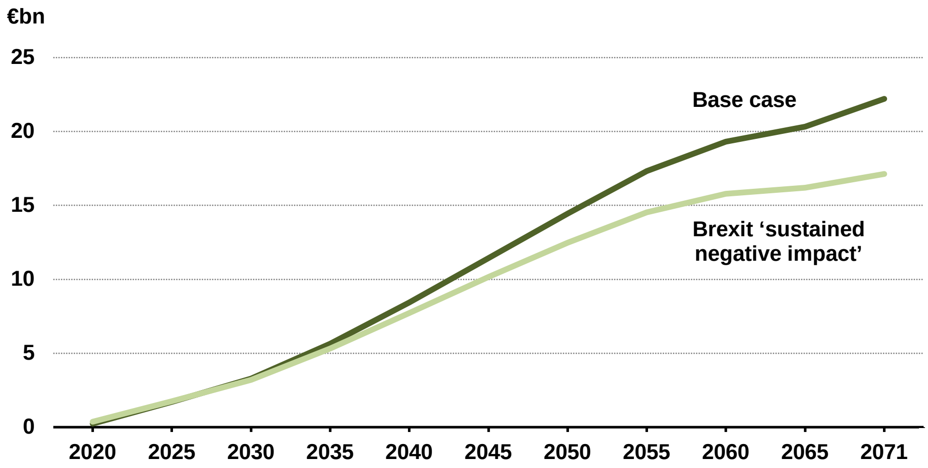
13.8 The review also considered the potential impact of Brexit on the finances of the SIF, outlining two potential scenarios — a sustained negative impact or an acute short-term economic shock.

13.9 The review examined the scenario of a sustained negative impact of Brexit in the longer term, based on the following assumptions

- due to long-term negative impact on growth, labour productivity increases are moderated, resulting in real earnings growth of 1% per annum (from 1.5% per annum in the long-term in the base case)
- overall employed numbers are reduced by 2% for the entire duration, with the numbers of unemployed increased by the same amount.

13.10 Under this 'sustained negative impact' scenario, notwithstanding that PRSI receipts are projected to gradually reduce following Brexit, the overall long-term 'gap' between income and expenditure is expected to be lower than otherwise identified (€17.1 billion in 2071 compared with €22.2 billion in the base case). This is because pensions and other benefit levels are limited in the projection to average earnings increases which are expected to be moderated in the post Brexit scenario as compared with the base case.

Figure 13.4 Projected SIF deficit under base case and 'sustained negative impact' Brexit scenario



Source: Actuarial review of the Social Insurance Fund 31 December 2015 (September 2017)

13.11 If, instead of a sustained negative impact, Ireland experienced an acute short-term economic shock as a result of Brexit leading to a severe reduction in PRSI receipts, then the impact of Brexit on the finances of the SIF were shown by the review to be very different, and relatively small over the projection period.

13.12 In this case, the review assumed the economic shock would be similar in magnitude to the 2008 recession and that it would commence from 2020. A full recovery was assumed to be made within five years of the initial event, returning to normal thereafter. The review estimated the total impact of a shock of this magnitude at €4.3 billion in 2017 real price terms.

Conclusion

13.13 The periodic actuarial review of the Social Insurance Fund is a valuable exercise that enables informed discussion about the expected long-term implications of current decision making.