

Streamlining Front Office Technology

With Consolidated Portfolio Construction and Analytics

Risk modeling, performance measurement, and scenario analysis play an increasingly critical role in the buy-side portfolio management process. Together, these capabilities help managers construct smarter portfolios, respond faster to market opportunities and implement effective hedging strategies. However, several challenges prevent portfolio managers from realizing the full potential of these capabilities. This brief discusses Charles River's approach to mitigating those challenges with an integrated solution for portfolio construction and analytics.

Disparate Systems, Multiple Problems

Traditionally, risk management and performance measurement and attribution (PMAR) were viewed as middle office functions used to satisfy regulatory and client reporting requirements. This resulted in backward looking views of risk that provided little value to the front office. In response, technology vendors began offering specialized risk and performance systems targeted to portfolio managers.

Although these systems empowered the front office with new capabilities, the fragmented approach to system acquisition created new problems. Most importantly, portfolio construction systems remained largely separate from this new class of product offerings, with few meaningful integration options

Lack of Integration

Disparate systems often prove difficult if not impossible to integrate with an existing front office environment, with varying levels of API support and web services provided by the individual system vendors. This results in a "swivel chair" effect, where portfolio managers have to work with multiple systems and acclimate to different user interfaces in order to manage their investment process. This also explains the still prevalent over dependence on spreadsheets to aggregate and consolidate data from the various systems into usable views of risk exposures, performance and portfolio positions.

Redundant Data

Firms using multiple systems for portfolio construction and analytics typically find they are paying for redundant data feeds. Attempts to rationalize these pre-configured feeds are often prohibited by system licensing terms and conditions, even when feeds are provided by the same data vendor.

Inconsistent Analytics

The lack of a shared analytics engine across the firm's disparate portfolio management tools has the potential to create inconsistent assessments of risk and performance. Lacking a single, consistent portfolio view results in wasted time reconciling data produced by these systems to uncover the source of the misalignment. More importantly, over time it leads to a lack of confidence in these systems, with portfolio managers reverting to their spreadsheets for manually calculating and verifying analytics.

Asset Class Limitations

Asset-class specific portfolio construction, risk and performance systems may be adequate for managing a single, narrowly defined mandate or fund. However, these systems prove unworkable for large multi-asset managers. It's not uncommon to find firms with multiple specialized portfolio construction and analytics tools, with each system focused on a single asset class or sub-class. This leads to even more inefficiencies, and expensive system integration challenges.

A Better Approach: Charles River Portfolio Management and Analytics

A Single, Consistent Portfolio View

Charles River helps firms reduce front office system fragmentation by providing a unified platform for portfolio construction and analytics. Using a common data set and natively calculated analytics, the platform delivers a single, consistent portfolio view. Risk exposures are updated in real time and displayed directly in the portfolio management workspace, so managers can make decisions based on the latest data. Eliminating redundant data feeds and disparate specialized systems helps firms gain confidence in the analytics driving their asset valuations, risk forecasts and performance metrics.

Packaged Workflows

By making risk and performance capabilities an integral part of the portfolio management process, Charles River adds additional value by providing asset managers with packaged workflows. These include factor model-based asset allocation, dynamic hedge construction, and portfolio stress testing. Interactive what-if modeling of portfolio construction and de-risking activities gives managers immediate feedback on how those activities will impact the portfolio.

Collaborative Decision Making

A shared, consistent view of risk metrics and asset valuations promotes collaboration across the front and middle office. Compliance officers, risk analysts, portfolio managers and traders can work more closely to implement investment ideas, manage risk, and clearly understand the factors driving performance. A consolidated view of portfolio holdings and performance metrics also expedites client reporting activities by providing visibility into the manager's asset allocation and targeting decisions.

One Platform, Multiple Mandates

Charles River provides the analytics and asset class coverage required to manage global multi-asset portfolios. Institutional asset managers, insurers and pensions can support multiple investment mandates on one platform, including benchmark-, liability-, or return-driven, and active or passively managed funds. Firms can add new investment products, geographies and asset classes without having to bring new specialty systems online to support that expansion. Charles River's single-solution approach to portfolio construction and analytics helps eliminate the shortcomings posed by disparate front office systems. By making risk and performance an integral part of the investment process, firms can make more informed and timelier decisions. More importantly, a shared and consistent portfolio view enables a collaborative approach to investment management across the front and middle office.



A State Street Company

CHARLES RIVER DEVELOPMENT, A STATE STREET COMPANY

Investment firms, asset owners, wealth managers, hedge funds and insurers in more than 30 countries rely on Charles River's front and middle office investment management platform to manage more than US\$30 Trillion in assets. Together with State Street's middle and back office capabilities, Charles River's software technology forms the foundation of State Street AlphaSM. The Charles River Investment Management Solution (Charles River IMS) is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Charles River's growing partner ecosystem enables clients to seamlessly access external data and analytics, applications and liquidity venues that support the unique demands of their product and asset class mix. Headquartered in Burlington, Massachusetts, we serve clients globally with more than 975 employees in 11 regional offices. (Statistics as of October 2019) WWW.CRD.COM

Charles River Development - A State Street Company is a wholly owned business of State Street Corporation (incorporated in Massachusetts).

This document and information herein (together, the "Content") is subject to change without notice based on market and other conditions and may not reflect the views of State Street Corporation and its subsidiaries and affiliates ("State Street"). The Content is provided only for general informational, illustrative, and/or marketing purposes, or in connection with exploratory conversations; it does not take into account any client or prospect's particular investment or other financial objectives or strategies, nor any client's legal, regulatory, tax or accounting status, nor does it purport to be comprehensive or intended to replace the exercise of a client or prospect's own careful independent review regarding any corresponding investment or other financial decision. The Content does not constitute investment research or legal, regulatory, investment, tax or accounting advice and is not an offer or solicitation to buy or sell securities or any other product, nor is it intended to constitute any binding contractual arrangement or commitment by State Street of any kind. The Content provided was prepared and obtained from sources believed to be reliable at the time of preparation, however it is provided "as-is" and State Street makes no guarantee, representation, or warranty of any kind including, without limitation, as to its accuracy, suitability, timeliness, merchantability, fitness for a particular purpose, non-infringement of third-party rights, or otherwise. State Street disclaims all liability, whether arising in contract, tort or otherwise, for any claims, losses, liabilities, damages (including direct, indirect, special or consequential), expenses or costs arising from or connected with the Content. The Content is not intended for retail clients or for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. The Content provided may contain certain statements that could be deemed forward-looking statements; any such statements or forecasted information are not guarantees or reliable indicators for future performance and actual results or developments may differ materially from those depicted or projected. Past performance is no guarantee of future results. No permission is granted to reprint, sell, copy, distribute, or modify the Content in any form or by any means without the prior written consent of State Street.

The offer or sale of any of these products and services in your jurisdiction is subject to the receipt by State Street of such internal and external approvals as it deems necessary in its sole discretion. Please contact your sales representative for further information.

©2019 STATE STREET CORPORATION

2807171.1.1.GBL