Chapter Overview

This chapter discusses the possibility of resolving controversies in exchange rate forecasting and reviews specific examples of exchange rate forecasting.

Exchange rate forecasts play a fundamental role in nearly all aspects of international financial management. Based on the alleged poor performance of popular models of exchange rate determination and on foreign exchange market efficiency, there is considerable skepticism about the possibility of accurate or useful forecasts. A central theme in this chapter is that more insights about exchange rate forecasting are possible if we clearly define the market setting – meaning the exchange rate system, the forecasting horizon, and the units of the forecast – where we find ourselves. With these factors well specified, this chapter argues that is possible to formulate a sensible, and possibly successful, approach to currency forecasting. The chapter also highlights the difference between accurate and useful forecasts. While economists typically judge a model on the basis of accuracy, professional economists may take a more pragmatic stance and judge a forecast by its ability to achieve correct hedging decision or speculative profits. Cases in which accurate forecasts might not be profitable are illustrated.

The chapter reviews exchange rate forecasting methods with some specific examples. These include short-run forecasts, long-run forecasts, and composite forecasts. The chapter argues that the failure to reject the random-walk model of exchange rates may stem from reliance on linear regression testing. In comparison, technical trend-following rules rely on a nonlinear relationship. The chapter also reviews evidence that the long-run forecasting ability of certain structural exchange rate models far exceeded the basic random-walk models of the exchange rate.

The chapter concludes with a discussion of various policy issues and problems facing consumers and producers of exchange rate forecasts.
Answers to end-of-chapter questions

1. Explain the difference between an accurate forecast and a useful forecast. Who needs an accurate forecast?

An accurate forecast has small forecasting errors. Accuracy is often measured by the mean squared error or the mean absolute error. A useful forecast is one that is on the right side of the market and leads to correct hedging decisions. A manager who changes the magnitude of his currency position based on the expected percentage change in the currency has a need for accurate forecasts.

2. Describe and provide examples of different exchange rate systems used by countries. How do they affect the timing of exchange rate changes? How would a forecaster approach the different systems in making exchange rate forecasts?

The most common exchange rate systems are floating rates and pegged rates. In a floating rate system, current and expected macroeconomic events are the proximate causes of exchange rate changes. Macroeconomic models may be useful in gauging the impact of news in the short-run, and exchange rate dynamics over the medium to longer run. Under pegged rates, a political decision often determines the timing of the exchange rate change. The magnitude of the change may be forecast using a model or PPP. Certain economic variables, like international reserves may be useful to forecast the time of a rate change.

3. How does the forecasting horizon affect the choice of a forecasting model?

Short-term exchange rate forecasts could be generated using technical models, or based on pending macroeconomic news announcements. Longer-term forecasts should rely on macroeconomic models. Models incorporating PPP will be most helpful when monetary shocks are the primary source of uncertainty. When real shocks accumulate over a longer term, forecasting must allow for a change in the real exchange rate.

4. "Short-term exchange rate forecasting requires a strong emphasis on economic fundamentals." True or False? Explain.

True and False. Economic fundamentals could be very useful when forecasting exchange rates on the basis of news announcements. However, many short-term forecasts are generated using technical models that do not incorporate economic fundamentals.
5. "Purchasing Power Parity measures are a powerful tool for short-term forecasting." True or False? Explain.

False. PPP plays a more important role in long-term forecasting. There is some evidence (from John Bilson, 1984) that PPP makes a marginal, but statistically significant, contribution to shorter-term forecasts.

6. What is the difference between real exchange rate forecasting and nominal exchange rate forecasting? Which one is the most useful to financial planners? To foreign currency traders?

Real exchange rate forecasting includes, either implicitly or explicitly, a forecast of relative inflation rates in conjunction with the nominal exchange rate. The real exchange rate forecast would be more useful to managers planning longer-term investment projects. A nominal exchange rate forecast is more important for currency traders, and financial managers who hold nominal assets, such as bonds.

7. Explain the limitations of the regression method for forecasting future exchange rates using current and past exchange rates.

Regression methodology assumes that the structural relationships of the past will be valid in the future. When structural changes occur, regressions based on historic data need not provide a useful guide for forecasting exchange rates.

8. What is a mean-reverting series? Why is the concept of mean-reversion helpful for making long-term exchange rate forecasts?

"Mean-reversion" describes a series that is stationary and, therefore, has a tendency to return to its mean value if it is shocked away from it. Mean-reversion is helpful for forecasting because once an exchange rate has diverged from its mean value, it can be expected to return in the direction of its mean value.
9. What is composite forecasting? Under which conditions would a composite forecast outperform individual forecasts?

Composite forecasting is a method for producing forecasts using a combination of other individual forecasts. For example, a composite forecast could be constructed by taking a combination of forecasts based on the monetary approach, the portfolio balance approach and purchasing power parity. A composite forecast will outperform an individual forecast when several conditions are met. First, the individual forecasts must reflect different information elements. The correlation of forecasts (or forecast errors) will be less than unity. Second, we must have a technique (such as linear regression) for estimating the weights for combining individual forecasts. Finally, the relationship between the individual forecasts which determines the weights must be stable over time.

10. What are the main problems for forecasters using econometric models to forecast exchange rates?

Forecasting using econometric models presents many problems. Among these are the availability of adequate data on a timely basis and for a sufficiently long period. Assuming that a model can be adequately specified, we have the problem of forecasting the right-hand-side variables to make true out-of-sample forecasts. Last is the problem of stability or stationarity. Even if our model adequately describes exchange rate behavior for an earlier in-sample period, a change in the exchange rate system or intervention may cause the model to perform poorly in the future out-of-sample forecast period.