

Crystal Ball Software and Risk Analysis Tips

(#20) Using the Tornado Chart to Build Better Models

The Tornado Chart tool, previously packaged with Crystal Ball Pro, is now available with the Standard Edition of Crystal Ball 2000. Like Crystal Ball's sensitivity analysis, the Tornado Chart tool is used to determine which variables drive the uncertainty of a model forecast. Unlike the sensitivity analysis, however, the Tornado Chart tool can analyze a non-Crystal Ball (deterministic) model to help you identify which variables should become Crystal Ball assumptions.

The Tornado Chart tool measures the independent impact of each model variable on a target cell. The target cell can be either a Crystal Ball forecast or a cell with a formula. The model variables you test can be assumptions, decision variables, or precedents. Precedents are value cells within the active spreadsheet that are referenced as part of the formula or a sub-formula of the target cell.

To use the Tornado Chart tool this way:

1. Open your spreadsheet model.
2. Start the Tornado Chart tool by selecting CBTools > Tornado Chart.
3. Select any formula cell to use as the target cell.
4. On the Specify Input Variables dialog, click on Add Precedents.
5. Run the Tornado Chart.

After the Tornado Chart tool has been run, it displays the results as either a tornado chart or a spider chart. The charts show the cells that have the greatest effect on the target cell, listed in decreasing order of impact. You should pay close attention to the cells having a significant impact and investigate whether those cells have uncertainty and should be defined as Crystal Ball assumptions.

For more information or to contact us, browse to <http://helpdesk.crystalball.com>

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