

Discussion of:  
The ECB Survey of Professional Forecasters  
A Review After Eight Years' Experience  
by Bowles, Friz, Genre, Kenny, Meyler, and  
Rautanen

Carlos Capistrán

Banco de México

The Federal Reserve Bank of Dallas, May 25, 2007

# Summary

- ▶ The paper is organized around three topics:
  - ▶ Short-term forecasting performance
  - ▶ Forecast uncertainty
  - ▶ Longer-term expectations
- ▶ I will discuss some of the paper's main results in this order

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# SPF's short-term forecasting performance

## Some results

- ▶ **SPF persistently under-predicts inflation**
  - ▶ The mean across forecasters has a systematic bias
  - ▶ Inflation was generally outside 90th percentile of distribution across forecasters
  - ▶ Bias seems to have switched recently (2006q3)
- ▶ Less evidence of such systematic errors for GDP and unemployment
- ▶ Difficult to identify good or bad forecasters, or to group forecasters by region or institution

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## Comments

### ► Evaluation

- Efficiency tests per forecaster to learn how they form their expectations: bias? autocorrelation? systematically missing an important variable?

$$E [e_{t+h,t,i}^* | \Omega_t] = 0$$

- Ranking forecasters is hard because you have to distinguish between forecasting skills vs. extraordinary luck (similar to ranking mutual fund's managers)

### ► Multivariate evaluation

- $e_{t+h,t,i}^*$  above is  $n \times 1$

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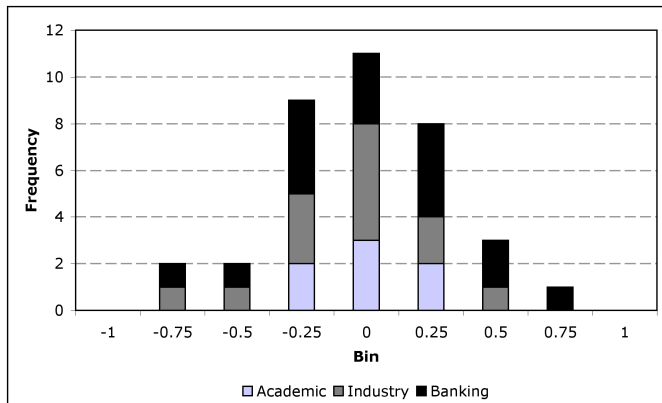
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Mean forecast errors, six-month ahead inflation forecasts, Livingston Survey, 1992-2004, real-time (Capistrán and Timmermann, 2006)



# SPF's short-term forecasting performance

## Comments

- ▶ Suppose you want to use these expectations as a predictor of future inflation

- ▶ Using equal weights to combine the forecasts (e.g., the mean across forecasters) is a good idea because (i) it is difficult to estimate the optimal weights (Clemen, 1989; Stock and Watson, 2003), and (ii) forecasters usually enter and exit the survey (Capistrán and Timmermann, 2007)

- ▶ But the mean is a biased forecast: project the actual value on a constant and the mean (Capistrán and Timmermann, 2007):

$$\tilde{Y}_{t+h,t} = \alpha + \beta \bar{Y}_{t+h,t}$$

- ▶ Now you can concentrate on  $\alpha$ . What drives it? It is clearly time-varying, how to forecast it?

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# Inflation forecast uncertainty

## Some results

- ▶ SPF provides two dimensions to measure uncertainty
  - ▶ Disagreement among forecasters
  - ▶ Probability distributions from each forecaster
- ▶ Their preferred measure of uncertainty is the standard deviation of aggregate distribution
- ▶ Level of disagreement has decreased since 2004
- ▶ With respect to probability distributions, SPF respondents do not seem to fully capture the overall level of uncertainty particularly at the individual level

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## Disagreement about inflation expectations

There are some stylized facts about the behavior of the disagreement about inflation expectations (Mankiw, Reis, and Wolfers, 2003; Carroll, 2003):

1. There is substantial disagreement
2. Disagreement varies through time, moving with:
  - ▶ The level of inflation
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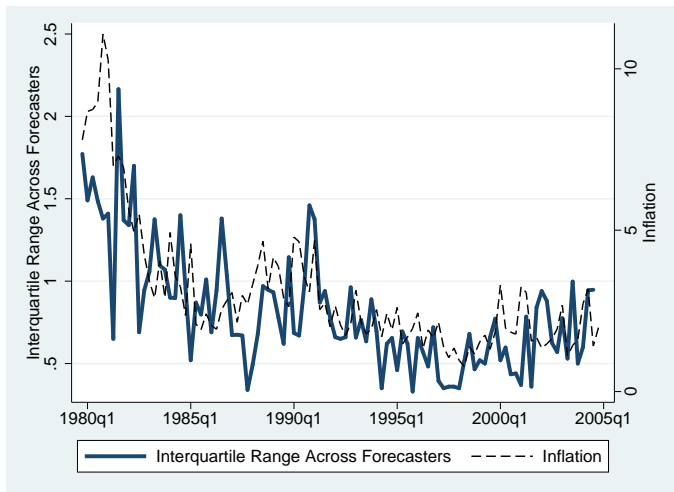
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Disagreement about inflation expectations, one-step-ahead inflation forecasts, US-SPF (Capistrán and Timmermann, 2006)



# Inflation forecast uncertainty

What drives heterogeneity in inflation expectations?

- ▶ Optimal forecast under symmetric loss and homogeneous information sets:

$$f_{t+h,t,i}^* = E[\pi_{t+h} | \Omega_t]$$

- ▶ Optimal forecast under symmetric loss and **heterogeneous** information sets:

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- ▶ Optimal forecast under **asymmetric** loss (linex) and **heterogeneous** information sets:

$$f_{t+h,t,i}^* = E[\pi_{t+h} | \Omega_{t,i}] + \frac{\phi_j}{2} \sigma_{t+h,t,i}^2$$

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- ▶ The level of disagreement has decreased since 2004 in ECB-SPF but, has the coefficient of variation decreased?
- ▶ With respect to probability distributions, how to aggregate the information?
  1. Calculate standard deviation from each individual distribution and then average across forecasters
  2. Combine the distributions (e.g., Giacomini and Komunjer, JBES, 2005) and then calculate the standard deviation

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# Longer-term inflation expectations

- ▶ Longer-term (qualitative assessment): suggests that the ECB has been successful at anchoring long-term inflation expectations
  - ▶ Capistrán and Ramos-Francia (2007): Inflation targeting reduces the dispersion across forecasters, measured as the coefficient of variation, in particular in emerging market economies
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