

# Fed Forecasting and the Role of Judgment

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# Outline

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- Overview of the policymaking and forecast processes
- Role of judgment
  - Definition
  - Examples
- Critique



# Federal Reserve Policymaking

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- Federal Open Market Committee
  - Large and geographically dispersed
  - Heterogeneous
  - Diversity of staff resources across System
- Dual mandate w/o formal inflation target
- Consensus decisionmaking w/o consensus forecast



# Implications for Forecast Analysis

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- Stimulates rather than guides internal policy debate
- Analysis “owned” by Board staff, not FOMC
- Analysis must ...
  - Include detailed narrative of the central outlook
  - Address topical issues
  - Explore alternative narratives

Key point — value gauged by more than just predictive accuracy



# Greenbook Forecast Analysis

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- Central narrative
  - Main forecast has ~ 2 year horizon
  - Often a modal forecast
  - Mix of models and judgment
- Alternative scenarios
  - Involves different stories, not just generic shocks
  - FRB/US-generated (with adjustments as needed)
- General uncertainty
  - Fan charts and confidence intervals
  - Historical GB errors, FRB/US stochastic simulations

# Judgment — what is it?

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#1: Subjective add-factoring of model equations

#2: Using informal methods to combine quantitative data, qualitative information, different economic models, and various forecasting techniques to produce a coherent central projection and an evaluation of risks to that outlook

→ #2 seems closer to the truth than #1

→ #2 may have its flaws — e.g., lack of rigor

# Use of Qualitative Information: Near-Term GDP Forecasting

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- Filter quantitative information
  - GDP adding-up using actual & projected source data
  - Factor models
- Applying judgment in ...
  - Pooling bottom-up & factor-model estimates
  - Using qualitative information (Beigebook)
  - Using other information (data reliability, revisions)

# Evaluating Shock Persistence: Inflation Forecasting

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Question: To what degree will a surprisingly high inflation reading be followed by elevated readings?

- Standard inflation models predict average historical persistence
- Price detail may suggest different persistence
- Incidence of shock matters
  - Index components differ in noise, reliability
  - Incidence may suggest special stories



# Model Pooling: Residential Investment

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- Forecasts from different estimated models
  - Reduced-form equations (several permutations)
  - FRB/US (structural but not DSGE)
  - FRB-EDO (DSGE)
- Analysis from different calibrated “models”
  - Backlog of unsold homes, sales, and starts
  - Mortgage finance innovations
- Results pooled informally, not formally
  - Issues w/ real-time forecasting
  - Issues w/ proper weight for calibrated model analysis

# Does the Greenbook Use of Judgment Provide Predictive Value-Added?

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- Probably yes for inflation
  - Relative to VARs (Sims, 2002)
  - Relative to univariate models (Faust and Wright, 2007)
  - Relative to factor models (Giannone, Reichlin and Sala, 2004)
- Maybe not for output
  - Value-added, if any, small and near term (Sims, FW)
  - Factor models may be more accurate in near term (GRS)
  - But no method adds much (Tulip, 2005)
- Jury still out for unemployment
  - No published analysis
  - Preliminary work suggests Greenbook has value-added

*But predictive accuracy is not the only gauge of value-added.*



# Future Directions

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- Dynamic factor models
  - Promising but black-box aspects problematic
  - Can they help redirect staff time to better uses?
- Real-time data
  - Carries great promise for better analysis
  - Takes more work
- FRB-EDO model
  - Forecasting performance looks promising
  - Provides new narrative
  - Flexibility for telling alternative stories may be limited