The discussion of

The anatomy of a peg: lessons from China's parallel currencies

(Saleem Bahaj & Ricardo Reis)

José-Luis Peydró

(Imperial College London)

ECB Conference on Money Markets 2023

Summary: motivation

- The Chinese authorities have conducted a **large-scale monetary experiment**. The challenge has been to **reconcile an open current account with a fairly closed capital account**
  - An open current account, with free trade of goods over multiple destinations by the world's largest exporter and its second largest economy, comes with a large volume of payments across borders to settle imports and exports
  - A closed capital account, with tight restrictions on foreign investment and state control over savings abroad, requires strict controls on any payments associated with financial inflows and outflows
  - The former provides a strong force for the yuan to be used internationally; the latter restricts the yuan to be a domestic currency

- Chinese answer was **to create an offshore currency, the Hong Kong yuan (CNH), that circulates in parallel with the onshore currency (e.g. in HK), the mainland yuan (CNY)**
  - The CNH is freely used for payments and investments by anyone outside of China. ¥2 trillion worth in transactions per day in CNH across the world fueling 14% of global trade
  - By placing strict restrictions on the conversion of CNH to CNY and vice versa, the authorities can have tight **capital controls co-existing with an internationally-used yuan**

Summary: contribution

The paper uses the Chinese setting on the parallel currency pegged to the domestic currency

- **Very interesting in its own right** given the size of the Chinese economy in the international financial system

- To **test classic principles in international economics** that link money to exchange rates

Summary: results

- The paper finds that **exogenous, anticipated, and transitory increases in the supply of money depreciate the exchange rate**

- The co-existence of the two currencies is **sustained by an elastic supply of money to absorb shocks to the demand for CNH,** without the use of interest rate policy

- Not only capital controls are important but also liquidity controls as money also includes demand deposits created by private banks, and **when the supply of money is kept scarce, banks may find ways to make loans and take on deposits, so the relation between the money supply that is controlled by the central bank and the exchange rate may be lost**. To avoid it, it requires controlling the flow of money from depositors and banks between CNH and CNY accounts. **Liquidity controls complement capital controls**

- **Deviations from the CNH/CNY peg** are used as a pressure valve to **manage the exchange rate between the yuan and the US dollar**

General comments

- A **top paper regarding question, setting, results. You should read it**
  - They write: "*Readers satisfied with this bottom line can skip to the next section; those wanting to understand better the details of the monetary operations can read what follows.*"
  - And the institutional details on money markets and monetary policy are extremely interesting, not just the economics of the four results
- **China is becoming the largest economy** in the world, with huge export market, and this study of the parallel currencies is hence very important
- The **setting is also very good for identification purposes to test theories in general** beyond the Chinese setting. E.g., the impact of money on exchange rates is very difficult to tackle because of
  - Endogeneity of money in economic activity and hence for exchange rates
  - Reverse causality of exchange rate to money
  - Omitted variables such as macro variables or endogenous monetary policy to other related factors
  - The paper uses the institutional setting (including the Chinese monetary policy tackling local economy issues) and different instruments to tackle the identification problems

A key tension is internal vs external validity

- One could argue about how to get the external validity beyond the Chinese setting:
  - Capital controls
  - Liquidity controls
  - Key private players are subsidiaries of Chinese state-owned banks
  - HK banks/central bank are potentially heavily influenced by China (and Chinese policy)
  - Are there close substitutes to CNH money such as repos (private, liquid, safe assets similar to money)? If scarcity of money, close substitutes in USA or Europe, and in general, but CNH seems to have little variation of assets

- A key issue in this paper is then how to position the paper: it is not only the Chinese setting but results apply narrowly to China? Or the 4 general results apply in general?

- If both, then a suggestion is to highlight the Chinese particular setting as unique for identification but not affecting so much the external validity on the results. I think the paper could improve (or be more persuasive) on this

Internal vs external validity and further possible tests

- For example, there is No relation between M and FX in general (for not hyperinflation countries) in empirical papers (e.g. Meese and Rogoff 1983): is it **because of endogeneity** (identification problems that plague the existing literature) or **because changes in M are compensated with private money from banks**?

To push on this, given your unique setting:

- Could you exploit **different bank regulation** for the creation of private money at time of scarcity of CNH?

- For example, there is HK but there are also other offshore centers such as **London, Luxembourg and Singapore** where maybe it is easier in some periods to provide private money in case of scarcity of public money and FX deviations. **Could you exploit any of this in the empirical analysis?**

How is the central bank of China directly intervening?

MONETARY POLICY OPERATIONS: CNH

People's Bank of China

Assets	Liabilities
(a) CNY Assets	(c) CNY Onshore Reserves
(b) FX Assets	(d) CNY Clearing Bank Reserves
	(e) CNH Bills
	(f) Equity, Others

Offshore Clearing Banks

Assets	Liabilities
(g) CNY Clearing Bank Reserves	(i) CNH Commercial Bank Sight Deposits
(h) Other Assets	(j) CNH HKMA Deposits
	(k) CNY Equity, Others

Hong Kong Monetary Authority CNH

Assets	Liabilities
(l) Deposits at Clearing Banks	(p) Equity, Others
(m) PLP Balances	
(n) Liquidity Facilities	
(o) Other Assets	

Hong Kong Commercial Banks CNH

Assets	Liabilities
(q) Deposits at Clearing Banks	(t) Demand Deposits
(r) PBoC Bills	(u) PLP Balances
(s) Loans, Others	(v) HKMA Facilities
	(w) Equity, Others

- PBoC weekly manages M through bills: (e) falls (d) up; (g) up (i) up ; (q) up, (r) down.
- HKMA hourly manages M through lending facility: (l) down (m) up ; (q) up, (u) up.

Is the central bank of China directly intervening?

- Fitch (2016): “A spike in the Hong Kong interbank rate for **offshore renminbi (CNH-Hibor)** this week is not indicative of a broader liquidity problem in the Hong Kong banking system, *… The jump in CNH-Hibor to above 60% was the* ***result of the People's Bank of China (PBOC) buying offshore renminbi*** *to tighten CNH liquidity in an effort to reduce short positions against the currency, according to media reports. This was also spurred by an increasing disconnect between the offshore (CNH) and onshore (CNY) exchange rates since the beginning of the year…* ***The PBOC's intervention is likely to support the CNH and act as a stabilising factor to slow the rate of depreciation versus the US dollar*** *and Hong Kong dollar* ” (https://www.fitchratings.com/research/banks/cnh-interbank-spike-not-broader-hk-liquidity-squeeze-13-01-2016)

- In addition to CNH bills, does the PBOC intervene in the asset side via FX purchases (or SWAPs or other operations)?
    - For bills: can they call back some existing issued bills? Or just adjust next operations?

- More generally, as CNH may be crucial for exports and dollar to yuan, and that is an important part of the Chinese GDP and FX, could the PBoC set monetary policy also thinking about CNB/CNY?

- In any case, it seems that PBoC can directly buy CNH

What are other related similar experiences?

- There has been many pegged currencies in the past with fairly liberalized current account but with strong restrictions in the capital account, e.g. Europe before 1990

- Euro area nowadays have one currency, extreme version of the pegged currencies, but it has fully liberalized the capital account. Still capital control restrictions as in the financial crisis in Cyprus

  - In the euro area crisis, a big thing was risk premia of longer maturity (government) bonds, but are there bonds in the market of CNH of different maturities (other than the central bank bills)?

  - Does the CNH not have close substitutes with similar maturity and liquidity (say US repo market in 2003-06) nor it does not have typical risk-free bonds (safe assets) with different maturity?

- In currency boards, there is normally a strong currency (e.g. the dollar) and a weak one (e.g. the Argentinian peso) without much success, but the Chinese case is different

- The currency board of Hong Kong has been very successful, and HKMA plays a role in this one and the in the CNH (a kind of fixed effect?)

- Is the Eurodollar market another very related example even if it is not about a pegged currency?