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Comment Doo Yong Yang

The relationship between economic fundamentals and exchange rates has been one of the long and unsolved issues in international finance. Asset price approach provides a variety of structural models of the exchange rates and concludes that exchange rates is a function of the discounted sum of its expected future fundamentals as follows:

$$S_t = \alpha \sum_{j=0}^{\infty} \beta^j E_t(f_{t+j}|I_t),$$

where S_t is exchange rates, and f_t is economic fundamentals. Greek letters α and β are parameters in the structural model specification. According to the model, exchange rates should Granger-cause its fundamental, or exchange rates have abilities to forecast the future fundamentals. This present value representation is well-accepted from a theoretical view, but the empirical findings are not supportive. Meese and Rogoff (1983) show that the structural models of the exchange rates do not outperform random walk benchmarks, implying that there is no relationship between exchange rate and fundamentals.

However, there are several problems in empirical investigation of the relationship between the fundamentals and exchange rates. First, it is not easy to find exogenous fundamentals to exchange rate movements. If fundamentals are endogenous to exchange rates, the positive relationship between fundamentals and exchange rates is related with the other variables' responses. In this case, it is difficult to conclude that the present value representation is valid, even if exchange rates Granger-cause the fundamentals or exchange rates have higher power to predict future fundamental movements. In other words, we face the endogenous problem or reverse causality problem. This is why several studies focus on commodity currencies to investigate the relationship between the currency and commodity prices, since commodity prices are a unique exchange rate fundamental that seems to be exogenous to exchange rate movements.

Second, there is a nonlinearity problem in estimated parameters. If the relationship between the currency and commodity prices is time-varying, then the standard Granger causality test might provide the wrong interpretation. Rossi (2006) shows that exchange rates might not be a random walk after controlling the instability of the parameters. Chen, Rogoff, and Rossi (2008) also find that the commodity currencies Granger-cause commodity prices, and conclude that exchange rates have remarkable robust power in predicting commodity prices.

In line with the previous literature, Chan, Tse, and Williams's chapter

examines relationships between commodity currency returns and commodity index returns in four commodity-exporting countries using both causality tests and an out-of-sample forecasting analysis. They conclude that commodity currency returns are contemporaneously correlated with commodity prices, and currency returns are not capable of predicting commodity returns in both directions. The conclusion is different from the previous literature (Chen, Rogoff, and Rossi [2008]; Chen and Rogoff [2003]), which suggests that exchange rates have a power to predict future commodity prices. The difference between this chapter and previous literature is using high-frequency data and future prices for empirical analysis. The authors conclude that the different empirical finding comes from the information transmission between the commodity and currency markets as a consequence of informed traders using futures markets to profit from expectation/trade information. This implies that relationships between commodity price and exchange rates are related with information efficiency rather than the structural model.

This is interesting, and provides important implications on exchange rate behaviors as well as other financial assets. The authors interpret their controversial empirical findings by depending on the heterogeneity of traders in both currency and commodity markets. They suggest that the incorporation of economic expectations into trade terms takes place over intervals shorter than what business-motivated economic agents need to alter their commodity positions after an exchange rate shock. The short-interval traders are generally speculators who have greater information processing abilities relative to the average economic agent and, therefore, are able to capture asymmetric information profits. As a consequence, speculative activity brings about rapid currency-to-commodity comovement in a short period of time. However, the average uninformed traders do not likely recognize and incorporate economic expectations into their business decisions over very short time intervals, and adjust their commodity positions according to their business-specific economic outlooks.

The question is why there exists a contemporaneous relationship between currency futures and commodity futures in short time intervals, and not in long horizon intervals. Does this come from different characteristics of traders such as informed versus uninformed traders, as the authors suggest? I have a little doubt on this argument. Why are the average traders uninformed or unable to adjust their position over very short time intervals? It is not clear to me why only informed speculators come to currency futures and commodity futures to take advantage of their information.

This may be caused by the nature of future trading itself. For example, some traders who purchase commodity futures also want to hedge their positions to exchange rate risks. Therefore, they purchase currency futures in short time intervals. However, long-term commodity holders do not hedge

their exchange rate risks since exchange rates have a robust power to predict future commodity prices.

The chapter also suggests that futures markets have more information efficiency than spot markets. This is the justification to explain why the authors use futures market data to test relationships between commodity prices and exchange rates. I am wondering why the authors do not test some robustness for this issue. In other words, the same empirical analysis can be done using high-frequency spot market data. With this analysis, it becomes more clear that the contemporaneous relationship between commodity prices and exchange rates exists in futures markets, which is more efficient in information processing.

In addition, the information set in commodity traders in the chapter is just commodity prices and currencies. One could argue that the comovement of currencies and commodity prices in the high-frequency world results from the dollar effect. Global commodity demands and prices would go up when the dollar is weak. Therefore, it is worthy to include the U.S. dollar value (effective exchange rates of the U.S. dollar) in the regression to confirm the authors' conclusion.

Related to traders' information, monetary variables also affect global commodity demands. It is possible that higher interest rates reduce commodity prices since the interest rates are related to current and future demand and supply for commodities, and lower interest rates reduce inventory costs (Frankel 2006). This is also related to the global liquidity condition. Higher liquidity possibly contributes to an increase in global commodity demand. Thus, it is also interesting to include monetary variables in the regression.

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