



# Axioma Risk

## The next-generation market-risk management system

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Axioma Risk is a flexible system for multi-asset class risk management, offering analytics and data in a unified platform. In the system, a suite of analytics tailored to meet portfolio and asset-specific risk-measurement needs, is coupled with integrated market data and terms and conditions data for over 5 million active and 10 million inactive fixed income, derivative, and equity securities across all major currencies and liquid emerging markets. With hosted and on-site deployment options, Axioma Risk is designed to support the disparate requirements of each investment firm.

Axioma Risk delivers consistent measures of risk, including decomposition through fixed income and fundamental equity factor models. Users can evaluate risk measures via an underlying factor model, or a price time series as would be done with a granular risk model, with either linear approximation or simulation-based full revaluation models. This provides for a system that is able to deliver sensible measures for portfolios with differing underlying strategies, asset classes, and investment horizons. Axioma Risk allows institutions to replace multiple systems with a single risk analytics

platform accessible and relevant to both risk control and front-office functions.

Axioma Risk has a sophisticated stress testing framework, allowing users to walk through a historical period (or multiple periods) one day at a time, thus capturing the observed path-dependent behavior, while also offering standard instantaneous, model-parameter, and correlated stress tests.

Axioma Risk allows users to backtest their VaR models, to monitor trends in risk measures, and to identify periods of stress for future scenario analysis through its included historical results storage. The system's storage of position details and risk results, coupled with local aggregation, also make the system interactive and responsive by eliminating redundant revaluations. Client-provided position details can be managed through Axioma Risk's SOAP-compliant interface, simplifying its incorporation into a client's existing workflow.

## Axioma Risk: Asset Coverage and Market Data

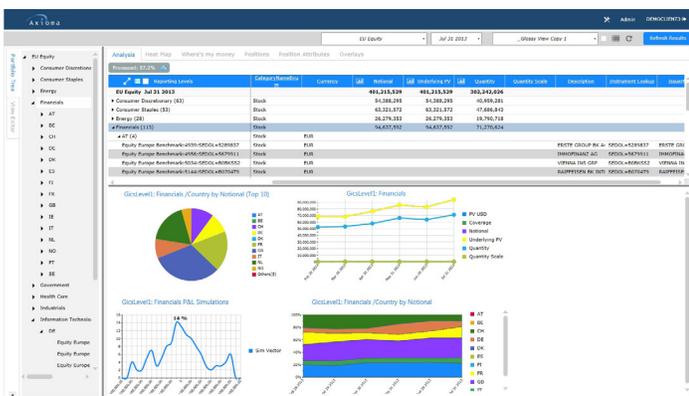
The non-exhaustive lists below summarize the asset coverage and market data available in the system.

### Asset Coverage

Axioma Risk has pricing models and data enrichment to cover most asset classes, including:

- Commodity and derivatives
- Credit and derivatives
- Currency and derivatives
- Equity and derivatives
- Fixed income and derivatives
- Structured debt
- Developed and emerging markets
- Support for fund-of-fund structures

Axioma Risk: a tool to help manage complex multi-asset class risk.



### Terms and Conditions Data

- Commodities
- Credit
- Equities
- Fixed income
- Futures
- Options

### Market data

Axioma Risk provides much of the market data necessary for risk analyses, including but not limited to:

- Axioma equity factor models
- Axioma commodity model
- Axioma fixed income models
- Commodity CMF curves
- Equity price data
- Fixed income yield and credit curves

### Data enrichment

- Country
- Consistent issuer information across securities
- Composite rating
- Sector

## Axioma Risk: Risk measures, application, and data integration

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The lists below describe a subset of the features available for risk management and system interaction.

### Risk Measures

- Beta
- Factor sensitivities
- Fixed income risk measures
- Fixed income valuation measures
- Greek sensitivities
- Asset aging within scenarios
- Multi-currency support
- Multi-horizon support
- Statistical measures
- VaR and Tracking Error

### Model support

- Factor model risk simulations
- Market factor risk simulations
- Linear risk modeling
- Simulation-based risk modeling of non-linear assets
- Multiple distribution assumptions available (allowing fat tails to be created, for example)
- Independent settings for correlation and volatility estimation

### Stress Testing

- Scenario analysis via market factor shocks
- Model parameter shocks
- Historical event simulations
- Instantaneous or horizon-adjusted “walk-through”s
- Independent or correlated factor movements allow forward-looking stresses to be defined

### Reporting

- Absolute and relative risk reporting
- Business intelligence engine for dashboard definition
- SSRS tools for customized report generation
- Multi-level hierarchical risk reporting
- Customizable risk decomposition

### Application

- Web-based interface
- Interactive tools to manage positions and allocations, define reports, and test overlays
- Import and export data directly from and to Excel
- Export dashboard results in multiple formats
- Multi-user environment

### Data Integration

- Standards-based API
- Rapid integration into client workflow
- Full support to import assets using common identifiers or OTC instruments
- Historical results storage



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