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Discussion

The comments during the discussion on "Exchange Rate Models Are Not as Bad as You Think," by Charles Engel, Nelson Mark, and Kenneth West, generally questioned which variables were included as fundamentals and the interpretation of the authors' tests.

Olivier Blanchard, noting that there are large current account surpluses and deficits around the world, posited that the terms of trade of these countries would have to adjust. This adjustment mechanism, relating the current account and the exchange rate, is much discussed in the open-economy macroeconomic literature. However, this paper, Blanchard noted, did not include the current account as a fundamental. Indeed, he said, the paper finds that purchasing power parity, which basically ignores this link, "works quite well." Blanchard wondered why this disconnect exists between the literature and this paper's empirical tests.

Responding to Blanchard's comments, Engel disputed the idea that the U.S. exchange rate will depreciate much further due to the current account imbalance, citing his earlier work. As a result of this belief, the authors did not include the current account as an independent variable. Kenneth Rogoff, however, mentioned his own previous paper, which had added the current account to the set of fundamentals. This variable, along with purchasing power parity, consistently was shown to have a significant impact on exchange rates. He asserted that this result held across dozens of papers.

Daron Acemoglu focused on the interpretation of the authors' Granger causality tests. The exchange rate, under some weak assumptions, would follow a process resembling a random walk. In turn, the authors used the exchange rate to forecast future fundamentals. Acemoglu wondered whether the Granger causality tests could distinguish be-

tween this and the possibility that the exchange rate directly affected the future fundamentals. The latter interpretation made sense because many of the fundamentals were dependent on monetary policy, like interest rates and output.

Kristin Forbes, observing that announcements of macroeconomic data are said to impact the exchange rate, questioned whether policymakers' announcements have been shown to be important. The seeming lack of papers documenting this effect is especially curious, since policymakers believe that their specific statements could have dramatic effects on the economy.

In addition to wanting greater clarification on the specifics of the null test with respect to varying parameters, Julio Rotemberg questioned the importance of one result; namely, the authors' finding that people's expectations of future fundamentals are significantly correlated with the exchange rate. Rotemberg said that it should be obvious that survey data affects the exchange rate. In fact, any financial market will "react to everything," especially given that models with consumer sentiments suggest over-reaction. Kenneth West responded, saying that their results show not just a reaction of exchange rates to changes in people's expectations, but the correct sign as well. However, even though the sign seems accurate, West acknowledged that the magnitude of the coefficient could be off.

Returning to the remarks of the discussants, West made two comments. First, he indicated that the robustness check for parameter instability, proposed by Barbara Rossi, was an interesting idea worth pursuing. He thanked her because, even though they had overlooked the idea, her results seemed to further support their conclusions. Second, West argued about the benefit of Kenneth Rogoff's suggestion to replace the authors' data on people's expectations of future fundamentals with the risk premium. As this term is, at best, poorly measured in the data, the authors' use of survey data to incorporate expectations is justifiable.

Charles Engel continued to discuss Rogoff's critique, saying that there are different, but equivalent, ways to rewrite the model, each yielding different levels of performance, judged by out-of-sample fit. Engel suggested that Rogoff's technique resulted in a poor fit, while the authors' paper used the variable that offered the best fit. As a side note, Rogoff acknowledged that the risk premium could not account for the movements in exchange rates, since it was not nearly volatile enough. There needs to be a leveraging effect, coming through the present discounted values.

Mark Gertler remarked that the Great Moderation in the 1980s resulted in a structural break for financial and real data. Gertler questioned whether the exchange rate data exhibits a similar structural break and how this break affects the performance of the authors' model. Later responding to this question, Nelson Mark indicated that the data by and large do not display any clear structural break in 1984. If anything, the impact of inflation on the exchange rate might have been affected by the Great Moderation. Whereas an increase in inflation made the exchange rate depreciate prebreak, postbreak data shows the opposite result. Mark noted that this conforms to the idea that monetary policy had shifted at that time.

Anil Kashyap concluded the comments session by returning to the discussion of announcements. Kashyap noted that in the finance literature, it is believed that public announcements greatly impact financial variables, including bond yields. The same result, he said, should hold for exchange rates. As a result, Kashyap questioned whether anyone has tried to link major exchange rate movements, unexplained by the unusual fundamentals, with the announcement that caused the change, thus reverse engineering the origin of the movements.