Appendix A: Forecasting public finances

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This appendix looks at the techniques used for the Green Budget public finance forecasts. It starts by comparing the forecasts made for borrowing in 2004–05 in last year's Green Budget and the December 2004 Pre-Budget Report with the eventual out-turn. It then goes on to provide more background information to the short-term and medium-term public finance forecasts that are set out in Chapter 5.

A.1 The accuracy of our previous forecasts

The December 2005 Pre-Budget Report (PBR) gave an out-turn figure of £38.8 billion for public sector net borrowing in 2004–05. This was higher than both the Treasury December 2004 Pre-Budget Report forecast of £34.2 billion and the January 2005 IFS Green Budget forecast of £34.4 billion. The deficit on the current budget was £19.9 billion, which was closer to the £15.9 billion deficit forecast in the January 2005 IFS Green Budget than the £12.5 billion deficit forecast in the Treasury December 2004 Pre-Budget Report. Current receipts came in weaker and current spending (including depreciation) higher than expected in either forecast. The December 2005 Pre-Budget Report out-turn for public sector net investment was £18.9 billion, which came in between the £18.5 billion January 2005 IFS Green Budget forecast and the £21.7 billion Treasury December 2004 Pre-Budget Report forecast. (Table A.1.)

Table A.1. A comparison of last year's IFS Green Budget forecast and the Treasury's December 2004 Pre-Budget Report forecast with the estimated out-turn for 2004–05 from the December 2005 Pre-Budget Report

£ billion	**HM Treasury PBR forecast, December 2004**	**IFS Green Budget forecast, January 2005**	**Estimate, PBR, December 2005**
Current receipts	451.0	449.6	448.4
Current expenditure[a]	463.5	465.5	468.3
Net investment	21.7	18.5	18.9
Public sector net borrowing	34.2	34.4	38.8
Surplus on current budget	–12.5	–15.9	–19.9

[a] Includes depreciation.

Sources: Out-turn figures for 2004–05 from HM Treasury, *Pre-Budget Report 2005*, Cm. 6701, December 2005, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr05/report/prebud_pbr05_repindex.cfm. Forecasts from HM Treasury, *Pre-Budget Report 2004,* Cm. 6408, December 2004, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr04/prebud_pbr04_index.cfm, and table 4.1 of R. Chote, C. Emmerson, D. Miles and Z. Oldfield (eds), *The IFS Green Budget: January 2005*, IFS Commentary no. 98, January 2005, http://www.ifs.org.uk/budgets/gb2005/index.php.

Table A.2 shows the breakdown of the forecasts for tax receipts contained in the December 2004 Pre-Budget Report and the January 2005 IFS Green Budget. Both sets of predictions overestimated total receipts, although the January 2005 IFS Green Budget did so by a smaller margin. However, the HM Treasury 2004 Pre-Budget Report was closer to the 2004–05 out-turn for net taxes and National Insurance contributions. The largest absolute error was in non-tax receipts, which were £3.8 billion lower than both the Pre-Budget Report and IFS Green Budget forecasts. In terms of tax receipts, the largest absolute error for both the Pre-Budget Report's and the IFS Green Budget forecast was in corporation tax: the December 2004 Pre-Budget Report underestimated corporation tax receipts by £1.2 billion while the Green Budget forecast's underestimate was slightly larger, at £1.9 billion.

Table A.2. IFS Green Budget and Treasury main errors in forecasting tax receipts, 2004–05

£ billion	**Pre-Budget Report, December 2004**	**IFS Green Budget forecast, January 2005**
Income tax (net of tax credits)	0.8	–0.4
National Insurance contributions	–0.4	0.4
Value added tax	0.5	0.0
Corporation tax (net of tax credits)	–1.2	–1.9
Net taxes & National Insurance contributions	*–1.2*	*–2.6*
Non-tax receipts[a]	3.8	3.8
Total current receipts	*2.6*	*1.2*

[a] Includes accruals adjustments on taxes, the tax credits adjustments, interest and dividends, gross operating surplus and rent; net of oil royalties and business rate payments by local authorities, the own resources contribution to the EC budget and PC corporation tax payments.
Sources: Out-turn figures for 2004–05 from HM Treasury, *Pre-Budget Report 2005*, Cm. 6701, December 2005, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr05/report/prebud_pbr05_repindex.cfm. Forecasts from HM Treasury, *Pre-Budget Report 2004,* Cm. 6408, December 2004, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr04/prebud_pbr04_index.cfm, and table 4.1 of R. Chote, C. Emmerson, D. Miles and Z. Oldfield (eds), *The IFS Green Budget: January 2005*, IFS Commentary no. 98, January 2005, http://www.ifs.org.uk/budgets/gb2005/index.php.

A.2 Techniques used in our forecasts

For the current financial year, three different sources of information are examined before coming to a judgement for each element of government revenue. In addition to the latest Treasury forecast from the December 2005 Pre-Budget Report, we use information from the revenues implied by a current receipts method, and the IFS modelled approach.[1]

1. Information from current receipts. The current receipts method uses the information on receipts received in the current financial year compared with those received up to the same point in the previous financial year. An estimate for the current year's receipts is then calculated using the following formula:

$$\textit{2005–06 forecast} = \frac{\textit{Receipts received so far this year}}{\textit{Receipts received to the same point last year}} \times \textit{2004–05 receipts.}$$

[1] For a more detailed explanation of both these techniques, see C. Giles and J. Hall, 'Forecasting the PSBR outside government: the IFS perspective', *Fiscal Studies*, vol. 19, pp. 83–100, 1998, http://www.ifs.org.uk/publications.php?publication_id=2250.

While this is useful when forecasting revenues in the current financial year, it cannot provide projections for borrowing in future years. Also, particular caution should be used when revenues are cyclical or changes have been made that may affect the timing of payments – for example, the effect of the recent move to a quarterly system of corporation tax payments.

2. The IFS modelled receipts approach. This estimates growth in each of the taxes using forecasts for the growth in the tax base relevant to each tax, combined with an estimate of the elasticity of revenue with respect to the growth in the tax base. Information on the revenue effects of pre-announced tax changes from previous Budgets is then added in order to reach a forecast. Hence, modelled receipts can be summarised by the following formula:

2005–06 forecast = (*2004–05 receipts* × *Tax-base change* × *Elasticity*) + *Tax changes*.

This technique enables forecasts to be made for future years, given the expected structure of the tax system. It should be noted that these forecasts become considerably less accurate for later years, since forecasts for changes in tax bases, estimates of elasticities and the impact of tax changes all become less accurate.

The elasticities are largely estimated from TAXBEN, the IFS tax and benefit model. The estimates for income tax elasticities are supplemented by a model of the responsiveness of income tax revenues to changes in employment and wages. For fuel, an elasticity calculated from previous IFS research is used.[2] Elasticities for beer, spirit, wine and tobacco duties are taken from the median elasticity found in a range of UK studies.[3]

A.3 Forecasts for 2005–06

The Green Budget forecast is a judgement based on the Treasury's latest forecast contained in the December 2005 Pre-Budget Report, the current receipts method and the IFS modelled approach. Each of these is presented in Table A.3. There is very little divergence between our expectation of receipts and spending in 2005–06 and those published in the Pre-Budget Report.

[2] L. Blow and I. Crawford, *The Distributional Effects of Taxes on Private Motoring*, Commentary no. 65, IFS, London, 1997.

[3] M. Chambers, 'Consumers' demand and excise duty receipts equations for alcohol, tobacco, petrol and derv', Government Economic Service, Working Paper no. 138, August 1999.

Table A.3. Forecasts for government borrowing in 2005–06

£ billion	***PBR Dec. 2005***	***Current receipts method***	***IFS forecasting model***	***IFS forecast judgement***
Income tax (net of tax credits)	131.3	133.8[e]	131.6	131.6
National Insurance contributions	84.2	85.8	82.0	84.2
Value added tax (VAT)	74.4	73.1	76.1	74.4
Corporation tax (net of tax credits)	41.3	39.5	38.5	41.5
Petroleum revenue tax	2.2	2.0	1.3	2.2
Fuel duties	23.9	23.3	24.4	23.3
Capital gains tax	2.8	n/a	2.7	2.8
Inheritance tax	3.3	2.5	3.0	3.3
Stamp duties	10.2	10.1	9.7	10.2
Tobacco duties	8.2	8.4	8.4	8.3
Spirits duties	2.4	2.3	2.5	2.4
Wine duties	2.3	2.3	2.3	2.3
Beer and cider duties	3.4	3.3	3.6	3.4
Betting and gaming duties	1.4	1.4	1.5	1.4
Air passenger duty	1.0	1.0	0.9	1.0
Insurance premium tax	2.5	2.4	2.5	2.5
Landfill tax	0.8	0.8	0.7	0.8
Climate change levy	0.8	*0.8*	0.8	0.8
Aggregates levy	0.3	*0.3*	0.3	0.3
Customs duties and levies	2.2	2.3	2.3	2.2
Total HM Revenue and Customs	**398.8**	**395.4**	**395.2**	**399.0**
Vehicle excise duties	4.9	4.9	5.0	4.9
Business rates	20.3	20.3	19.2	20.3
Council tax[a]	21.1	*21.1*	21.1	21.1
Other taxes and royalties[b]	12.9	*12.9*	12.6	12.9
Net taxes and NI contributions[c]	**458.0**	**454.6**	**453.1**	**458.2**
Other adjustments[d]	24.9	*24.9*	*24.9*	24.9
Current receipts	**483.0**	**479.5**	**478.0**	**483.1**
Current spending	**493.6**	***493.6***	***493.6***	**493.6**
Current balance	**–10.6**	**–14.1**	**–15.6**	**–10.5**
Net investment	26.3	26.3	*26.3*	26.3
Public sector net borrowing	**37.0**	**40.4**	**41.9**	**36.8**

[a] HM Treasury figures are based on stylised assumptions rather than government forecasts, as council tax increases are determined annually by local authorities, not by the government. [b] Includes VAT refunds and money paid into the National Lottery Distribution Fund. [c] Includes VAT and the traditional 'own resources' contributions to the EU budget. [d] This line is a sum of accruals adjustments on taxes, tax credits adjustment, interest and dividends and other receipts, less own resources contribution to EU Budget and PC corporation tax payments. [e] Current receipts estimate of income tax revenues includes capital gains tax.

Note: Figures in italics are taken from the 2005 PBR.

Sources: Treasury forecasts from HM Treasury, *Pre-Budget Report 2005*, Cm. 6701, December 2005, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr05/report/prebud_pbr05_repindex.cfm (this table is similar to table B14 on page 225); IFS calculations.

HM Revenue and Customs receipts

For **income tax** (net of tax credits), we forecast £131.6 billion, which is £0.3 billion higher than the PBR forecast of £131.3 billion. Our estimate is broadly consistent with the current receipts projection for net income tax and capital gains tax of £133.9 billion and the IFS modelled forecast of £131.6 billion.

Our forecast for **corporation tax** (net of tax credits) is £41.5 billion. This is £0.2 billion higher than the Treasury forecast of £41.3 billion. The current receipts forecast suggests that net receipts will be £39.5 billion, but this excludes the additional £1.1 billion in receipts from North Sea oil companies that was brought forward by the March 2005 Budget. The IFS modelled forecast suggests receipts of just £38.5 billion. We discount this on the basis of current receipts to date – in addition, the Treasury should have significantly more information on short-term corporation tax receipts in particular.

Our forecast for **stamp duties** matches the Treasury's, with expected receipts of £10.2 billion this year. This is slightly higher than both the current receipts forecast (£10.1 billion) and the IFS modelled forecast (£9.7 billion).

Our forecast for **National Insurance contributions** also matches that of the Treasury (£84.2 billion). This is between the current receipts forecast (£85.8 billion) and the IFS modelled receipts forecast (£82.0 billion).

We forecast **VAT** receipts of £74.4 billion, which is the same as the Treasury's forecast and again roughly halfway between the forecast from the current receipts projection (£73.1 billion) and the IFS modelled receipts (£76.1 billion).

We forecast that **fuel duties** will yield £23.4 billion, which is £0.5 billion below the Treasury's projection. This is taken on the basis of the current receipts forecast (£23.4 billion).

Other government receipts

For all other receipts, we take the Treasury's forecasts for 2005–06.

Government expenditure

We assume that the Treasury's forecasts for **current spending** (£493.6 billion) and **public sector net investment** (£26.3 billion) in 2005–06 are accurate. There is a reasonable chance that the Treasury will in fact underspend on public sector net investment. While such an undershoot would reduce public sector net borrowing, it would have no impact on the golden rule. In addition, under the End-Year Flexibility arrangements, any underspending by departments could simply lead to higher spending in future years.

Government borrowing

We forecast a **deficit on current budget** of £10.5 billion for 2005–06. This is £0.1 billion lower than the £10.6 billion deficit forecast by the Treasury.

We forecast that **public sector net borrowing** will be £36.8 billion, which is £0.2 billion lower than the £37.0 billion forecast by the Treasury.

A.4 Medium-term forecasts

Compliance with the golden rule is judged over the economic cycle, and any assessment of the fiscal stance should take into account the performance of the economy. Table A.4 presents the macroeconomic forecasts underlying the Green Budget forecasts under the three different economic scenarios used. For the Green Budget baseline forecast, the Treasury's macroeconomic forecasts are used. These assume that national income will grow by 1¾% in 2005–06, 2¼% in 2006–07, 3% in 2007–08, 2¾% in 2008–09 and thereafter at ¼ percentage point below the Treasury's estimate of trend growth, namely at 2¼%. Under the first alternative Green Budget scenario (the Morgan Stanley central case), growth in national income is expected to be in line with the Treasury's prediction this year, slightly higher than the Treasury for 2006–07, lower in 2007–08 and 2008–09, and then higher in the medium term. Under the second alternative Green Budget scenario (the Morgan Stanley 'worse case' scenario), growth is lower every year until 2009–10, reflecting a pessimistic view of the level

Table A.4. Medium-term public finance forecasts under various macroeconomic assumptions

	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
Green Budget baseline (PBR 'cautious' assumptions)						
Gross domestic product (GDP)	1¾	2¼	3	2¾	2¼	2¼
Real consumers' expenditure	1¾	2¼	2½	2¾	2¼	2¼
Employment	0.8	0.8	0.6	0.6	0.6	0.6
Real wages	1½	1¾	1½	1½	1½	1½
GDP deflator	2½	2½	2¾	2¾	2¾	2¾
Alternative Green Budget scenario I (Morgan Stanley central case)						
Gross domestic product (GDP)	1¾	2¼	2¾	2¼	2½	2½
Real consumers' expenditure	1½	2	2¼	2	2¼	2¼
Employment	1.0	0.7	0.7	0.6	0.7	0.6
Real wages	1¼	1¾	1¾	1¾	1½	1½
GDP deflator	2½	2¼	2¼	2¼	2½	2½
Alternative Green Budget scenario II (Morgan Stanley 'worse case')						
Gross domestic product (GDP)	1¾	1½	2	2	2½	2½
Real consumers' expenditure	1½	¾	1½	1½	2½	2½
Employment	0.9	0.3	0.6	0.6	0.9	0.9
Real wages	1¼	1¾	1¼	1¼	1½	1½
GDP deflator	2½	3	2¾	2½	2¼	2¼

Sources: Authors' calculations; Treasury forecasts from HM Treasury, *Pre-Budget Report 2005*, Cm. 6701, December 2005, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr05/report/prebud_pbr05_repindex.cfm.

of sustainable output. This is associated with markedly lower real consumer spending growth, which is also shown in the table, alongside employment, real earnings growth and the GDP deflator.

Under the Green Budget baseline scenario, published Treasury forecasts are used, where available, for all macroeconomic assumptions. Under all scenarios, the growth in corporate profits is not used for corporation tax figures, due to difficulties in forecasting these profits in the current climate. Instead of this, we assume that in the medium term, corporation tax receipts return to their average level in recent years.

Appendix B: Headline tax and benefit rates and thresholds

	2005–06 level	2006–07 level[a]
Income tax		
Personal allowance: under age 65	£4,895 p.a.	£5,035 p.a.
aged 65–74	£7,090 p.a.	£7,280 p.a.
aged 75 and over	£7,220 p.a.	£7,420 p.a.
Married couple's allowance, restricted to 10%:		
aged 65 or over on 6 April 2000	£5,905 p.a.	£6,065 p.a.
aged 75 or over	£5,975 p.a.	£6,135 p.a.
Lower rate	10%	10%
Basic rate	22%	22%
Higher rate	40%	40%
Starting-rate limit	£2,090 p.a.	£2,150 p.a.
Basic-rate limit	£32,400 p.a.	£33,300 p.a.
Tax rates on interest income	10%, 20%, 40%	10%, 20%, 40%
Tax rates on dividend income	10%, 32.5%[b]	10%, 32.5%[b]
National Insurance		
Lower earnings limit (LEL)	£82 p.w.	£84 p.w.
Upper earnings limit (UEL)	£630 p.w.	£645 p.w.
Earnings threshold (employee and employer)	£94 p.w.	£97 p.w.
Class 1 contracted-in rate: employee – below UEL	11%	11%
– above UEL	1%	1%
employer – below UEL	12.8%	12.8%
– above UEL	12.8%	12.8%
Class 1 contracted-out rate: employee – below UEL	9.4%	9.4%
(salary-related schemes) – above UEL	1%	1%
employer – below UEL	9.3%	9.3%
– above UEL	12.8%	12.8%
Corporation tax		
Rates: starting rate	zero[c]	19%
small companies' rate	19%	19%
standard rate	30%	30%
Capital gains tax		
Annual exemption limit: individuals	£8,500 p.a.	£8,800 p.a.
trusts	£4,250 p.a.	£4,400 p.a.
Non-business assets: higher-rate taxpayers	24%–40%	24%–40%
basic-rate taxpayers	12%–20%	12%–20%
Business assets: higher-rate taxpayers	10%–40%	10%–40%
basic-rate taxpayers	5%–20%	5%–20%
Inheritance tax		
Threshold	£275,000	£285,000
Rate for transfer at or near death	40%	40%

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	2005–06 level	2006–07 level[a]
Value added tax		
Standard rate	17.5%	17.5%
Reduced rate	5%	5%
Registration threshold	£60,000 p.a.	£62,000 p.a.
Excise duties		
Beer (pint at 3.9% abv)	29p	29p
Wine (75cl bottle at 12% abv)	126p	129p
Spirits (70cl bottle at 40% abv)	548p	561p
20 cigarettes: specific duty	205p	210p
ad valorem (22% of retail price)	102p	104p
Ultra-low-sulphur petrol (litre)	47p	48p
Ultra-low-sulphur diesel (litre)	47p	48p
Air passenger duty		
Destinations within the EU: economy	£5	£5
club/first class	£10	£10
Destinations outside the EU: economy	£20	£20
club/first class	£40	£40
Betting and gaming duty		
Gross profits tax	15%	15%
Spread betting rate: financial bets	3%	3%
other bets	10%	10%
Insurance premium tax		
Standard rate	5%	5%
Higher rate (for insurance sold accompanying certain goods and services)	17.5%	17.5%
Stamp duty		
Land and buildings:		
standard residential threshold	£120,000 p.a.	£120,000 p.a.
residential threshold in disadvantaged areas	£150,000 p.a.	£150,000 p.a.
non-residential threshold	£150,000 p.a.	£150,000 p.a.
rate: up to threshold	0%	0%
threshold–£250,000	1%	1%
£250,000–£500,000	3%	3%
above £500,000	4%	4%
Stocks and shares: rate	0.5%	0.5%
Vehicle excise duty		
Graduated system (for new cars from 1 March 2001)	£55–£170 p.a.	£55–£175 p.a.
Standard rate	£170 p.a.	£175 p.a.
Small-car rate (engines up to 1,549cc)	£110 p.a.	£115 p.a.
Heavy goods vehicles (varies according to vehicle type and weight)	£160–£1,850 p.a.	£170–£1,940 p.a.
Landfill tax		
Standard rate	£18 per tonne	£21 per tonne
Lower rate (inactive waste only)	£2 per tonne	£2 per tonne

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	2005–06 level	2006–07 level[a]
Business rates		
Rate applicable for high-value properties[d] in: England	42.2%	43.3%
Scotland	46.55%	45.3%
Wales	42.1%	43.2%
Council tax		
Average rate band D council tax in England	£1,214	Councils to set
Income support / income-based jobseeker's allowance		
Single (aged 25 or over)	£56.20 p.w.	£57.45 p.w.
Couple (both aged 18 or over)	£88.15 p.w.	£90.10 p.w.
Basic state pension		
Single	£82.05 p.w.	£84.25 p.w.
Couple	£131.20 p.w.	£134.75 p.w.
Winter fuel payment: for those aged 60–79	£200[e]	£200
for those aged 80 or over	£300[e]	£300
Pension credit		
Guarantee credit for those aged 60 or over: single	£109.45 p.w.	£114.05 p.w.
couple	£167.05 p.w.	£174.05 p.w.
Savings credit for those aged 65 or over:		
threshold – single	£82.05 p.w.	£84.25 p.w.
threshold – couple	£131.20 p.w.	£134.75 p.w.
maximum – single	£16.44 p.w.	£17.88 p.w.
maximum – couple	£21.55 p.w.	£23.58 p.w.
withdrawal rate	40%	40%
Child benefit		
First child	£17.00 p.w.	£17.45 p.w.
Other children	£11.40 p.w.	£11.70 p.w.
Child tax credit		
Family element (doubled for first year of a child's life)	£545 p.a.	£545 p.a.
Child element	£1,690 p.a.	£1,765 p.a.
Disabled child element	£2,285 p.a.	£2,350 p.a.
Working tax credit		
Basic element	£1,620 p.a.	£1,665 p.a.
Couples and lone-parent element	£1,595 p.a.	£1,640 p.a.
30-hour element	£660 p.a.	£680 p.a.
Disabled worker element	£2,165 p.a.	£2,225 p.a.
Childcare element:		
maximum eligible cost for one child	£175.00 p.w.	£175.00 p.w.
maximum eligible cost for two or more children	£300.00 p.w.	£300.00 p.w.
proportion of eligible costs covered	70%	80%
Features common to child and working tax credits		
First threshold	£5,220 p.a.	£5,220 p.a.
First threshold if entitled to child tax credit only	£13,910 p.a.	£14,155 p.a.
First withdrawal rate	37%	37%
Second threshold	£50,000 p.a.	£50,000 p.a.
Second withdrawal rate	1 in 15	1 in 15

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	2005–06 level	2006–07 level[a]
Maternity benefits		
Sure Start maternity grant	£500	£500
Statutory maternity pay: weeks 1–6	90% earnings	90% earnings
weeks 7–26	£106.00 p.w., or 90% earnings if lower	£108.85 p.w., or 90% earnings if lower
Maternity allowance	£106.00 p.w.	£108.85 p.w.

[a] 2006–07 figures take pre-announced values where available and estimated results of standard indexation otherwise.

[b] Offsetting tax credit available which reduces effective tax rates to 0% and 25%.

[c] Minimum rate of 19% applies on distributed profits.

[d] Applies where rateable values are at least £21,500 in Greater London, £15,000 in the rest of England, £29,000 in Scotland, and to all non-domestic properties in Wales. Lower rates apply below these thresholds.

[e] In addition to the winter fuel payment, there is a one-off payment of £200 for those aged 65 or over and not receiving pension credit guarantee and £50 for those aged 70 or over and receiving pension credit guarantee.

Sources: Various HM Treasury and HM Revenue and Customs Press Releases, March 2005 and December 2005; HM Treasury, *2005 Pre-Budget Report*, December 2005, http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr05/prebud_pbr05_index.cfm; HM Treasury, *Tax Ready Reckoner and Tax Reliefs*, December 2005, www.hm-treasury.gov.uk/media/FA1/96/pbr05_taxreadyreckoner_223.pdf; www.hmrc.gov.uk; www.dwp.gov.uk/lifeevent/benefits/index.asp; www.dvla.gov.uk/vehicles/taxation.htm; www.statistics.gov.uk/pdfdir/cpibrief1205.pdf; www.local.odpm.gov.uk/finance/ctax/data/tab256pc.pdf; http://www.local.dtlr.gov.uk/finance/busrats/bri42005.pdf; http://www.scotland.gov.uk/News/Releases/2005/11/23124356; http://www.information.wales.gov.uk/content/decisionreports/business/business-e.asp.

For descriptions of the tax and benefit systems, see S. Adam and J. Browne, *A Survey of the UK Tax System*, IFS Briefing Note no. 9, 2006, http://www.ifs.org.uk/bns/bn09.pdf, and J. Shaw and L. Sibieta, *A Survey of the UK Benefit System*, IFS Briefing Note no. 13, 2005, http://www.ifs.org.uk/bns/bn13.pdf, respectively.

For a summary of the main tax measures introduced in each Budget and Pre-Budget Report since 1979, see http://www.ifs.org.uk/ff/budget_measures.xls.

For estimates of the effects of various illustrative tax changes on government revenues, see HM Treasury, *Tax Ready Reckoner and Tax Reliefs*, December 2005, http://www.hm-treasury.gov.uk/media/FA1/96/pbr05_taxreadyreckoner_223.pdf.