

Economic Models at the Bank of England

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Plan for the Presentation

- **Bank of England's new quarterly macro model (BEQM)**
- **Alternative forecasting models**
- **Data uncertainty models**

Design of BEQM

Driven by nature of policy-making process

- role and nature of Monetary Policy Committee**
- role of forecasts in policy making**

Role and nature of the Monetary Policy Committee

- **MPC 9 members**
- **Key features: technical expertise
: individually accountable**
- **Inflation forecasts are ‘owned’ by MPC; not staff forecasts**
- **MPC very closely and intensely involved in producing forecast**

Role of forecasts in policy-making process

- **Point estimate of future inflation, but emphasis on risks and uncertainties**
- **“Fan charts” only part of the story**
- **Considerable time spent analysing economic issues: large number of scenarios and simulations**
- **Aim is as much to understand the “economics” of the forecast, as to produce quantitative estimates**

Key criteria for BEQM

(i) 'Rich' economic structure

needs to be relatively explicit, flexible and large

(ii) Fits the data

needs to be a credible forecasting tool

(iii) Operationally robust

needs to be fast and reliable at producing large number of forecasting 'runs'

Core / Non-core Approach

- **BEQM has two elements:**
 - Core:** relatively standard DGE model – but ‘big’
 - Non-Core:** help capture short-run data movements
- **Non-core captures two type of effects:**
 - **Economic effects which we understand but too complicated to include in core, e.g. credit market imperfections**
 - **Empirical regularities/correlations do not fully understand but important for forecasting, e.g. persistence of inflation**

Some other types of economic models used at the Bank

- Alternative forecasting models**
- Data uncertainty models**

Alternative forecasting models

- **Estimated a set of around 15 forecasting models**
 - **Some exploit different data sets, e.g. factor models, monetary and financial models**
 - **Some process information in a different way, e.g. Bayesian VARS, double-differenced VARS**
- **Coded in single framework, common dataset**
- **Run each quarter – results presented to MPC as a cross check on BEQM**

Data uncertainty models

- **Motivated by two points**
 - (i) **Early official estimates of economic variables are uncertain**
 - (ii) **Business surveys / indicators also contain information about economic activity**
- **Best guess based on weighted average of official estimates and surveys. (Issue of how to identify ‘true’ growth)**
- **Month-to-month assessment of current economic situation less sensitive to noisy / erratic data movements**