The Triangular distribution

The Triangular distribution is called so because of its triangular shaped density function. The range of the distribution is a bounded interval of real numbers.

In the triangular distribution the key numbers, “a”, “b” and “c” are interpreted as follows:

“a”
=
The 0%-fractile.

“b”
=
The mode of the density function (the value corresponding to the maximum of the density).

“c”
=
The 100%-fractile.

To get a sensible distribution, the specified values must satisfy:

“a” < “b” < “c”

DynRisk will reorder the numbers if they do not satisfy these requirements. No further adjustments are needed.

The probability, p, of having a value less than or equal to the “b” value is given by:

p = (“b” - “a”) / (“c” - “a”).

Note that if “b” is the arithmetical mean of “c” and “a”, it is also equal to the 50%-fractile of the distribution.

Assume e.g., that the following key numbers are specified:

“a” = 0.5
“b” = 1.0
“c” = 3.0

In this case we get that:

p = (1.0 - 0.5) / (3.0 - 0.5) = 0.2

Thus, in this case “b” value is equal to the 20%-fractile of the distribution.