Comments on Lisheng Xiao's paper

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Summery of the paper

- The author constructed a cross border arbitrage index based on exchange rate appreciation pressure and interest spreads, as an indicator of the relative attractiveness of RMB denominated assets.
- The author conducted an empirical analysis on any relationship between the cross border arbitrage index and the indicator for invoicing currency to identify trade transactions against financial transactions as a driver of internationalization of RMB.
- The empirical result indicates that import RMB settlement and offshore RMB deposit both have a significant positive correlation with cross border arbitrage index.

Cross-border arbitrage index

- What is an objective of cross-border arbitrage index?

" The cross-border arbitrage index mainly reflects of the arbitrage motivation in the process of cross-border RMB trade liquidation."

"the construction of the cross-border arbitrage index aims to measure the arbitrage factors in RMB cross-border trade with the method of quantification."

- What is meaning of "arbitrage factors"?

"Arbitrage" is risk-free financial transaction that takes advantage of differences in returns between two or more markets to seek for profit by using forward transaction.

Calculation of cross-border arbitrage index

- “Calculate the Sharpe Ratio in RMB and other major trade liquidation currencies by dividing the bilateral spreads with the fluctuation of bilateral exchange rate, eliminating the relative spread of the fluctuation of exchange rate. Then, according to the sequence that economies set up RMB liquidation banks, we introduce the RMB trade liquidation of the economy as the corresponding weights, and get the RMB cross-border arbitrage index.”
- Why the Sharpe Ratio is used to calculate cross-border arbitrage index?

Is the Sharpe Ratio right?

- The author's definition of Sharpe Ratio

$$Sp = \frac{r_{rmb} - r_i^*}{vol(e_{rmb})}$$

- According to textbooks of Finance, the Sharpe Ratio should be defined as an excess return or risk premium per unit of its risk (standard deviation) compared with a risk-free benchmark to measure performance of investing in the relevant risky asset.

$$Sp = \frac{r_{rmb} - (r_i^* + \log F_{t,t+1} - \log S_t)}{vol(r_{rmb}) - vol(r_i^* + \log F_{t,t+1} - \log S_t)}$$

Empirical test of the relationship between RMB trade settlement proportion and invoicing currency and arbitrage

- The author empirically tested the relationship between RMB trade settlement proportion and invoicing currency and arbitrage.
- The HS classification data is used as the indicator for invoicing currency.

⇒What does the author mean?

- Cross-border arbitrage indicator is calculated by Sharpe ratio data.

⇒Is it good to regard the Sharpe ratio as a cross-border arbitrage indicator?