Office for Budget Responsibility

Recognising uncertainty

Robert Chote
Chairman

Hutchins Center on Fiscal and Monetary Policy
Brookings Institution
Washington DC, 15 December 2014

A brief introduction to the OBR

- **Independent, accountable to Executive and Parliament**

- **Four main tasks**

  – Produce five-year forecasts for the economy and public finances
  – Judge progress towards the Government's fiscal and spending targets
  – Scoring of tax and spending policy measures
  – Assess long-term (50 year) fiscal sustainability and balance sheet

- **Differences from the CBO/JCT/OMB**

  – Analysis covers entire public sector
  – Confined to current policy of current Government
  – The Executive does not publish its own forecasts

Office for
**Budget
Responsibility**

Uncertainty and the OBR's work

- In UK Budget-making, the Executive is powerful relative to Parliament and the Treasury (in its OMB role) is powerful relative to Cabinet departments

- We were created to remove politically-motivated wishful thinking from the official forecasts, rather than to help Parliament consider options *à la* CBO

- Key objectives: increase transparency and emphasise uncertainty

- Forecast highly disaggregated, so transparency means a lot of detail

- But why emphasise uncertainty?
  – Policy should reflect uncertainty, not ignore it
  – Avoid the spurious sense of precision that comes with lots of detail
  – Offer a richer assessment of progress towards targets
  – Educate people as to what forecasts can and cannot achieve
  – Avoid tying success of institution to accuracy of central forecast

Office for
Budget Responsibility

Illustrating uncertainty: narrative

- **Explain conditioning assumptions (and implied risks) e.g.**
  - Monetary policy in line with market expectations
  - Fiscal policy as announced
  - Credit conditions normalise gradually
  - World economy evolves broadly in line with IMF forecasts
  - Exchange rate, oil and equity prices move in line with market expectations

- **Identify specific economic risks e.g.**
  - Euro area instability
  - Volatility as global monetary policy 'unloosens'
  - Adjustment to ongoing fiscal consolidation proves difficult
  - Productivity and real wage growth fail to pick up

- **Identify specific fiscal risks e.g.**
  - Effective tax rates
  - Will central and local government spend more than they plan to?
  - Policy delivery risks
  - Uncertainty around scoring of policies

Office for
Budget
Responsibility

Illustrating uncertainty: scorings

- Every scoring we certify is given an uncertainty rating, based on the data, modelling and behavioural assumptions that underpin it
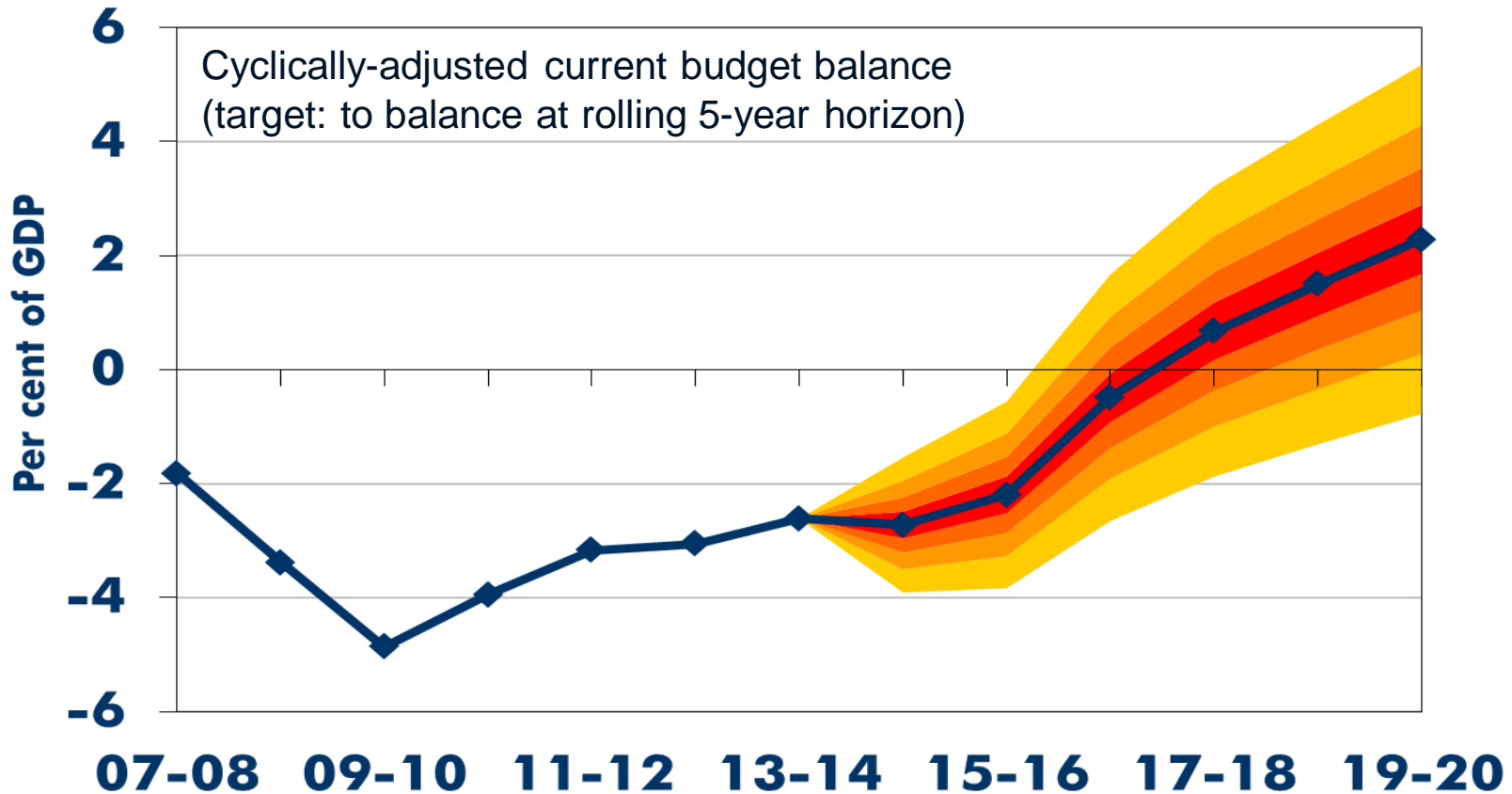
Example: Exempting children from Air Passenger Duty

	Very high	High	Medium-high	Medium	Medium-low	Low
Data	- Very little data - Poor quality	- Little data -Much of it poor quality	-Basic data, perhaps from external sources -assumptions cannot be readily checked	- Incomplete data - High quality external sources - verifiable assumptions	-High quality data	-High quality data
						High importance
Modelling	- Significant modelling challenges - Multiple stages and/or high sensitivity on a range of unverifiable assumptions	- Significant modelling challenges - Multiple stages and/or high sensitivity on a range of unverifiable assumptions	- Some modelling challenges - Difficulty in generating an up-to-date baseline and sensitivity to particular underlying assumptions	- Some modelling challenges - Difficulty in generating an up-to-date baseline	- Straightforward modelling - few sensitive assumptions required	-Straightforward modelling of new parameters for existing policy with few or no sensitive assumptions
				Low importance		
Behaviour	- No information on potential behaviour	- Behaviour is volatile or very dependent on factors outside the tax/benefit system	-Significant policy for which behaviour is hard to predict	- Considerable behavioural changes or dependent on factors outside the system	- Behaviour fairly predictable	- Well established, stable and predictable behaviour
					Medium importance	
Overall	Medium-low					

Illustrating uncertainty: quantitative

- **We quantify uncertainty around central fiscal forecast…**

- **…with particular reference to chances of hitting targets**

- **We use three main techniques for medium term forecasts**

  - Probability bands implied by past forecast errors
  - Sensitivity to key economic determinants
  - Scenario analysis

- **We try to explain how wrong the central forecast would need to be – and in what sorts of ways - for the targets to be missed**

Office for
**Budget
Responsibility**

Probabilities based on past errors

Cyclically-adjusted current budget balance
(target: to balance at rolling 5-year horizon)

Size and distribution of past official forecast errors
implies 80% chance of success on current policy

Office for
Budget
Responsibility

Mechanical sensitivity analysis

- **Bigger / smaller output gap (i.e. higher or lower potential output)**

- **Faster / slower GDP growth**

Table 1.1: Cyclically adjusted current budget in 2019-20

		Per cent of GDP				
		Output gap closes				
		2015-16	2017-18	2019-20	2021-22	2023-24
Level of potential in 2019-20 relative to central forecast (per cent)	-2	0.9	0.9	0.9	0.9	0.9
	-1	1.6	1.6	1.6	1.6	1.6
	0	2.3	2.3	2.3	2.3	2.3
	1	3.0	3.0	3.0	3.0	3.0
	2	3.7	3.7	3.7	3.7	3.7

- **Higher / lower government borrowing costs**

- **Higher / lower cyclical adjustment coefficients**

Potential output is the key uncertainty
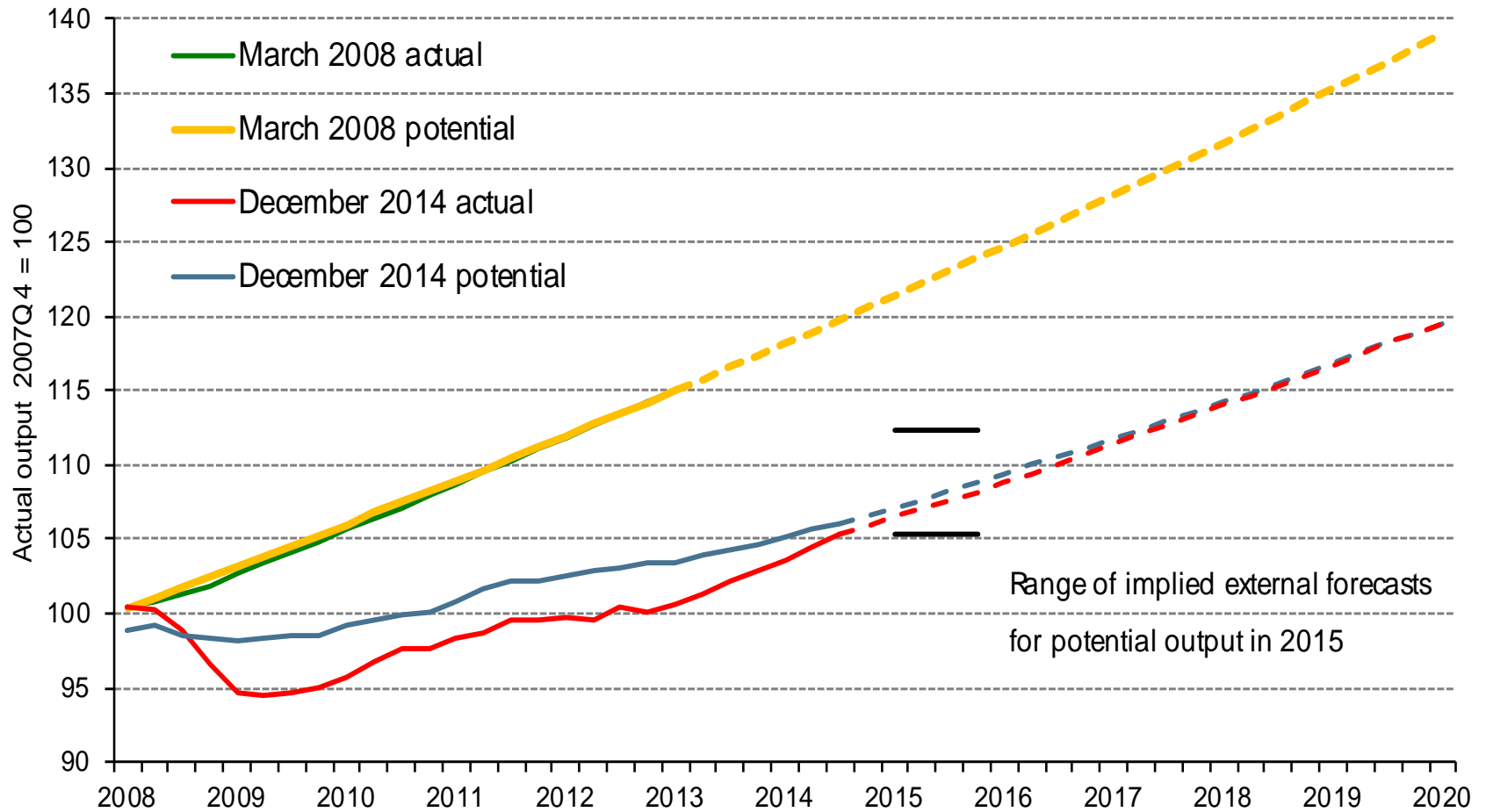
Source: HM Treasury, ONS, OBR

Selected scenario analysis

- **Used to highlight key debates/critiques**

- **Recent examples**

  - Higher or lower productivity growth

  - Faster monetary tightening (for 'good' or 'bad' reasons)

  - Spike in oil prices

  - Impact of euro-zone crisis (took OECD scenario)

- **Most boil down to identifying cyclical/structural impact**

Office for
Budget
Responsibility

What can the balance sheet add?

- **_Whole of Government Accounts_ on commercial basis**

- **Includes assessment of contingent liabilities**
  - i.e. those with non-negligible but less than 50% probability

Table 1.1: WGA quantifiable contingent liabilities

	£ billion		
	2011-12 restated	2012-13	Difference
Financial Stability interventions	9.9	9.9	0.0
Export guarantees and insurance policies	9.9	12.7	2.8
Clinical negligence	8.4	10.5	2.1
Taxes subject to challenge	14.5	14.5	0.0
Supporting international organisations	32.6	32.1	-0.5
Oil and gas field decommissioning revenues	20.0	0.0	-20.0
Other	5.5	8.2	2.7
Total quantifiable contingent liabilities	100.8	87.9	-12.9

Office for
Budget
Responsibility

Unquantifiable contingent liabilities

Table 1.1: Non-quantifiable contingent liabilities in the 2012-13 WGA

Details of the most significant non-quantifiable contingent liabilities in the 2012-13 WGA
• Legal claims, compensation claims and tribunal cases against various WGA entities.
• Commitments made by several WGA entities to fund any deficits of individual pension schemes.
• HM Treasury guarantees for indemnities in relation to financial stability interventions.
• Compensation schemes set up by HM Treasury in relation to former shareholders of various banks taken into public sector ownership as part of the financial stability interventions.
• HM Treasury's contingent liability for risks associated with reinsurance arising from acts of terrorism.
• Various civil nuclear contingent liabilities in BIS resource accounts.
• Future increases in liabilities of the Financial Assistance Scheme beyond those recognised in the provision.
• Contingent liabilities arising from rail franchise agreements.
• Contingent liability in relation to the Channel Tunnel (to return the land to a suitable condition if the tunnel ceases to operate).
• Access to life insurance for Ministry of Defence personnel.

Office for
Budget
Responsibility

Uncertainty in long-term projections

- **Central projection based on 'unchanged' policy**

- **Takes on board projected demographic change**

- **Calculate debt trajectories and fiscal gaps**

- **Sensitivity analysis**
  - Fiscal position at end of medium-term forecast
  - Long-term relationship between interest rate and growth rate
  - Demography: ageing / net migration flows
  - Health spending / productivity
  - Overall productivity: less significant if taxes and benefits indexed to earnings

- **Also selected issues in tax revenue sustainability**
  - North Sea oil receipts: impact of different price and production scenarios
  - Motoring taxes: fuel efficiency scenarios

Office for
**Budget
Responsibility**

A postscript: *ex post* assessment

- **We emphasise uncertainty *ex ante***

- **So we try to show that we learn from it *ex post...***

- **...via detailed annual analysis of past forecast errors**

Figure 1.1: June 2010 net borrowing and current budget errors for 2012-13

	Forecast	Outturn	Error	£ billion *of which:*			
				Economic factors	Fiscal forecasting errors	Policy changes	Classifi-cation changes
Receipts (a)	621.9	586.5	-35.5	-31.8	-4.7	-3.3	4.3
Spending (b)	711.0	702.1	-8.9	0.3	-2.4	-10.7	3.8
of which:							
Current expenditure (c)	664.5	657.1	-7.4	0.3	-3.2	-7.5	3.0
Net investment (d)	24.0	22.5	-1.6	0.0	1.4	-3.7	0.8
Depreciation (e)	22.5	22.5	0.0	0.0	-0.6	0.6	0.0
Net borrowing (b - a)	89.1	115.7	26.6	32.1	2.3	-7.3	-0.5
Current budget (a - c - e)	-65.1	-93.2	-28.1	-32.1	-0.9	3.6	1.3