

- ✓ Axioma Fixed Income Spread Curves
- ✓ Axioma Factor-based Fixed Income Risk Model
- ✓ **Axioma Granular Fixed Income Risk Model**

# AXIOMA GRANULAR FIXED INCOME RISK MODEL

## Gain a granular and accurate view of entity-specific risk

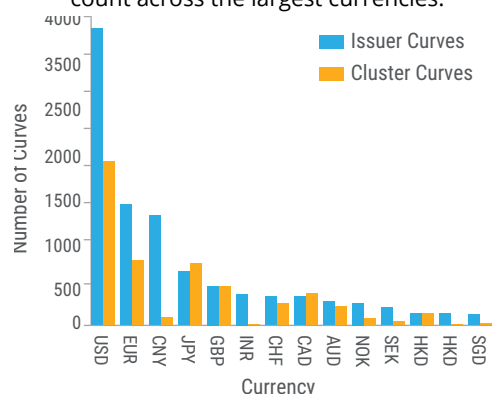
Powered by Qontigo's proprietary methodology for modeling issuer spread returns, our next generation granular fixed income risk model provides Axioma Risk users with a more accurate way to view, deconstruct and aggregate risk measures across portfolios for corporate, emerging market and credit-risky assets.

### Our Approach





We've spent years cleansing and organizing underlying fixed income data so that you don't have to. Our methodology transforms raw bond price data into stable, robust, issuer-level term structures of credit risk factors, based on highly accurate issuer credit spread curves. In addition, our methodology extends to rating curves — "cluster" curves — that accurately capture credit spread levels across currencies, regions, sectors and notch-level ratings. To reach this level of granularity and accuracy, great care has been taken to construct bond-to-issuer, country and industry mappings, and to leverage peer data and incorporate sophisticated outlier detection to extract signals — all while reducing noise for thousands of curves.

Curve Counts by Currency, May 21, 2019

Represents the issuer and cluster curve count across the largest currencies.



### The Axioma Risk Model Advantage

 <p><b>DTS MODEL</b></p>	<ul style="list-style-type: none"> <li>• Instrument level duration-times-spread risk exposure to proportional credit risk factor returns</li> </ul>
 <p><b>EXTENSIVE HISTORY</b></p>	<ul style="list-style-type: none"> <li>• More than 16-year history of granular fixed income risk factors with daily frequency</li> </ul>
 <p><b>STABILITY</b></p>	<ul style="list-style-type: none"> <li>• Stochastic time series smoothing algorithms employed to balance granularity with data quality</li> </ul>
 <p><b>BREADTH AND DEPTH</b></p>	<p><b>Risk models constructed from:</b></p> <ul style="list-style-type: none"> <li>• Over 12,000 full term structure issuer curves across approximately 6,000 issuers, 30 currencies and multiple subordination tiers</li> <li>• Over 6,000 full term structure cluster curves across 30 currencies, 9 regions, 21 ratings and multiple sector/industry levels</li> </ul>

### Flexible and Accurate Analytics

- > A range of cash-flow based analytics that leverages the curves
- > Risk analytics that encompass historical and Monte Carlo simulations, parametric risk models and stress tests
- > Market-consistent pricing and analytics of illiquid instruments
- > Granular risk factors that accurately capture risk across different investment strategies
- > Consistent sector and country classifications of debt from the same issuer

## Qontigo's Methodology

### Axioma Issuer-Specific Risk Factors:

- Minimize the distortion of risk signals that can arise from mapping dissimilar bonds to the same entity or risk factors
- Easily match the most liquid instruments to improve the alignment between the term structure and market liquidity
- Efficiently harness peer information to support term structures for many issuers, even when issuer-specific data is thin

### Axioma Rating Risk Factors:

- Reduce sensitivity to rating migrations that cause artificial volatility in rules-based methodologies
- Improve coverage to ensure complete data across maturities and credit qualities
- In addition, Axioma risk factors incorporate full term structures rather than single tenor factors, exhibit improved stability and robustness through time, and are less sensitive to noisy fixed income data

### Axioma Risk Models are for:

- Portfolio Managers
- Risk Managers
- Central Risk Book Owners
- Asset Owners
- Actuarial Teams
- Strategy Research Teams

### Getting Access

- The new model will be released to run in parallel with the existing model, enabling current clients to validate and test before switching
- New clients will be automatically enabled for this new best-in-class risk model

## Examples

The figures below illustrate issuer and cluster credit spread behaviors for General Electric; and for EUR sovereign rating spreads during the European sovereign crisis. These examples demonstrate the robustness and granularity of the Axioma Fixed-Income Factor Library.

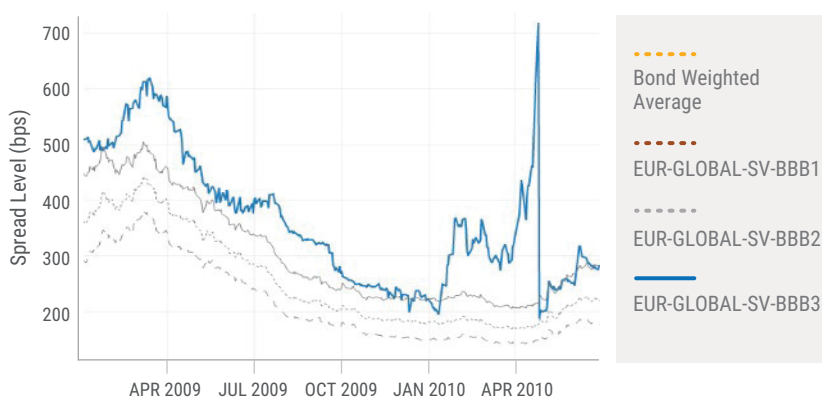
### GE Credit Deterioration

Axioma time series of 5-year USD senior spread for GE Co alongside Axioma Fixed Income Spread Curves for North American Capital Goods issuers. The issuer spread signals the markets concern about future downgrades and deteriorating credit quality.



### EUR-GLOBAL-SV Cluster Curves

Granular EUR sovereign curves (shown in grey) exhibit stability through time compared with a simpler bond weighted average across the major letter rating. The spike in the average is caused by the downgrade of Greece from BBB to BB.



To learn more about Qontigo, please contact us, or visit [qontigo.com](http://qontigo.com)



sales@qontigo.com  
info@qontigo.com



Part of

