Crystal Ball Software and Risk Analysis Tips

(#11) Creating Custom Weighted Sample Distributions

In certain circumstances you might want to create an assumption representing a discrete set of weighted values. For example, perhaps a bonus program at your company is tied to current salaries. Your company has specific pay grades, and you know how many workers are at each pay level. What you want to model is a discrete distribution of several values, each with a corresponding probability or weight. This is known as a weighted sample distribution.

To create a weighted sample distribution when defining your assumption, use the Custom distribution. For the above example, in the Custom distribution dialog, enter a pay grade (such as $35,000) in the Value field and the number of employees at that grade (such as 23) in the Probability field. The Probability field in the Custom distribution can contain ANY positive value, such as a relative weight, not just a value between 0 and 1.

After you have entered each value and probability, click on Enter (OK closes the dialog). Repeat the above procedure, entering your remaining values and probabilities. When you run a simulation, Crystal Ball selects assumption values from the discrete Custom distribution, taking the weights into account.

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

This tip published May 1999 (Crystal Ball version 4.0)