

The Government's budgetary decisions must be consistent with long-term sustainability in order to promote long-term economic growth and intergenerational equity. The illustrative long-term fiscal projections presented in this annex assist the Government in assessing the sustainability of its fiscal policies. The key points are:

- the impact of an ageing population on the UK's public finances is expected to be less marked than in most other EU countries and manageable, allowing the Government to target resources on low and middle income pensioners while maintaining long-term sustainability;
- given the projected profile for transfers and tax revenues, current consumption can grow faster than real GDP in the long run without jeopardising the fiscal rules;
- meeting the fiscal rules on cautious assumptions with a margin of error means that:
 - the Government is well placed to deal with spending commitments that might arise in the future which are not yet accounted for; while
 - net debt is projected to remain below 40 per cent of GDP in the long run.

INTRODUCTION

A1 When setting fiscal policy the Government has to ensure that its decisions provide stable public finances in the short and medium term. However, the Government also has to ensure that its policy decisions are consistent with a sustainable long-term framework. Failure to do so could not only have detrimental effects on long-term economic growth (as the financial burden would be shifted to future generations) but would also be inconsistent with the principles of fiscal management set out in the *Code for Fiscal Stability*.

Code requires illustrative long-term projections **A2** For this reason, the Code requires the Government to publish illustrative long-term projections covering a period of at least ten years. The projections published in Budget 99 and Budget 2000 showed that the UK's long-term fiscal position was relatively favourable and that, as a result, current consumption could grow at a faster rate than GDP, without jeopardising the Government's fiscal rules.

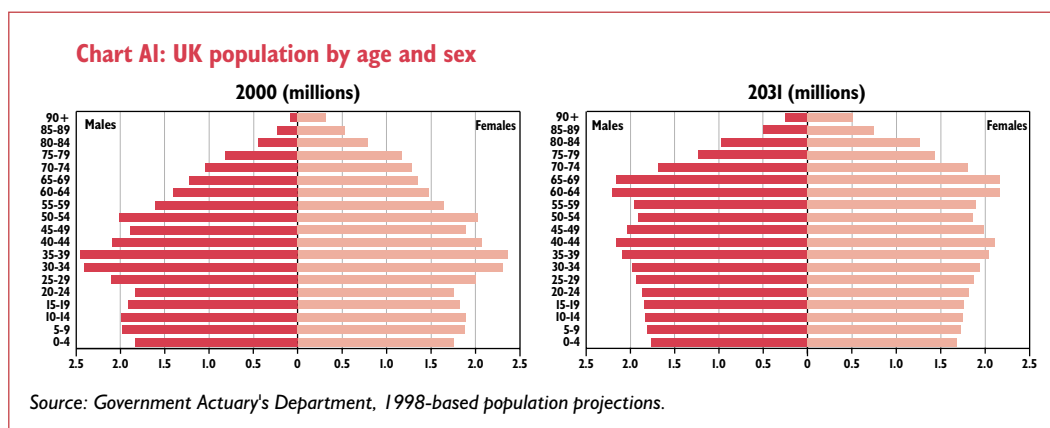
A3 By incorporating updated spending and revenue projections and latest policy settings, this annex provides up-to-date information on the sustainability of UK fiscal policy. To ensure the comparability of this year's set of projections with those of previous years, the underlying assumptions and methodology used remain virtually unchanged. The new set of projections shows that, as expected, given that the factors affecting long-term sustainability remain relatively stable over time, the UK's long-term fiscal position remains sound.

A4 In recent years there has been an increased focus on long-term fiscal sustainability issues not only in the UK but also in other countries, including EU Member States. It is now widely recognised that the long-term sustainability of public finances plays a major role in providing the necessary environment to achieve long-term economic growth, prosperity for all and fairness between generations. The Government will continue to analyse long-term spending and revenue trends to ensure that the public finances remain sustainable.

DEMOGRAPHIC TRENDS

The UK's population is ageing

A5 Like most other EU and OECD countries, the UK will face a major demographic challenge in the decades ahead from an ageing population. Whereas only one in seven people in the UK were aged 65 or over in 1980, that share had risen to nearly one in six in 2000 and is predicted to rise to nearly one in five by 2020. Over the same period, life expectancy at birth will have risen sharply from 70.2 years in 1980 to 77.8 years in 2020 for males, and from 76.2 years to 82.5 years for females. The median age is projected to be 42.6 years in 2020, some 8 years higher than in 2000. Chart A1 shows the UK's age structure in 2000 and at the end of the projection period presented in this annex, 2031.



A6 The UK's population is ageing less rapidly than the populations of most other EU Member States. As a comparison, the old-age dependency rate (the number of people aged 65 and over as a percentage of those aged 20 to 64) is set to rise from 26.4 per cent in 2000 to 32.0 per cent in 2020 in the case of the UK, compared with a projected rise from 26.7 per cent to 35.1 per cent over the same period in the EU as a whole. The difference will be even more pronounced further in the future.

A7 Even though the UK faces a less severe demographic challenge than many other European countries and the impact of an ageing population on the public finances is predicted to be manageable, there is no room for complacency. Demographic developments will still have implications for government spending and revenue (for example, in the form of greater demand for services for the aged), thereby emphasising the importance of a sound long-term strategy for the public finances.

METHODOLOGY AND ASSUMPTIONS

A8 The Treasury's model for producing long-term fiscal projections examines the sustainability of the public finances by determining at what rate current consumption (current spending on health, education, infrastructure, etc.) can grow while still allowing the Government to meet its fiscal rules. To achieve this, the Treasury projects the evolution of taxation and transfer payments and capital consumption (depreciation) in the coming decades on the basis of prudent and cautious assumptions. The difference between the former and the latter two then indicates the financial resources available for current consumption. This methodology is unchanged since Budget 2000, where it was set out in detail in Box A1 of the EFSR (page 129).

A9 The taxation, transfers and capital consumption projections are based on current policy settings. In other words, it is assumed that the Government will leave current policy unchanged in the future. This does not imply though that policy will in fact remain unchanged. Indeed, it is unlikely to do so over the next 30 years. Rather, the projections

intend to show how the public finances are likely to develop if policy remained unchanged. As it is difficult to represent current policy from a modelling perspective, a number of assumptions (set out below) are made to approximate the current settings. It is important to note that the outcome of this set of projections – as with all projections – is driven by the underlying assumptions.

Economic assumptions

A10 Table A1 sets out the key economic assumptions underlying the projections¹. With the projections covering a time span of 30 years, a wide range of assumptions can be considered to be plausible. Consistent with the approach to projecting the public finances in the short and medium term, the assumptions used here represent a cautious case. For example, the expected effects of the Government's reforms to increase labour market activity and productivity are not taken into account. The key economic assumptions have not been changed. This is partly because the economic fundamentals have remained unchanged but also to ensure comparability between this year's projections and those presented in Budget 2000.

Table A1: Long-term economic assumptions

	Average annual real growth, per cent	
	2006–07 to 2010–11	2011–12 to 2030–31
Productivity	2	1 ³ / ₄
Labour force	¹ / ₄	0
GDP	2 ¹ / ₄	1 ³ / ₄
Inflation	2 ¹ / ₂	2 ¹ / ₂

Cautious economic assumptions

A11 Importantly the long-term rate of economic growth used in the projections – at 1³/₄ per cent a year from 2011-12 – is lower than the Government's neutral projection of trend economic growth². This reflects the use of cautious assumptions for both labour force and productivity growth, the latter the main driver of economic growth in the UK. The use of cautious assumptions can be justified on several grounds, including the greater degree of uncertainty involved when projecting long-term trends. Furthermore, a number of the effects driving economic growth higher – for example higher productivity growth and a rising female participation rate – may not continue into perpetuity. For these reasons, long-term productivity and labour market growth are cautiously assumed to stabilise some ¹/₄ and ¹/₂ percentage points respectively below the rates used in the neutral projection of trend growth.

Taxation and spending assumptions

A12 Tax revenues are subject to a number of short and long-term influences which make them difficult to project. For example, changing patterns of income and expenditure give rise to considerable uncertainty about tax bases. For this reason, current receipts as a share of GDP are projected to remain constant from 2006-07 onwards (beyond the medium-term projection) without making assumptions about the source of that revenue. This approach, for the purposes of long-term projections, is equivalent to saying that the Government will continue to raise the same relative amount of revenue as in 2005-06, offsetting possible changes in the tax base by changing policy in a revenue neutral way.

A13 Current spending is assumed to grow in line with current receipts from 2006-07 onwards. This implies that the current budget is projected to be in balance from then. As current consumption is calculated as the difference between receipts and other spending, the main spending assumptions relate to transfers and capital consumption.

¹For the period to 2005–06, the projections presented in Chapter C of the FFSR are used.

²See *Trend Growth: Prospects and Implications for Policy*, HM Treasury, November 1999.

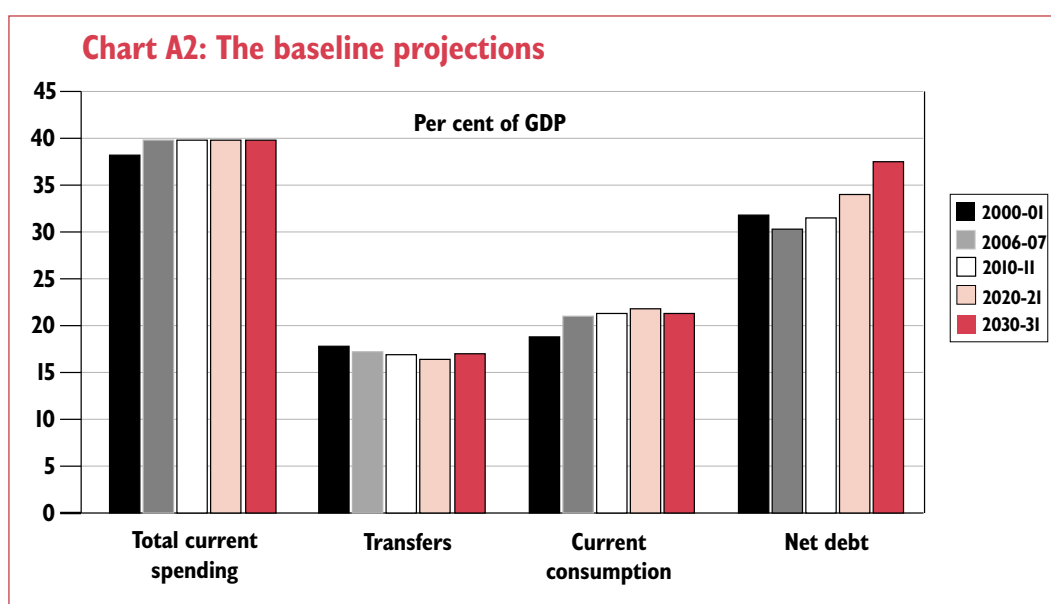
AI4 Transfers are made up of three separate components: social security transfers (calculated in conjunction with the Department of Social Security), interest payments and other transfers. The calculation of interest payments requires assumptions both about interest rates and the level of investment. As for the short-term forecasts, interest rates are modelled using market expectations and the existing spread of financial assets to which those rates apply. The share of net investment in GDP is assumed to remain constant from 2005-06 to 2030-31.

AI5 To calculate capital consumption, the Treasury uses the forward profile for investment that provides information on additions to the capital stock. The consumption of both the existing stock of assets and these new additions is then calculated on the assumption that future public sector asset lives are broadly similar to those evident in the past.

THE BASELINE PROJECTIONS

**The fiscal rules
are met
comfortably**

AI6 Chart A2 shows the projected evolution of total current spending, transfers, current consumption and net debt between 2000-01 and 2030-31, given the baseline assumptions. As a percentage of GDP, total current spending is projected to increase between 2000-01 and 2005-06 before stabilising. Transfers are predicted to fall until 2020-21 before increasing slightly towards 2030-31, while net debt will fall in the coming years before gradually rising towards 40 per cent of GDP by 2030-31. Current consumption is projected to rise from 18.8 per cent of GDP in 2000-01 to 21.8 per cent in 2020-21 before falling towards the end of the projection period. Despite the slight drop towards 2030-31, current consumption as a percentage of GDP will be markedly higher than in 2000-01. This relative expansion reflects the fact that current consumption can grow at a markedly faster rate – at an average $2\frac{1}{2}$ per cent a year between 2000-01 and 2030-31 – than the assumed average real GDP growth rate of 2 per cent while still meeting the fiscal rules. This means that the Government is in a good position to deal with spending commitments which might arise in the future in addition to the ones already accounted for, without being in danger of jeopardising the fiscal rules.



A17 With total current spending (by assumption) remaining constant as a percentage of GDP from 2006-07 onwards, the increase in current consumption as a share of GDP over the period 2000-01 to 2020-21 is due to the declining trend for transfers as a share of GDP. In other words, there is a reallocation of financial resources away from funding transfers to funding current consumption. This is mainly due to the decline in social security spending as a share of GDP but also partly due to a fall in debt interest payments as a share of GDP in the medium term. The marginal drop in current consumption as a percentage of GDP towards the end of the projection period is the result of small increases in transfer and debt interest payments as a percentage of GDP.

A18 With the underlying assumptions remaining more or less unchanged, these illustrative projections produce a broadly similar picture to those presented in previous years. The changes – including the markedly lower net debt level as a percentage of GDP in 2000-01 – are mainly the result of the revised medium-term projections that take into account all existing and announced Government policy initiatives.

A19 The projected changes in net debt emphasise the importance of ensuring sound public finances in the short term to prepare for future developments. On current projections, net debt falls to around 30 per cent of GDP in 2006-07, a rate well below the 40 per cent level defined as consistent with meeting the sustainable investment rule. This downward trend, however, is not projected to continue into the future. Rather, net debt is projected to rise gradually to reach 37½ per cent of GDP in 2030-31 given the long-term growth and investment assumptions.

External studies A20 The general conclusion of the baseline projections has been broadly supported by other studies. Using a set of generational accounts, the National Institute of Economic and Social Research (NIESR), for example, concluded that the UK faced only a modest generational imbalance, suggesting that the public finances will be sustainable in the long run.

AGEING AND PUBLIC PENSION EXPENDITURE

The UK is well placed internationally A21 In an international context, the UK is well placed compared with other countries, many of whom face marked generational imbalances (NIESR, 1999)³. The UK's relatively favourable position derives from a number of factors, including a sound fiscal starting point, less pressing demographic developments and price indexation of universal state pension benefits. This is complemented by substantial and continuing growth in private pensions. The Government is therefore able to target its resources on low and middle income pensioners, helping ensure average pensioner incomes continue to rise faster than average incomes of the rest of the population. The Government has introduced and raised the Minimum Income Guarantee for the poorest pensioners, linking this to earnings and is consulting on extending this further to all low and middle income pensioners through the Pension Credit from 2003. The implications of these initiatives are fiscally sustainable, and the policies being developed are consistent with meeting the fiscal rules. Over the long term net debt is projected to remain below 40 per cent of GDP.

European initiatives

A22 In February 2000, ECOFIN (the Council of EU finance ministers) requested a detailed study of the impact of ageing populations on public sector pension systems. Following the

³ *Generational Accounting Around the World*, edited by Alan Auerbach, Laurence Kotlikoff and Willi Leibfritz, NIESR, 1999.

request, the Commission's Economic Policy Committee (EPC) set up a working group, comprising representatives from the EU Member States and the Commission, to prepare an in-depth analysis covering the next 50 years. Future research projects for the working group include the study of the impact of ageing populations on health-care costs and, possibly, on other age-related expenditure such as education. This will help to build up a comprehensive picture of the likely impact of ageing populations on the public finances of the Member States in the first half of this century.

A23 The working group's results on public sector pensions were published in a progress report in December 2000⁴. Member States were requested to provide long-term projections of public pensions expenditure, based on commonly-accepted definitions and demographic and macroeconomic assumptions. Different scenarios were considered, not least to test the robustness of the results. For example, the working group studied the effects of using different demographic projections (which were provided by EUROSTAT) and of different hypotheses on labour market performance, interest rates and productivity.

A24 The two main scenarios, however, were the "current policy" and "Lisbon" cases. In the former, Member States used macroeconomic assumptions, for example on participation and unemployment rates, based on projections provided by the OECD and EUROSTAT. Furthermore, labour productivity growth was assumed to converge towards 1³/₄ per cent a year between 2020 and 2030. The real interest rate was set at 4 per cent.

A25 Based on these assumptions – and economic policies already in place or firmly announced – Member States projected the evolution of public pension expenditure as a share of GDP (before tax) over the next 50 years. The main conclusion of the analysis was that the share is predicted to rise sharply in most Member States. In addition to one other Member State, the only exception was the UK where public pension expenditure was projected to decline gradually as a share of GDP from 5.1 per cent in 2000 to 3.9 per cent by 2050.

A26 In the "Lisbon" case, the projections were based on assumptions consistent with the conclusions of the Lisbon European Council in March 2000. These conclusions set ambitious objectives for Member States, including reaching full employment, boosting employment rates by nearly 10 percentage points between now and 2010, and achieving rapid economic growth of around 3 per cent a year in the coming years. Productivity growth rates and levels were assumed to converge towards the respective US rate and level by the end of the projection period.

A27 Despite these more optimistic assumptions, the main finding remained broadly unchanged: with the exception of the UK and a few other Member States, the share of public pension expenditure in GDP was predicted to rise between 2000 and 2050.

Table A2: Change in the share of public pension expenditure between 2000 and 2050

	per cent of GDP, before tax	
	"Current policy"	"Lisbon"
UK	-1.2	-1.7
EU ¹	3.2	2.0

¹Unweighted average including the UK but excluding Greece and Luxembourg. 2040 for France.

Source: European Commission (2000).

⁴Progress Report to the Ecofin Council on the Impact of ageing populations on public pension systems, EPC, 2000.

A28 These results have already made their mark, feeding into a Council and Commission report⁵ to be presented to the spring 2001 European Council in Stockholm. The report highlights the challenges that need to be addressed by Member States if the ambitious objectives set out at the 2000 Lisbon Council are to be attained. Sustainability of public finances is seen as necessary to achieve these goals, as well as policies to boost employment rates and reform of public pension systems, the latter to be increasingly supplemented by occupational schemes, in a number of Member States.

A29 While the UK is relatively well placed in all these aspects, and able to afford to target extra support to low and middle income pensioners, there is no scope for complacency. The underlying assumptions used in these long-term projections while reasonable and prudent are nonetheless subject to a number of uncertainties. For example, mortality, fertility or migration trends may well turn out to be different from those generally predicted, having a potentially marked effect on revenue and spending in the future. Furthermore, the demand for, and cost of providing, public services might deviate significantly from those predicted. In the light of these uncertainties, the Government's response is to take the ageing of the population into account in its policy making. Policy initiatives such as raising the retirement age for women from 60 to 65 and programmes to raise productivity and labour market participation all play a major role in guaranteeing the long-term sustainability of the public finances.

ALTERNATIVE SCENARIO

A30 As stated above, the outcome of any set of long-term projections is driven by the underlying assumptions and – given the time horizon involved – a large number of assumptions can be considered to be plausible. It is therefore useful to study different scenarios to gain further insights into the economic and demographic forces at work. In Budget 99 and Budget 2000, the EFSR presented the effects of stronger economic growth and higher investment, and higher labour market participation rates, on the long-term sustainability of the public finances.

A31 Amounting to more than 10 per cent of GDP and around a quarter of total current spending, social security expenditure is one of the key determinants of the long-term sustainability of the public finances. Social security comprises a number of spending items such as pensions, disability benefit, Jobseeker's Allowance and Income Support. With the Government determined to increase employment opportunity for all, it could be that there will be less demand for spending items such as Jobseekers' Allowance and Income Support in the future than assumed in the baseline projection.

A32 The alternative scenario is therefore based on the assumption that social security spending will grow a little more slowly than in the baseline scenario. Specifically, it is assumed that social security spending as a percentage of GDP – at 8.2 per cent by 2030-31 – is 1 percentage point lower than in the baseline scenario by the end of the projection period. As in most other industrialised countries, social security spending as a percentage of GDP increased substantially in the UK between the early 1970s – when it was around 7 per cent – and early 1990s when it peaked at around 12 per cent. This was partly at the cost of the other current spending items. Since then social security's share has gradually fallen, giving the alternative scenario some plausibility.

⁵Based on *Communication from the Commission to the Council and European Parliament: "The contribution of public finances to growth and employment: improving quality and sustainability"*, European Commission, December 2000.

A33 With all other assumptions the same as in the baseline scenario, the illustrative long-term projections show that current consumption can grow faster in the alternative scenario. Despite the fact that the alternative scenario assumes that social security spending as a percentage of GDP will be only 1 percentage point lower than in the baseline projection by 2030-31, the growth rate of current consumption can average $2^{3/4}$ per cent for 30 years without jeopardising the fiscal rules.

CONCLUSIONS

**The public
finances are
sustainable in
the long term**

A34 The set of long-term projections in this annex indicates that the UK's public finances are broadly sustainable in the long term. The current projections therefore confirm earlier findings. Taking a narrower perspective (focusing on public pensions only), a study by the European Commission's Economic Policy Committee provides further evidence that the Government's fiscal policies are sustainable in the long term. The UK is therefore well placed compared with many other EU Member States to deal with the projected impact of an ageing population on the public finances.

A35 Despite this relatively favourable position, there is no room for complacency, not least because of the high degree of uncertainty involved in producing long-term projections. Even though the demographic and economic assumptions used are reasonable and cautious, a wide range of unforeseeable developments might take place over the projection period. It is for this reason that the Government has put in place policy measures designed to offset the impact of an ageing population on revenue and spending flows. Moreover, the Government will continue to produce long-term projections in the future to ensure that its fiscal policymaking takes into account the latest demographic and economic projections.