

## CHAPTER 18: Forecasting

### Learning Objectives

After reading this chapter and doing the exercises you should be able to:

1. Understand that the long-run success of an organization is often closely related to how well management is able to predict future aspects of the operation.
2. Know the various components of a time series.
3. Be able to use smoothing techniques such as moving averages and exponential smoothing.
4. Be able to use the least squares method to identify the trend component of a time series.
5. Understand how the classical time series model can be used to explain the pattern or behavior of the data in a time series and to develop a forecast for the time series.
6. Be able to determine and use seasonal indexes for a time series.
7. Know how regression models can be used in forecasting.
8. Know the definition of the following terms:

time series	mean squared error
forecast	moving averages
trend component	weighted moving averages
cyclical component	smoothing constant
seasonal component	seasonal constant
irregular component	

