

The Future of
Macroeconomic
Forecasting:
Understanding the
Forecasting Process

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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
- Model Accuracy, Wallis (1987), Klein (1991)
 - 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