CAC (MPI) Pre-Ask 5

In the combined scenario, correlation between equity and interest rate yields (based on the last ten years) are used (DCAT report, p. 49).

a) Please explain the methodology used to embed the correlation coefficients for 1, 2, 3 and 4 years in the combined scenario.

b) Specifically, please explain how equity and interest rate yields or movements are selected from a joint distribution for inclusion in the combined scenario.

RESPONSE:

a) The Corporation uses @RISK statistical software to simulate equity and interest rate yields. @RISK is able to correlate two probability distributions such that the resulting output will be correlated to each other at the selected correlation level (-1.0 to 1.0). Probability distributions were fit to each of the 1, 2, 3, and 4 year equity and interest rate yields. Then equity and interest rate probability distributions were correlated following the table on page 49 of the DCAT report (ie. a 1-year equity return and 1-year interest rate yield are correlated with a correlation coefficient of 0.28).

b) See a)