Chapter 9

# *Answers to End of Chapter Questions*

**1. Motives for Forecasting.** Explain corporate motives for forecasting exchange rates.

**2. Technical Forecasting.** Explain the technical technique for forecasting exchange rates. What are some limitations of using technical forecasting to predict exchange rates?

**3. Fundamental Forecasting.** Explain the fundamental technique for forecasting exchange rates. What are some limitations of using a fundamental technique to forecast exchange rates?

**4. Market-Based Forecasting.** Explain the market‑based technique for forecasting exchange rates. What is the rationale for using market‑based forecasts? If the euro appreciates substantially against the dollar during a specific period, would market‑based forecasts have overestimated or underestimated the realized values over this period?  Explain.

**5. Mixed Forecasting.** Explain the mixed technique for forecasting exchange rates.

**6. Detecting a Forecast Bias.** Explain how to assess performance in forecasting exchange rates. Explain how to detect a bias in forecasting exchange rates.

**7. Measuring Forecast Accuracy.** You are hired as a consultant to assess a firm’s ability to forecast.  The firm has developed a point forecast for two different currencies presented in the following table.  The firm asks you to determine which currency was forecasted with greater accuracy.

**8. Limitations of a Fundamental Forecast.** Syracuse Corp. believes that future real interest rate movements will affect exchange rates, and it has applied regression analysis to historical data to assess the relationship.  It will use regression coefficients derived from this analysis, along with forecasted real interest rate movements, to predict exchange rates in the future.  Explain at least three limitations of this method.

**9. Consistent Forecasts.** Lexington Co. is a U.S.‑based MNC with subsidiaries in most major countries.  Each subsidiary is responsible for forecasting the future exchange rate of its local currency relative to the U.S. dollar.  Comment on this policy.  How might Lexington Co. ensure consistent forecasts among the different subsidiaries?

**10. Forecasting with a Forward Rate.** Assume that the four‑year annualized interest rate in the United States is 9 percent and the four‑year annualized interest rate in Singapore is 6 percent.  Assume interest rate parity holds for a four‑year horizon.  Assume that the spot rate of the Singapore dollar is $.60.  If the forward rate is used to forecast exchange rates, what will be the forecast for the Singapore dollar’s spot rate in four years?  What percentage appreciation or depreciation does this forecast imply over the four‑year period?

 **Country Four‑Year Compounded Return**

 U.S. (1.09)4 – 1 = 41%

 Singapore (1.06)4 – 1 = 26%

 

 **11. Foreign Exchange Market Efficiency.** Assume that foreign exchange markets were found to be weak‑form efficient.  What does this suggest about utilizing technical analysis to speculate in euros?  If MNCs believe that foreign exchange markets are strong‑form efficient, why would they develop their own forecasts of future exchange rates?  That is, why wouldn’t they simply use today’s quoted rates as indicators about future rates?  After all, today’s quoted rates should reflect all relevant information.

**12. Forecast Error.** The director of currency forecasting at Champaign‑Urbana Corp. says, “The most critical task of forecasting exchange rates is not to derive a point estimate of a future exchange rate but to assess how wrong our esti­mate might be.”  What does this statement mean?

**13. Forecasting Exchange Rates of Currencies That Previously Were Fixed.** When some countries in Eastern Europe initially allowed their currencies to fluctuate against the dollar, would the fundamental technique based on historical relationships have been useful for forecasting future exchange rates of these currencies? Explain.

**14. Forecast Error.** Royce Co. is a U.S. firm with future receivables one year from now in Canadian dollars and British pounds. Its pound receivables are known with certainty, and its estimated Canadian dollar receivables are subject to a 2 percent error in either direction. The dollar values of both types of receivables are similar. There is no chance of default by the customers involved. Royce’s treasurer says that the estimate of dollar cash flows to be generated from the British pound receivables is subject to greater uncertainty than that of the Canadian dollar receivables. Explain the rationale for the treasurer’s statement.

**15. Forecasting the Euro.** Cooper, Inc., a U.S.-based MNC, periodically obtains euros to purchase German products. It assesses U.S. and German trade patterns and inflation rates to develop a fundamental forecast for the euro. How could Cooper possibly improve its method of fundamental forecasting as applied to the euro?

**16. Forward Rate Forecast.** Assume that you obtain a quote for a one-year forward rate on the Mexican peso. Assume that Mexico’s one-year interest rate is 40 percent, while the U.S. one-year interest rate is 7 percent. Over the next year, the peso depreciates by 12 percent. Do you think the forward rate overestimated the spot rate one year ahead in this case? Explain.

**17. Forecasting Based on PPP versus the Forward Rate.** You believe that the Singapore dollar’s exchange rate movements are mostly attributed to purchasing power parity. Today, the nominal annual interest rate in Singapore is 18%. The nominal annual interest rate in the U.S. is 3%. You expect that annual inflation will be about 4% in Singapore and 1% in the U.S. Assume that interest rate parity holds. Today the spot rate of the Singapore dollar is $.63. Do you think the one-year forward rate would underestimate, overestimate, or be an unbiased estimate of the future spot rate in one year? Explain.

**18. Interpreting an Unbiased Forward Rate.** Assume that the forward rate is an unbiased but not necessarily accurate forecast of the future exchange rate of the yen over the next several years. Based on this information, do you think Raven Co. should hedge its remittance of expected Japanese yen profits to the U.S. parent by selling yen forward contracts? Why would this strategy be advantageous? Under what conditions would this strategy backfire?

***Advanced Questions***

**26. IRP and Forecasting.** New York Co. has agreed to pay 10 million Australian dollars (A$) in two

years for equipment that it is importing from Australia. The spot rate of the Australian dollar is $.60. The annualized U.S. interest rate is 4%, regardless of the debt maturity. The annualized Australian dollar interest rate is 12% regardless of the debt maturity. New York plans to hedge its exposure with a forward contract that it will arrange today. Assume that interest rate parity exists. Determine the amount of U.S. dollars that New York Co. will need in 2 years to make its payment.

**27. Forecasting Based on the International Fisher Effect.** Purdue Co. (based in the U.S.) exports

cable wire to Australian manufacturers. It invoices its product in U.S. dollars, and will not change its price over the next year. There is intense competition between Purdue and the local cable wire producers that are based there. Purdue’s competitors invoice their products in Australian dollars and will not be changing their prices over the next year. The annualized risk-free interest rate is presently 8% in the U.S., versus 3% in Australia. Today the spot rate of the Australian dollar is $.55. Purdue Co. uses this spot rate as a forecast of future exchange rate of the Australian dollar. Purdue expects that revenue from its cable wire exports to Australia will be about $2 million over the next year.

If Purdue decides to use the international Fisher effect rather than the spot rate to forecast the exchange rate of the Australian dollar over the next year, will its expected revenue from its exports be higher, lower, or unaffected? Explain.

**30. Forecast Errors from Forward Rates.** Assume that interest rate parity exists. One year ago, the

spot rate of the euro was $1.40 and the spot rate of the Japanese yen was $.01. At that time, the one-year interest rate of the euro and Japanese yen was 3% and the one-year U.S. interest rate was 7%. One year ago, you used the one-year forward rate of the euro to derive a forecast of the future spot rate of the euro and the yen one year ahead. Today, the spot rate of the euro is $1.39, while the spot rate of the yen is $.009. Which currency did you forecast more accurately?

**32. Forward Versus Spot Rate Forecast.** Assume that interest rate parity exists. The one-year risk-free interest rate in the U.S. is 3 percent, versus 16 percent in Singapore. You believe in purchasing power parity, and you also believe that Singapore will experience a 2% inflation rate, and the U.S. will experience a 2% inflation rate over the next year. If you wanted to forecast the Singapore dollar’s spot rate for one year ahead, do you think that the forecast error would be smaller when using today’s one-year forward rate of the Singapore dollar as the forecast or using today’s spot rate as the forecast? Briefly explain.