MOST 2014 學術研習營 (國際金融理論與實證)

貨幣政策與匯率動態

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2014.11.10

Outline

1. Official Exchange Rate Intervention
2. Historical Background
3. ABC's of Official Intervention
4. Fear of Appreciation

Official Intervention in Foreign Exchange Market

- What is official intervention?
  - The authorities buy or sell foreign exchange in order to affect the exchange rate.
  - Direct Intervention vs. Indirect Intervention

Historical Background

- In 1970s, at the time of the collapse of the Bretton Woods system, the profession appeared strongly to favor a pure float, involving zero intervention.
- The 1970s experience with extremely high volatility of exchange rates so that, by the late 1970s, both economists and policy makers - particularly of countries which had suffered a substantial loss in competitiveness - frequently criticized the US authorities for not intervening in support of the dollar.

Historical Background

- It hence leads to
  - 1985 Plaza Agreement (concerted intervention)
  - 1987 Louvre Agreement (reference range)
- Following the Plaza and Louvre meetings, official intervention in the markets for the major exchange rates has been regular and at times heavy.
- In addition, exchange rate intervention, together with macro policy coordination, has also played an important role in the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) of target zones between European exchange rates.

ABC's of Official Intervention

- Why promoting exchange rate intervention?
- The channels of influence of official intervention
- The effectiveness of exchange rate intervention
- The profitability (cost) of intervention
- Data on exchange rate intervention

Why promoting exchange rate intervention?

- The Wrong-Rate Argument
- The Adjustment-Argument

The Wrong-Rate Argument

- An inefficient foreign exchange market may tend to generate the "wrong rate"
- Move the exchange rate towards what the authorities believe to be the correct rate, i.e., the rate consistent with the economic fundamentals
- So called "dynamically stable (動態穩定)" in Taiwan

The Wrong-Rate Argument

- Why deviating from the correct rate?
  - Foreign exchange market inefficiency/Instability in the foreign exchange market:
    - ★ For instance, Self-fulfilling currency crises; Speculative bubbles; Technical (chartist) analysis; Noise Traders
  - Suggestion: a policy of "leaning against the wind"
  - That is, sell the currency while it is appreciating; buy it back when it depreciates.

The Wrong-Rate Argument

- The wrong-rate argument implicitly assumes that: the authorities use information more efficiently than speculators.
- That's also the reason why the central bank is capable to correct the wrong rate.
- However, this raises the question of why the central bank does not make its information set available to the other market participants since this would eliminate the informational asymmetry, helping speculators to act in a stabilizing manner.

The Adjustment Argument

- To smooth the adjustment process of exchange rates towards their long-run equilibrium value
- The adjustment process may be very painful and cause large costs if purely determined by market forces

Comments

- Authorities may not be capable of identifying correctly the exchange rate implied by the fundamentals
  - May not be effective
- The benefit may not exceed the cost
- Most importantly, the extent of official intervention which is needed to move the exchange rate towards a certain target depends crucially on the reaction of the private sector
- The authorities may not easily understand when a certain observed disturbance is temporary or permanent and, therefore, they may whether it requires a specific response in the foreign exchange market or not

Other Motivations

- Precautionary purposes
  - Reserve Adequacy: e.g., Reserve-M2 ratio
- Competitiveness reasons

Interventions and Exchange Rate Dynamics

- How do official interventions work?
  - Portfolio Balance Channel
  - Signaling Channel
  - Coordination Channel

Interventions and Exchange Rate Dynamics

- Main focus: are official interventions effective and successful in achieving their objective?
  - Major global currencies (US dollar, Yen, Euro/Mark): Fratzscher (2012, Handbook of Exchange Rates)
  - Emerging Markets: Menkhoff (2013, World Economy)

The Profitability (Cost) of Intervention

- According to Sarno and Taylor (2003)

$$z_t = \underbrace{\sum_{k=1}^{t} f_k(e_t - e_k)}_{z_{1t}} + \underbrace{\sum_{k=1}^{t} e_k(i_k^* - i_k) \sum_{j=1}^{k} f_j}_{z_{2t}}$$

  - US: Profits from intervention operations may vary significantly according to the sample period considered but, in general and in the long run, central banks make profits.

Data on Exchange Rate Intervention

- It is a big issue for researchers that the intervention data is NOT available.
- It is really unclear why the central banks do not release historical intervention data
- Make the data publicly available: US, Germany, Japan, Australia, Turkey, Switzerland, Itlay, Mexico
  - See FRED Economic Data

Data on Exchange Rate Intervention

- What can we do if the intervention data is unavailable?
  - Use changes in reserves as a proxy
  - Problem: too many sources of the changes in reserves
- Weymark (1997, JIMF)
  - A model-consistent estimated measure of intervention
  - Sarno and Taylor (2003): Weymark's measure may represent a plausible alternative to measured changes in international reserves
  - Further reading: Chen and Taketa (2007, PER)

Fear of Appreciation

- Fear of Floating vs. Fear of Appreciation
    - Levy-Yeyati et al. (2013, *JDE*)
    - 陳旭昇 (2014,《經濟論文叢刊》)
    - Chen (2014, working paper)

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