15: Assessing Uncertainty

“The future is not what it used to be.”

Anonymous

Formal procedures can help people to assess uncertainty. This is important because decisions may depend on the level of uncertainty. High uncertainty may call for further investments in forecasting to improve accuracy, to compare alternative strategies, or to better assess uncertainty. It can also affect one’s planning. For example, if you are uncertain whether you will have good weather, take an umbrella. If uncertain about demand for your products, keep safety stocks.

Hal Arkes, Department of Psychology at Ohio University, describes judgmental principles in “Overconfidence in Judgmental Forecasting.” This leads to such principles as “list reasons why your forecast might be wrong” and “consider the use of a devil’s advocate in group interaction.”

Those using quantitative models produce overconfident forecasts because the models often overlook key sources of uncertainty. For example, measures for uncertainty typically do not account for the uncertainty in the forecasts of the causal variables in an econometric model. In addition, uncertainty arises because assumptions about relationships might not hold over the forecast horizon.

In “Prediction Intervals for Time Series,” Chris Chatfield of the Department of Mathematical Sciences at the University of Bath describes principles for assessing uncertainty when using quantitative methods. One principle is obvious, yet is often ignored: supplement point forecasts by computing interval forecasts.