Adjusting exchange rates affects currency value

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Credit: George Hodan/public domain

Forthcoming research from Cass Business School and the Bank of International Settlements has found that newly proposed currency valuation metrics display strong predictive power for exchange rates, offering valuable insights for global policymakers and investors alike.

Currency Value, a paper forthcoming in the *Review of Financial Studies*, proposes a novel way of adjusting real exchange rates (RER) for key country-specific fundamentals to obtain better gauges of currency valuation levels.

The paper argues that accounting for productivity, export quality, foreign assets, and output gaps isolates information related to currency risk premia across countries. The resulting measure of currency value displays a stronger predictive power for currency movements, serving as a more precise input into investment and policy decisions.

Report co-author Lucio Sarno, Professor of Finance at Cass Business School said the recent economic environment of low interest rates had presented challenges for currency investors to generate returns but that the strategies proposed in this research could offer them hope.

"Typical currency strategies such carry trades – which buy low interest rate currencies and sell low interest rate currencies to gain from interest rate differentials – are simply unattractive when all interest rates around major economies are so low. It then becomes necessary for currency investors to search for yield in other ways that are not related to interest rates, and the first thing that comes to mind is build a currency value strategy that buys undervalued currencies and sells overvalued currencies, irrespective of the interest rate on offer."

A core building block of any method to determine currency value is purchasing power parity (PPP) and the related concept of real exchange rates (RER) embed expectations about future macro fundamentals and currency risk premiums, rendering them useful gauges of future currency excess returns. However, the way in which currency valuation measures relate to future currency movements is far from being well understood.

The researchers employed a panel of exchange rates and macro fundamentals (such as GDP, inflation, interest rates and net foreign assets) from 1970 Q1 to 2014 Q1, assessing at the quarterly frequency. The sample covered 23 advanced economies and emerging markets, using data from the Global Financial Database (GFD) and a measure of export quality from the International Monetary Fund (IMF).

Conceptually, the RER is driven by three components:

1.Expected excess returns (currency risk premia);
2.The expected real interest rate differential; and
3.If long-run PPP fails to hold, the long-run expected RER.

Adjusting the RER for macroeconomic fundamentals related to the latter two expectations should result in a cleaner measure of risk premia.

The researchers focused on the following fundamentals to adjust real exchange rates:

(i) Harrod-Balassa-Samuelson (HBS) effects (measured as real GDP per capita),
(ii) the quality of a country's exports,
(iii) net foreign assets (a measure of net foreign wealth of a country), and
(iv) output gaps.

Professor Sarno said:

"Each of these variables bears a clear link to long-run expectations of the RER and/or expected real interest rate differentials. We found that all four fundamentals have predictive power for real interest rate differentials, making them useful devices to purge the effect of fundamentals from the RER. In turn, this helps to obtain a cleaner risk premium measure for investment decisions, allowing a better understanding of the information contained in the RER."

The research will be published in the *Review of Financial Studies* and can be read here.

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