

## LVALM

### Comprehensive Asset Liability Modeling System

LVALM is a complete asset liability system designed to forecast a plan's liabilities, assets, and future required contributions based on specific sets of assumptions and funding policies as selected by the user. Assets can be projected on either a deterministic or stochastic basis and liabilities can be projected on a closed or open group population. Both pension liabilities (based on results from LVVal, our pension valuation system) and OPEB liabilities (based on results from LVMed, our post-employment benefit valuation system) can be forecast up to 120 years.

**Deterministic forecasting** relies on the plan achieving the user's expectation of asset returns.

**Stochastic forecasting** runs a series of random samples to determine the likelihood that the plan's assets will reach a certain level. These random samples utilize the expected rate of return and volatility of each asset class as well as the correlation of each asset class to the other classes. This allows the user to compare the impact of different investment policies on future pension costs and the plan's exposure to risk.

Output is available displaying detailed actuarial level calculations to executive summaries. Also included is an extensive set of graphs displaying liabilities; assets; funded status; funding policy, IRS required contributions, and IRS maximum permissible contributions; accounting expense; required PBGC premiums; and demographic changes.

#### ALM FEATURES

- Ability to set different assumptions for expected experience than those used in the valuation.
- A census file is produced for each future valuation indicating survival rates for actives and new entrant characteristics
- Details of the determination of future contributions and accounting expense available for each year
- Ability to customize any assumption to test a plan's exposure to risk
- Different funding policies assists in analyzing options for the plan and plan sponsor
- Projects future cash flows and their impact on plan assets

#### ADDITIONAL STOCHASTIC FEATURES

- Simultaneously runs over 1,000 scenarios of future asset returns
- Future asset returns based on historical averages
- Ability to include up to 16 asset classes

#### OUTPUT INCLUDES

- Valuation output is generated for each year in the forecast.
- Detailed sample lives available for each year in the forecast thus sample lives can be tracked during the entire forecast period
- Determination of gains and losses attributable to assumed experience different than valuation assumptions
- Output can be analyzed in terms of best case, worst case, and standard deviations from the mean or by percentiles.
- Graph can be customized by the user including items to display, colors, and percentiles
- Graphs can compare the results based on different assumptions
- Summary reports display all numbers on graphs and supporting information for verification purposes
- Results easily exported to MS Excel
- Ability to generate user defined reports