Comments on Persson and Tabellini's Designing Institutional Arrangements to Foster Nominal Stability

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Questions for institutional design

- Central bank design raises three key questions:
  - What do we want the central bank to do?
  - How can we ensure the central bank does it?
  - Who is the "we"?

The environment and objectives

- The model:

$$\pi = \pi^e + \kappa^{-1}(\hat{x} + \varepsilon), \tag{1}$$

$$\hat{x} = -\sigma(i - \pi^e - \rho); i \geq 0 \tag{2}$$

- $\hat{x} = x - \theta$ is an output gap, $\rho = \text{r} < 0$ with prob. q and $\rho = \text{R} > 0$ with prob. 1-q.
- The objective:

$$E[L(\pi, \hat{x})] = \frac{1}{2}E[(\pi - \bar{\pi})^2 + \lambda(\hat{x} - x^*(\theta))^2]. \tag{3}$$

$\bar{\pi}$ and $x^* = \bar{x} - \theta \geq 0$ are target levels of inflation and output.

- Realizations of $x^*(\theta)$ are common knowledge: realizations of ε are in the policymaker's information set but not in that of private agents.

If a state-contingent contract is feasible

- The optimal commitment outcome can be achieved.
  - Extends P&T (1993) and Walsh (1995): Optimal contract is linear in π but is state contingent. It depends on θ, but not on ε.
  - Average inflation in the good state exceeds $\bar{\pi}$.
  - The contract only applies in the good (non-ZLB) state.
- The power of the contract:

$$T_{\pi}^{R}(\theta) = \left[\underset{\geq 0}{\lambda(\bar{x} - \theta)} + \underset{\leq 0}{\beta(q)^{R}(\bar{\pi} + r)} \right]$$

- If ZLB episodes are frequent, penalty can turn into a reward for more inflation in the normal state.

If a state-contingent contract is not feasible

- θ may be non-rulable (Kocherlakota 2016).
- P&T (2024) show that the optimal non-state-contingent contract cannot replicate the optimal commitment outcome.
- The contract takes the form

$$T(\pi) = T_0^R + T_\pi^R(\bar{\theta})\pi^R + \frac{1}{2}T_{\pi\pi}^R(\upsilon_\theta, \upsilon_\varepsilon)(\pi^R - \bar{\pi}^R(q))^2 \qquad (4)$$

  where $T_{\pi\pi}^R(\upsilon_\theta, \upsilon_\epsilon) > 0$ and $T_{\pi\pi}^R(\upsilon_\theta, \upsilon_\epsilon)$ increasing in υ_θ and decreasing in υ_θ.
- We have seen this trade-off before: Rogoff (1985).

Issues of practicality

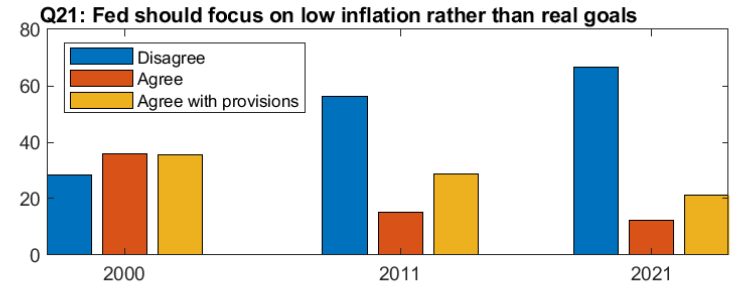
- Can a performance contract be implemented?
  - Svensson (1997) showed the linear component is equivalent to assigning an inflation target.
  - The quadratic component distorts central banker's preferences towards greater inflation stabilization.
- More complex (realistic?) models would imply more complex contracts.
  - Bilbiie (JEDC 2014) derives an optimal contact in a NK model in which optimal commitment introduces an endogenous state variable.

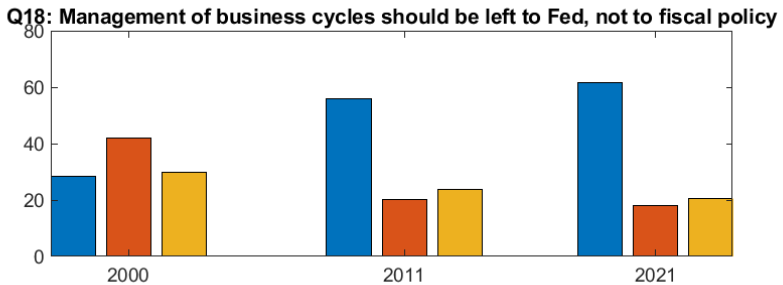
Accountability

- In delegation problems, performance measures and systems of accountability are important.
  - P&T (2024): "As the contracts we have derived are based on realized inflation, performance should be evaluated ex post. To set incentives right, the central bank leadership should know about this evaluation – they should expect that they will be held accountable for their policy performance with explicit reference to the delegation terms."
- Rules versus goals Walsh (IJCB 2015) – goals win.
- Need an external evaluation of policy performance.

The third key question: Who is "we"?

- If the government sets the contract, whose preferences are being reflected?
- Households? Economists?
  - Survey evidence: Afrouzi, et al (2024) finds average preferred inflation rate is 0.2%, while Stantcheva (2024) finds attitudes about inflation vary by income.
  - Geide-Stevenson and La Perra Perez (2021): Views of economists have also evolved.





Summary

- The authors show the importance of thinking about incentives when considering central bank design.
- The results raise several important issues for further study:
  - The design and feasibility of contracts in richer models;
  - Robustness of contracts to model uncertainty;
  - Communications challenges of the contracting approach;
  - Whose λ?
- Is flexible IT the best practical approach? – a goal dependent central bank with a clear performance measure and policymakers who internalize the objectives of flexible inflation targeting.