

## Parity Reversion in Real Exchange Rates: A Puzzle or a Nonissue?

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The attempt by Cashin and McDermott (2006) to “test the validity” of the purchasing power parity (PPP) theorem by means of a refined measurement of the turnaround time of changes in real exchange rates calls for a brief comment. Their article, “Parity Reversion in Real Exchange Rates: Fast, Slow, or Not at All,” appeared in *IMF Staff Papers*, Volume 53, Number 1.

Ever since Rogoff’s (1996) seminal paper, this subject has flourished under the name of the “PPP puzzle,” which Rogoff defined as follows: “How is it possible to reconcile the extremely high short-term volatility of real exchange rates with the glacial rate (15 percent per year) at which deviations from PPP seem to die out?” (p. 664). Rogoff’s analysis starts out from the grandfather of PPP, the law of one price (LOP), which, as he states, holds mainly in the breach. He concludes by suggesting an explanation of the PPP puzzle that runs entirely in terms of the impediments to the working of the LOP.

“It is simply this: international goods markets, though becoming more integrated all the time, remain quite segmented, with large trading frictions across a broad range of goods. These frictions may be due to transportation costs, threatened or actual tariffs, nontariff barriers, information costs, or lack of labor mobility” (p. 665). Rogoff closes his paper with the admission that “[t]his is not an entirely comfortable conclusion, but for now there is no really satisfactory alternative explanation to the purchasing power parity puzzle.”

I would agree that trading frictions is where one should look for an explanation of the failure of prices of individual commodities to converge across borders. But one

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has to look elsewhere for an explanation of a failure of price indices, such as PPP, to revert: at the mechanism that brings about—or does not bring about—balance of payments equilibrium.<sup>1</sup>

A change in a country's price level is one of the factors that influences the current account of its balance of payments. But (1) the magnitude of the impact is not easy to determine in advance; (2) it takes time for the full impact to materialize, including the time taken by the J-curve; (3) changes in demand and supply factors, and in macroeconomic policies, also affect the current account; (4) changes in the capital account codetermine the overall balance of payments outcome; (5) countries generally prefer riding out moderately sized changes in their overall balances of payments on their foreign exchange reserves to taking immediate corrective action; and (6) countries tend to respond more slowly to balance of payments surpluses than to balance of payments deficits.

The six factors listed readily explain the fact that national current account imbalances, and the underlying deviations of national price levels from what appeared to be PPP equilibrium rates, frequently continue for years and indeed decades. They also explain why in a substantial number of categories of cases—which may well account for one-half of all potential observations—there is no ground for the expectation that any observed change in a country's actual PPP will be followed by a reversal:

- if the observed change is equilibrating;
- if the observed change is equilibrium-neutral, in the sense that it accompanies a simultaneous and corresponding change in the demand and supply factors (the Balassa-Samuelson effect would be an example);
- if the observed change is smaller than a certain minimum value which the country has learned to take in its stride.

These brief comments lead to four conclusions:

1. The bulleted cases do not imply that relative prices do not affect the economy; they are merely instances in which PPP reversal is unlikely to occur except by chance.
2. Trawling observations of changes in real exchange rates without allowing for the effect of changes in demand and supply factors and policy measures is not an efficient way to measure some kind of average PPP adjustment period across countries and time.
3. Since, even for the same country, the period of PPP reversal in those instances where adjustment is expected to occur depends on a wide range of policy and market factors, I would question whether attempts at measuring a “typical” adjustment period for a particular country are worth the effort.

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<sup>1</sup>This is by no means an original observation. It is found as a common theme in the international economic literature of the 1920s and 1930s, as part of the rejection of Cassel's more extreme versions of purchasing power parity. See, for example, Angell (1922), Terborgh (1926), and Viner (1937). A citation from Viner (p. 385): “But the divergences between actual exchange rates and those required by the purchasing power parity formula are in fact frequently substantial, and the ‘disturbances’ from which such divergences result need not by any means be temporary in character, so that a longer period would lessen the divergence, but may in fact be progressive in character though time.”

4. A much more promising approach to understanding movements in real exchange rates is to relate them to real changes in the economy, as for example in Chen and Rogoff (2002), dealing with the experience of Australia, Canada, and New Zealand, and Cashin, Cespedes, and Sahay (2004), dealing with developing countries.

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