Discussion of "Hegemony or Harmony? A Unified Framework for the International Monetary System"

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Brief Summary

- ► a solid and well polished paper that presents a micro-founded money search theory to study the equilibrium conditions under which
  - (1) a single currency exists; (2) two currencies co-exist

- ► addresses a very important (perhaps of first-order) question for international macro
  - Dominant Currency Paradigm (DCP, Gopinath et al., 2020): (1)close to 60% of foreign reserves in USD; (2)40% trade invoiced in USD; (3)sticky border prices in USD
  - Eichengreen (2011): declining of the "exorbitant privilege" for UK Pound/USD along with increasing diversifications of currency

- ► this paper: a country's fiscal capacity as the key condition
  - safe asset provides the "fundamental" source of liquidity for the "value" of a currency
  - short supply triggers *currency substitution* and commands a currency *risk-premium* that supports the coexistence

Model Sketch

- ▶ roles of MONEY (per currency): (1) medium-of-exchange (MOE) and (2) store of value (SOV)

- ▶ I. search frictions among households:

  - finite number of households ($N + M$) with N buyers and M depositors to create wedge of transaction costs of both parties (interest rate wedge)

  - intrinsic value of a currency: safe asset of a currency provides liquidity to functioning with MOE and SOV

- ▶ II. "trade finance" frictions via a banking sector (financed goods payment before goods shipment)

1. Decentralized Market (DM): matched as buyers and unmatched as investors

2. Financial Market (FM): investors deposits finance the trade loans to buyers

3. Centralized Market (CM): loans and investors get repaid

Equilibrium Determination

▶ (net) returns on holding one unit of currency j

$$r_j = \frac{N}{N+M} \underbrace{[\frac{u'(q)}{c'(q)}(\frac{1-F_j'}{N/M})-1]}_{mar. \ gain \ from \ DM \ transactions} + \frac{M}{N+M} \underbrace{(i_j^D + \eta_j)}_{mar. \ gain \ from \ FM \ investment}$$

- MOV channel operates as the transaction cost effect (MOV): $F'(m_j) < 0$

- SOV channel: $\eta_j > 0$: interest rate markup given finite number of M investors, with some market power: (SOV)

▶ $j = 1, 2$: two equations solving for holdings m_1, m_2

- determinants of 2 by 2 Hessian Matrix for inferring on interior vs. corner (unipolar) solution

- negative semi-definite for ensuring "co-existence"

Key Channel

- $sign(|H|) = sign((L_1 - MOE_1 - SOV_1)(L_2 - MOE_2 - SOV_2) - L_1 L_2) < 0$ (unconstrained fiscal capacity)

- $sign(|H|) = sign((L_1 - MOE_1 + S\bar{O}V_1)(L_2 - MOE_2 + S\bar{O}V_2) - L_1 L_2)$? (constrained fiscal capacity) (shrink the investment return which deters liquidity provision)

▶ where SOV_j and MOE_j is the partial of marginal gain from DM and FM with respect to changing m_j

▶ $SOV_j > MOE_j$ gives the possible "semi-definiteness" of H that interior solution of currency coexistence survives

Key Channel (Cont.)

- safe asset is the source of liquidity provision of the bank balance sheet

- for short of safe asset supply, investors pays a "liquidity risk premium" in order to make a deposit for investment return, which discounts the return $\eta_j < 0$

- loss of interest rate markup $return\ loss = -\frac{1+i_j^D}{\frac{N}{M}-(1+i_j^D)}$ for $N > M$

- triggers substitution to hold other competing currency up to the fraction that well compensated for the risk premium

Comment 1. Hedging and Other Source of Bank Funding Liquidity

▶ This paper: expansionary fiscal policy raises the debt limit by supplying additional safe asset $\bar{B}_j$

▶ if treasury considered the only source of funding liquidity, i.e. occasional binding constraint $p_j \phi_j b_j \leq \bar{B}_j$

- perhaps too strong of an assumption in this paper: concurrence of twin crisis (currency $\leftrightarrow$ banking crisis) in the model

- in reality, the asset side of banking system under bank's *optimization*: (1)vault cash, (2)interest-earning reserves at the central bank, (3)other foreign reserves for hedging cross-border trade finance liquidity risk

- the theoretical "funding liquidity constraint" may not binding at least simply for the fiscal reason

- the "hard constraint" may be the point when central bank's money printing triggers too high of inflation that cannot provide additional liquidity (the monetarist view)

- it's not wrong at all to highlight the fiscal importance but good to think about ruling out the alternative

Comment 2. Definitions of Currency Regime

The US dollar's share in global foreign exchange reserves fell to its lowest level in 25 years in the fourth quarter of 2020, driven by exchange rates in the short term and central bank actions in the long term.
(currency composition of global foreign exchange reserves, percent)
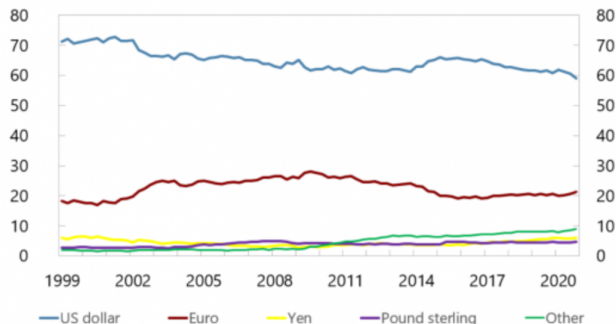
Mapping to the data: what is unipolar or multi-polar or perhaps long-run coexistence? (Recall "Dominant CP" as in Gopinath et al., 2020)

Comment 3. What really hits the fiscal constraint, Sovereign Defaults?

- ▶ can be good to rationalize the constraint via lens of the risk of Sovereign Defaults, instead of thinking of a "safe asset supply" limit

  - too many SD events in history

  - effectively a debt supply limit for issuing more sovereign debts can be costly or completely impossible

- ▶ "safety" implicitly assumes the meaning of "risk-free", but why the government bonds are safe at the first place (related to Comment 1, presence of liquidity hedging, last lender of resort, bank insurance etc.)

- ▶ or, defaults driven by agents (buyers) that cause a banking crisis?

- ▶ More generally, instead of thinking of equilibrium selection, think about the "value-added" by only focusing on comparative statics

  - alternative modelling: dynamics with risk to sovereign default, sudden stops and currency devaluation (Mendoza and Yue, 2012 QJE)

Comment 4. More than 2 Currencies

1. suppose No. Currency > 2, to generate single dominance of a currency in this model, do we need to have ALL other countries' fiscal capacities constrained?

▶ run for one currency or run for all alternative currency

▶ any prediction of the relative ranking of foreign currencies using the likelihood of reaching debt limits of a country?

2. short-run vs. long-run

▶ dynamics and relative growth of the U.S. economy is missing

▶ transition path between unipolar to multipolar?

Finally,

- a really fascinating and thought-provoking paper!

Best of lucks!