numerix

CrossAsset

Benefits

Rapidly structure and price any derivative

Gain time-to-market advantages with 250+ pre-defined deal templates, including 'out-of-the-box' deal types and trade blotters that can be easily modified.

Comprehensive asset class coverage

Equities, Interest Rates, FX, Credit, Commodities, Inflation, Cash Securities, Structured Products, Exchange Traded, Structured Finance , Crypto, Hybrids and all OTC derivatives - Vanilla through Exotic.

Comprehensive model coverage

Richest set of models and full transparency with deep insights into calculations.

Full support for alternative reference rates

Complete coverage for all global risk-free rates (ARRs)

For more information, contact:
sales@numerix.com

Structure, price and manage any type of derivative or structured product

Numerix CrossAsset offers the industry's most comprehensive derivatives pricing and risk management analytics library to empower users to structure, price and manage even the most complex derivatives.

In addition to the multitude of pricing models, a flexible architecture for defining bespoke deals—CrossAsset enables you to deploy a unified pricing and risk solution for all your derivative and fixed income positions across all trade types.

Industry leading pricing and risk analytics library

The award-winning CrossAsset pricing and risk analytics library provides the industry's most comprehensive cross-asset class library of market-standard models and advanced numerical methods. Whether you are valuing a vanilla derivative using one of our hundreds of pre-defined templates and closed-form pricers or creating a bespoke instrument using our payoff scripting language, CrossAsset makes the pricing, valuation, and risk management of derivatives and struct ured products more efficient and accurate than ever.

Optimized numerical methods

Pricing derivatives often involves intense computations. Our quantitative analysts have developed methods that have been optimized for speed and accuracy, enabling rapid calculations for even the most complex instruments.

Recognized leader in pricing and risk analytics for exotic derivatives and complex hybrid derivatives

Numerix hybrid model framework produces accurate valuations for instruments consisting of multiple underlyings through joint calibration and incorporating multiple stochastic processes.

The Numerix hybrid model framework: unifying all asset classes

joint calibration → **Hybrid**

IR	EQ	FX	CR	CMDTY	INF
HW1F	BS*	BS*	BK1F	BLACK*	JY (BK)
BK1F	DUPIRE	DUPIRE	CIR1F	SCHWARTZ1F	JY (HW)
SBK1F	HESTON*	HESTON*	CIR2F	GS2F	IMM
CIR1F	HESTON FR	HESTON FR	CTM*	HESTON	
HW2F*	LSV	LSV	SV CTM*	GABILLON	
SBK2F	BATES*	BATES*		LV	
CIR2F*	DLV			GIBSON SCHWARTZ LV	
LMM					
CHEYETTE					

*Risk Neutral & Real World

Note: There may be restrictions on the available configurations in which a certain model can be included in the hybrid/jointly calibrated.

Advance risk capabilities

Risk scenario framework

Numerix Risk Scenario Framework is designed to enable financial institutions to automate the modeling and pricing of portfolios of non-loan securities and derivatives held by operations, such as treasury departments and investment banking subsidiaries—specifically for structuring custom greeks and stress tests.

Numerix uses this stress testing framework to automate the estimation of a portfolio's value changes, gains, and losses under circumstances that reflect different scenarios required by a financial institution for stress testing. A financial institution's book of records is the primary data set with which the Risk Scenario Framework is integrated in order to perform scenario-based analyses and projections on all of the firm's positions.

Scenario analysis

Risk Scenario Framework, Numerix's stress testing capability, can be used to calculate central difference Greek sensitivities such as Interest Rate DV01, equity delta, and vega sensitivities but can also be used to create large scale scenario shocks.

- A framework that allows Greeks and sensitivities to be calculated across asset classes for any market data environment
- One report that has user-defined statistics that can be calculated consistently across one or all asset classes
- The Greeks can be aggregated by asset class
- Create bespoke market scenarios, risk and P/L decomposition reports

Flexible deployment

From trading desk to enterprise risk management — CrossAsset easily integrates within your operations

CROSSASSET XL

Numerix CrossAsset XL provides unprecedented flexibility for structuring, pricing and managing even the most complex derivatives and structured products—all in the Microsoft© Excel environment that traders and structurers are already accustomed to.

Single asset class or a complete cross-asset solution

CrossAsset XL is available as either a comprehensive cross-asset solution or select modules targeted to individual asset classes.

Make better trading decisions

Pre-trade price discovery and the ability to stress-test and monitor trading strategies in Excel helps users develop more informed trading strategies and better trading decisions.

Designed for continually evolving capital markets

Rapidly describe any new deal type using hundreds of customizable trade templates, an intuitive payoff scripting language and the industry's most comprehensive cross-asset class pricing and risk analytics library to dramatically reduce time-to-market for creating new products.

CROSSASSET SDK

The CrossAsset Software Development Kit (SDK) - available in Python, Java, C# and C++ - empowers users to easily integrate Numerix's best-in-class pricing and risk analytics library directly into any proprietary or third-party software/systems – from trading through risk management, enabling users to achieve analytic consistency across the firm.

Simplify the task of building bespoke applications that leverages Numerix's market-tested models and methods

Easily integrate Numerix's, comprehensive derivatives pricing and risk management analytics library into the core of your system and seamlessly generate valuations, Greeks, cashflows and scenarios with ease. It also has a low-level interface that allows users to completely customize bespoke applications at the most granular level.

Scalability

Users can quickly deploy their solution to on-perm servers or cloud computing platforms with ease. This allows large, complex portfolio-level calculations for valuations and risk to be scaled seamlessly using cloud computing resources.

Path to standardization

The CrossAsset SDK paves the way for a true "single-source of truth" system for structuring, pricing and risk management of derivatives and structured products – including hard to price exotic derivatives.