

# "Anchoring long-run inflation expectations in a panel of professional forecasters"

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# An Important Research Agenda

- ▶ How does the anchoring of long-run inflation expectations depend on **incoming inflation data** and **news** about future inflation?
- ▶ To what extent is the anchoring driven by **common beliefs about future inflation** among forecasters?
- ▶ Estimation uses **individual forecasts**, instead of median or modal projections.

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- ▶ To what extent is the anchoring driven by **common beliefs about future inflation** among forecasters?
- ▶ Estimation uses **individual forecasts**, instead of median or modal projections.
- ▶ **Coordination of beliefs** about inflation:
  - ▶ **Slowed down the pull** on average long-term inflation expectations despite chronic undershooting of inflation targets from early 2000s.
  - ▶ Role for **forward guidance**.

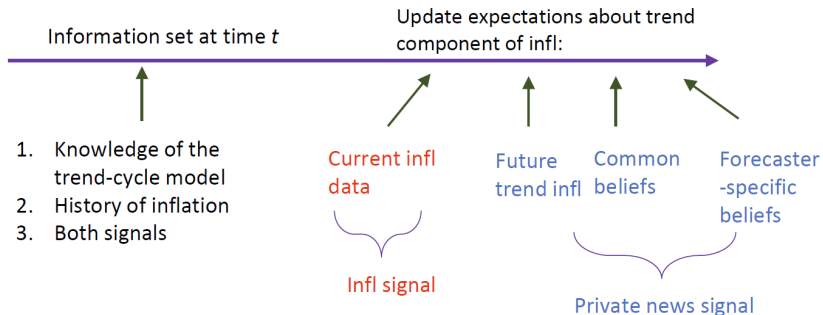
# Discussion and Comments

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2. Are professional forecasters responding differently to news?
  - a. Evolution of Kalman Gains and the importance of inflation vs. news signals
  - b. Recent SPF forecasts
  - c. Implications for forward guidance
3. Long-run inflation expectations and the Phillips curve
  - a. What are the implied estimates for the slope of the Phillips curve?
  - b. How does the slope respond to shocks to beliefs?
4. Use estimates of the signals to derive a measure of credibility of the central bank?

# 1. Long-run Inflation Expectations Formation Process



# 1. Long-run Inflation Expectations Formation Process (contd.)

De-anchoring - average long-run inflation expectations drift from central bank target.

Suppose inflation runs persistently above/below target:

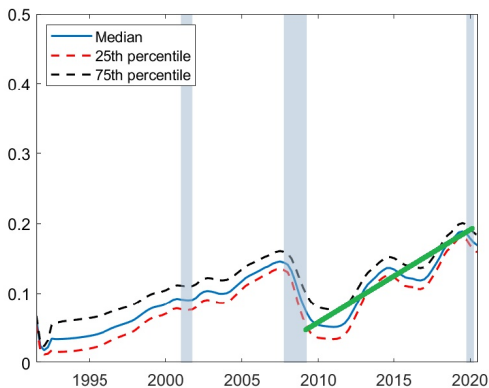
1. **Inflation signal**: Slow, persistent deviation of inflation drift
2. **News signal**:
  - If s.d. of common belief is large, no role for news signal.
  - If s.d. is small, news signal will fasten or slow down de-anchoring, **depending on central bank's credibility**

## 2. Are Professional Forecasters Responding Differently to News?

- ▶ Convergence of Kalman gains for inflation and news signals over the 2010s
- ▶ Recent SPF forecasts
- ▶ Implications for forward guidance effects

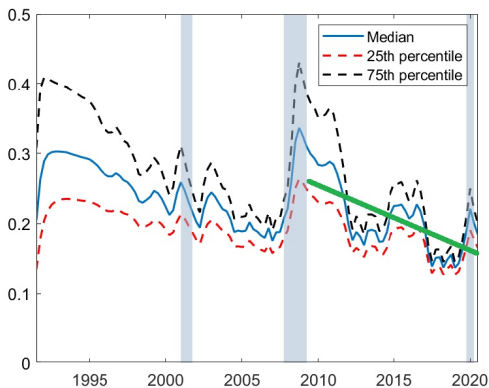


## 2a. Kalman Gain for Inflation Signal



Source: Left panel of fig. 4 (*green line added*)

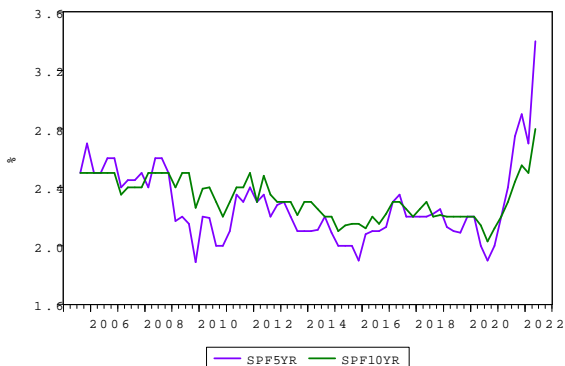
## 2a. Kalman Gain for News Signal



Source: Right panel of fig. 4 (*green line added*)

## 2b. Recent SPF Forecasts

Median SPF Inflation Forecasts



Source: SPF. Latest release on May 13, 2022.

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- ▶ Can the coordination of beliefs about inflation **still slow down de-anchoring process?**

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- ▶ How would this **change the importance of forward guidance** for common beliefs?
- ▶ Can the coordination of beliefs about inflation **still slow down de-anchoring process**?
- ▶ In the linear, Gaussian framework, **how would inflation have to evolve for de-anchoring** of long-term expectations?

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- ▶ Can we use this strategy to understand how the slope of the Phillips curve responds to the signals?
- ▶ For instance, using the NKPC representation:

$$\pi_t = \beta E_t \pi_{t+1} - \kappa (u_t - u_t^n) + v_t$$

Hazell, Herreño, Nakamura and Steinsson (2022) estimate:

$$\pi_t - E_t \pi_{t+\infty} = -\varphi \tilde{u}_{t-4} + \omega_t$$

where  $\varphi$  is proportional to  $\kappa$ ;  $E_t \pi_{t+\infty} \rightarrow$  10-year ahead SPF inflation exp;  $\tilde{u}_{t-4} \rightarrow$  4Q moving average of CBO unemployment gap.



### 3a. Slope of the Phillips curve

- ▶ Estimated series of average long-run inflation expectations can be substituted for  $E_t \pi_{t+\infty}$ .
- ▶ Do these estimates **reconcile with the empirical findings** for the slope?

## 3b. How does the slope respond to shocks?

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- ▶ How does the slope **respond to the different shocks** (permanent component, common beliefs, idiosyncratic beliefs)?
- ▶ For the 2008 crisis, and the ensuing ELB period, long-term average inflation expectations are stable (even as trend inflation declines).
- ▶ Implications for **forward guidance affecting the inflation-unemployment tradeoff** through common beliefs?

## 4. Measure of the Central Bank's Credibility

- ▶ The estimates of  $\lambda_t$  and  $v_t$  can be used to derive how much the forecasters trust the central bank to control rising inflation using  $\sum_{j=1}^h \lambda_{t+h} + v_t$ 
  - ▶ Credibility in central bank's willingness to tighten policy (and therefore, slow down de-anchoring)  $\Rightarrow \sum_{j=1}^h \lambda_{t+h} + v_t < 0$

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  - ▶ Credibility in central bank's willingness to tighten policy (and therefore, slow down de-anchoring)  $\Rightarrow \sum_{j=1}^h \lambda_{t+h} + v_t < 0$
- ▶ How does **credibility vary with the time horizon**?
  - ▶ *Levin and Sinha (NBER WP 27748)* - Perceived credibility of the central bank is modeled as varying with the time horizon over which commitment is made. We analyze optimal commitment policy, and find that perceived imperfect credibility over longer horizons induces significant deterioration in macro stability.

# Summary of Comments

1. Important paper that estimates the contribution of beliefs in the formation of long-term inflation expectations. Significant policy implications for the role of forward guidance.
2. If forecasters are responding more to inflation vs. news signals, what does this imply for forward guidance?
3. How do the shocks to the beliefs affect the inflation/unemployment tradeoff?
4. Does the credibility of the central bank vary over longer time horizons?