

Robust Design Principles for Monetary Policy Committees

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Elements of Policy Design

- Inflation targeting

$$\pi_t = \bar{\pi}$$

- Specifies objectives
- Incomplete policy framework: require theory of transmission mechanism

Elements of Policy Design II

- A complete model

$$\pi_t = \bar{\pi}$$

$$x_t = E_t x_{t+1} - \sigma (i_t - E_t \pi_{t+1} - r_t^n)$$

$$\pi_t = \kappa x_t + \beta E_t \pi_{t+1}$$

- To determine current interest-rate setting i_t requires the central bank to compute projections

$$\{i_T, \pi_T, x_T\}_{T=t}^{T=\infty}$$

- * Implication of forward looking behavior

Elements of Policy Design III

- Equivalent representation

$$x_t = -\sigma E_t \sum_{T=t}^{\infty} (i_T - \pi_{T+1} - r_T^n)$$

$$\pi_t = \kappa E_t \sum_{T=t}^{\infty} \beta^{T-t} x_T$$

- Underscores centrality of conditional expectations $E_t i_T$, $E_t \pi_T$, and $E_t x_T$
- Underscores why monetary policy can be effective even when current interest rates are constrained by the zero lower bound on nominal interest rates

Elements of Policy Design III

- Equivalent representation

$$x_t = -\sigma E_t \sum_{T=t}^{\infty} (i_T - \pi_{T+1} - r_T^n)$$

$$\pi_t = \kappa E_t \sum_{T=t}^{\infty} \beta^{T-t} x_T$$

- Implies $\bar{\pi} = 0$ is optimal policy. Central bank can fully stabilize π_t by choosing in each period

$$i_t = E_t \pi_{t+1} + r_t$$

- In general insufficient to provide only the projections $E_t i_T$, $E_t \pi_T$, and $E_t x_T$ in each decision cycle
 - * Households and firms may hold different views — Indeterminacy
 - * Not always the best policy

Elements of Policy Design IV

- Optimal policy is history dependent — x_{t-1} encodes past commitments

$$\pi_t = \bar{\pi} - \frac{\lambda_x}{\kappa} (x_t - x_{t-1})$$

$$x_t = E_t x_{t+1} - \sigma (i_t - E_t \pi_{t+1} - r_t^n)$$

$$\pi_t = \kappa x_t + \beta E_t \pi_{t+1} + u_t$$

- Agents need to know, or be able to infer, the reaction function

$$i_t = \frac{1}{\sigma} \left[E_t x_{t+1} - \frac{\lambda_x}{\lambda_x + \kappa^2} x_{t-1} + \left(\frac{\beta \kappa}{\lambda_x + \kappa^2} + \sigma \right) E_t \pi_{t+1} + \frac{\kappa}{\lambda_x + \kappa^2} u_t + r_t^n \right]$$

- Can contemplate how different projections change policy

Current Practice in Australia

- Statement on Monetary Policy provides projections
 - Little discussion of the policy framework. Hard to discern reaction function. Hard to discern what perceived trade-offs mean for the conduct of policy
 - Limits credibility since cannot distinguish poor policy from developments beyond the control of the central bank
- Success gauged by retrospective criterion: if inflation averages 2-3 per cent over 10 years all good [Stevens (2016) *An Accounting*]
 - Communication a double-edged sword: consider a situation in which the CB misses the target for a sustained period
 - Will want to claim its for reasons beyond CBs control – how do we know?

Going Forward

- Australia is in the fortunate position of being able to have a serious discussion about the policy framework and institutional design outside of a crisis
- The financial crisis highlighted some limitations of inflation targeting as practiced
 - Worth designing a framework that has the flexibility to respond to unanticipated developments
 - Best done through refinement of communication strategy: improves policy in good and bad times. Quantitative easing not the answer
- Worth recalling why the Fed was side-lined during the Great Depression