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

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Salem Bahaj[2] and Ricardo Reis[1]

[1]London School of Economics and Political Science, [2]University College London

More than a decade ago, Chinese monetary authorities created an offshore currency in order to be able to enforce capital controls, while at the same time allowing for an open current account and for the yuan to be used as an international currency. This created a regime of parallel currencies, the offshore and the onshore yuan, with separate money supplies, and a particular liquidity framework to control the private creation of money while keeping a peg of the two currencies close to parity.

This monetary experiment provides new insights into what drives exchange rates. Empirically, in this paper we found that exogenous transitory increases in the money supply depreciate the exchange rate. This confirms that reserves are not a pure financial asset and that liquidity matters. We also found evidence that monetary policy has responded to increases in the demand for money by raising the money supply and this has kept deviations from the peg small and short-lived. This prevented the usual demise of parallel currencies from Gresham's law and allowed capital controls to survive. The implied elasticity of money demand is 0.13, consistent with estimates using variation in interest rates, but significantly different from cashless-limit theories or the simple quantity theory. Looking at money substitutes and their impact through Goodhart's law, we also found that the use of liquidity facilities, rates in interbank markets, and the demand for bills in auctions are all consistent with money demand and supply. Finally, we found that the behavior of liquidity variables and exchange rates in China in 2015-16 and in the Summer of 2023 are consistent with a shift from liquidity controls to liquidity policies by the central bank.

Theoretically, we proposed a model of how banks allocate reserves and create deposits that provided a micro-foundation and interpretation of the empirical results in the previous paragraph. The model showed the complementarities between liquidity controls and capital controls, as well as how having an offshore currency can relieve pressure for the onshore currency to depreciate relative to the rest of the world. The analysis provides future guidance for the PBoC on where the seams of its liquidity framework may burst and how to reinforce them. More intriguingly, it suggests that the yuan's international use could still significantly increase and that other countries could try frameworks inspired by this experience.