

One-Minute Spotlight

Crystal Ball: Forecast Filtering

How can I view a subset of the possible forecast results?

Many modelers, when working on a familiar model, are interested only in forecasting a portion of the entire possible range of outcomes. Crystal Ball can perform **forecast filtering**, a feature that lets you discard values inside or outside a range for one or all of the forecasts in a simulation.

With this filtering feature, you can focus only on the outcomes that most interest you. Additionally, you can speed up your simulation because Crystal Ball spends less time graphing and calculating forecast statistics.

	A	B	C	D	E	F	G
1		Risk Assessment at a Toxic Waste Site					
2							
3							
4		Body Weight	70		kilograms		
5		Volume of Water per Day	2.00		liters/day		
6		Concentration of Contaminant	100.00		micrograms/liter		
7		Cancer Potency Factor	3.0E-02		inverse mg/kg/d		
8							
9		Risk Assessment	8.57E-05				
10							
11							

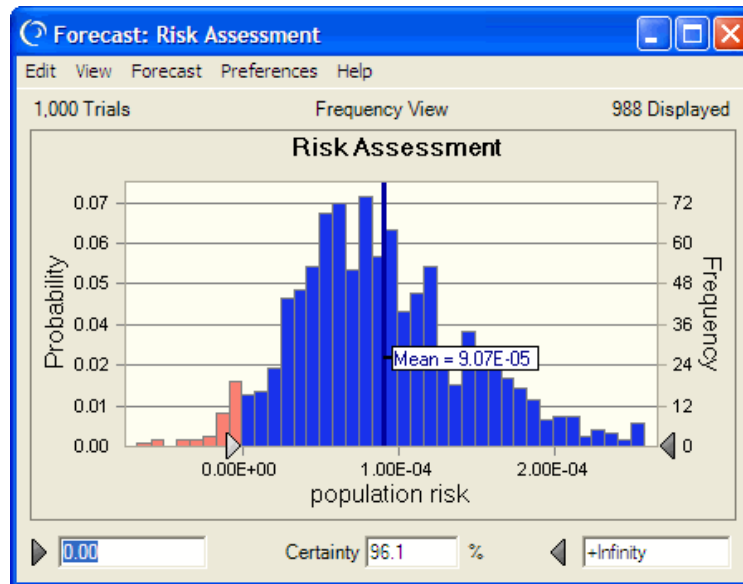
In the model above, you want to assess the risk at a toxic waste site. Your four variables are all uncertain, so you define them as assumptions and the Risk Assessment formula as the forecast.

Running the Simulation Without a Filter

When you run 1000 Crystal Ball trials, you see the forecast below.



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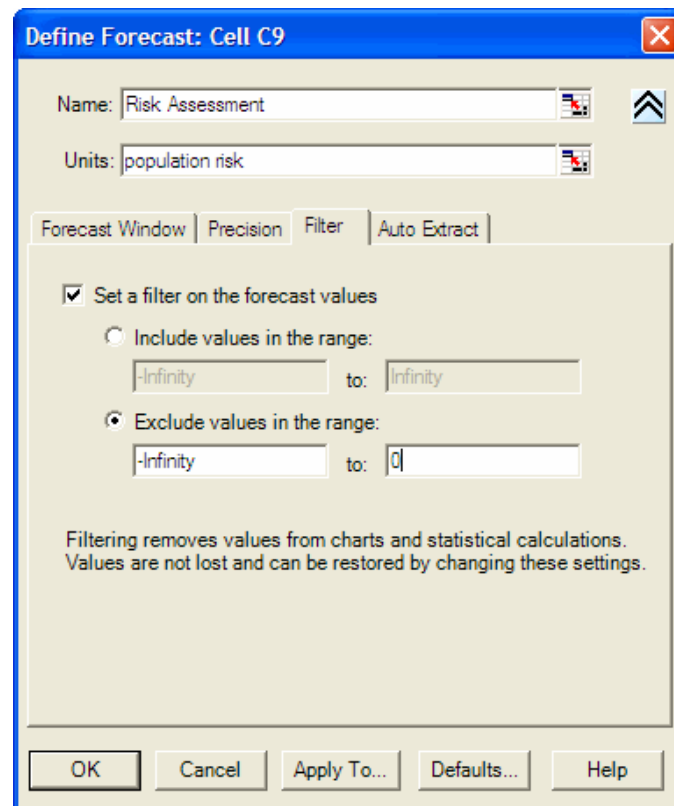
You know that you cannot have negative risk, but you see that 3.9% of the values fall below zero. Closer inspection of the model reveals that the normal distribution used to describe the volume of water an individual drinks per day can drop slightly below zero.

You could truncate the normal distribution, but this would change the symmetry of the curve, which is important to you. Instead, you decide to filter out the negative forecasts so that you only work with positive outcomes.

Setting Up a Forecast Filter

To filter the Risk Assessment forecast, you click on the forecast cell and then click Define Forecast. When the Define Forecast dialog appears, click on Filter to set your filtering preferences.

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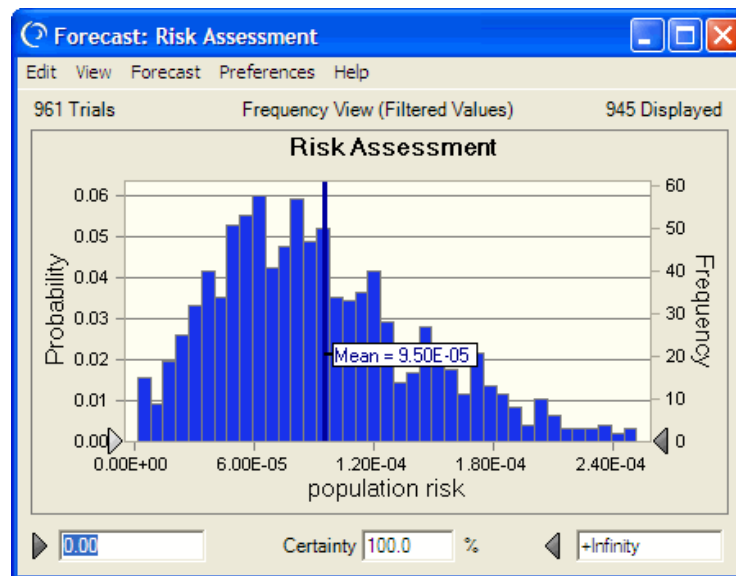


You want to filter any values below zero, so you set the filter range to exclude values in the range between negative infinity and zero. Once you define this range, click on OK to create the filter. Click Run to start the simulation with the filtered forecast.

Viewing Your Filtered Forecast Results

Crystal Ball discards all forecast values that fall at or below zero. Although Crystal Ball was set to run 1000 trials, the forecast chart doesn't display the results from all trials, as seen below.

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Now you can examine these filtered values further using Crystal Ball functionality to adjust the certainty range, etc. You can even filter the forecast again for another simulation that more closely approaches the values you want to study.

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