

Recognising uncertainty

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A brief introduction to the OBR

- **Created in 2010 with formal legislation in 2011**
- **Independent, jointly accountable to Executive and Parliament**
- **Council of three members plus 20 civil servant staff**
- **Four main tasks**
 - Produce five-year forecasts for the economy and public finances
 - Judge progress towards the Government's fiscal and welfare spending targets
 - Scrutinising scoring of tax and spending policy measures
 - Assess long-term (50 year) fiscal sustainability and balance sheet
- **In addition**
 - Requirement to forecast devolved tax revenues from 2015
 - Requirement to prepare regular fiscal risks statement from 2017

Uncertainty and the OBR's work

- In UK fiscal policy, the Executive is powerful relative to Parliament and the Treasury 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
- 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

Illustrating uncertainty: narrative

- **Explain conditioning assumptions (and implied risks) e.g.**
 - Monetary policy in line with market expectations
 - Fiscal policy as announced
 - World economy evolves broadly in line with IMF forecasts
 - Simple assumptions for exchange rate, oil and equity prices
- **Identify specific economic risks e.g.**
 - Slowdown in China
 - Volatility as US and other interest rates start to rise
 - Productivity and real wage growth fail to pick up
 - Fall in exchange rate given large current account deficit
- **Identify specific fiscal risks e.g.**
 - Central and local government public services spending
 - Policy delivery risks (eg social security reform)
 - Size and timing of financial asset sales
 - Reclassification and policy change for housing associations
 - Uncertainty around scoring of policies

Illustrating uncertainty: scorings

- Every scoring we certify is given an uncertainty rating, based on the data, modelling and behavioural assumptions that underpin it

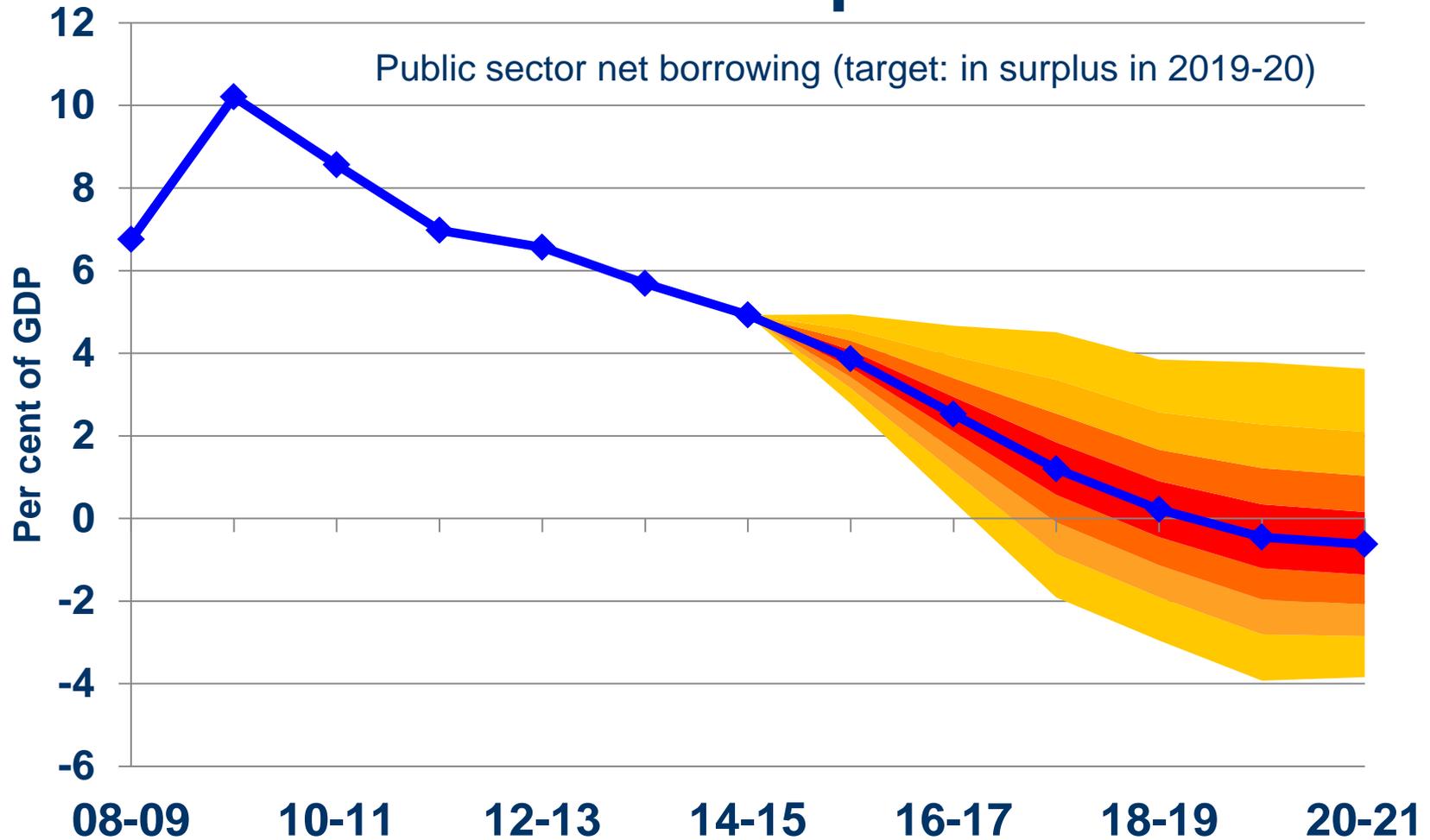
Example: Exempting children from Air Passenger Duty

	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**

Probabilities based on past errors

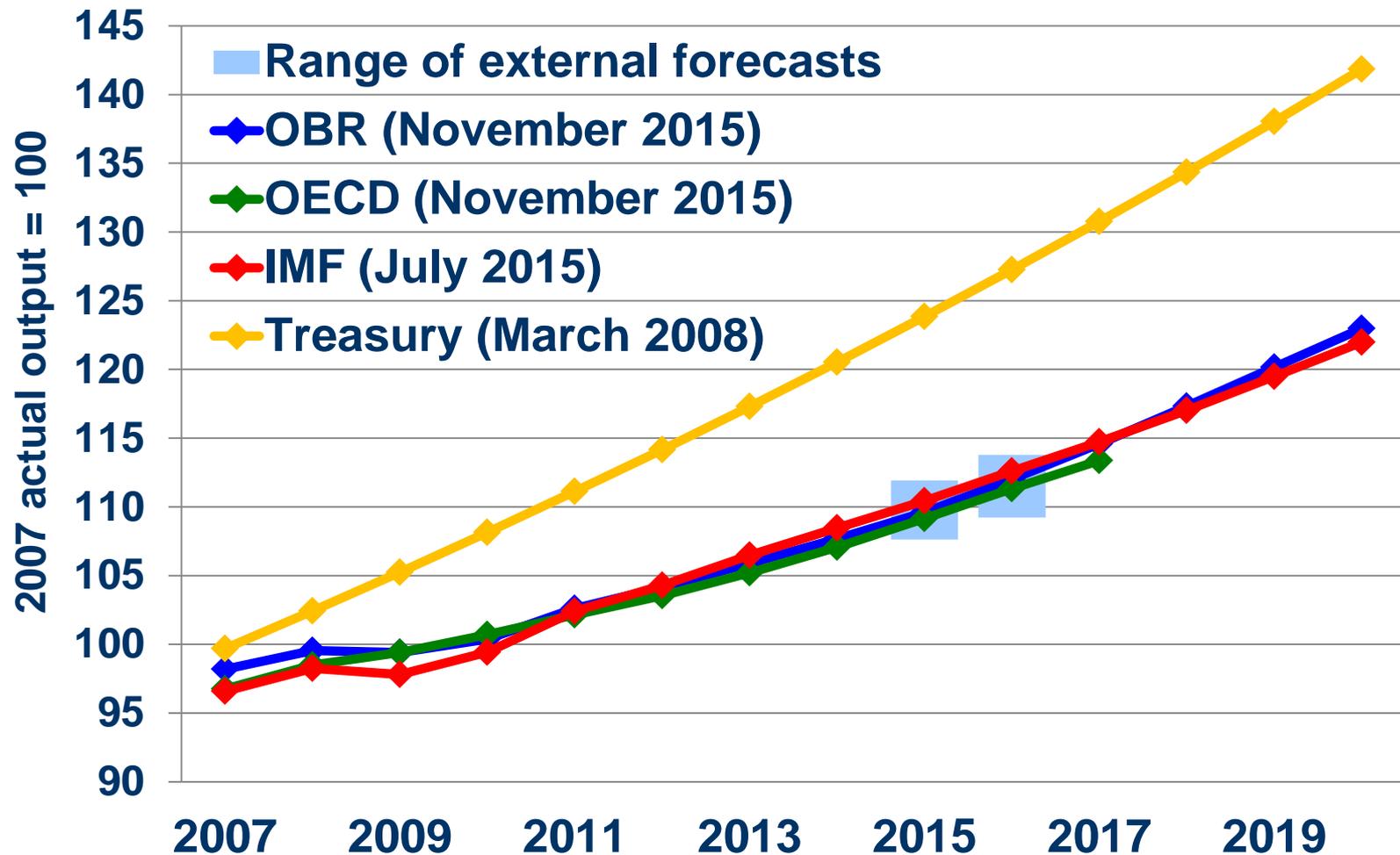


Size and distribution of past official forecast errors implies 55% chance of success on current policy

Mechanical sensitivity analysis

- **‘Fiscal mandate’ would be missed if**
 - Potential output 0.8% lower
 - Whole economy prices rise 1.1% less than expected
 - Interest rates 0.9 percentage points above market expectations
 - Effective tax rate 0.5% of GDP lower
 - Public services spending cuts fall short by a quarter
 - Retail prices inflation 2.2 percentage points higher
- **Use ready reckoners rather than full model runs**

Potential output is the key uncertainty



Note: IMF forecasts for potential output are inferred by combining GDP and output gap forecasts.

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**
- **New target not cyclically adjusted, but 1% growth threshold**
- **So test impact on surplus if growth just above the threshold**

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

WGA quantifiable contingent liabilities

	£ billion		
	2012-13 restated	2013-14	Difference
Future levels of quantifiable contingent liabilities:			
Financial stability interventions	9.9	0.3	-9.6
Export guarantees and insurance policies	12.7	12.1	-0.6
Clinical negligence	10.5	11.9	1.4
Taxes subject to challenge	14.5	29.2	14.7
Supporting international organisations	32.1	0.5	-31.6
Other	8.2	9.0	0.8
Total quantifiable contingent liabilities	87.9	63.0	-24.9

Unquantifiable contingent liabilities

Non-quantifiable contingent liabilities in the 2013-14 WGA

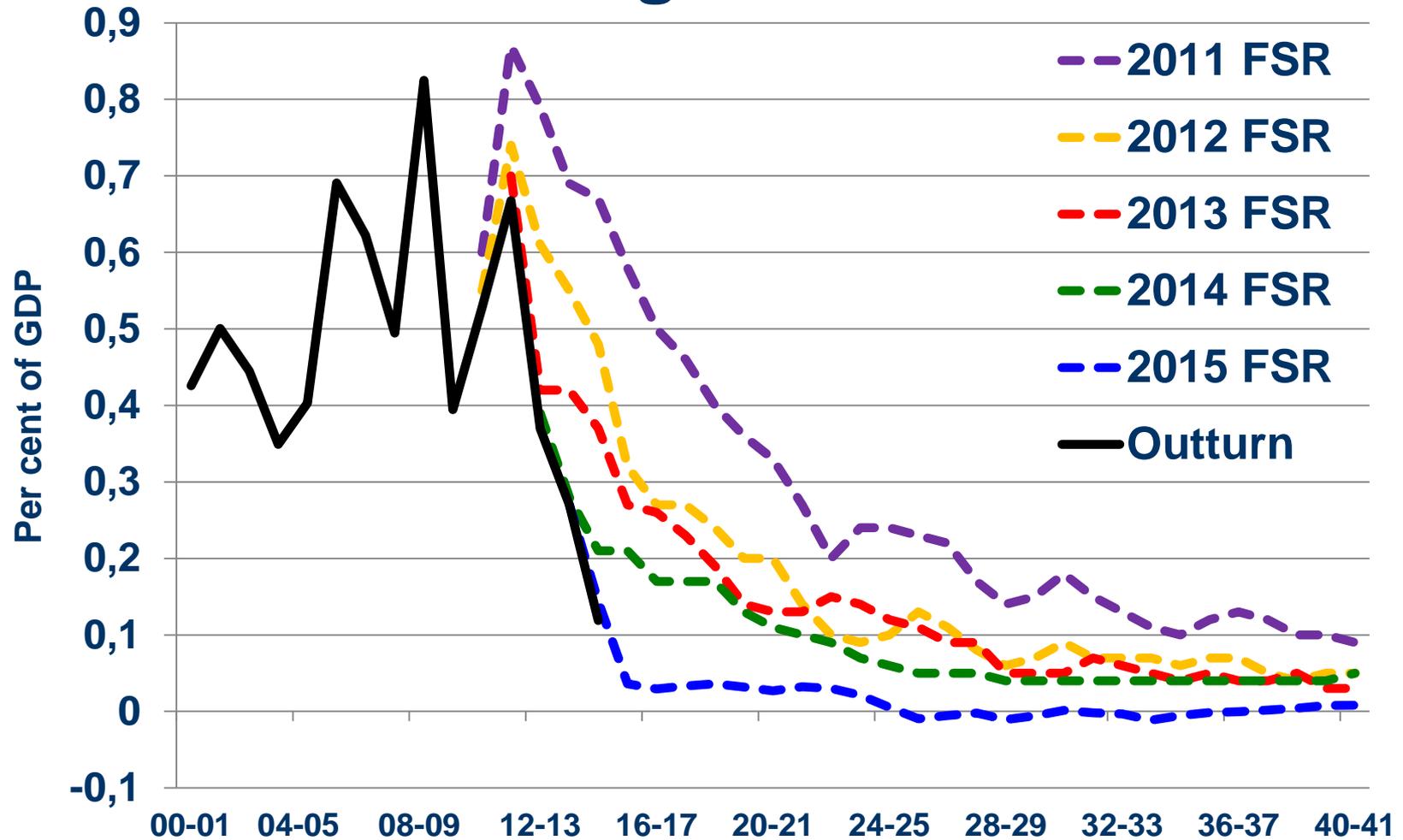
Details of the most significant non-quantifiable contingent liabilities in the 2013-14 WGA

- 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 (now just covers the compensation scheme set up in 2009 in relation to the Dunfermline Building Society).
- 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 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.

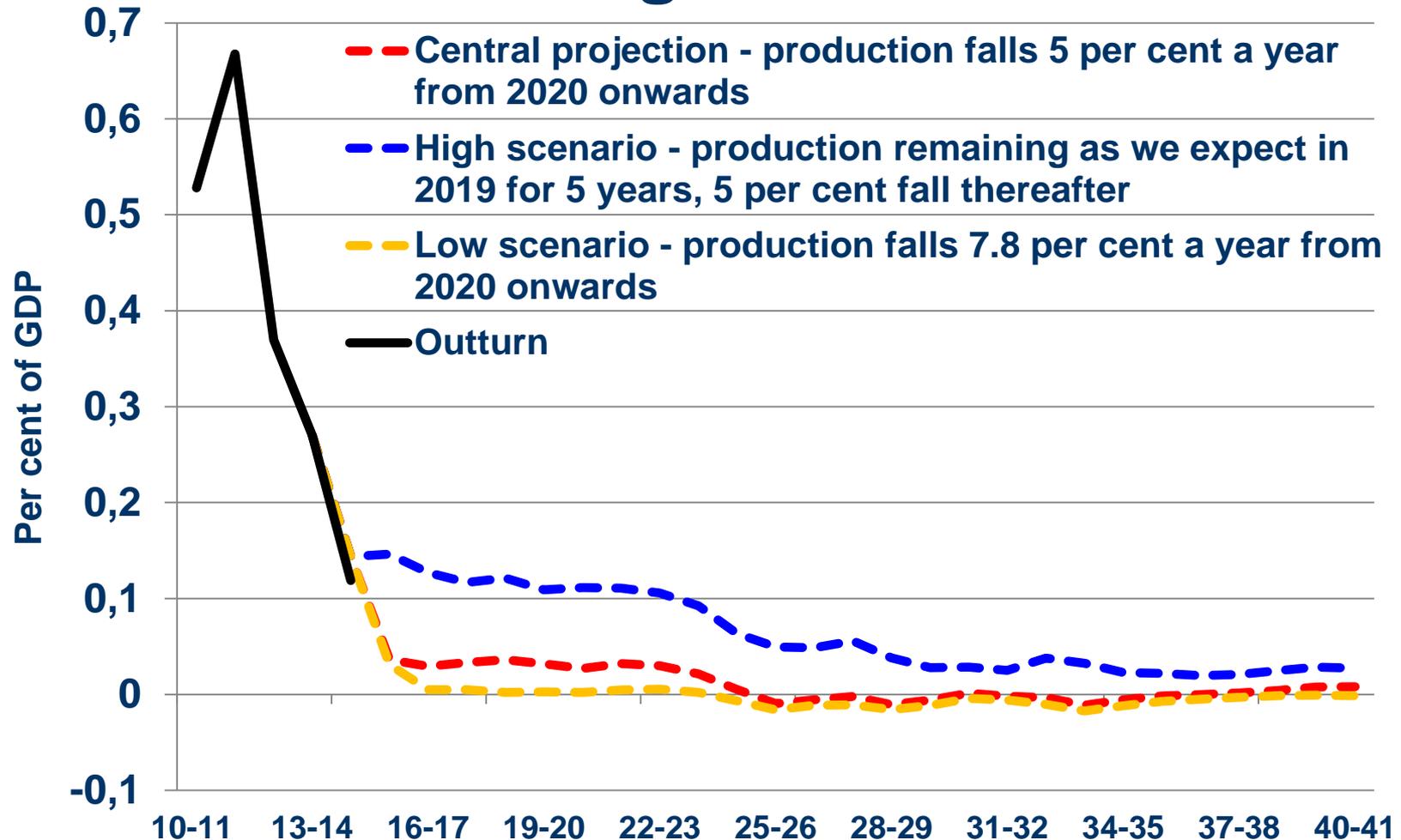
Uncertainty in long-term projections

- **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**
 - Motoring taxes: fuel efficiency scenarios
 - North Sea receipts: impact of price and production scenarios

North Sea oil and gas revenues



North Sea oil and gas revenues



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

	£ billion						
	Forecast	Outturn	Error	<i>of which:</i>			
				Economic factors	forecasting errors	Policy changes	Classification 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
<i>of which:</i>							
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