ANALYSIS

# Long-term sustainability of the public finances

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Long-term debt sustainability is measured by the 'S2' indicator, which summarises in a single figure the extent to which the general government finances should be permanently adjusted for public debt not to increase in an uncontrollable manner in the future. The Bank of Finland's updated estimate of the sustainability gap is 3½% relative to GDP.


The sustainability gap estimate is not based on a fiscal forecast, but on a calculation of the pressures the ageing-related costs will place on the public finances. The calculation assesses fiscal developments from 2025 onwards based on the assumption that there will be no changes to income and expenditure policies even if public debt increases sharply. Thus, it does not reflect the

most likely developments over the long term, but only illustrates the mechanical impact of various economic factors on fiscal indicators.

The sustainability calculation contains a number of assumptions about future developments. It builds on the long-term economic growth assessment and assumptions on, for example, the level of interest rates. The calculation also assesses the change in age demographics on the basis of Statistics Finland's population projection. Demographic change affects the evolution of age-related healthcare, long-term care and education expenditure assessed in the calculation.

## Sustainability gap smaller than previously assessed

The fiscal sustainability gap is approximately 3½% relative to the level of GDP for 2025. The change compared with the estimate a year earlier (5½%) is due to changes in assumptions and updates to background data. Changes in the sustainability gap estimate are also affected by the current short- and medium-term macroeconomic forecast. The most significant change compared with the year-earlier estimate reflects the expected development of the combined central and local government primary balance[1] from 2026 to 2070. During this projection period, future primary balances are affected by age-related expenditure, the sustainability of the pension system and the property income received by central and local government.

The long-term imbalance between revenue and expenditure implied by the sustainability gap can be corrected by fiscal adjustment measures which would affect the initial structural primary balance of central and local government for the calculation's base year 2025. As a result of the Bank of Finland's new economic forecast, the base-year structural primary deficit is slightly lower than assessed a year earlier, which also reduces the value of the sustainability gap indicator.

## Interest and revenue assumptions play an important role in the calculation

The changes to the sustainability calculation's interest rate assumptions have had a significant impact on the sustainability gap estimate. The assumption on the interest rate on public debt used in the calculation has been updated to reflect the assumptions for the 2021 report of the European Commission's Ageing Working Group (AWG).[2] Thus, the implicit interest rate on public debt (calculated as interest expenditure relative to the stock of debt) will increase from 2026 to 0.9% in 2030. Thereafter, the interest rate on public debt will rise steadily, to a nominal level of 4% by 2050.[3] Starting from 2050 the interest rate will remain unchanged. In previous calculations, the nominal interest rate on public debt increased to 5% by 2040.

In Finland, general government also includes private earnings-related pension institutions, because of their statutory duties. Earnings-related pension contributions are comparable to tax-like payments, but the pension assets accumulated cannot, in practice, be used to cover central and local government debt. For this reason, the Bank of Finland's sustainability calculation separates the earnings-related pension funds into their own entity, which is assumed to administer the pension scheme sustainably so that pension contributions are collected only to the extent necessary for the payment of pensions without decreasing the fund capital relative to GDP. Since earnings-related pension contributions are part of the total tax rate, which is assumed to remain constant in the calculation, changes in pension contributions have an inverse effect on the ability of the State and municipalities to collect tax revenue.

Thus, the value of pension fund assets in relation to GDP remains the same in 2025 and 2070, meaning that the fund capital is not permanently accumulated or depleted in the calculation. This assumption differs from the long-term projections of the Finnish Centre for Pensions, in which earnings-related pension contributions and fund assets will grow in proportion to the wage bill.

The return on assets held by the earnings-related pension funds plays a major role in determining future pension payments. The return assumption has also been revised downward, as the risk-free interest rate is estimated to be lower than before and the assessment of the long-term growth outlook of Finland has deteriorated. The return on pension assets is assumed to increase in the long term to 3.0% in real terms, from 1.7% in the base year of the calculation. The previous assumption was 3.5%. The returns are broken down into annual property income, i.e. interest, dividends and other investment income receivable, as well as changes in the value of financial assets. The value of assets varies annually according to changes in the value of asset items such as listed shares, but only property income affects the annual budget balance under the non-financial national accounts. Financial assets are assumed to be divided half into shares and half into bonds and other asset items such as real estate.

## Long-term forecasts for age-related expenditure and economic growth have changed

Age-related expenditure (excluding pensions) is assessed in the sustainability calculation on the basis of age group-specific education, healthcare and long-term care spending, based on the assumption that the population structure develops in line with Statistics Finland's population projection. The calculation now introduces the Finnish Institute for Health and Welfare's data on age group-specific healthcare and long-term care expenditure for 2017. Growth in healthcare expenditure is also affected by the rise in the standard of living (GDP per capita) following growth in earnings and improvement in treatments. Demand for services is estimated to increase at a

slightly faster pace than the level of income. As assumed by the AWG, income elasticity is set at 1.1, from which it will gradually converge to 1 by 2070. Changes in the need for long-term care are assessed to follow changes in the demographic structure, and expenditure is also affected by the increase in wages and salaries of care personnel.

The sustainability calculation is based on Statistics Finland's 2021 population projection, in which the birth rate assumption was revised up from the previous population projection. Therefore, the population will begin to shrink 10 years later, in 2040, and the contraction will occur more slowly than in the 2019 projection. The latest population projection assumes that life expectancy will continue to increase as previously observed. However, the Bank of Finland's calculation makes no assumptions on the impact of the extension of life expectancy on healthcare and long-term care expenditure. It is possible that a longer life expectancy will mean a greater number of healthy old-age years, although on the other hand the largest care costs are associated with care during the final stage of life.

Growth in pension expenditure in the calculation is based on the Finnish Centre for Pensions' long-term projections of 2019 for the number of pension recipients and the pension replacement ratio. The replacement ratio is the ratio of pension to earnings, i.e. at the level of the national economy, the ratio of pension expenditure to the wage bill.

Overall, age-related expenditure (incl. unemployment spending) relative to GDP will grow by 4.8 percentage points in 2019–2070 (Table 1). Healthcare and long-term care expenditure will increase by about 1 percentage point relative to GDP already by 2030, and growth will remain strong until 2040. Pension expenditure will continue to grow until 2030, but the pace of growth will slow down notably in the 2040s.

| Age-related expenditure in 2019–2070, % relative to GDP | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2030 | 2040 | 2070 | Change 2019–2030 | Chan 2030–2 |
| Pensions | 13.3 | 14.0 | 13.3 | 12.4 | 13.8 | −0.1 | −0.9 |
| Health care | 6.8 | 6.8 | 7.1 | 7.3 | 7.7 | 0.3 | 0.2 |
| Long-term care | 2.0 | 2.2 | 2.7 | 3.5 | 5.3 | 0.7 | 0.8 |
| Education | 5.6 | 5.8 | 5.3 | 4.9 | 5.5 | −0.4 | −0.4 |
| Unemployment | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 0.1 | 0.0 |

| | Age-related expenditure in 2019–2070, % relative to GDP | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total age-related expenditure** | 29.5 | 30.8 | 30.4 | 30.2 | 34.3 | 0.6 | −0.3 |
| **Age-related expenditure excl. pensions** | 16.2 | 16.9 | 17.2 | 17.8 | 20.5 | 0.8 | 0.6 |

GDP growth is assessed in the calculation based on the Bank of Finland's new long-term forecast[4]. The most significant difference in the new forecast compared with its predecessors is the increased emphasis on human capital as a source of economic growth. The model measures investment in the accumulation of human capital by cumulated consumption expenditure on education, which forms the stock of human capital. The sustainability calculation builds on the baseline scenario of the long-term forecast, according to which Finland's human capital stock will grow until the end of the 2030s and will thereafter remain unchanged until 2070.

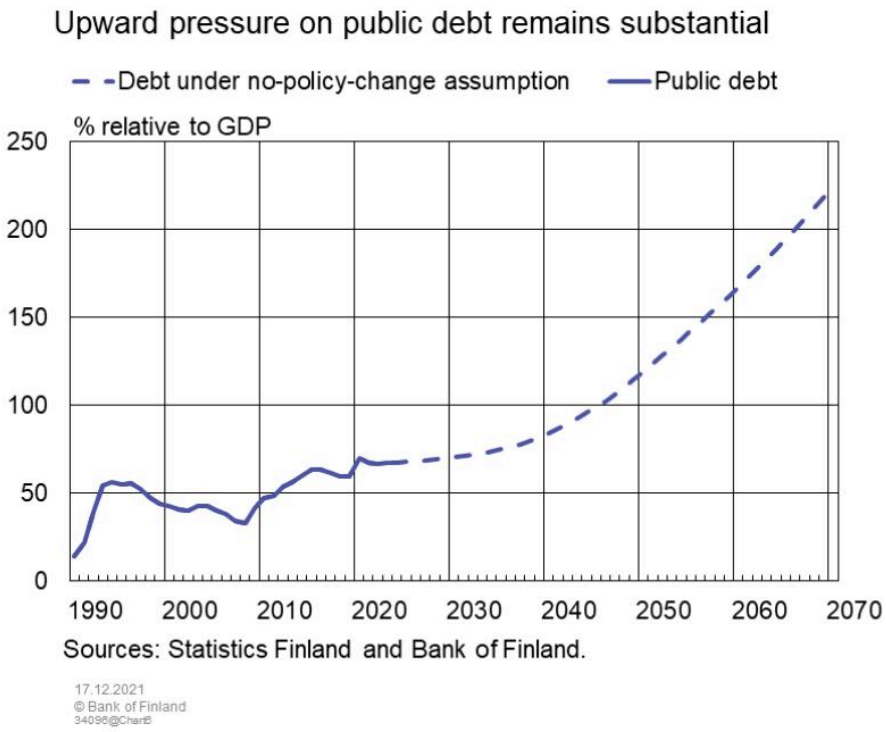
The difference to the growth assumption underlying the previous sustainability calculation is that, starting from the 2040s, the average annual growth rate of the economy will decelerate to just 0.5%. This change will also significantly slow the expected growth in healthcare and long-term care expenditure, the costs of which are expected to depend on the development of earnings and GDP. In the light of the new long-term forecast, the upward pressures on pension expenditure are also slightly lower, as slower productivity growth will lead to smaller average pensions through a slower rise in earnings.

The need for education services included in age-related expenditure will decrease with the shrinking of the youngest age groups. However, as the young age groups are larger than in the previous population projection, education spending will contract less than according to the previous sustainability calculation. In addition, the baseline scenario of the long-term forecast assumes that, starting from the 2040s, additional spending will push up the volume of education expenditure per student towards the level of the early 1990s, on account of which education expenditure relative to GDP will resume an upward trend. Unemployment is estimated to stabilise in the calculation to 8% in structural terms from 2030 onwards.

Even though the sustainability gap indicator is lower than previously assessed, the sustainability challenges remain substantial. If fiscal policy is not adjusted to the changing situation, there is a risk that public debt will grow in an uncontrollable manner (Chart 1). Basically, the problem relates to the existing structural deficit, which should be reduced to a more sustainable level. After that, we should respond to the upward pressures on age-related expenditure. Pension expenditure has grown at a particularly brisk pace already in the years of slow economic growth following the

financial crisis, and growth in the need for healthcare and long-term care services and the related implications are already partially visible. The health care backlog caused by the COVID-19 pandemic must also be cleared in the forthcoming years.

Chart 1.




## Notes

1. The primary balance refers to the general government budget balance net of interest payments on public debt. The structural primary balance is adjusted for cyclical effects and one-off factors. ↑
2. The 2021 Ageing Report. Underlying Assumptions & Projection Methodologies. Institutional Paper 142, European Commission, November 2020. ↑
3. Inflation is assumed at 2% from 2028 onwards. ↑
4. See article: Finland's new long-term forecast suggests GDP growth will be more subdued by Arto Kokkinen, Petri Mäki-Fränti and Meri Obstbaum. ↑

## Key words

long-term projection, population ageing, public finances, sustainability gap