Short-Lived Products

Building Multiple-level Models · https://dev.forecastpro.com/documentation/forecast-pro-trac/building-multiple-level-models/short-lived-products/

A manufacturer often maintains a product line for a long period of time but frequently changes the SKUs that make up the line. A laser printer manufacturer, for instance, often introduces new models and retires old ones. The result may be that the overall product line can be accurately forecasted, but the individual item histories are too short to support seasonal models. In these instances, the top-down approach is particularly useful.

For instance, assume that SKU1 and SKU2 have been phased out and replaced by SKU3 and SKU4. We also assume that at the end of the historic data, only SKU3 and SKU4 are alive. However, the histories for SKU3 and SKU4 are too short to generate seasonal forecasts. The manufacturer is interested in forecasting the group LINE, SKU3 and SKU4. The approach below takes care of the problem.

LINE **\INDEXES**

- SKU1
- SKU2
- SKU3
- SKU4

This causes Forecast Pro to follow the following procedure.

1.Forecast LINE, obtaining seasonal indexes.

2.Use the LINE seasonal indexes to deseasonalize the SKUs.

3.Forecast the resulting nonseasonal SKU-level data. These nonseasonal models require very little data.

4.Use the LINE seasonal indexes to reseasonalize the SKU-level forecasts.

By default, the LINE forecasts are then replaced by the summed SKU-level forecasts. If you do not want this to happen, you can add the keyword **\TOPDOWN** to the group LINE.

The approach presented in this example can also be used when the SKU-level histories are long lived. The result is that seasonality is accounted for at the LINE level. This is desirable when the SKUs are likely to have similar seasonal patterns, but the data are too irregular for accurate estimation of seasonal indexes at the SKU level.

This concludes the *Building Multiple-Level Models* tutorial.