distributions are assumed to be from the semi-normal family (i.e., with density function that is composed of two normalized halves of normal densities with generally different variances). The resultant distribution is approximated by a distribution of the same type in order to provide subsequent use as an input in a series of operations.

The program uses the technique of calculating several moments of the output distribution from the moments of the input distributions. This method avoids using Monte Carlo simulations, or any numerical evaluation of the convolution integrals. The program can be used in risk analysis, subjective probability evaluation, sensitivity analysis and similar situations. It is particularly suitable to replace Monte Carlo methods where correlated variables are involved, or when rapid execution is desired.

MATHRISK - A MANAGEMENT TOOL FOR THE ANALYSIS OF INVESTMENT DECISIONS

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In recent years simulation has played an increasingly more prominent role in the analysis of new investment opportunities. Numerous computer programs have been created to facilitate the simulation of cash flows created by new investments. Such programs can usually be classed as either inordinately simple to use, in which case they are often quite inflexible, or quite difficult to use, for which price the user obtains a flexible program.

This paper describes the design criteria for a dynamic software system which is not only easy to use, but flexible enough to provide the user with progressively more complex modeling capability.