

Volatility Dependence across Asia-Pacific Onshore and Offshore Currency Forwards Markets

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Summary

The financial turmoil in the Asia-Pacific region in the 1990s has sparked intense interest in the ongoing international financial integration and the co-movements between foreign exchange markets. Market participants have fretted that spillovers into other economies might amplify volatility in world financial markets. In particular, the impact of China's phenomenal economic growth is being felt around the world as the country establishes itself as a driver of global economic trends mainly in terms of exports and imports and FDI flows. With three decades of market-oriented reforms, China has become an international production hub which combines a vast supply of cheap labour with an economy that is unusually open by international standards. As China is unusually open to trade, China's development is not just a driver of global growth, it also exerts a profound impact on other Asian economies. Advanced economies are concerned about a hollowing out of their manufacturing industries, and neighbouring Asian countries are even more exposed given their close geographical proximity. In recent years this development has been spurred by the unbundling and offshoring of production processes. In light of this, the Chinese currency's future path, as well as in co-movements across Asian currencies, has been under rigorous scrutiny. Such a state of affairs raises the question of exactly how integrated are Asia's exchange rate markets. Our analysis aims to shed light on this very issue and provides insights into the following four issues:

- (1) Are the forward exchange rates under consideration characterised by regime switching and how many states can be identified?
- (2) How common are low versus high volatility regimes and how persistent are the regimes?
- (3) Is there evidence of temporal conformity of the low versus high volatility states across countries?
- (4) Financial markets have steadily become more open to foreign investors and risk premia are increasingly determined globally. We therefore examine which countries show volatility co-movements and dependencies, especially in periods of market stress. Thus we delve into the question of how and to what extent the volatility of Asian currencies is affected by the renminbi exchange rate developments.

We estimate switching autoregressive conditional heteroskedasticity (SWARCH) time series models for weekly returns of nine Asian forward exchange rates. We find two regimes with different volatility levels, whereby each regime displays considerable persistence. Our analysis provides evidence that the knock-on effects from China's currency forwards markets upon other Asian countries have been modest, in that little evidence exists for co-dependence of volatility regimes.