This part of the chapter 7 is all about the statistical models that underlie the ETS methods. The statistical models are stochastic in nature and randomly generate data that can produce an entire forecast. There are two models that exist for every method: models with additive errors or multiplicative errors.

The way to distinguish each model is by labeling the state space model, ETS(Error, Trend, Seasonal). The possibilities for each component include:

* Error – {A,M}
* Trend – {N,A,Ad}
* Seasonal – {N,A,M}

There are smoothing parameters (α, β\*, γ\*, φ) and the values are restricted. The values can only take on a number from 0 to 1, and φ typically takes a number between 0.8 and 0.98 to prevent numerical difficulties. The AIC, AICC, and BIC are used to determine the most appropriate ETS model for the given time series