These perfect-hindsight calculations then form an (estimated) upper bound on the revenue that might have been obtained in the past. Comparing this estimated maximum revenue to the historical revenue provides a measure of the potential gain. While this number clearly overestimates the revenue gains of a real system, it is common to assume some fraction of this potential gain is achievable. Often these estimated revenue gains are quite large, so even if the system achieves only a fraction of the gain, it provides more than enough justification for a RM investment.

The second methodology used for revenue-opportunity assessment is simulation. (See Section 11.4.) Simulation is more time-consuming but arguably more accurate in gauging potential revenue gains because in a simulation study it is possible to model consumer behavior, and replicate the exact forecasting and optimization methods being proposed. A simulation model can also model uncertainty and mimic salient features of the sales practices. Unlike historical perfect-hindsight studies, simulation can also be used to evaluate "what if" scenarios that have not been observed in the past. The disadvantage of simulation is that one must make a series of modeling assumptions, which may or may not reflect real-world conditions. Thus, it is important to get management approval of the model's validity prior to doing a detailed simulation study.

11.3.2 Revenue-Benefits Measurement

While in principle the benefits from a RM system should match the numbers given out by the revenue-opportunity assessment, this is rarely the case in practice. But this is to be expected. For one, business conditions change rapidly: recessions, economic shocks (wars) and currency changes all have a bigger impact than the effects of a RM system. Indeed, in RM one is often trying to measure benefits of the order of 1% to 2%, which can easily get washed out by even a mild demand shock or change in competitive conditions. Nevertheless, it is important to do such a study to attempt to validate the performance of a RM system. And it is best to aim for as unbiased a measurement as possible, ideally by a "neutral" internal team or an outside third-party.

Benefits measurement can and should be based on actual data. For this reason, it is important to collect and store all relevant data (prices and products, competitor prices and products, customer booking records, allocations) for a significant period—both prior to and after implementation of the RM system. The preimplementation data serves as the baseline for comparison. By collecting data over a long period, there is a better chance of being able to pick a period that is relatively stable or free from major outside shocks.