UnRisk

UnRisk VaR MODULE

The Powerful Tool for Efficient Risk Management in Banking

www.unrisk.com

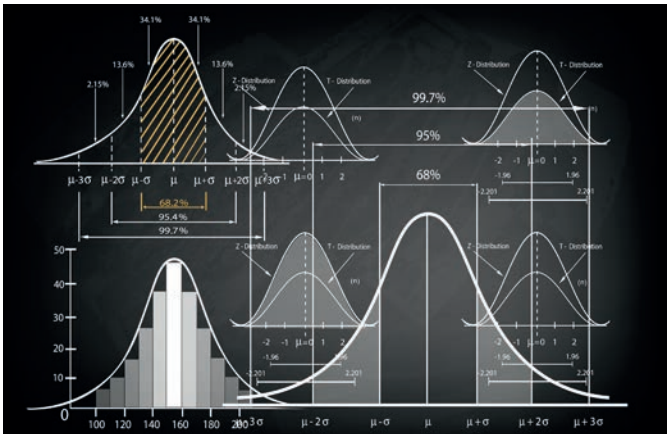
What is UnRisk VaR MODULE?

Risk management is an essential activity for all banks, whether they focus on commercial or investment banking. Value at risk, or VaR, has emerged from a variety of risk measures as the dominating method of quantifying risk. VaR is a statistic/probabilistic method of measuring the potential loss in position, asset or portfolio value over a given time period, based on historical data.

UnRisk VaR MODULE is an extension of UnRisk EXCEL and UnRisk QUANT, and is part of UnRisk FACTORY and UnRisk LIBRARY. It is implemented in C++ and offers highly efficient scalable VaR computations across positions, assets and portfolios.

Covered Methods and Key Risk Figures

- **Parametric VaR:** Also known as linear VaR or Variance-Covariance VaR. This parametric approach assumes a probability distribution for risk factors and is based on the premise that instrument prices linearly correlate with changes in these factors.
- **Historical VaR:** A calculation method based on historical data that generates scenarios reflecting changes in risk factors. Positions are reevaluated using these historical VaR scenarios to derive key VaR risk figures.
- **Monte Carlo VaR:** Utilizes historical data to estimate parameters for the distribution of risk factors and their correlation structure. These joint distributions are used to generate scenarios, and each position is subsequently reevaluated under these scenarios to derive key VaR risk figures.
- **Marginal and Contribution VaR:** These additional risk metrics assess the risk of individual positions or factors within the portfolio and their contribution to the overall risk/portfolio.
- **Conditional VaR (CVaR):** Also known as Expected Shortfall (ES), this risk figure is more sensitive to the shape of the tail of the loss distribution.
- **Peak Over Threshold Methodology:** Implemented in the UnRisk VaR MODULE to calculate VaR/CVaR and address issues related to insufficient historical data or inadequate modeling of distribution tails.



Key Benefits

- ✓ UnRisk VaR MODULE provides a comprehensive set of methodologies.
- ✓ It includes additional risk figures such as marginal and contribution VaR.
- ✓ Conditional VaR and the use of Peak Over Threshold methodologies allow for even deeper assessment of potential risks.
- ✓ Provides access to intermediate results of VaR calculations, such as generated VaR scenarios.
- ✓ Ensures the highest quality in numerical implementation and performance.
- ✓ Seamlessly integrates with UnRisk EXCEL and UnRisk QUANT.

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