



BarraOne Performance Analytics

Fixed Income Attribution

BarraOne is an integrated risk and performance platform providing global, multi-asset class, and multi-currency portfolio analytics that supports clients' investment decisions.

BarraOne Performance Analytics offers a suite of performance attribution models to analyze sources of portfolio performance that help clients make more informed investment decisions.

Fixed Income Attribution

The Fixed Income Attribution model in BarraOne Performance Analytics allows clients to analyze sources of multi-currency portfolio returns using income, paydown, rolldown, term structure, and spread return components, as well as currency.

Benefits

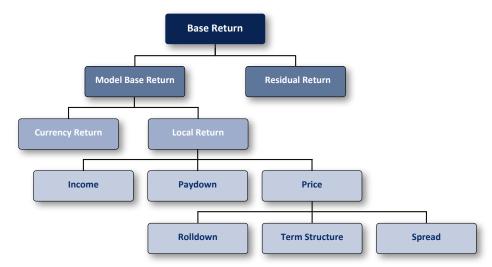
- » One Platform for Risk and Performance: A single data loading and reconciliation process for both risk and performance analytics needs.
- » Decompose Performance: Decompose performance into return components, which capture the key drivers of fixed income return, and explain return due to accrued interest, coupon payments, early principal payments, the passage of time (causing pull-to-par and pure rolldown), interest rate changes using yield curve key rates, and active return due to changes in credit spreads, using a Brinson model that is modified for fixed income.
- » Single & Multi-Currency Analysis: BarraOne supports attribution on single or multi-currency portfolios. The currency attribution explains the component of active return attributed to a portfolio's exposure to multiple currencies.
- » Manager Selection and Monitoring: Identify whether portfolio positioning decisions are consistent with the intended strategy. Compare managers based on ex-post risk and risk-adjusted returns measures.

- » Flexible Grouping: Choose a grouping scheme based upon an investment decision hierarchy.
- » Arithmetic and Geometric Attribution: BarraOne supports both arithmetic and geometric attributions within the Fixed Income Attribution model.
- » Derivative Look Through: BarraOne attribution models look through into many types of swaps, forwards, futures, composite funds, and ETFs before calculating attribution results.
- » Market and Asset Data: Daily market and asset data, including derivative returns are available within the system.
- » Intuitive: A streamlined workflow gives clients the ability to save time when performing attribution reporting.
- » Data Loading and Reporting Automation: A specialized implementation team is available for helping with the automation of data loading and reporting functions. A managed services team is available for data reconciliation and ongoing report management tasks.



Features

- » Visualization: MSCI Performance Analytics offers a visualization interface that allows users to interact with their performance output. The tool offers flexibility in viewing, analysing and communicating the complexity of analysis through graphics. Users can interact with their results and create analytical dashboards generated through automated daily updates.
- » Returns Calculator: Returns for many non-equity and derivative assets are calculated by BarraOne for attribution reporting. BarraOne also allows clients to import returns for all assets and prioritize these with BarraOne provided returns.



» Portfolio Trend Analysis:

Analyze portfolio performance over user-defined time periods.

- » History: Run performance attribution reports going back to 2003.
- » Daily Data: All attribution computations are based upon daily security data.
- **» Preloaded Benchmarks:** A large universe of rigorously maintained index data for fixed income is delivered daily and can be permissioned for licensed clients.
- » Flexible Reporting: From an executive summary to detailed attribution and contribution reports with results at the asset, group, and portfolio level.

In addition to Fixed Income Attribution, BarraOne also provides the following attribution models:

- **» Allocation-Selection Attribution:** Brinson-Fachler attribution for top-down sector allocation strategies for equity or multi-asset class portfolios.
- » Asset Selection Attribution: Evaluate bottom-up stock-picking investment strategies for equity or multi-asset class portfolios using asset selection attribution.
- **» Equity Factor-Based Attribution:** Clients can align sources of risk and return using the Barra factors.

For more information on Performance Analytics visit www.msci.com/products/risk_management_analytics/performance

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About MSCI

MSCI Inc. is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds. MSCI products and services include indexes, portfolio risk and performance analytics, and ESG data and research.

The company's flagship product offerings are: the MSCI indexes with over USD 9 trillion estimated to be benchmarked to them on a worldwide basis¹; Barra multi-asset class factor models, portfolio risk and performance analytics; RiskMetrics multi-asset class market and credit risk analytics; IPD real estate information, indexes and analytics; MSCI ESG (environmental, social and governance) Research screening, analysis and ratings; and FEA valuation models and risk management software for the energy and commodities markets. MSCI is headquartered in New York, with research and commercial offices around the world.

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¹ As of March 31, 2014, as reported on June 25, 2014, by eVestment, Lipper and Bloomberg