Determinants and Dynamics of Price Disparity in Onshore and Offshore Renminbi Forward Exchange Rate Markets

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Summary

Despite the fact that the pricing of the onshore deliverable and the offshore non-deliverable forward exchange rates are both linked to the movement of the onshore renminbi spot exchange rate, there are notable price disparities between the forward rates, and the gaps can be large during periods of financial market turbulence. Price disparities are one of the most intriguing puzzles in Chinese financial markets.

This paper shows that one of the determinants of price disparities is different assessments on the Mainland economy made by Mainland and Hong Kong investors. The differences, which are due to information asymmetry and market segmentation with limited arbitrage between the two markets, give rise to uncertainty about the model parameters used in pricing forward rates.

Through a no arbitrage condition that relates the forward rate to the spot rate and interest rate differential, the dispersion in the volatility of the Mainland's interest rate estimated from an equilibrium term structure model is used as a measure of parameter uncertainty. This paper finds that the measure is a robust determinant (in addition to other macroeconomic and financial factors identified in previous studies) of price disparities. Specifically, a one percentage-point increase in parameter uncertainty increases the absolute difference between the one-month onshore and offshore forward rates by around 54 pips.

With improved linkages between the onshore and offshore financial markets and the ongoing internationalisation of the use of the renminbi, the magnitude of price disparities has fallen markedly in recent years. However, the existence of price disparities is inevitable in the presence of information asymmetry and market segmentation with limited arbitrage.