Managing Capital Outflows:
The Role of Foreign Exchange Intervention
by Basu, Ghosh, Ostry and Winant

Discussion

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Summary

I. Highly sophisticated intertemporal model of foreign exchange intervention

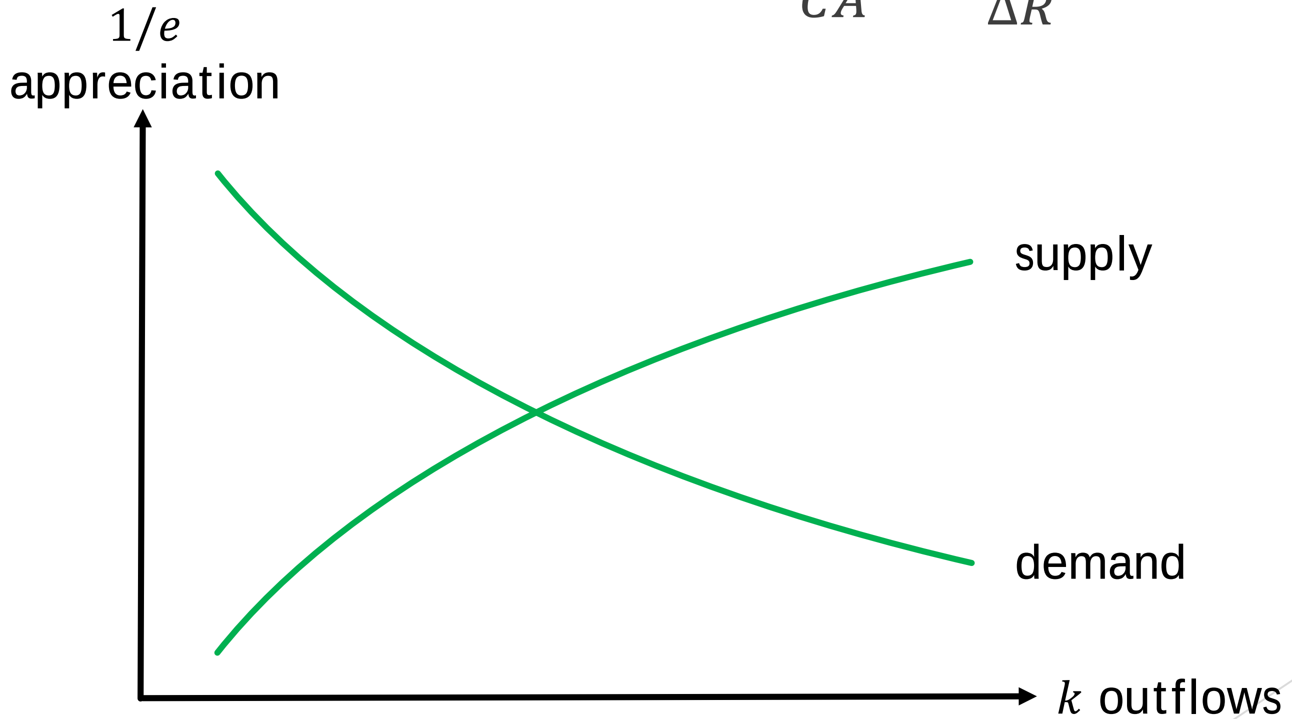
- market segmentation breaks UIP arbitrage
- exchange rate = asset price
  = PDV(future shocks & interventions)

II. Analysis of optimal intervention

- if CB cares about *level* of exchange rate
- solved under commitment and under time consistency

Overview of Model: Demand and Supply for Outflows

- Supply of outflows: $k = \overbrace{a \cdot [e_{t+1} - e]}^{UIP\ arbitrage} + \overbrace{z}^{shock}$
- Demand for outflows: $k = \underbrace{c \cdot e}_{CA} + \underbrace{f}_{\Delta R}$



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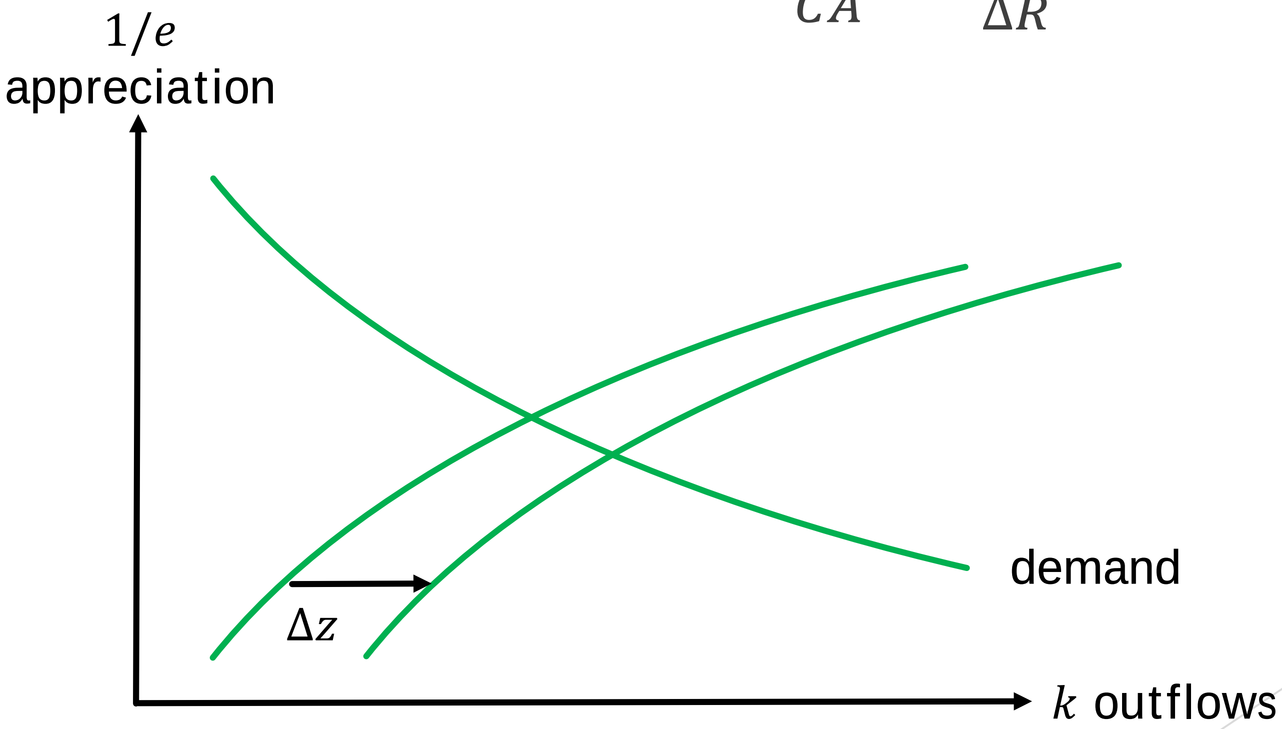

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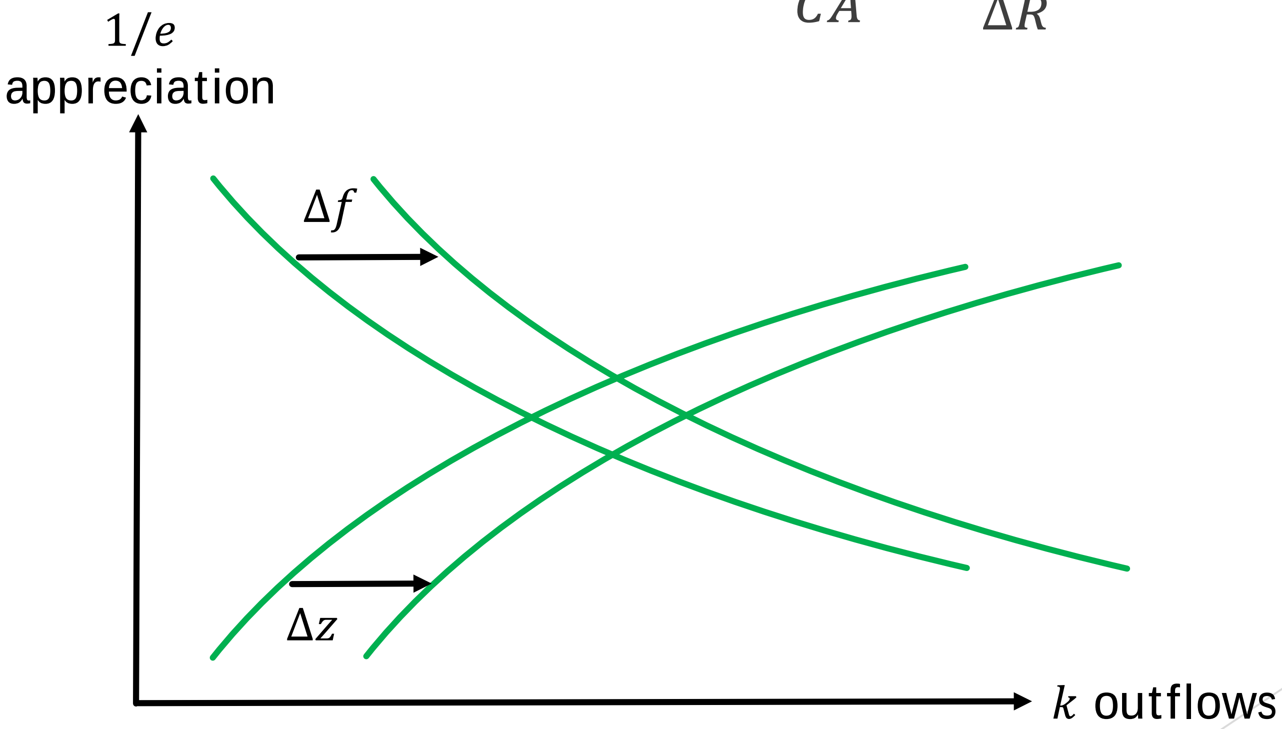

Overview of Model: Intertemporal Structure

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- iterate forward to obtain e as asset price

$$e = PDV(z_{t+s} - f_{t+s})$$

- discount factor $\left(\frac{a}{a+c}\right) < 1$ each period
- future intervention appreciates current e

Analysis of Optimal Policy

Welfare function: $W = -\sum_t \beta^t (e_t - e^*)^2$

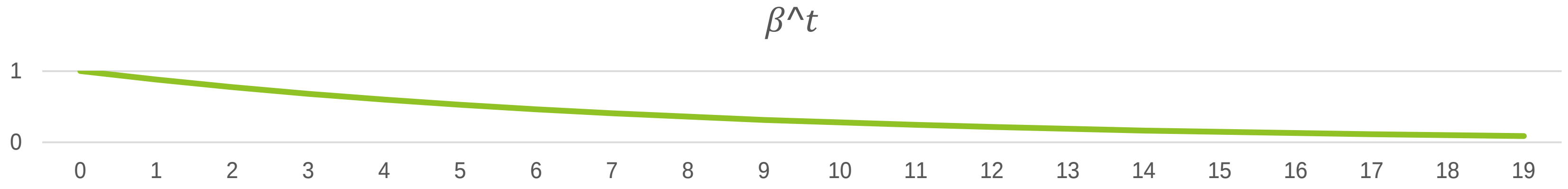
- policymaker values *level* of e_t
- benefit of intervention at t adds up since it appreciates $e_t, e_{t-1}, \dots, e_1, e_0$
- but it is also discounted at rate β
- in authors' preferred specification,

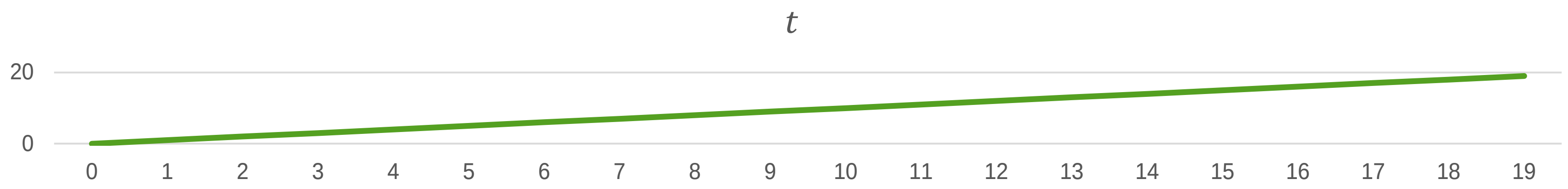
$$\frac{dW}{d\Delta e_t} \cong \beta^t \cdot t$$

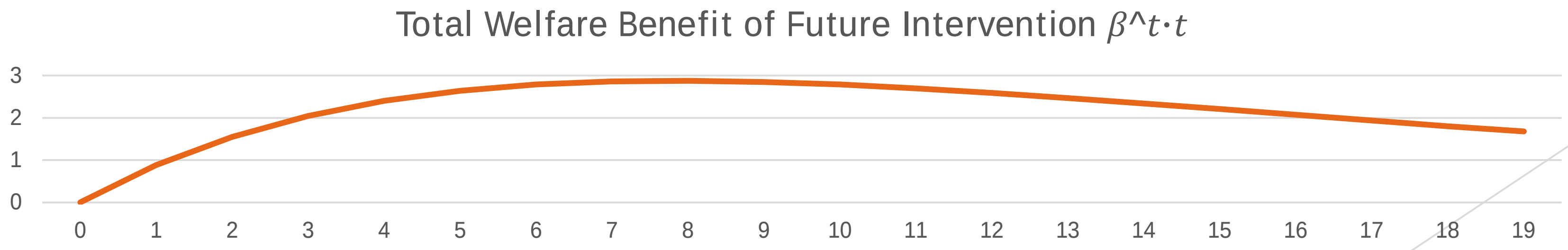
Intertemporal Structure

Benefit of intervention for misaligned exchange rate:

$$\frac{dW}{d\Delta e_{t+s}} \cong \beta^t \cdot t$$







Main Results:

Under commitment:

- promise future intervention at date with maximum payoff
- potentially delayed start
- intervene until reserves depleted (or shock over)

Main Results:

Under time consistency:

- keeping reserves = only way to create expectations of future intervention
  → always keeping some reserves is beneficial
- depreciation much greater, welfare lower, esp. when reserves are low

→ simple rules (e.g. peg, fixed intervention, …) may serve as 2nd best form of commitment

Q: Does Welfare Depend on Level or Changes in Exchange Rate?

Welfare function: $W = -\sum_t \beta^t (\Delta e_t)^2$

- policymaker dislikes changes in e_t
- same interesting intertemporal effects of intervention
- but very different implications for optimal policy

→ interesting to elaborate
(e.g is time consistency problem smaller?)

Q: Alternative Reading of Examples of Forex Intervention

Several of the examples cited in the paper (e.g. Russia, Korea, Brazil):

- banks/corporates with large currency mismatch, implicitly earning profits from carry trade
- keeping fixed exchange rate = implicit bailout = socializing losses that are flipside of carry trade

Optimal policy: forbid mismatches
very little forex intervention