

Central bank's stabilization and communication policies when firms have motivated overconfidence in their own information accuracy or processing

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First comment

Title too long

Summary

Setup

- Economy with households, firms, and a central bank (CB)
- Only relevant fundamental: labor-supply shock
- Price level (and inflation) irrelevant for welfare & all firms equal:
→ only CB objective is minimization of price dispersion
- Price dispersion b/c firms obtain signal with idiosyncratic noise
Central bank gets signal with different noise
- Central bank can
 - communicate its signal, potentially with added noise
 - set nominal GDP

Motivated beliefs

Firms ‘enjoy’ to raise expected profits by reducing their belief about...

- a) the variance of private noise σ_ε^2
- b) the variances of private noise σ_ε^2 & of CB’s added noise σ_ϕ^2

→ Firms maximize expected profits minus function of distortion and ratio of *non-distorted relative to distorted noise variances*:

$$\text{a) } \max_{\delta} \mathbb{E}_i \Pi - f \left(\frac{\sigma_\eta^2 + \sigma_\phi^2}{\sigma_\varepsilon^2} \right) C(\delta)$$

New results

- a) For certain parameter values, a CB that can only communicate adds noise to its communication of the signal
 - With less CB noise, non-distorted variances decrease, reducing distortion costs and hence raising distortion

Motivated beliefs

Firms 'enjoy' to raise expected profits by reducing their belief about...

- a) the variance of private noise σ_ε^2
- b) the variances of private noise σ_ε^2 & of CB's added noise σ_ϕ^2

→ Firms maximize expected profits minus function of distortion and ratio of *non-distorted relative to distorted noise variances*:

$$\text{b) } \max_{\delta} \mathbb{E}_i \Pi - f \left(\frac{\sigma_\eta^2}{\sigma_\varepsilon^2 + \sigma_\phi^2} \right) C(\delta)$$

New results

- b) For certain parameter values, CB only partly stabilizes GDP and reduces noise in its communication
 - With more CB noise, distorted variances increase, reducing distortion costs and hence raising distortion

Comments

Thought-provoking paper on important topic:
Policy implications of 'irrational' expectations

May rationalize noisy ECB forecasts?

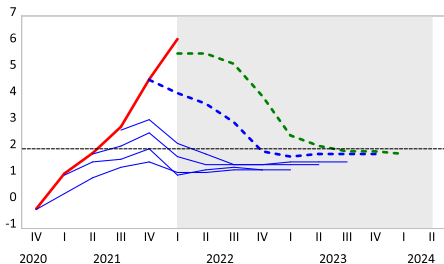


Figure: ECB inflation forecasts and realization (red line), from Conrad et al. (2022)

Two main comments

- Theoretical: results sensitive to ad-hoc assumption
- Empirical: analyzed cases questionable

Comments: theory

Main conclusions hinge on (ad-hoc) assumption:

Firms maximize expected profits minus function of distortion and ratio of *non-distorted relative to distorted noise variances*

Potential, equally plausible alternative:

Allow distortions to reduce objective profits by certain percentage

Implications:

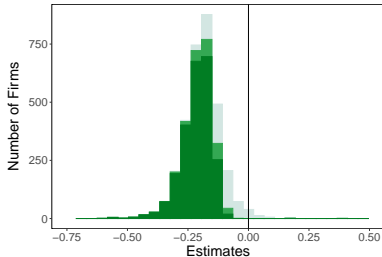
- a) Reducing CB noise makes distortion (listening less to CB) more costly: reduces distortion. Back to full transparency
- b) Higher CB noise makes distortion (listening more to CB) more costly: reduces distortion. Back to full opacity

⇒ Depending on assumptions, conclusions may flip

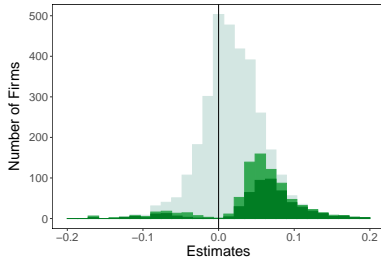
Comments: empirics

Born et al. (2022): Bordalo et al. (2020) regression of individual ifo firm expectations on forecast revisions and public news

Overreaction to private news
(forecast revision)



Underreaction to public news
(ifo index shock)



Note: grey=not significant, bright green=10%, dark green=5%

⇒ Private and public signals treated in opposing ways,
contrary to assumptions here

Conclusion

Interesting microfoundation of the expectation-formation mechanism

Important step to derive policy implications from these new models

Main comments:

- Theoretical implications not robust
- Other cases more plausible empirically