

Empowering Portfolio Managers with OTAS Analytics in Charles River

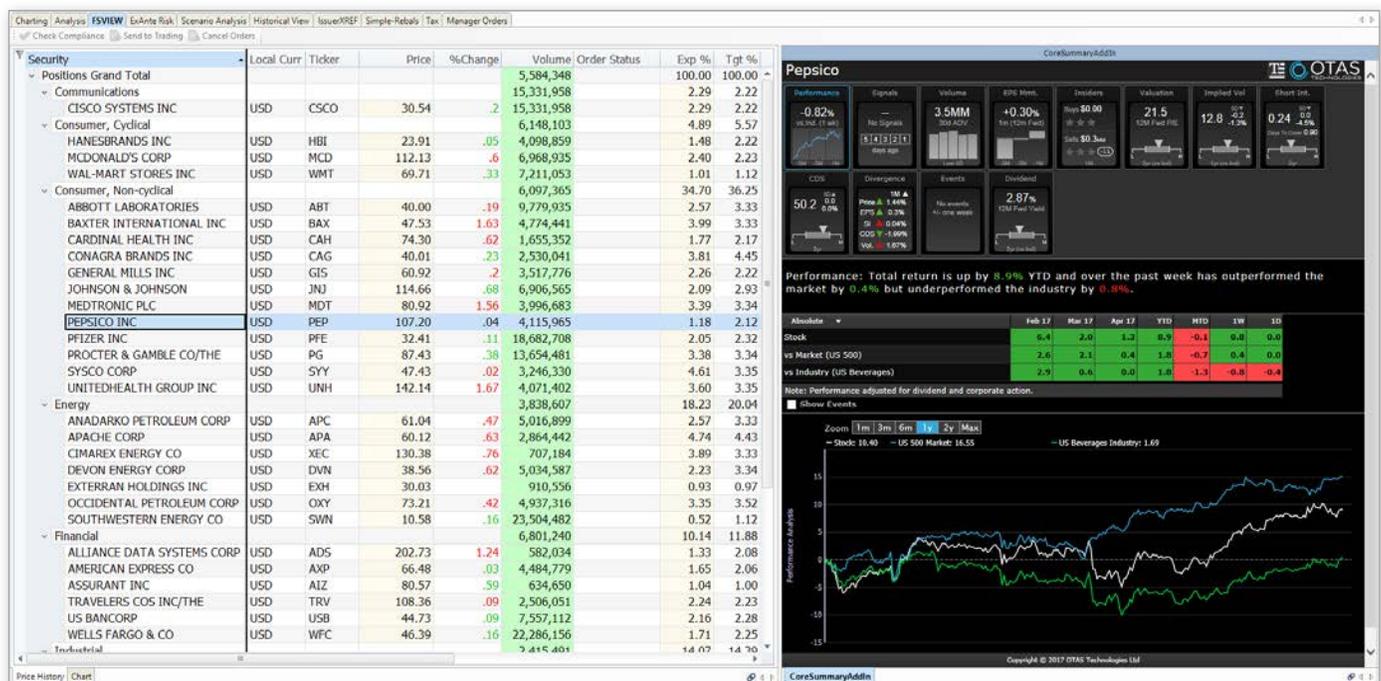
OTAS global equity analytics provides portfolio managers with intra-day risk forecasts and price trends to inform portfolio positioning and hedging decisions. Using multiple data sources and extensive price history, OTAS generates projections of price volatility and directionality for over 15,000 global equities.

Seamless integration between OTAS applets and the Charles River Manager Workbench helps ensure that portfolio managers receive continuously updated and context-sensitive information relevant to their portfolios, orders, and exposures.

Portfolio managers use OTAS to:

- Understand the overall health of their portfolio and exposures
- Analyze market conditions and factors impacting their portfolio before adding to positions
- Position and hedge their portfolio ahead of earnings announcements
- Generate new trade ideas by visualizing divergence between asset classes

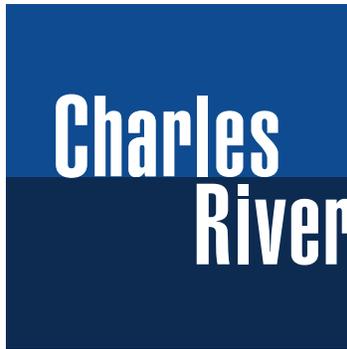
OTAS's portfolio analytics are available as a separately licensed add-in to Charles River's Manager Workbench.



OTAS Portfolio Analytics embedded in the Charles River OEMS provide portfolio managers with concise views of the drivers impacting a security's liquidity, volatility and price performance.

OTAS Portfolio Analytics Applets

- **Core Summary:** Provides multiple metrics impacting a stock's price: current and estimated dividends, short interest, insider transactions, upcoming corporate actions and performance relative to industry peer group.
- **Lingo:** Automated, natural language reports discussing relevant drivers impacting stock performance.
- **News:** Displays all news reports relevant to a portfolio. Report filters can be configured based on market, portfolio or an individual stock.
- **EXPRESS:** A concise view of key details from the Core Summary, Lingo and News applets.



A State Street Company

ABOUT CHARLES RIVER

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)

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 prospects 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 prospects 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