The Future of Macroeconomic Forecasting: Understanding the Forecasting Process

H.O. Stekler
George Washington University
Washington DC 20052

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The Forecasting Process

- What is the Forecasting Process?
- Findings from evaluations
- What explains the errors?
- Suggestions for improving forecasts
- Conclusions
What is the Forecasting Process?

- Models - Estimation, Accuracy
- Data
- Individuals - judgement

Findings from Evaluations

- No one method best

- Magnitude of the errors - 1% GDP + Inflation
  - Öller + Barot (2000)
  - Loungani (2001)
  - Fildes and Stekler (2002)

- Cyclical Turns + Systematic Error

- Rationality Tests
  - Unresolved Issues

  - Ex ante vs. Ex post

- Accuracy over time

- Role of Judgement
  - Mostly from non-macroeconomic
    Onkal et al. (2002), Goodwin (2005)

- Data Issues
  - Optimal forecasts or measurement errors
  - Are earliest data useful?
  - Do early data reveal condition of economy?
  - Do data revisions contribute to forecast errors?
What Explains the Errors?

- **Model Errors**
  - Misspecified
  - Inaccurate data - revisions and delay
  - Structural breaks, regime changes
    - Shifts in deterministic trends

- **Data Issues**
  - 1990 US Economy

- **Forecaster and Forecasting Process**
  - Cyclical errors
    - Low priors
    - Asymmetric costs
  - Biased Forecasts
    - Asymmetric loss functions
    - Rationally biased
    - Forecast smoothing (Scotese, 1994)
    - Did not understand the behavior of the variables
  - Systematic Errors
    - Underestimate growth - overestimate in recessions
    - Statistical properties of forecasts
      * not consistent with data
  - Forecasting Judgement
    - Model adjustments
    - Forecasting revisions
      *Most focused on accuracy
      *Batchelor- Dua (1992): model of behavior
      *Ieiklar et al. (2005) delay in using information
Suggestions for Improving Forecast

- Learn why something works (Clements, 2003)

- Models
  - Useful for determining why errors occurred
  - **Newer models**
    - Non-structural time series
    - Non-linear
    - General equilibrium
    - Regime switching
  - Adjust to structural breaks
  - Incorporate indicators
  - Study why errors occurred

- Data
  - Ragged edge problems
  - Preliminary data can be modeled
  - Combine data at different frequencies

- Forecasting Process - Role of Judgement
  - Information has come from non-macro
  - Model forecaster behavior
  - Determine loss functions
    - cyclical turns
    - suggestion for increasing priors
      *state assumptions
      *monitor
- **Adjusting Forecasts**
  - Write rationale for making adjustments
  - Mechanical rules
  - Reestimate every period

- **Monitor Forecasts**
  - Quality control literature

- **Types of Forecasts**
  - Point vs. distribution