Charles River Performance

Performance Measurement, Attribution and Risk Analysis

Charles River Performance enriches the portfolio management process with up-to-date performance measurement, attribution and risk analysis (PMAR) and facilitates GIPS compliance, without the need to integrate a standalone system. Users can directly calculate, analyze and report on multi-methodology, multi-asset and multi-currency performance attribution results. Up-to-date return, contribution and attribution data is available for each portfolio, for a variety of timeframes and user-defined classification levels. Users can also perform backward-looking performance analyses for any historical time period or account using multiple search criteria.

Advanced Capabilities

- Eliminate standalone systems with fixed income and equity performance and attribution on a single platform that supports portfolio modeling, trade execution, settlement & Investment Book of Record (IBOR)
- Provide context for decision making by bringing results directly into the portfolio management workspace or reports
- Streamline workflows with 'look-through' calculation down to the individual security level and dynamic recalculation of results when methodologies and classifications are changed on the fly
- Reflect investment objectives and/or strategies using custom blended benchmarks
- Automatically reconcile performance, attribution and ex-post risk data by eliminating multiple data feeds from disparate systems
- Reduce 'noise' and inaccuracies by easily restating performance data (price changes, corporate actions, etc.)
- Automate GIPS support with rules to maintain GIPS composite memberships; standard reports include firm and composite disclosures

PMAR Highlights

- Provide multi-asset, multi-currency PMAR
- Extend the portfolio management lifecycle to improve decision making
- Leverage a single system for a consistent calculation approach
- Eliminate data reconciliation within PMAR
- Run against any index, custom benchmark or model portfolio
- Support GIPS compliance

Best of Breed PMAR Within an Integrated System

Available as a stand-alone module or as part of the Charles River Investment Management Solution (Charles River IMS), Charles River Performance simplifies the PMAR process by consolidating Investment Book of Record (IBOR) data or accounting data into the front-office platform. Charles River Performance then combines this data with the comprehensive investment reference data, user interface and reporting capabilities of Charles River IMS. Multiple performance and attribution methodologies are available and can be applied on an account-by-account basis in real-time.
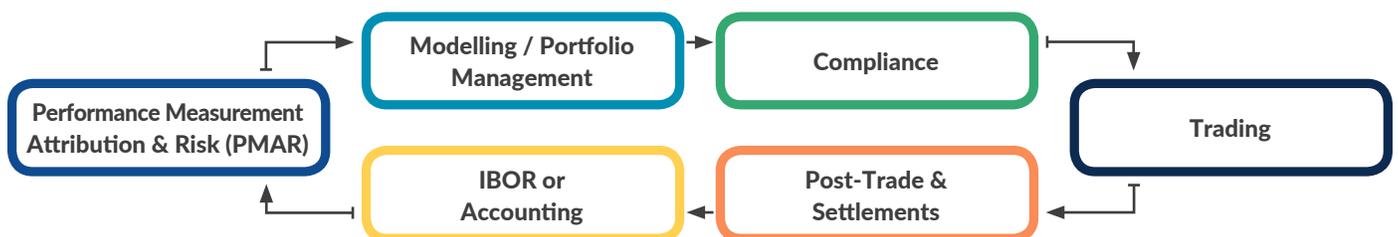
Enterprise performance measurement and attribution across the front and middle office.

Performance Measurement

Charles River Performance provides a single, flexible architecture, enabling users to easily change performance measurement methodologies and run different methodologies for the same account.

- Select time-weighted and money-weighted methodologies (configurable at account level)
- Run daily or non-daily security-level performance for any asset type
- Roll up performance to any level (multiple classification, total portfolio/benchmark, total composite, etc.)
- Calculate multiple return types (Capital, Income, Base, Local, Currency, Gross, Net)
- Convert performance results to any reporting currency
- Calculate linked performance between any two dates and in any frequency
- Define management fee schedules (calculate net-of-fee returns)
- Import category-level or constituent-level indices and blend for custom benchmarking

Attribution

With Charles River Performance, users can choose the attribution methodology that best meets their business needs and configure the methodology at global system, account or report levels. Additionally, methodologies can be changed in real-time which eliminates the need for system reconfiguration when running reports. Since the entire investment workflow is managed by a single system, users benefit from a consistent calculation approach and consistent PMAR results, including rate-of-return, contribution and attribution data.

- Run daily security-level attribution for any asset type
- "Attribute" active return to investment decisions
- Select from multiple equity styles: allocation, security selection, interaction
- Select from multiple fixed income styles: income, duration, convexity, spread with two available methodologies
- Conduct currency allocation and timing analysis
- Roll up to multiple classification levels for each security, i.e., by domicile (region, country, currency) or by sector (industry sector or sub sector)
- Use smoothing algorithms for arithmetic calculation
- Support multiple equity calculations including Brinson-Hood-Beebower, Brinson-Fachler, Karnosky-Singer, arithmetic, geometric, top-down and bottom-up

Performance Risk

Charles River Performance calculates and reports on a variety of ex-post risk measures based on historical returns of portfolios, composites or benchmarks. In addition to calculating the risk measures, the system also allows certain risk measures to be used for further risk contribution and attribution analysis. Risk contribution allows the decomposition of a given risk measure to each category and security, while risk attribution analyzes the amount of risk caused by each investment step, such as allocation or selection decisions.

- Run daily security-level risk analysis for any asset type
- Roll up to multiple classification levels for each security
- Calculate absolute risk measures for portfolios or relative risk measures against user-selected benchmarks
- Calculated risk measures include: Volatility, Variance, Semi-Volatility (Downside Risk), Sharpe Ratio, Tracking Error, Information Ratio, Beta, Jensen's Alpha, Treynor Ratio, M2, Sortino Ratio, Calmar Ratio

Enabling GIPS Composites

Charles River Performance allows the creation and automated, rule-based maintenance of GIPS Composites, along with their policies and footnotes. It also keeps an audit trail of changes for future auditing. By sharing reference data (security master, classifications, accounts, etc.) with the portfolio management and trading systems, GIPS users can ensure they have the most up-to-date view within a single application.

- A single performance reference data repository delivers consistent data across the PMAR workflow
- Methodologies are consistent with GIPS recommendations
- Create, maintain and store composites for a full audit trail
- Supports firm and composite disclosure reporting
- Customize report footnotes and disclosures

Charles River Manager Workbench Integration

Charles River Performance provides real-time integration with Charles River Manager Workbench enabling clients to directly access all return, contribution, attribution and risk data for each portfolio, for a variety of timeframes, and user-defined classification levels. Users can quickly and easily create customized portfolio views, conduct benchmark comparisons, run and monitor pre-trade compliance and more.

The Manager Workbench classification structure works seamlessly with Charles River Performance, enabling users to dynamically group, sort and report these results at any level (i.e., security, category and total). For example, users can configure data in individual columns to display desired time frames (e.g., since inception, year-to-date and month-to-date). The performance engine automatically calculates performance, attribution and risk results, and refreshes the Manager Workbench data view. This flexible data analysis helps to streamline the portfolio management process.

Configurable workbench views consolidate performance contribution, attribution and ex-post risk results for portfolio managers.

Robust Reporting

Charles River Performance gives users multiple reporting options to generate and export reports in either interactive or batch mode, and view them within Charles River IMS or a web browser. Reporting capabilities include:

- 60+ standard, user-configurable, out-of-the-box reports, including composite reports
- Security level, category level and total level data display
- Up to 9 levels of cascaded classifications
- Reports between any two dates and in any frequency (based on underlying data) and in any currency

Reduced Risk and Cost

Charles River Performance centralizes the maintenance of all underlying performance data resulting in reduced risk, cost and time compared to maintaining multiple applications:

- Save integration time and costs by eliminating the need to integrate a stand-alone PMAR system with existing systems
- Automatically reconcile data (performance, attribution, risk, etc.) by eliminating multiple data feeds from disparate systems
- Reduce inaccuracies by easily restating performance data (price changes, corporate actions, etc.). Charles River IMS automatically imports, validates and stores source and performance reference data in a single repository
- Enhance data management and reduce risk by easily configuring user privileges

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