

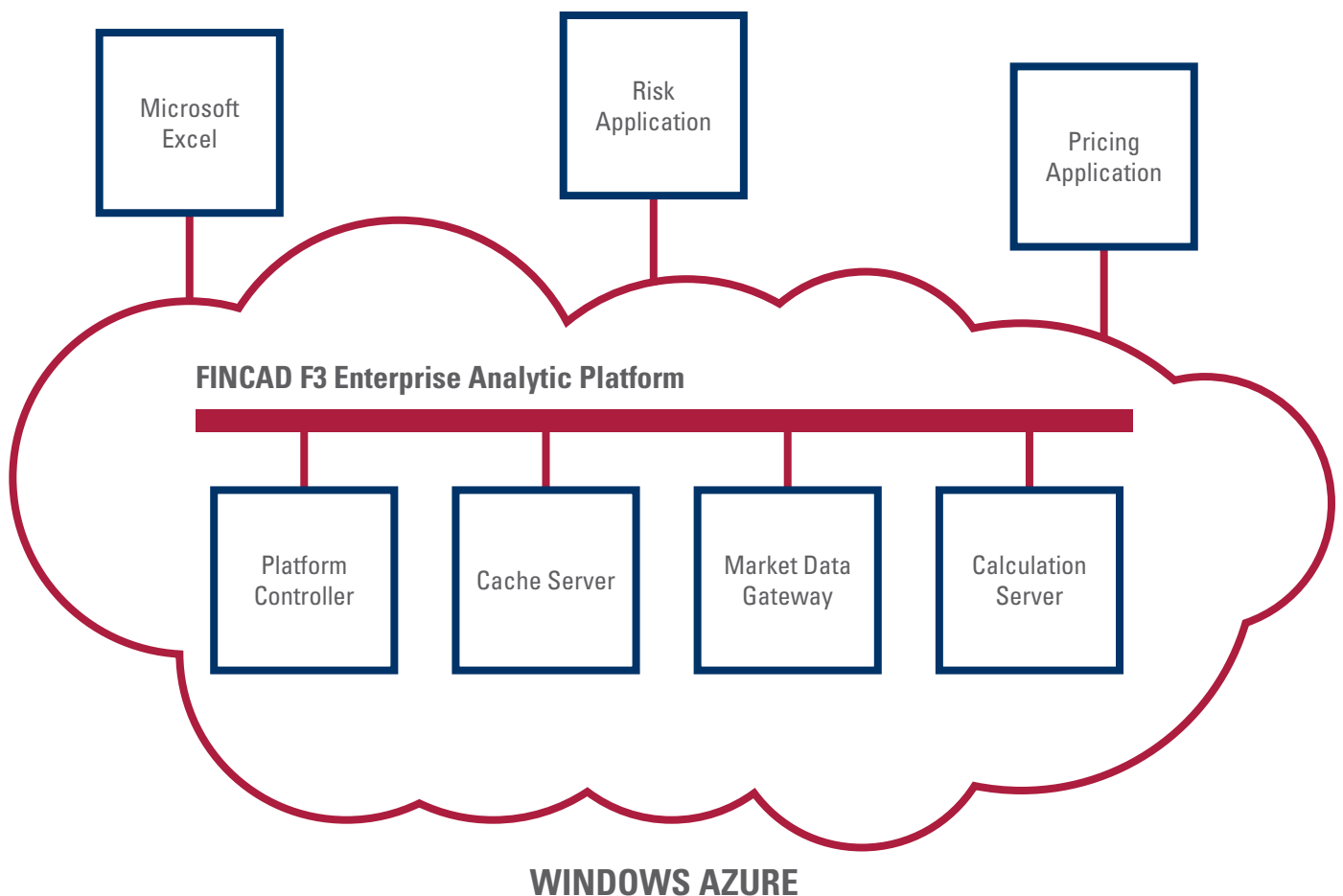
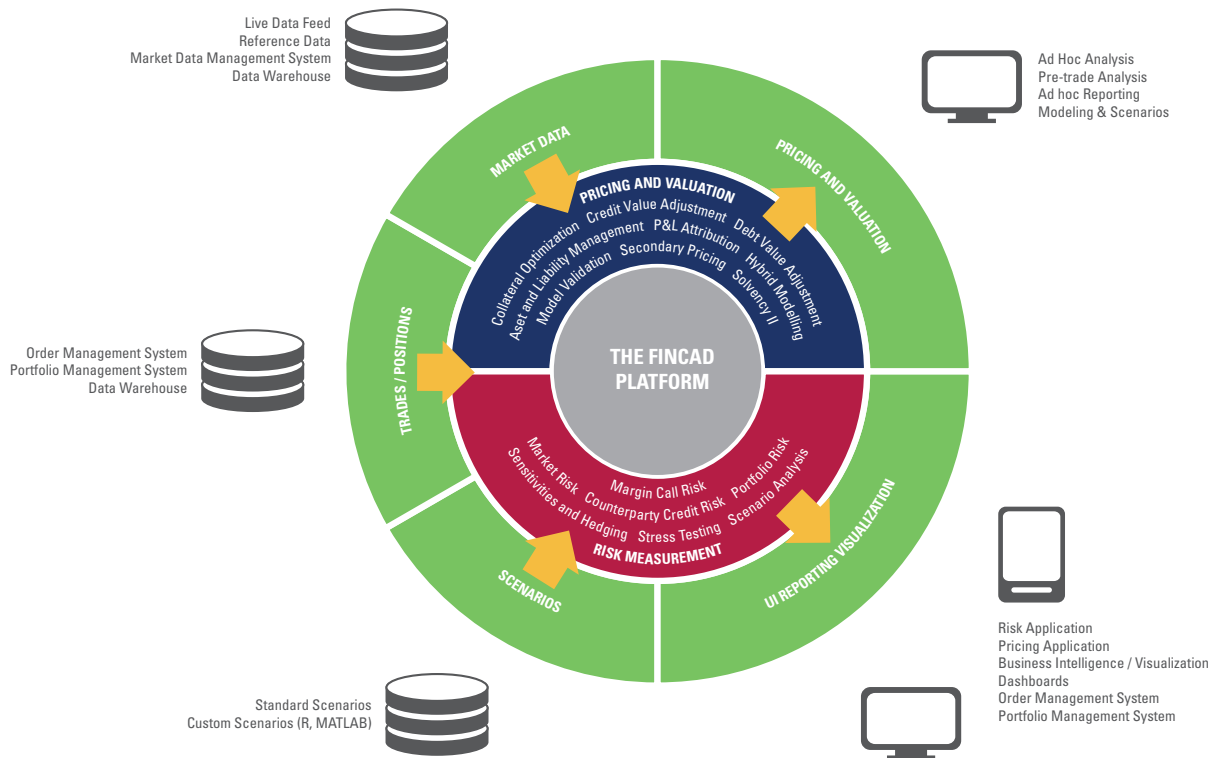
Meeting the Challenge of *Pricing & Risk Analytics* *Computations* with the FINCAD Platform and Cloud Computing

FINCAD's enterprise analytics platform is an in memory cloud computing calculation engine that allows fixed income & derivatives teams to have a scalable and powerful analytics platform. With the ability to scale from a single user to multi-trading desk implementations.

FINCAD's core calculation engine technology can integrate with a multitude of applications to be part of the entire trading & asset management workflow.

HOW FINCAD'S ENTERPRISE ANALYTICS PLATFORM IS ADDING VALUE TO CLIENT IMPLEMENTATIONS:

- Portfolio level understanding of risk, exposures, and valuations
 - Effective attribution or profitability & risk to the trader, trading desk, or global level.
 - Calculation of the impact of counterparty credit risk at the trade level or global level
 - Comprehensive curve building to capture various global market conventions
 - Transparency of modeling methodology & calculations results provides additional control to the user.
 - FINCAD's Universal Risk Technology.
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SCENARIO ANALYSIS

Ability to stress (perturb) data inputs (market, instrument, credit data) used in generating market scenarios based on risk neutral or real world assumptions.

Stress testing and scenario-analysis to provide granular analysis of multi-asset portfolios.

Powerful simulation engine allows for Monte Carlo analysis on all instruments & allowing users to utilize historical scenarios or Monte Carlo simulations.

MARKET RISK SENSITIVITIES

Multi-asset & multi-currency portfolio analysis for understanding market risk sensitivities on-demand.

FINCAD's in depth risk functionality for calculation of risk sensitivities on spot or forward basis under a variety of market conditions.

Key Rate Duration & granular risk sensitivity analysis on all market data points.

Common sensitivities computations include interest rate risk, credit risk, yield curve risk, volatility risk.

Sensitivities calculations over different time horizons utilizing F3's calibration engine to generate simulated interest rate paths.

CREDIT RISK MANAGEMENT

Effectively calculate the impact of counterparty credit risk (CVA, FVA, and DVA)

Calculations at the instrument level due to incremental CVA impact or at the aggregate level for global credit risk exposures across all netting sets.

Better informed credit risk management practices & trading decision management.

P&L AND RISK ATTRIBUTION

On-demand P&L Attribution analysis for portfolio wide metrics

P&L Vectors to understand profitability in different market environments

Understand risk attributes at global, trading book, and trade level.

EXTENSIVE INSTRUMENT & MODEL COVERAGE

Multi-asset & multi-currency analysis to represent virtually all financial instrument types.

Ability to accurately value and assess risk on an instrument or overall portfolio basis.

Index expression language for exotic product prototyping for scalable analytics platform

F3's Flexible Index expression language allows for the most Complex payoff formulas to be easily represented.

Comprehensive pricing and risk analysis on virtually all instrument types.

Functionality to model a multitude of product payoff formulas and back test these different product iterations under different market conditions.

AUDIT TRAIL & REPORTING

F3 offloads & stores calculation results for future audit and compliance requests.

Technology provides the ability to recreate calculations and recreate the market environment at any point, to ensure a powerful monitoring tool.

Risk, valuation & exposures calculations providing portfolio visibility & required regulatory data

CURVE BUILDING

Ability to integrate new market practices for curve construction dynamically.

FINCAD functionality comes pre-configured with numerous global market conventions.

Ability to utilize different curve building approaches for performing pricing & risk analysis (i.e. illiquid instruments utilized to build curves or specific local market conventions)

Comprehensive OIS curve building functionality & implementation assistance.

Providing curve building flexibility needed for different global market conventions (ex. Brazil, Mexico).

A more robust & flexible curve building capability catering to the specific nuances of local markets around the globe.

TECHNOLOGY INTEGRATION

F3 offers the ability to integrate with other applications for an integrated workflow. Common examples includes actuarial databases, market data feeds, positions databases, reporting applications, and cloud computing engines.

Our modern API integrates utilizing xml to ensure an efficient integrated platform that can be scaled at multiple points.

HEDGING & EXPOSURE MANAGEMENT

Flexible market scenario functionality to analyze effectiveness of hedging programs.

F3's unified approach allows for the inclusion all financial instruments (i.e. A & L)

F3 aggregates user defined financial instrument portfolios & calculates impact under different market environments

Identify different specific sub-allocations of exposure and for potential risk mitigation.

Analytics output of greeks sensitivities, duration, DV01, and cash flow generation.

Determine how financial instruments & portfolios perform under a variety of market conditions (i.e. understand capability to hedge during market stresses & non-linear risks)

Hedging decision management under varied market environments.

CLOUD COMPUTING

FINCAD's in memory cloud computing engine for enterprise pricing & risk analytics provides multi-asset & multi currency analysis

F3's calculations utilizes caching to ensure that computationally intensive calculations with high numbered simulations are optimally deployed to ensure the most computationally efficiency.

ABOUT FINCAD

Founded in 1990, FINCAD provides advanced modeling solutions built on award-winning, patent pending technology. With more than 4,000 clients in over 80 countries around the world, FINCAD is the leading provider of financial risk analytics technology, enabling global market participants to make informed hedging and investment decisions. FINCAD provides software and services supporting the valuation, reporting and risk management of derivatives and fixed income portfolios to banks, corporate treasuries, hedge funds, asset management firms, audit firms, and governments. FINCAD Analytics can be accessed through Excel, MATLAB®, as a Software-as-a-Service or embedded into an existing system through software development kits. Now, over 70 FINCAD Alliance Partners embed FINCAD Analytics within their solutions. FINCAD provides sales and client services from Dublin, Ireland, and Vancouver, Canada. www.fincad.com

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