Non-technical summary for 'Forecasts of Period-average Exchange Rates: Insights from Real-time Daily Data'

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What did we set out to do?

Exchange rate forecasting is crucial for policymaking and private sector decision-making. Macroeconomists often focus on period-average exchange rates, such as the average exchange rate over a month or quarter. Many macroeconomic variables are sums over a period (e.g. the total value of trade during a quarter) or period-averages (e.g. the average level of prices during a quarter), and so these variables should be more closely related to period-average exchange rates than end-of-period exchange rates.

But is it possible to forecast period-average exchanges rates in real time? To help answer this question, we construct a new exchange rate dataset for nearly all countries. Our dataset contains bilateral exchange rates (between two countries) and effective exchange rates (between one country and all its trading partners) in both 'real' and 'nominal' terms. Our dataset is unique in two ways:

1. It only uses data available at the time of the forecasts to construct the period-average exchange rates.
2. It is the first dataset to provide daily real effective exchange rates.

We survey the literature on forecasting period-average exchange rates, and then use our new dataset to fill gaps in the literature identified by our survey.

What did we learn?

We make three contributions that fill gaps identified by our survey of the literature. Focusing on forecasts one to thirty-six months ahead, our key findings are:

1. **Benchmarks** – A common way to evaluate a proposed forecasting model is to do an out-of-sample forecast evaluation. This involves providing the model with data available at some time in the past (e.g. data up to May 2015), using the model to make a forecast (e.g. for June 2015), and then comparing the forecast to actual outcomes. Typically, researchers compare their proposed forecasting models to a simple 'naive' forecast benchmark. A common benchmark is to assume the period-average exchange rate will remain constant at its latest known value (e.g. June 2015 average equals May 2015 average). Using the newly available data, we show that a much more accurate benchmark for all exchange rates measures is to assume the period-average exchange rate in future periods will equal the latest daily value (e.g. June 2015 average equals the 31 May 2015 exchange rate).
2. **Choice of model inputs** – We did an out-of-sample forecast evaluation of several models that forecast future exchange rates. Models that used daily or end-of-month exchange rates as inputs outperformed models with month-average inputs.
3. **Testing predictability** – In the literature, a variable is said to be 'predictable' if it can be forecast more accurately than the best naive benchmark. For the first time, we test the predictability of exchange rates against the important and more accurate benchmark: the latest daily value. For bilateral nominal exchange rates, the models do not outperform this important benchmark. However, for real effective exchange rates, the models outperform the most accurate naive benchmark for most countries, suggesting they are predictable.

What was our key takeaway?

We show that high-frequency data on exchange rates are critical for testing the predictability of period-average exchange rates, and for forecasting them as well as possible. Improved forecasts for period-average exchange rates are directly useful to policymakers, and may also assist in forecasting other variables such as activity and inflation.