If there are major changes in the marketplace or economic conditions, benefits measurement becomes more difficult and potentially fraught with controversy. The data should ideally be "corrected" to account for these changes, but such corrections are difficult to make. So the judgment, fairness, and skills of the managers, statisticians, and consultants involved in the study play an important role in the credibility of the numbers.

One way to avoid such controversies is to perform a parallel test of the new system versus the old system. That is, selectively apply the new RM system to a sample of products and markets while continuing to manage the remaining products and markets with the old system and procedures. This allows for a controlled experiment of the revenue performance of the new and old systems under the same economic conditions. Many RM vendors use this approach, especially for first-time adopters of RM.

Of course, this approach has some drawbacks. One has to take care that the selected products and markets are representative of the total population and that analysts behave as "normally" as possible when using each system. And it may be technically or operationally difficult to try to run two systems in parallel. But the results of such side-by-side comparisons are often much more credible than those based on comparing performance of an entire system pre- and post-implementation.

Whichever approach is used for benefits measurement, it is important that such studies not be undertaken solely as a reward and validation process. Rather, they should be also viewed as an opportunity for process improvement—as a way to find and fix hidden bugs in the system or to determine areas where the system and models can be improved. As such, benefits measurement should ideally be part of a continuous improvement process.

In addition to revenue measurements, senior management is usually interested in tracking before and after measures along a number of dimensions. Table 11.11 lists some commonly used performance measures that are tracked pre- and post-implementation.

11.4 RM Simulation

As mentioned, simulation is a flexible and powerful methodology to evaluate RM system performance. It is also useful in basic R&D studies to evaluate the performance of new forecasting and optimization methods. Here, we look briefly at some RM-specific simulation issues.

The idea of simulation is to mimic both the customer demand process and the RM system responses to this simulated demand. A variety of questions can be addressed using a simulation study, such as: What is the potential revenue impact of changing to a new forecasting or opti-