



# BANK OF ENGLAND WATCHERS' CONFERENCE 2025

## **Bank of England**

What if things are different?

Speech by Clare Lombardelli

Deputy Governor for Monetary Policy

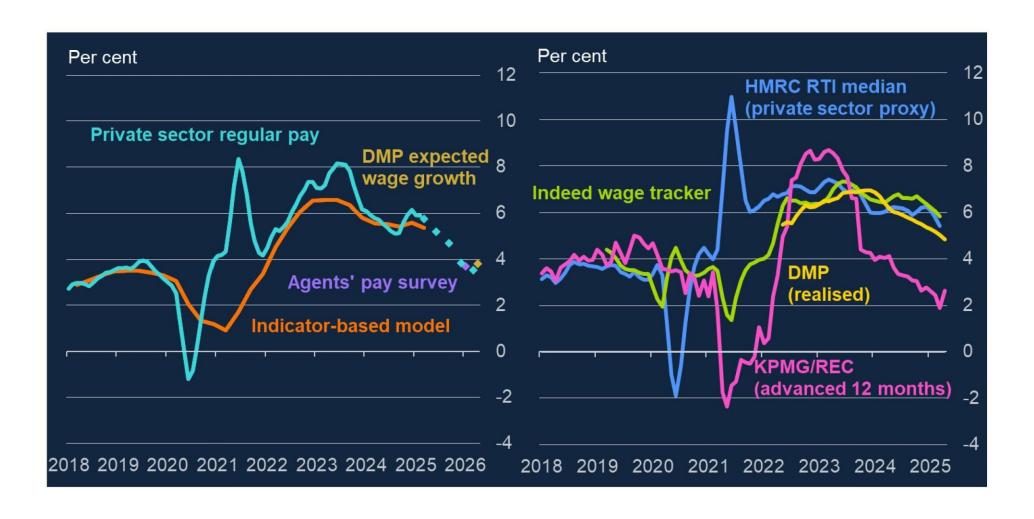
Bank of England Watchers Conference, London, 12 May 2025



## 1. Labour productivity growth has been very weak



## 2. Wage growth higher than target-consistent but gradually easing

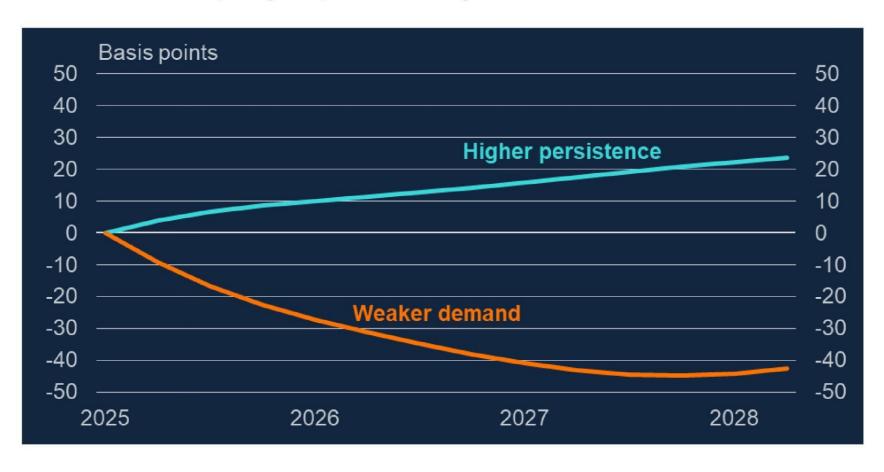


## 3. Latest pay settlements consistent with steer from Agents' survey



# 4. Policy tends to respond more strongly to a demand shock than in the presence of a trade-off

Model-based simulations of policy responses in May scenarios relative to baseline model-based path





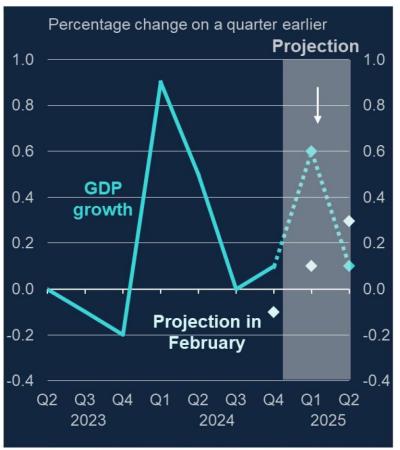
## **Bank of England**

Monetary policy outlook

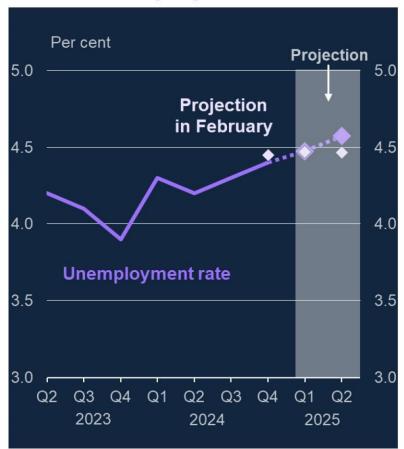


## Where are we now vs. the start of the year?

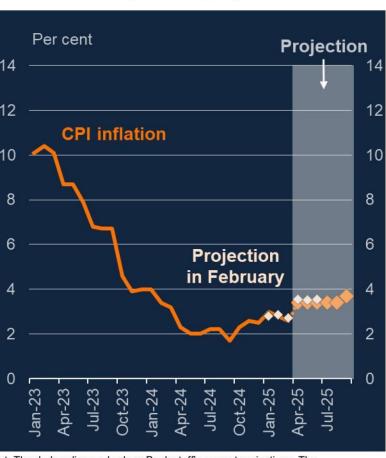
#### **GDP** growth



#### **Unemployment rate**



#### **CPI** inflation



Sources: BCC, CBI, Lloyds Business Barometer, ONS, S&P Global and Bank calculations. The lighter diamonds show Bank staff's projections at the time of the February Report. The darker diamonds show Bank staff's current projections. The projections for headline GDP growth and the unemployment rate are quarterly and show 2025 Q1 and 2025 Q2 (February projections show 2024 Q4 to 2025 Q2). The projections for CPI inflation are monthly and show April to September 2025 (February projections show January 2025 to June 2025). The GDP growth and unemployment rate projections for 2025 Q1 are based on official data to February 2025, while the CPI inflation figures over the same quarter are outturns. Although LFS unemployment data have been reinstated by the ONS, they are badged as official statistics in development and the LFS continues to suffer from very low response rates, which can introduce volatility and potentially non-response bias (Box D of the May 2024 Monetary Policy Report).

## Inflation persistence remains in focus

#### Services inflation

## Per cent Services Services low variance weighted Services trimmed mean Services excluding indexed and volatile components, rents and 2021 2022 2023 2025 2024

### Pay growth



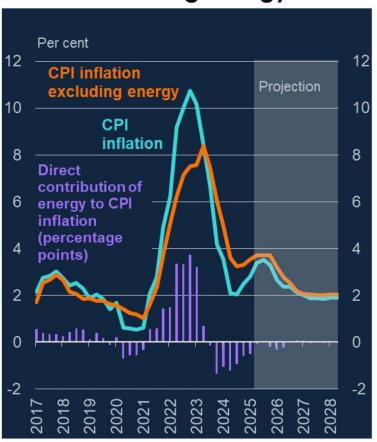
## The observed V/U ratio and the estimated equilibrium level



Sources: . LHS chart: ONS and Bank calculations. The low variance measure is calculated by weighting each component of services inflation by the inverse variance of the change in 12-month inflation by the inverse variance of the change in 12-mont

# A near-term bump in inflation is expected to fall back though expectations remain elevated

## CPI inflation and CPI inflation excluding energy



## Household and business shortterm inflation expectations



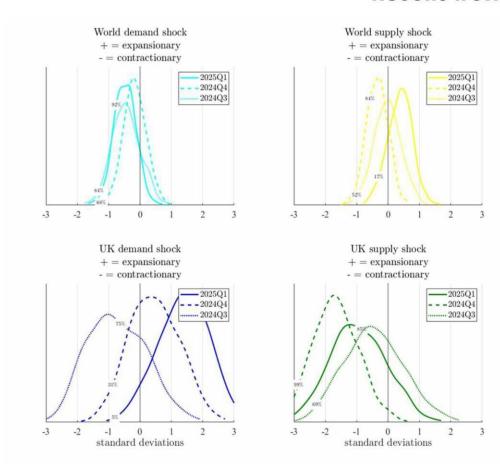
## Household and business longerterm inflation expectations

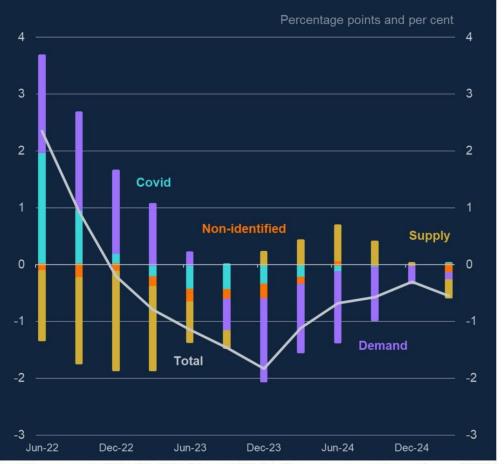


Sources: LHS: Bloomberg Finance L.P., ONS and Bank calculations. Energy prices include fuels and lubricants, electricity, gas and other fuels. Centre and RHS: Bank/lpsos Inflation Attitudes Survey (IAS), Citigroup, YouGov, DMP and Bank calculations. Bank/lpsos IAS data shows median responses. Data shown are the one year and five year ahead inflation expectations measures. Dashed lines represent the series averages over 2010–19. A methodological break occurred during the Covid pandemic that means a degree of caution should be taken when making long-run comparisons with these data. The methodology notes linked in the latest IAS release for February 2025 provide more information. Data are not seasonally adjusted and the latest data points are for 2025 Q1. Citi/YouGov survey data shown are the one year and five to ten year ahead inflation expectations measures. Dashed lines represent the series averages over 2010–19. Since August 2022, the YouGov/Citigroup survey has been based on updated response buckets. Data are not seasonally adjusted and the latest data points are for April 2025. DMP data is 1 year and 3 year ahead CPI expectations. Latest data points are for April 2025.

## A key question remains whether weakness in activity is supply or demand driven - or both

#### Results from Bank staff's SVAR

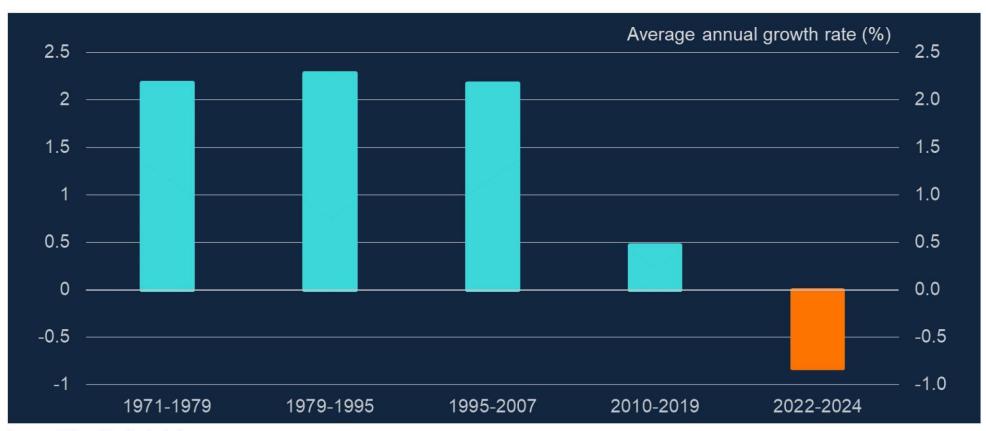




Sources: LHS: Chart shows the estimated distribution of domestic and global demand and supply shocks that have hit the UK economy in 2024 Q3, 2024 Q4 and 2025 Q1. These shocks are derived from a SVAR model for the UK economy, estimated using Bayesian techniques on data from 1992 Q1 to 2025 Q1. The shocks are identified through zero and sign restrictions. Moreover, the SVAR also estimates a global energy shock and a domestic monetary policy shock, not shown here. See here for further details on the model. RHS: Chart shows a decomposition of YoY headline GDP growth using results from the SVAR model. The chart is expressed in 5 deviation from deterministic component (around 2%).

## Productivity continues to be surprisingly weak

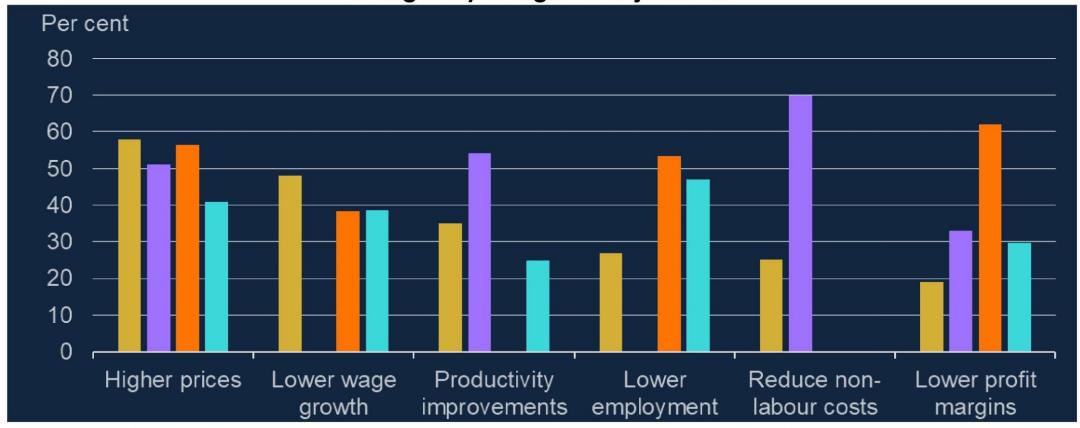
## Average annual growth rate of whole economy labour productivity



Sources: ONS and Bank calculations.

## Businesses' responses to the rise in the NICs is still unclear

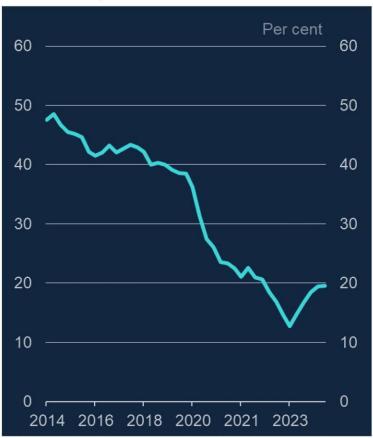
Proportion of firms reporting responses to Autumn Budget policy changes by margin of adjustment



Sources: Agents' pay survey, Deloitte, DMP Survey, IoD and Bank calculations. Agents' pay survey results are based on the question: 'In response to the April 2025 increases in employers' National Insurance contributions (NICs) and National Living Wage/National Minimum Wage (NLW), and other changing labour market policies (including proposals in the Employment Rights Bill), what actions do you plan to take (select up to three that are most relevant/significant to you)?'. Firms are allowed to select multiple options, although limited to three options, therefore the percentages do not add up to 100. Responses are weighted by firm industry and size. Responses are for November and December 2024. Deloito CFO survey results are based on weighted-average ratings on a scale of 0–100 for how likely chief financial officers are to pursue the following strategies in response to the forthcoming rise in employer National Insurance contributions. Zero stands for not pursuing to the greatest extent. Latest data are for 2024 Q4. DMP results are based on the question: 'How do you expect your business to respond to the changes to employer National Insurance contributions announced in the November 2024 Budget?'. Firms are allowed to select multiple options, therefore the percentages do not add up to 100. Responses are weighted by firm industry and employment. Responses are for January 2025. IoD results are based on responses the question: 'You said the changes will increase your employer National Insurance bill. How do you plan to respond to the resulting higher costs of employment?'. Latest data are for February 2025. Other option not shown in chart had response of 6.5%.

## Official statistics still face some challenges

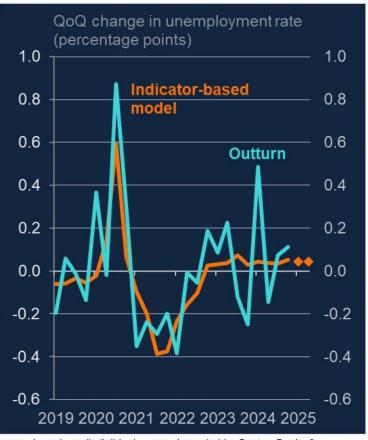
## LFS response rates, excluding imputed households



## Measures of employment growth



## Quarterly change in the unemployment rate



Sources: LHS: ONS. Latest data is for 2024Q4. Response rate shown is total response rate is the cumulative response rate for the quarter across all waves, based on all eligible, in-scope households. Centre: Bank of England Agents, DMP survey, HM Revenue and Customs, KPMG/REC/S&P Global UK Report on Jobs, Lloyds Business Barometer, ONS, S&P Global and Bank calculations. (a) Bank staff's indicator-based measure of underlying employment growth is constructed using a dynamic factor model following the approach of <u>Doz et al (2011)</u>. The model extracts a common component from monthly survey indicators, capturing co-movements across series. The common component is scaled to align with LFS employment growth between 2000–19. Shaded area represents 95% confidence intervals. Latest data are for the three months to February 2025 for the LFS and April 2025 for the survey data. RHS: Bank of England Agents, Google Trends, S&P Global, KPMG/REC UK Report on Jobs, ONS and Bank calculations. Bank staff's indicator-based models of near-term unemployment use mixed-data sampling (MIDAS) techniques (<u>Daniell and Moreira (2023)</u>). Latest data are to 2024 Q3 and the diamonds show the model implied values for 2024 Q4 and 2025 Q1.

# Uncertainty persists surrounding the degree of restrictiveness in the economy

## Potential drivers of the change in R\*

Potential driver	Likely directional impact on R*			
Demographic trends	•			
Global trade fragmentation	<b>I</b>			
Higher risk	<b>↓</b>			
Global financial fragmentation	1			
Expansionary global fiscal policy	1			
Artificial intelligence (AI)	1			
Climate change	1			

Sources: LHS: Bank of England February 2025 Monetary Policy Report.

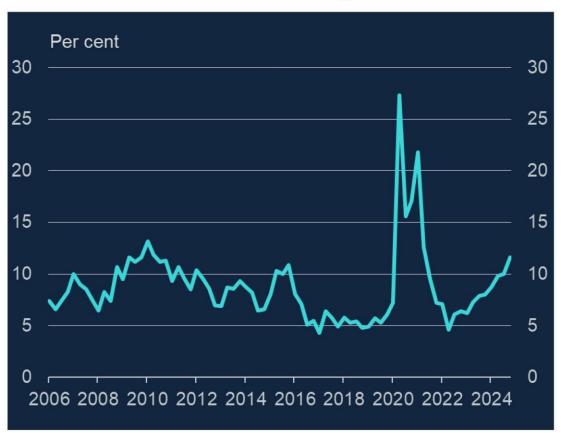
## Estimates of change in R\* between 2018 and F25

Approach	Change from 2018 to F25 MPR
Financial market measures	>90bps
Survey measures	<25bps-150bps
Macroeconomic models	25bps-75bps

Sources: Financial market measures are based on dynamic term-structure models. 10-year forward expected rates are extracted from nominal bond yields before subtracting survey inflation expectations. The survey measures are based on responses to the Bank of England's MaPS survey and professional forecasts according to Consensus Economics. The macroeconomic models covered in the range are <a href="Davis et al (2024)">Davis et al (2024)</a> and <a href="Del Negro et al (2019)</a>. Estimates shown are not exact. More detail can be found in the <a href="February 2025 Monetary Policy Report">February 2025 Monetary Policy Report</a>.

# Household saving ratio and consumption suggest monetary policy is still restrictive

## Household saving ratio



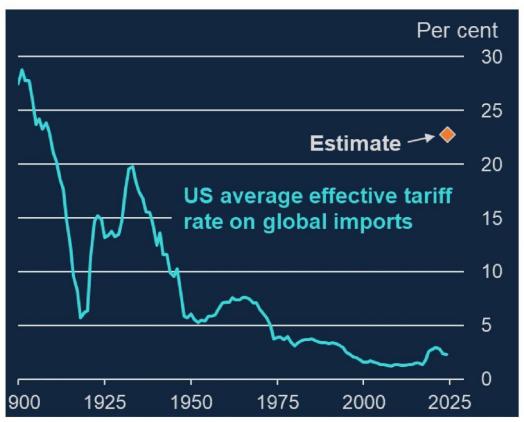
## **Household consumption**

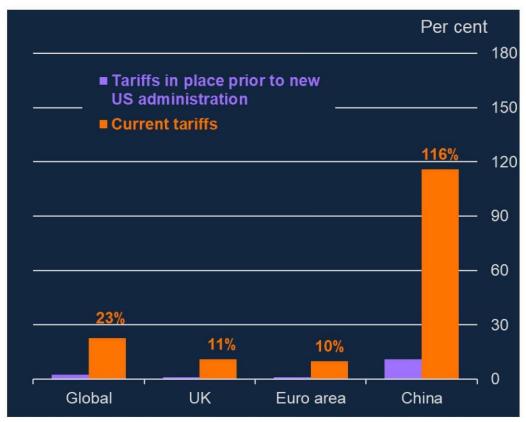


Source: ONS. LHS: Saving as a percentage of total available household resources. Based on NRJS. Final data points are 2024 Q4. RHS: Indexed 2019 Q4. Based on ABJR and HAYO. .

## Global shocks have emerged

#### **US** effective tariffs

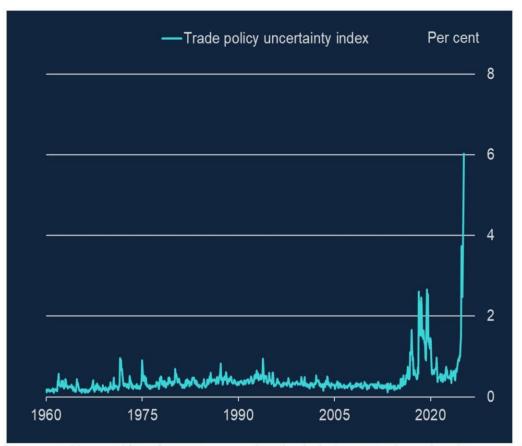




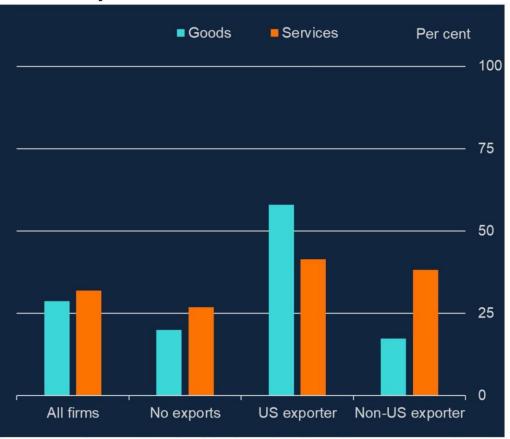
Sources: US Bureau of Economic Analysis, US International Trade Commission, White House and Bank calculations. The effective tariff rate is defined as implied customs duty revenue divided by total goods imports for consumption. Estimates for current effective US tariff rates reflect trade policies in place as of 15 April 2025 and assume that trade weights and flows remain fixed at 2024 levels. In the latest estimates, Bank staff also assume that the share of trade compliant with the free trade Agreement between the US, Mexico and Canada (USMCA) will rise from 2024 levels, with the vast majority of imports from Canada and Mexico adhering to USMCA standards as firms are motivated to demonstrate compliance in response to higher tariffs. A range of external estimates suggest that the US average effective tariff rate on global imports has increased to between 18% and 28% under the new US administration, depending on assumptions, particularly around changes in trade flows and substitution effects in response to tariffs, and the share of USMCA compliant trade.

## Tariffs have led to heightened uncertainty

### Trade policy uncertainty



## Share of UK firms expecting a fall in sales next year because of US tariffs



Sources: <u>Caldara et al (2019)</u>, DMP Survey and Bank calculations. LHS: The trade policy uncertainty index reflects automated text search results of the electronic archives of seven newspapers discussing trade policy uncertainty: Boston Globe, Chicago Tribune, Guardian, Los Angeles Times, New York Times, Wall Street Journal, and Washington Post. Data are monthly. The final data point is for March 2024. RHS: The survey results are based on the question: 'How do you expect the implementation of new tariffs on goods entering the United States to affect the sales of your business over the next year?". The survey took place between 4 and 18 April 2025.

# Risks of trade policy to inflation are two-sided, but on balance likely to be disinflationary

Unilateral tariffs		Retaliation					
Impact on →							
Channel	UK activity	UK inflation	Explanation	UK activity	UK inflation	Explanation	
Included in ECB-G							
Expenditure switching	1	1	US demand for UK exports weakens.	1	1	US demand for UK exports weakens	
Weaker global demand	1	1	Additional trade distortions weigh on global demand, weakening demand for UK exports.	1	1	Additional trade distortions weigh on global demand, weakening demand for UK exports.	
Trade diversion	$\leftrightarrow$	1	Other countries lower prices of exports previously destined for US.	$\longleftrightarrow$	1	Other countries lower prices of exports previously destined for US.	
Exchange rate movement	1	1	Sterling depreciates against the dollar.	1	1	Sterling appreciates against the dollar.	
Not included in ECB-G							
Supply chains	1	1	Reorganisation temporarily reduces global supply capacity and increases price pressures.	1	1	Reorganisation temporarily reduces global supply capacity and increases price pressures.	
Lower competition/ knowledge transfer	1	$\leftrightarrow$	Reduced trade openness weighs on global potential supply growth.	1	$\Leftrightarrow$	Reduced trade openness weighs on global potential supply growth.	

Source: For further details see (Greene, 2025)

## Tariffs have also contributed to some sharp movements in financial markets





## Foreign exchange



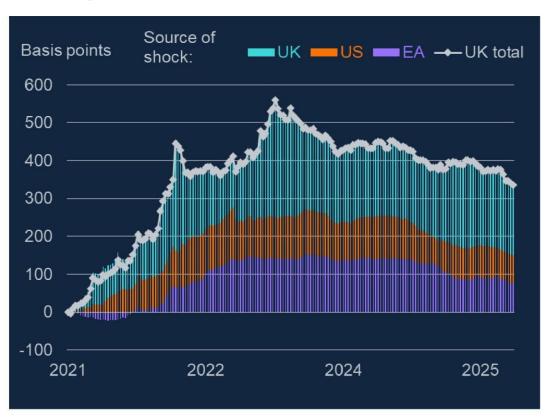
## Ten-year government bond yields



Sources: Bloomberg Finance L.P., Tradeweb FTSE Gilt Closing Data and Bank calculations. Equities and effective exchange rates are indexed to the date of the 2024 US presidential election, while 10-year yields show cumulative changes in yields over the same period. The final data points are for 29 April 2025.

## Developments outside the UK significantly shift UK rates

## Rigobon decomposition of UK 1y OIS



### Rigobon decomposition of UK 3y Gilt Yield



Source: Bloomberg Finance L.P. and Bank calculations. RHS: Decomposition of UK 1-year overnight index swap (OIS) rate cumulative change since December 2021. (LHS) and UK 3-year gilt cumulative change since 2 January 2025 (RHS) yield based on a model following Rigobon (2003). Latest data: 1<sup>ST</sup> May 2025.







# BANK OF ENGLAND WATCHERS' CONFERENCE 2025

## **Bank of England**

The neutral rate of interest – and its relevance for monetary policy

Bank of England Watchers' Conference 12 May 2025

**Dr. Catherine L. Mann**External member of the Monetary Policy Committee



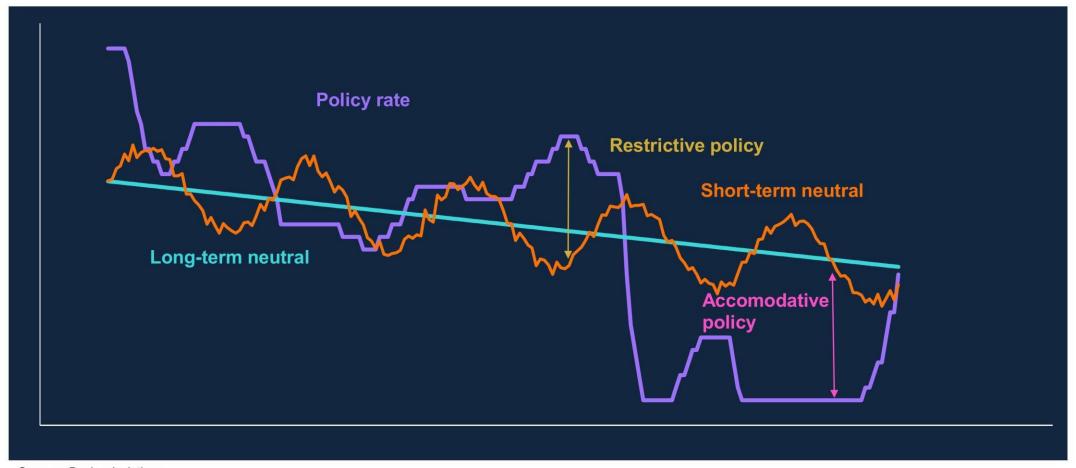
What is the neutral rate of interest?

## What is the neutral rate of interest?

- Definition: Varies across institutions, papers and studies
  - My preferred definition: the interest rate that neither stimulates nor depresses inflation
  - But, the time horizon of 'neither stimulate nor depress' is key, as time horizon incorporates the
    presence and dynamics of shocks, transmission, lags, and spillovers
- Synonyms? Neutral, natural, terminal, equilibrium rate... R-star, r-star...
  - In practice these are <u>not</u> all synonymous, they are different concepts, and differ by interlocutor
  - For my decision-making, the 'neutral rate' is the <u>short-term rate</u> at which the economy is neither stimulated nor contracted within the monetary policy horizon, and inflation is sustainably at target
- Measurement challenges:
  - Few of the elements underpinning the neutral rate are observable

## Bringing the concepts together...

Illustrative example of the interaction between notions of nominal neutral and the nominal policy rate



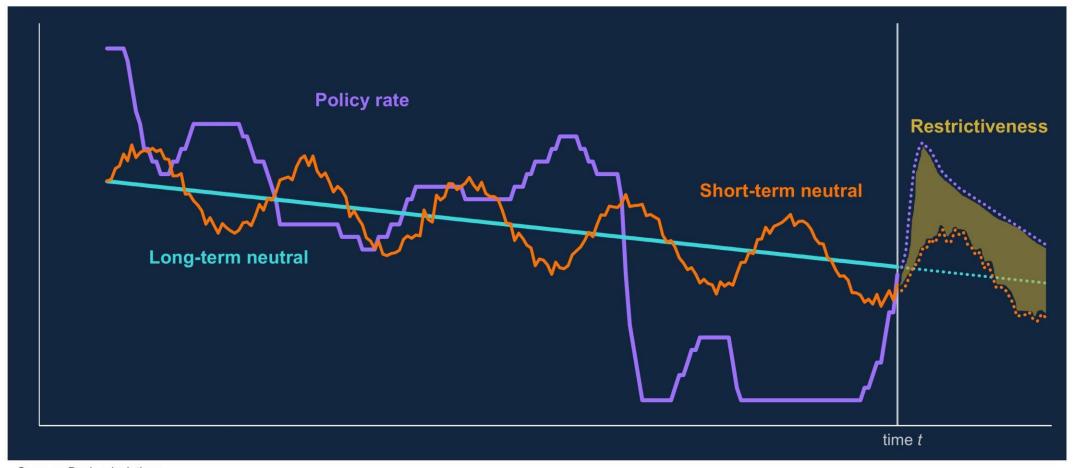
Sources: Bank calculations.

Notes: Because the illustration asserts that (policy rate – short-term neutral) = degree of restrictiveness or accommodation, it follows that short-term and long-term neutral in this illustration is in nominal terms.

## Restrictiveness at time t:

Determined by the term structure of expected interest rates, including the transmission through financial markets relative to the neutral rate, and the policy rate

Illustrative example of the term structure of neutral and the policy rate



Sources: Bank calculations.

Notes: Because the illustration asserts that (policy rate – short-term neutral) = degree of restrictiveness or accommodation, it follows that short-term and long-term neutral in this illustration is in nominal terms.

## The term structure of the neutral rate: short-run versus long-run

- The distinction between short and long-run neutral rate has been previously made in the literature (<u>Platzer et al., 2022</u>; <u>Obstfeld, 2023</u>) and in policy-making (<u>Seim, 2024</u>; <u>Baker et al., 2023</u>)
- Short-run neutral can be moved around by economic shocks, changes in first stage financial market transmission, volatility, and spillovers of varying sources (e.g. risk, fiscal, demand shocks)
- Long-run neutral is determined by the equilibrium level of savings and investment in the economy. It is the risk-less return that equates the demand and supply for savings. It is linked to slow-moving structural changes in the economy, such as demographics and productivity growth
- For me, short-run neutral has greater monetary policy relevance. Long-run neutral is far off-stage, but it is helpful to the extent that this is the trend around which short-run fluctuates

Assessing the degree of restrictiveness

1) interest rate gaps

Let restrictiveness be defined as:

real interest rate – neutral rate 
$$= r - r^*$$
 (1)

Let restrictiveness be defined as:

real interest rate – neutral rate 
$$= r - r^*$$
 (1)

where

$$r = i - E(\pi)$$
 and

$$r^* = i^* - E(\pi^*) {3}$$

i = nominal interest rate set by the MPC (i.e. Bank Rate),  $E(\pi)$  is expected inflation,  $i^*$  = nominal neutral interest rate and  $E(\pi^*)$  is expected long-run inflation (2% is the BoE inflation target).

Let restrictiveness be defined as:

real interest rate – neutral rate 
$$= r - r^*$$
 (1)

where

$$r = i - E(\pi)$$
 and (2)

$$r^* = i^* - E(\pi^*) {3}$$

i = nominal interest rate set by the MPC (i.e. Bank Rate),  $E(\pi)$  is expected inflation,  $i^*$  = nominal neutral interest rate and  $E(\pi^*)$  is expected long-run inflation (2% is the BoE inflation target).

Putting (2) and (3) into (1):

$$r - r^* = [i - E(\pi)] - [i^* - E(\pi^*)]$$
(4)

Let restrictiveness be defined as:

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$$r = i - E(\pi)$$
 and (2)

$$r^* = i^* - E(\pi^*) \tag{3}$$

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Putting (2) and (3) into (1):

$$r - r^* = [i - E(\pi)] - [i^* - E(\pi^*)]$$
(4)

Rearranging (4):

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)] \tag{5}$$

## Monetary policy and measuring restrictiveness: what do we know?

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)]$$
(5)

- The elements of the real rate gap  $r r^*$  are not observable
- The policy rate i is known (it's my job), but i\* has to be measured
- The inflation target  $E(\pi^*)$  is pre-determined, but inflation expectations  $E(\pi)$  need to be measured (and managed)

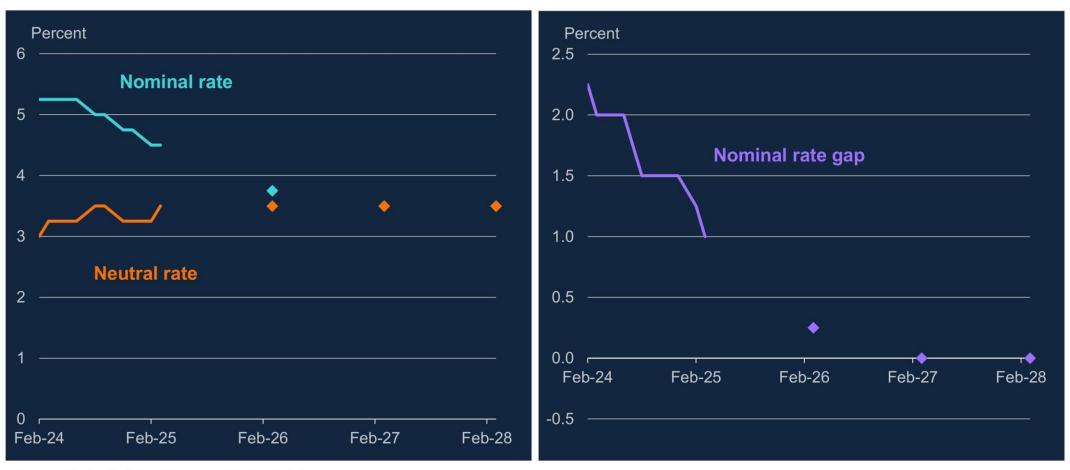
#### a) The nominal rate gap

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)]$$
Nominal rate gap
(5)

- Some channels of the monetary transmission mechanism (mainly the cash flow channel, through mortgage rates for instance) are nominal in nature
- Monetary policymakers affect monetary conditions, and therefore financial conditions, by changing i and/or by affecting inflation expectations  $E(\pi)$  while keeping long-term inflation expectations anchored at the inflation target  $E(\pi^*) = 2\%$

#### Measuring $[i - i^*]$ : A majority of MaPS respondents expect policy to turn neutral within 2 years

#### MaPS-implied nominal rate gap



Sources: Market Participant Survey and Bank calculations.

Notes: Diamonds show the MaPS median response of interest rate expectations 1-, 2- and 3-years ahead (aqua). The nominal rate gap (purple) is calculated at the nominal rate (aqua) minus the neutral rate (orange), in realised (solid lines) and expectations (diamonds) terms. Latest data: March 2025 survey.

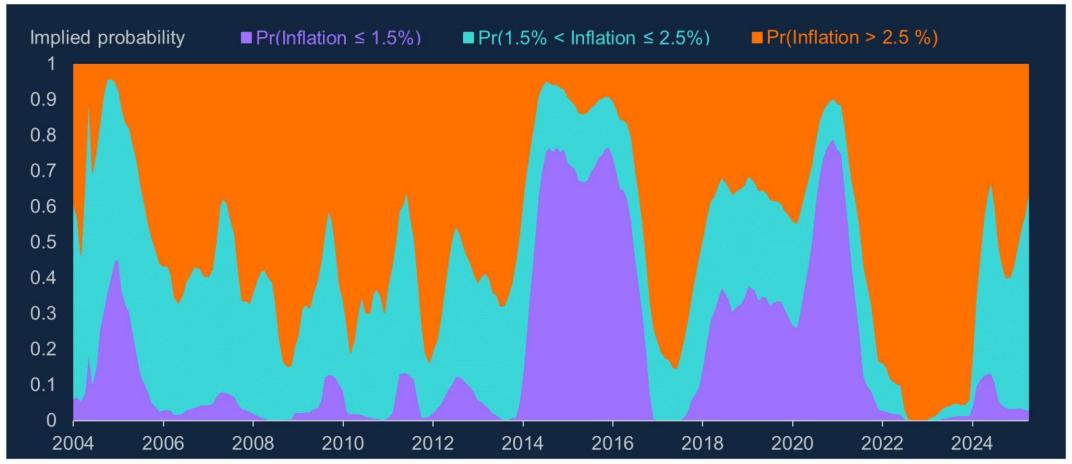
#### b) Inflation expectations 'drift'

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)]$$
Inflation expectations
drift

- Monetary policymakers affect monetary conditions, and therefore financial conditions, by changing i and/or by affecting inflation expectations  $E(\pi)$  while keeping long-term inflation expectations anchored at the inflation target  $E(\pi^*) = 2\%$
- Many factors that affect  $E(\pi)$  are not directly under the control of the monetary policymaker, but to which it needs to respond (supply shocks, degree of forward-vs-backward-lookingness in expectation formation, frequency of price changes)

#### Measuring $E(\pi) - E(\pi^*)$ : Implied probabilities of expected CPI inflation outcomes

Asset-price-implied probabilities of lower, around target and higher 12-months-ahead UK CPI outcomes



Sources: Bloomberg Finance L.P., Consensus Economics, LSEG Datastream, Office for National Statistics, Tradeweb, ICE BofAML and Bank calculations.

Notes: 6-month moving average of asset-price-implied probabilities of 12-months-ahead UK CPI inflation outcomes. Asset-price-implied probabilities are based on a monthly quantile regression of 12-months-ahead CPI inflation on asset prices from which probability density functions are obtained, adopting the methodology of <u>Adams et al. (2021)</u> and the <u>New York Fed</u>. Asset prices include UK 3-year OIS rate, UK 10-year govt. bond yield, FTSE All-Share, UK IG corporate bond spread, sterling ERI.

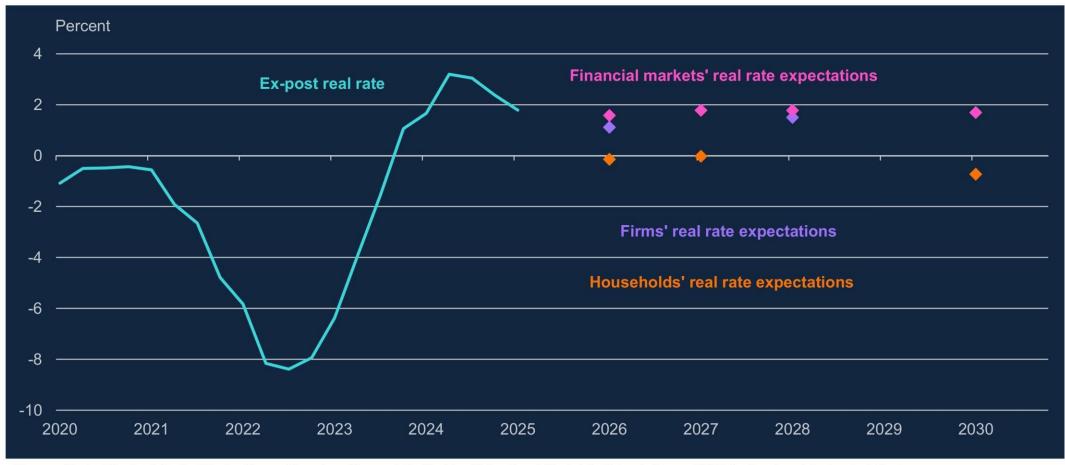
#### c) The real rate gap

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)]$$
Real rate gap

- Real rates are not directly observable
- Monetary policymakers affect real rates indirectly through their effect on i and  $E(\pi)$
- So the real rate gap is endogenous to policy and shocks

#### Measuring r using survey-based $E(\pi)$ : Real interest rates differ across economic agents

Measures of ex-ante real interest rates by economic agent



Sources: Bank of England, Bank of England/Ipsos, Bloomberg Finance L.P., Decision Maker Panel, Market Participants Survey, ONS, Tradeweb and Bank calculations.

Notes: Ex-ante real interest rates are calculated as the 1, 2, 3 and 5-year ahead OIS rate respectively, minus the (maturity-matched) survey-implied inflation expectation. Quarterly data. For households, the Bank of England/Ipsos Inflation Attitudes Survey is used, the Decision Maker Panel for firms' and the Market Participants survey for financial markets. The ex-post real interest rate is calculated as Bank Rate minus realised headline CPI inflation.

Assessing the degree of restrictiveness

2) the role of volatility, uncertainty, risk premia

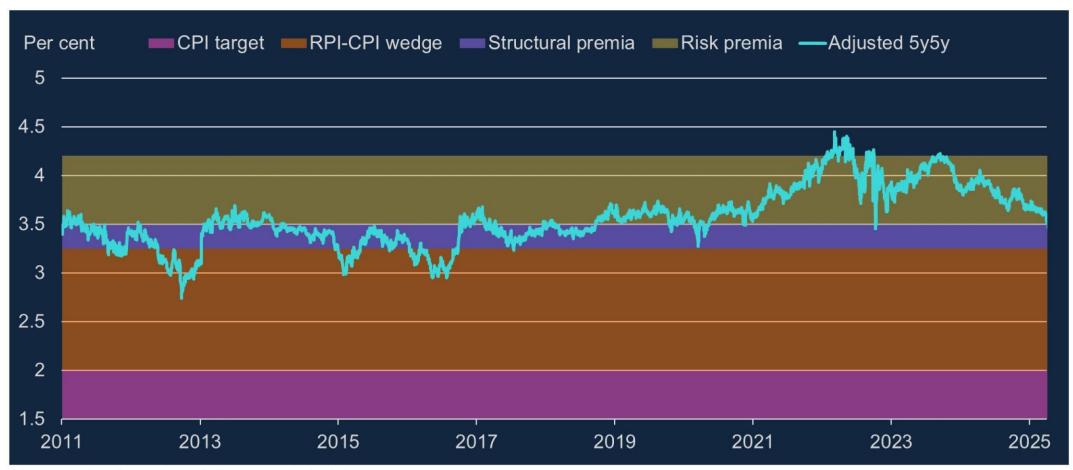
#### The role of uncertainty, volatility, and risk premia

$$r - r^* = [i - i^*] - [E(\pi) - E(\pi^*)]$$
Uncertainty affects the Volatility affects the nominal rate gap and the inflation expectations drift

- Uncertainty reduces consumption and investment, lowering  $r^st$
- Volatility in  $(\pi)$  is positive and asymmetrically related to  $(\pi)$ , raising  $i^*$
- Higher risk premia in financial markets yield higher  $r^*$  and  $i^*$

## Risk premia are significant, but often assumed away when looking at inflation expectations

RPI-reform adjusted UK 5-year, 5-years ahead measure of inflation compensation

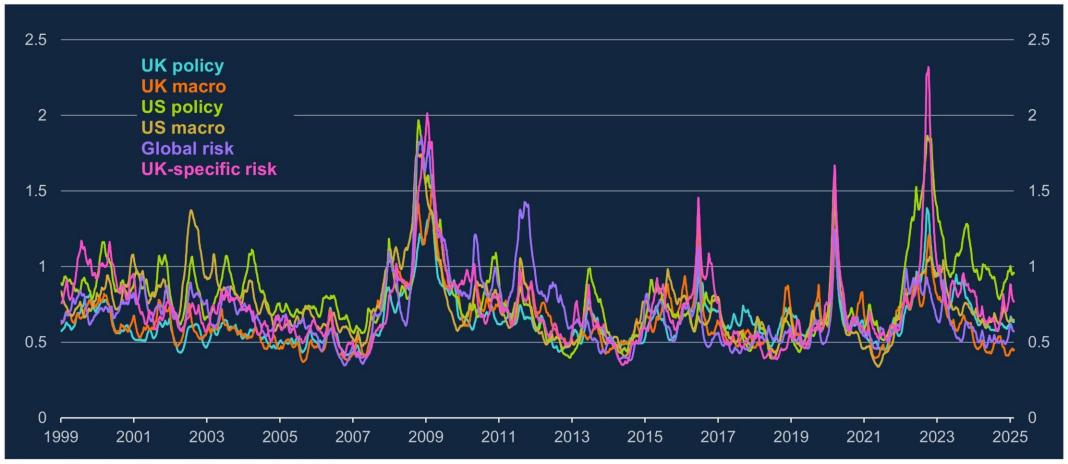


Sources: Bloomberg Finance L.P. and Bank calculations.

Notes: Latest data: 1st April 2025. UK RPI adjusted 5y5y is derived by adjusting the five-year, five-year rate to account for UK RPI reform. From 2030, UK RPI will be aligned with the CPIH measure of consumer prices.

## Volatility and spillovers affect UK financial conditions: US monetary policy factor remains elevated, but UK specific risk is present too.

Stochastic volatility of asset price factors



Source: Bloomberg Finance L.P. and Bank calculations

Notes: See Mann (2025) for more detail. The calculations are based on a structural VAR identified using sign and magnitude restrictions following Brandt et al. (2021). The model is extended to analyze monetary policy spillovers between the UK and its two most important trading partners and dominant currency blocks, the US and EA.

Assessing the degree of restrictiveness

3) the effect of monetary policy on financial conditions and the economy

## Financial market transmission matters: It's not just the short-term interest rate that affects restrictiveness

UK financial conditions index



Sources: Bloomberg Finance L.P., Moneyfacts, LSEG, Tradeweb and Bank calculations.

Notes: The pink line is an adaptation of <u>Burr (2023)</u>, where interest rates are detrended using the MaPS median estimate of the neutral rate.

### The choice of $r^*$ matters: Underestimating $r^*$ implies overestimating restrictiveness

UK financial conditions index



Sources: Bloomberg Finance L.P., Moneyfacts, LSEG, Tradeweb and Bank calculations.

Notes: The pink line is an adaptation of <u>Burr (2023)</u>, where interest rates are detrended using the MaPS median estimate of the neutral rate.

#### Conclusions for monetary policy and research

- Evaluating restrictiveness of policy in real-time is challenging, with various methodologies which have strengths and weaknesses
  - Real rate gap:
    - Allows monitoring in real-time, but subject to strong assumptions
  - Nominal rate gap:
    - Allows monitoring of policy transmission to financial conditions, and is an early-indicator, but involves uncertainty about second-stage monetary policy transmission to output and inflation
  - Inflation expectations gap:
    - Allows a direct assessment of the effectiveness of policy, but is subject to measurement challenges and the channels of monetary policy transmission
- Biggest research gaps? Treatment of uncertainty, volatility, and risk







# BANK OF ENGLAND WATCHERS' CONFERENCE 2025