Chapter 6
Conclusions

It is difficult for any model to describe adequately, and with a firm empirical basis, all features of modern economies that are relevant to determining exchange rate movements. This reflects in part the difficulty of modeling international financial markets and capital flows. Economists have developed a variety of methods to estimate equilibrium exchange rates [271]. The methods differ considerably in their construction and in their estimations of equilibrium values. In some sense, comparing the models is similar to comparing "apples and oranges" because they can radically differ in structure and can even use different measures of the real effective exchange rate. Often, they are attempting to measure entirely different kinds of equilibrium. That does not mean the models do not provide useful information. To the contrary, they provide valuable insights, but one must recognize that they are limited by the use of somewhat simplified structures, which are often necessary if they are to have a reasonable empirical underpinning.

Complexity matters in economics and finance and in the special case of foreign exchange markets. It prevents easy solutions, efficient algorithms to solve the problems and often even efficient algorithms to approximate optimal solutions. But nevertheless, in real life, decisions have to be made. For instance, despite the complexity, traders in financial firms need to take bets on whether the exchange rate is going to rise or fall within a certain time interval. In addition, risk managers of nonfinancial firms need to decide on when and how to hedge their foreign exchange exposures. The computational complexity of a given problem is therefore an argument that helps agents to choose the right tools to support their decisions. By considering above results on the general computational impossibility of detecting foreign exchange market inefficiencies, we know that it is suitable to use heuristics, which are able to handle problems of high dimensionality such as exchange rate forecasting or approximating the optimal solution to decision problems such as exchange rate hedging.