AXIOMA FIXED INCOME SPREAD CURVES

Powered by proprietary methodologies for issuer classification and modeling issuer spread returns

Fixed income data is notoriously difficult to work with and the construction of curves a daunting exercise in obtaining signal from noise. Built on our own proprietary methodology, Qontigo's new library of spread curves solves the key challenges inherent in curve construction.

What Do Axioma Fixed Income Spread Curves Offer?

> Comprehensive data across maturities and credit quality
> Granularity and dynamic updates suited for use in both valuation and risk
> Consistency across multiple time periods
> Full entity mapping to ensure correlated entities (e.g., subsidiaries of a common legal entity) can be grouped together
> Sophisticated methodology to guard against model-based instability and artificial volatility in curve-building; addresses issues like ratings migration problems often seen in rules-based methodologies
> Joint-estimation technique aligns the term structure with liquid market comparables creating a meaningful and robust shape

How Do We Ensure a Clearer Signal?

<table>
<thead>
<tr>
<th>TIME SERIES NOISE REDUCTION</th>
<th>PEER INFLUENCE</th>
<th>OUTLIER REMOVAL</th>
<th>AXIOMA RISK ENTITY FRAMEWORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Level Reverting Noise Reduction (LRNR) algorithm is applied to smooth the time series history of curves and reduce noise from poor or inconsistent pricing, bad liquidity and general market noise</td>
<td>• The shape of spread term structures is informed by comparable peer issuers ensuring granular market-consistent trends</td>
<td>• Automated detection and down-weighting of outlying instruments to improve risk factor signals</td>
<td>• Legal entities within the corporate hierarchy are grouped together to define issuers and provide consistency across asset classes and within complex issuer hierarchies</td>
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With Axioma Fixed Income Spread Curves you can access:

> Over 12,000 issuer-specific curves (granular risk entity/currency/debt tier)
> Over 6,000 cluster curves (aggregate currency/region/industry/rating)
> Flexible delivery options: Rest API, file delivery, or integration with Axioma Risk
> Algorithmic and logical treatment of entities to cluster related risk entities (identifies ultimate parent companies and logical country and sector of risk)
Use Axioma Fixed Income Spread Curves across the front, middle and back offices

FRONT OFFICE

- Valuation of illiquid or unpriced assets
- Bond, loan, private placement and credit derivative valuations
- Pricing tools for new issues
- Building factor models
- Relative value analysis and market intelligence
- Derivation of scores for factor-based investment strategies
- CDS proxying

1. Asset Management
   - Modelling default risk and to enable multi-asset risk integration
   - Fixed income attribution factors which can integrate with Order Management and Portfolio Management Systems
   - Research & investment decision making

2. Insurance & Pension Funds
   - Ultimate parent company and country of risk, both required for Solvency II
   - Proxying illiquid single-name CDS curves in counterparty risk calculations (xVA)
   - Inputting into annuity valuations driven by corporate bond yields
   - AA corporate curves which are required for pension fund discounting

3. Banks
   - Risk, Treasury and Finance
     - Independent Own Credit calibration
     - Reducing Risk Weighted Assets (through better risk model calibration)
   - Treasury, Finance and Audit
     - LEI entity risk mapping
   - Risk
     - Limit checking and third-party check against ratings

MIDDLE OFFICE

- Credit risk modelling and aggregation
- Internal risk model calibration
- Entity master mapping
- Ratings proxies and market-implied ratings

BACK OFFICE

- Regulatory reporting

To Learn More

For more information about the Axioma Fixed Income Spread Curves visit axioma.com/products/axioma-fixed-income-suite/

To learn more about Qontigo, please contact us, or visit qontigo.com