UnRısk

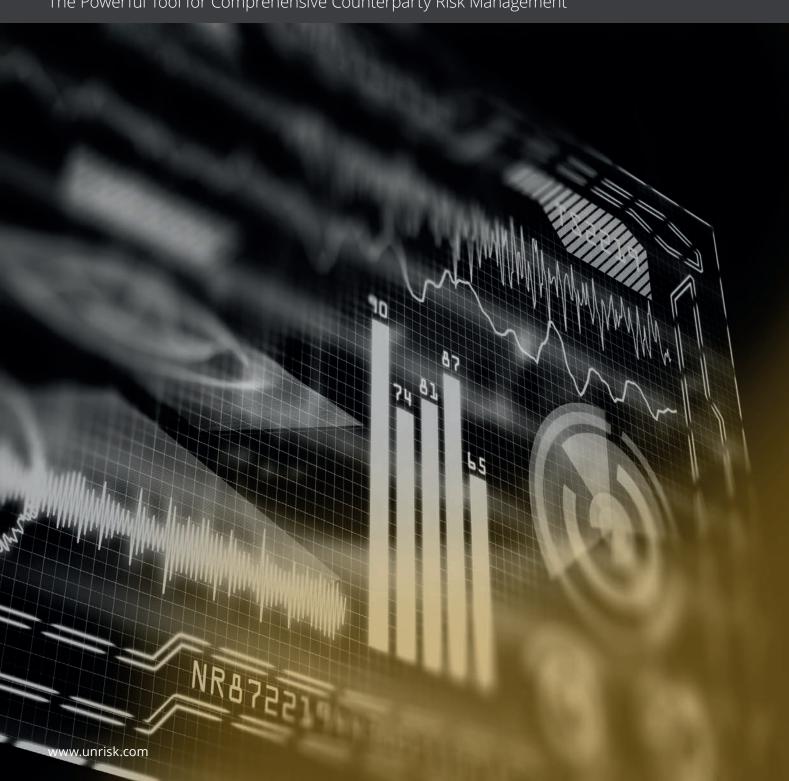## UnRısk xVA MODULE
The Powerful Tool for Comprehensive Counterparty Risk Management

What is UnRisk xVA MODULE?

Managing counterparty risk is essential for all banks, whether they focus on commercial or investment banking. Counterparty risk is a combination of **market risk (exposure)** and **credit risk (counterparty credit quality)**. The complexity arises because in a xVA calculation setting including netting and collaterals, a trade with a counterparty cannot be seen isolated but must be evaluated in relation to other transactions within the same netting set. UnRisk xVA MODULE is an extension to UnRisk EXCEL, UnRisk QUANT and UnRisk FACTORY. It is implemented in C++ and offers highly efficient scalable xVA and exposure computations across positions, assets and portfolios taking into account netting and collaterals.

Methodology

Exposure defines the potential amount of loss in case of a counterparty default and can assume both positive and negative values. This measure is particularly time-sensitive, as a default can occur at any time. Netting and collateral agreements influence its calculation.

UnRisk solutions for counterparty credit risk use Monte Carlo simulations combined with fast solvers for partial differential equations, enabling the calculation of exposure and associated metrices.

- Exposure distribution from a single instrument to portfolio level.
- Potential Future Exposure.
- Negative Expected Exposure, Positive Expected Exposure.
- Unilateral- and Bilateral Credit Value Adjustment (CVA).
- Debt Value Adjustment (DVA).

Key Benefits

- ✓ UnRisk xVA MODULE provides a comprehensive exposure engine.
- ✓ A combination of SDE and PDE solvers significantly reduces the number of necessary valuations.
- ✓ Provides access to intermediate xVA calculation results, such as simulated market scenarios in each path.
- ✓ Ensures the highest quality in numerical implementation and performance.
- ✓ Seamlessly integrates with UnRisk EXCEL, UnRisk QUANT and UnRisk FACTORY.