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NATIONAL AUDIT OFFICE

Audit of Assumptions for the March 2001 Budget

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL
HC 304 Session 2000–2001: 7 March 2001

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This report has been prepared for presentation to the House of Commons under Sections 156 and 157 of the Finance Act 1998.

John Bourn	**National Audit Office**
Comptroller and Auditor General	**1 March 2001**

The Comptroller and Auditor General is the head of the National Audit Office employing some 750 staff. He, and the National Audit Office, are totally independent of Government. He certifies the accounts of all Government departments and a wide range of other public sector bodies; and he has statutory authority to report to Parliament on the economy, efficiency and effectiveness with which departments and other bodies have used their resources.

For further information about the National Audit Office please contact:

National Audit Office
Press Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

Tel: 020 7798 7400

Email: enquiries@nao.gsi.gov.uk
Website address: www.nao.gov.uk

Report

Report by the Comptroller and Auditor General to the House of Commons

In this report

Statement of Responsibilities

1 Sections 156 and 157 of the Finance Act 1998 provide for me to examine and report on any conventions and assumptions underlying the Treasury's fiscal projections that are submitted to me by the Treasury for examination.

2 The Chancellor of the Exchequer has confirmed that there are no new assumptions he wishes me to examine. I understand that none of the assumptions I have examined in previous reports[1] are to be changed. This report therefore covers assumptions falling within the scope of the three year rolling review arrangements announced by the Chancellor at the time of the last Budget. As before, the Treasury remains responsible for making projections of future public expenditure and revenue on the basis of these assumptions.

3 The purpose of the rolling review is to provide a check both that the relevant assumptions remain reasonable and cautious, and to see whether they have indeed resulted in reasonable and cautious projections in the three year period since they were first audited.

4 Assumptions covered in this report are those first examined for the March 1998 Budget:

- for the purposes of fiscal projections in the medium term, when the economy is assumed to be on its trend path, the shares of labour income and of profits in domestic income are broadly constant; and
- the funding assumptions used to project central government debt interest are consistent with the forecast level of government borrowing and with the current financing policy as set out in the Debt Management Report.

Basis of Report

5 As in my previous reports on assumptions underlying the fiscal projections, I have considered the available evidence in undertaking the rolling review. Evidence was obtained from relevant papers and discussions with officials in the Treasury.

1 Cm 3693; HC 361, Session 1997-98; HC 616, Session 1997-98; HC 294, Session 1998-99; HC 873, Session 1998-99; HC 348, Session 1999-00; and HC 959, Session 1999-2000

Report

Factor income shares

6 The Treasury assumes for the purposes of making their medium term fiscal projections that output in the economy is around its trend level and so grows at the same rate as trend or potential output. This reflects the fact that it is not possible to forecast unforeseen shocks to the economy, which would tend to move the economy off its trend path in the medium term. At the trend level and rate of growth, a further assumption made by Treasury is that the shares in domestic income of labour income and income from capital – profits – are broadly constant.

7 This factor share assumption is important for projections of equity prices, which I re-examined in my Report for the 2000 Pre-Budget Report, (HC 959, Session 1999–2000). It also has a direct bearing on the public finances, since labour income and profits are taxed at different rates. Labour incomes at the margin are more highly taxed than company profits. The basic rate of income tax is 22 per cent and taking account of both employee and employer National Insurance contributions, the marginal tax rate at average earnings for contracted out employees is about 40 per cent. The standard rate of corporation tax is 30 per cent.

8 A shift between labour income and profit shares in domestic income will therefore affect the level of tax revenues. While the precise effects will depend on a range of assumptions (especially for average earnings and employment), Treasury estimates suggest that, if no second round effects on the real economy or on prices are taken into account, a permanent shift of one percentage point in GDP from profits to labour income could raise the total level of tax receipts by up to £1 billion after one year.

9 Mainstream economic theory gives grounds for thinking that the shares of labour income and profits in domestic income will tend to be constant, though this prediction depends on a number of assumptions, particularly about the nature of technology in the economy and the existence of competitive markets. I have examined the empirical evidence for the assumption that the shares of labour income and profits are broadly constant when the economy is on trend.

10 There have been major changes in the methodology for compiling the National Accounts since my previous audit of the factor share assumption in March 1998. This follows the adoption of a new national accounting standard within the European System of Accounts.

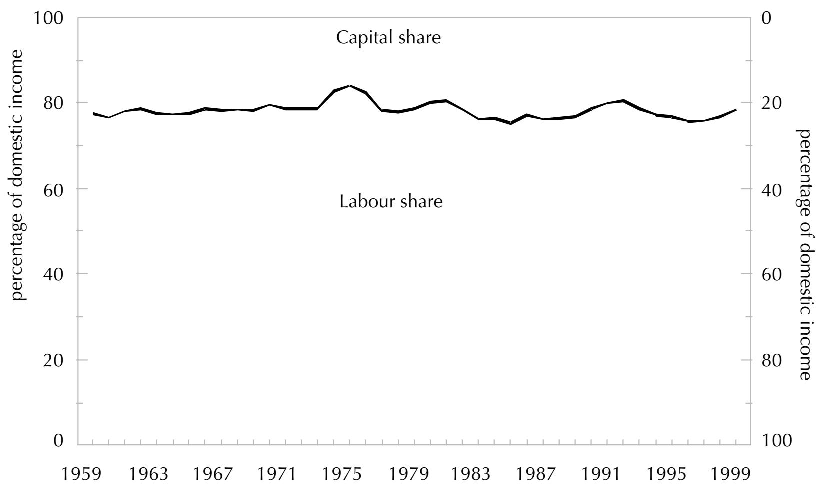
11 The factor share data have been affected by these changes largely through a reclassification of part of self-employment incomes (the income of partnerships) to profits. The remainder of self-employed income, largely the income of sole traders, is now defined as 'mixed income', which with compensation for employees, defines 'labour income'. Capital income is defined as gross trading profits net of stock appreciation. For the purposes of fiscal projections, labour and capital incomes together constitute domestic income[2].

12 Rental income and an imputed charge for general government non-trading capital consumption are excluded when calculating shares of labour income and profits in domestic income; the former on the basis that it includes a large imputed element attributed to households, and the latter because profits are defined on the basis of trading activities.

[2] *Domestic income = income from employment + gross trading profits*
Income from employment = compensation of employees + mixed income
Gross trading profits = gross operating surplus excluding stock appreciation - rental income including an imputed charge for non-trading capital consumption

13 **Figure 1** shows the pattern of the shares of labour income and profits for the period from 1959 onwards. The shares have tended to be constant though with fluctuations around an average level of 78.2 per cent for labour incomes, ranging from about 75 per cent to 84 per cent over the period.

1 **Factor shares in domestic income net of stock appreciation and rental income, 1959–1999**



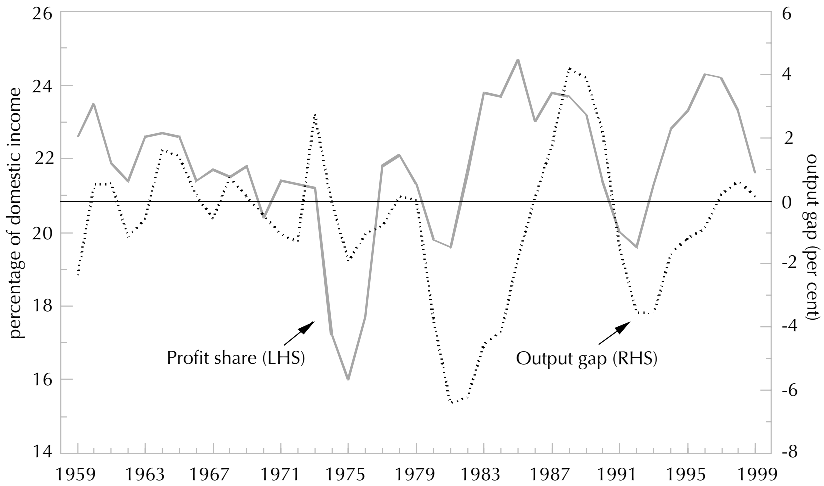
Source: HM Treasury

14 Data are not yet available for the last year of the three year rolling review period, but the labour share of domestic income in 1998 was 76.7 per cent, rising to 78.4 per cent in 1999. This is within the range of fluctuation over the long term for which data exist. The two main possible explanations for why the shares were not precisely constant are **structural** and **cyclical** factors.

15 **Structural** factors produce a shift in the way the economy functions and hence may affect factor shares. For example, significant increases in labour supply due, say, to tax and benefit system reform, which translate into higher employment and output may temporarily involve real wage growth falling short of productivity growth. This will alter factor shares for a period. Changes in the real exchange rate will tend to have fairly long drawn out consequences for profit margins and real wages, again affecting factor shares. On the basis of two years data for the rolling review period, Figure 1 suggests there is no clear evidence of structural changes significantly shifting factor shares in that period.

16 **Cyclical** factors can also lead to changes in income shares if economic growth falls below or rises above trend. **Figure 2** examines how factor shares and the economic cycle are related in more detail. It shows the relationship between profits as a percentage of domestic income and the "output gap". The output gap is calculated by the Treasury as an estimate of the amount (in percentage terms) by which actual output is above or below long run potential output. The output gap cannot be measured with complete certainty, as potential output is hard to estimate. The Treasury forms a view of the output gap based on a range of economic indicators including measures of capacity utilisation from the Confederation of British Industry survey of manufacturing, the British Chambers of Commerce survey of services, and the Building Employers' Confederation survey of construction.

2 Profit share and output gap



Source: HM Treasury

Note: The output gap is defined as:

$$\frac{\text{actual output - potential output}}{\text{potential output}} \times 100$$

17 Figure 2 shows that the profit share tends to move cyclically with the output gap. As actual output falls relative to potential, the profit share tends to fall and vice versa. The evidence over the rolling review period is not inconsistent with this relationship. This suggests that some part of the observed changes in factor shares over the period may have been cyclical, and therefore that the use of the assumption over the rolling review period was reasonable.

18 For the future, I observe above that there is a theoretical basis for assuming factor shares are constant, and there is also supporting empirical evidence provided allowance is made for the effects of structural shifts and cycles in the economy. The Treasury's medium term projections abstract from both these influences, and an assumption that factor shares are broadly constant when the economy is assumed to be on its trend path in the medium term remains reasonable as a basis for fiscal projections.

Debt Interest

19 I have examined the consistency of the assumptions used in projecting central government debt interest with the forecast of government borrowing and with financing policy as set out in the Debt Management Reports, from this Budget re-titled the Debt and Reserves Management Report, DRMR.

20 These checks are necessary to ensure that the data input to the Treasury's economic forecasting system are consistent with the detailed forecast of debt interest over the year ahead, which is separately prepared and is based on known and planned debt redemption and issuance transactions.

21 A further element of ensuring consistency is that both financing requirement forecasts and debt interest calculations reflect policy intentions relating to debt management. These policy intentions include:

- maintaining a constant level of official net reserves of gold and foreign exchange. In line with the policy not to intervene in foreign exchange markets to achieve a given level of sterling, the policy is that there should be no net borrowing (and hence no impact on net debt interest payments), for example to increase the level of the reserves;

- fully financing through the issue of gilts the central government net financing requirement, the repayment of maturing debt and any unplanned changes in the official reserves. This impacts on the stock of outstanding government debt and hence debt interest payments;
- a policy decision about the extent to which National Savings will make a contribution to the central government net financing requirement. This affects debt interest payments to the extent that interest rates paid on National Savings products differ from those on other debt instruments; and
- policy decisions regarding the mix of financing through conventional and index-linked gilts. This again affects the level of debt interest payable as the returns on the two securities differ.

22 These policies underlie a particular pattern of debt issuance, as set out previously in Debt Management Reports and now in the DRMR. For consistency this pattern must be used in the calculations of debt interest payments.

23 For the three year period of the rolling review since March 1998, I examined the relevant working papers relating to the 1999 and 2000 Budgets and the 1998, 1999 and 2000 Pre-Budget Reports. I confirm that the figures for government borrowing used to calculate debt interest payments were consistent with the forecast of government borrowing, and that they reflected the policy assumptions in the relevant Debt Management Report. I confirmed also that the Treasury has used the audited methodology for projecting interest rates, (my Report for the November 2000 Pre-Budget Report, HC 959 Session 1999–2000), and has applied the outcome in its calculations of debt interest payments, including for this Budget.

24 For this Budget, my examination of the relevant papers confirms that the data input to the Treasury's economic forecasting system is consistent with the detailed forecast of debt interest over the year ahead.

25 The government's current statement of financing policy is set out in the Debt and Reserves Management Report published today. In addition to the debt management policies set out above, the DRMR indicates that there will be a run down of the government's current net short term cash position. This has arisen due to buoyant public finances and unexpectedly large cash receipts from the auction of radio spectrum licenses for third generation mobile phones. Consistent with the policy commitment given in the November 2000 Pre-Budget Report, the run down in the short term cash position will take place over the next three years. This will in turn reduce the scale of new gilts issuance, and hence the total outstanding stock of debt and debt interest payable, compared to what it would have been.

26 For 2001–02, I have confirmed that the pattern of gilt issuance adopted in the DRMR has been used in the calculation of the debt interest forecast. For subsequent years, the DRMR makes no explicit assumption about the pattern of gilt issuance. However, the Treasury forecasting system assumes that the 2001-02 pattern remains unchanged. I have confirmed that this assumption has been applied in making forecasts of debt interest for future years.

Conclusions

27 I conclude that the assumption of broadly constant factor shares was a reasonable one to use over the rolling review period of the last three years, and that it currently remains a reasonable one to adopt for the future. I am satisfied that the calculations of debt interest payments were consistent with forecasts for central government's net financing requirement and with current financing policy at the time of each forecast made since the March 1998 Budget, and are for this Budget.