CEEMEA Fair Value Exchange Rates

Mid-year update on thirteen CEEMEA currency fair values

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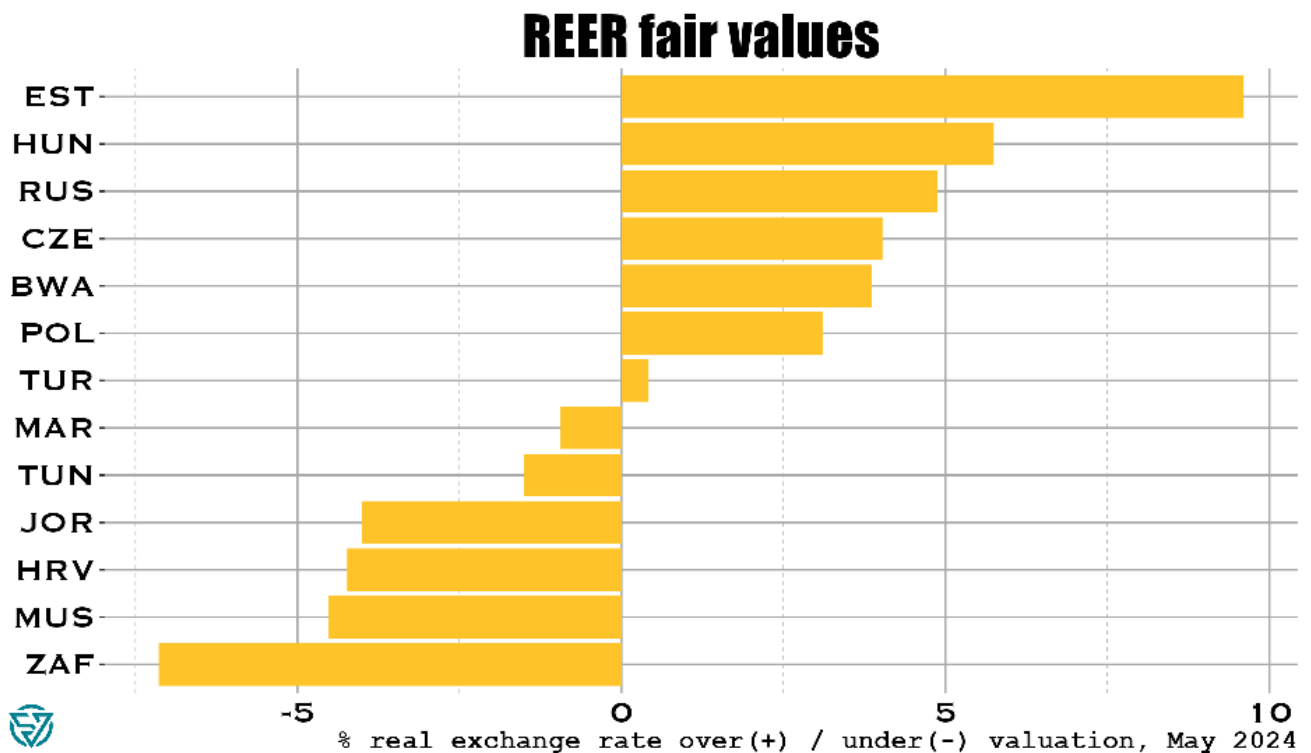pdellaguardia@sovereignvibe.com
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- The war in Ukraine remains a common factor driving currency overvaluation in much of Eastern Europe.
- YTD end-May: noteworthy real exchange rate spikes in Poland, Turkey; sharp drop in the Czech Republic.
- Download the PDF to view the charts from this data visualization-driven analysis.

The relationship between current account balances and real effective exchange rates provides a useful framework to determine currency over- or under-valuation. The IMF uses this fair value model,[1] which compares "equilibrium"[2] to "underlying" CABs, with any difference a result of REER misalignment.

CEEMEA FAIR VALUES

Among the thirteen in-sample[3] countries, Estonia, Hungary, Russia, the Czech Republic, Botswana, Poland, and Turkey exhibit currency overvaluation. South Africa, Mauritius, Croatia, Jordan, Tunisia, and Morocco exhibit currency undervaluation.


REER fair values

% real exchange rate over(+) / under(-) valuation, May 2024

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[1] https://www.elibrary.imf.org/display/book/9781557757319/ch02.xml
[2] https://sovereignvibe.com/cab-equilibria-em/
[3] Data availability determines which countries are included for each income-geographic group.

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METHODOLOGY

To interpret the chart below, a currency is ***overvalued*** if the underlying CAB is ***below*** the model's fitted CAB. It is ***undervalued*** if the underlying CAB is ***above*** the model's fitted CAB.
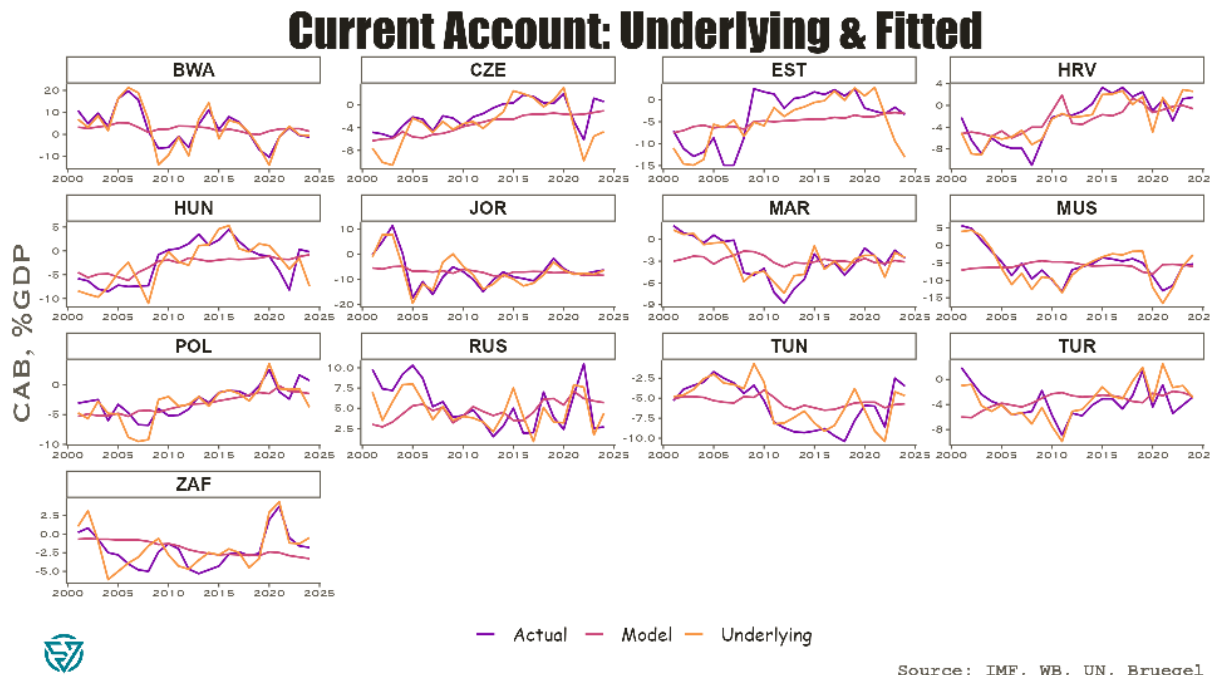
To estimate a currency's fair value, it is first necessary to derive the relevant country's equilibrium and underlying CABs. While short-run independent variables including budget balances, the domestic output gap, terms of trade changes, and REER changes determine observed CABs with high statistical significance, the equilibrium CAB is unobservable and thus difficult to measure. To overcome this challenge, the model regresses long-term independent variables[4] - including deviations from in-sample average PPP-adjusted GNI/capita and from young- and old-age dependency ratios – on observed CABs. The model's fitted result serves as the equilibrium CAB.

One limitation to estimating equilibrium CABs in this way is that governments manipulate CABs via economic policies.[5] Indeed, a long-run CAB average almost certainly departs from the equilibrium that demographic and income-related fundamentals alone would otherwise determine. Despite its flaws, however, this approach at least provides an elegant, transparent framework for estimating an equilibrium that incorporates a country's economic policies.

The second step is to estimate the underlying CAB, which reflects lagged effects on the observed CAB. Changes in the real effective exchange rate have price and volume effects that take time to affect the CAB. The domestic and trade-weighted foreign output gaps also have lagged volume effects on the CAB. The IMF specifies the relevant elasticities for each effect by country group and lag decay weights by year in its model.
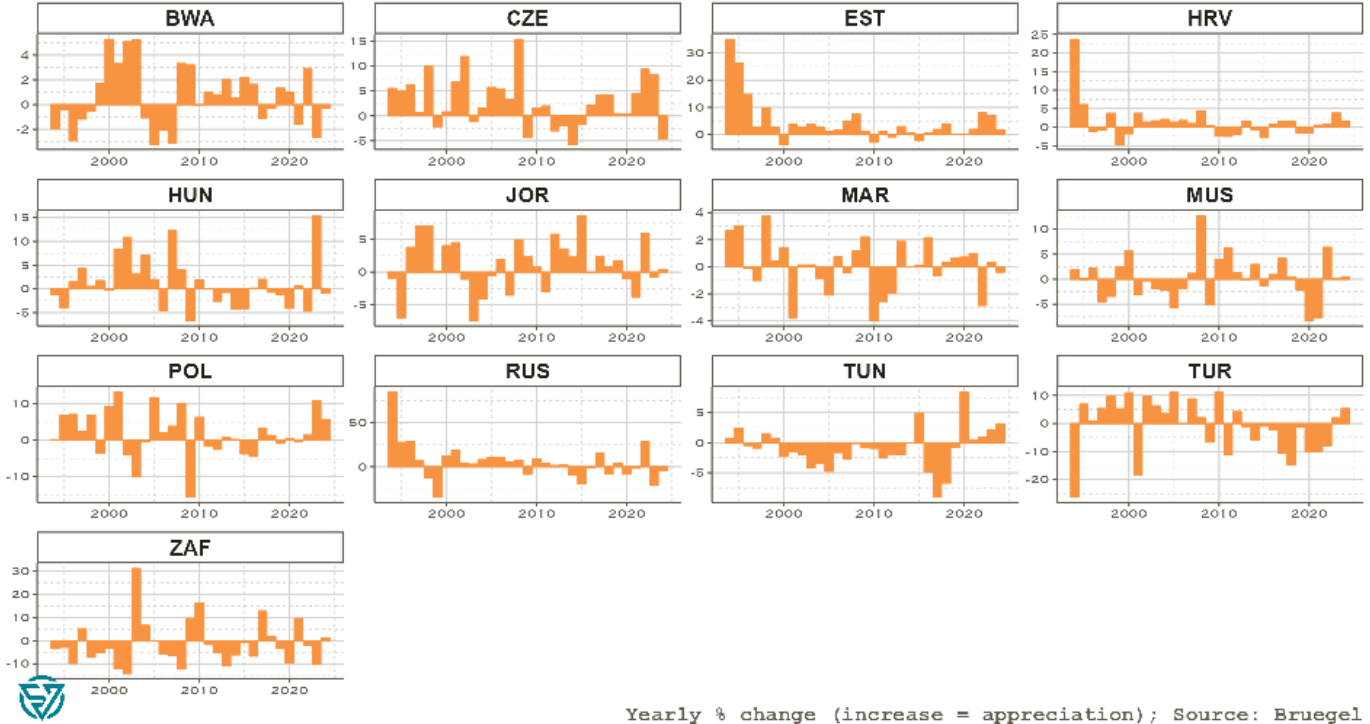
- A REER appreciation typically results in an upward price adjustment (i.e. imports are less expensive) and a downward volume adjustment (i.e. higher import volumes, lower export volumes) to the CAB.
- A positive trade-weighted foreign output gap pushes the CAB upward, while a positive domestic output gap pulls the CAB downward.

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[4] In addition to the deviation from the in-sample mean of the general government cyclically-adjusted budget balance/potential GDP.
[5] Boosting savings and investment at the expense of consumption in China is one prominent example of CAB manipulation.

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APPENDIX

Real Effective Exchange Rates

Yearly % change (increase = appreciation); Source: Bruegel

Real Effective Exchange Rates

Index: end-2007 = 100; Source: Bruegel