Big forecast errors

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Forecasting

- Not just a number
  - Interpretation/explanation
  - Why a model-based, systematic forecasting is useful/needed

- Not just a model outcome
  - Include extra-information
  - Experience, intuition

Forecast errors - types

- Biased forecasts

- Large forecast errors (standard error of forecasts is large)

- Large occasional errors (“big events”)
  - Financial crisis

- At what horizon?
  - At longer horizons is the confidence interval more relevant than the point estimate?

Forecasting

- Easy in normal times – the difficulty is the turning points!

- Forward looking, but data used for model construction is backward looking (retrospective bias)
  - How to proper include variations which have not been important in the past? (financial accelerator? New financial products? More integrated markets?)

- Ability to predict changes relative to ”normal” depend on model qualities/theory (dynamics, long-run properties etc)

- Society is changing - errors are inevitable

- Forecasts are an anchor for expetations – fundamental endogeneity problem

Model evaluation

- Prediction errors: exogenous variables
  - Foreign
  - Policy (perhaps responses to the forecasts?)
- Endogenous mechanisms
  - Dynamics
  - Structural changes (long-run)
- Model properties
  - Systematic errors
  - Parameter stability
- Model/theory changes

Forecasting in real time

- Changes – temporary or permanent (structural)
  - Learning/signal extraction problem
  - In hindsight easy

- Errors cannot be avoided
  - Should be taken seriously in use of model forecasts
  - Not an argument against the usefulness of forecasts – decisions have to be taken under uncertainty