

Using Charles River IMS to access ICE Continuous Evaluated Pricing (CEP™)

Fixed income markets are quickly migrating from one-to-one transactions to a more robust, electronic, and automated process. The rapidly changing environment and expansion of trading venues and protocols means liquidity is increasingly fragmented and has led to a growing number of execution options and greater data complexity.

Increased market fragmentation has increased the complexity of fixed income order flow management and driven the need for vast amounts of pricing data to support fixed income trading decisions and to determine efficient execution strategies.

These developments put a premium on timely and accurate pricing data. The Charles River Investment Management Solution (**Charles River IMS**) provides traders and portfolio managers access to fixed income data including ICE's Continuous Evaluated Pricing (**CEP**). This can provide critical decision support at the time of trade and helps fixed income managers discover potential trading opportunities.

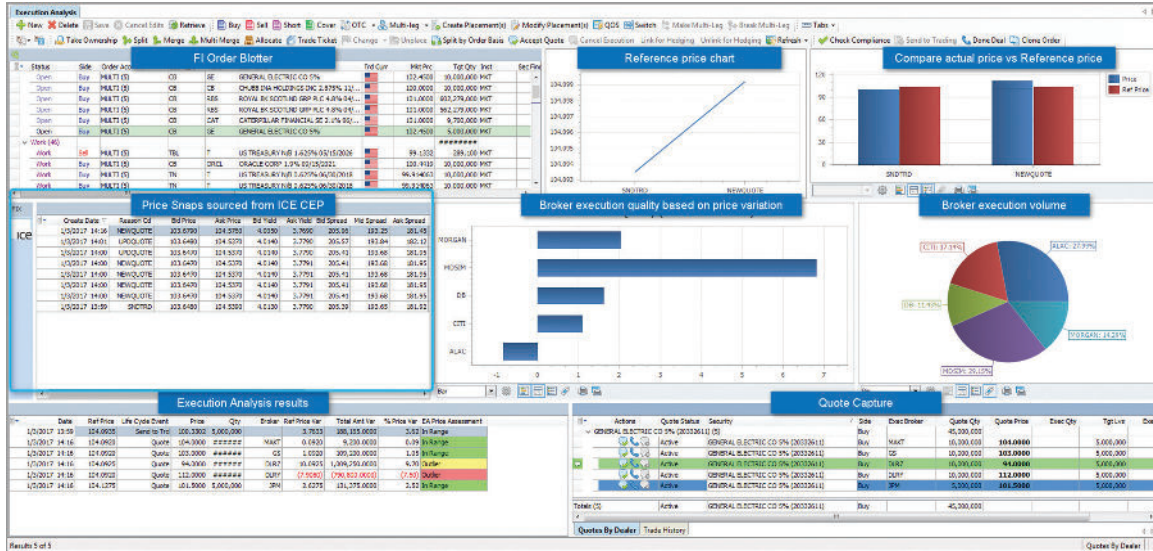
Overview of Charles River IMS

The Charles River IMS supports the full trade life cycle by consolidating all fixed income trading into one scalable and simplified platform. Charles River provides full trading life cycle support that incorporates key data at the point of execution and direct connectivity to leading trading venues.

This helps eliminate switching between external systems and streamlines the fixed income trading process. Further, it helps traders more easily access critical information, find liquidity, and quickly execute trades.

All information is stored for later execution analysis and regulatory audit requirements.

The Charles River IMS provides a consolidated view of orders, quotes, evaluated pricing and trade history.



Benefits of Accessing CEP in Charles River IMS



Pre-Trade Price Transparency and Discovery

The flow of pre-trade pricing information is changing. Traditional sources of pre-trade transparency focus on a narrowing segment of the fixed income market. New trading venues are providing alternative pricing sources, but the anonymity these venues provide to their participants may leave pre-trade participants seeking additional information about the quality of the prices they see. The trading community increasingly looks for pricing information from recognized independent sources to help them quickly identify the best option for each trade. The Charles River IMS helps provide investment managers with the tools to assess quote quality and enhance price discovery, enabling quicker decision-making.



Measuring Execution Quality

The Charles River Execution Analysis framework helps firms analyze execution quality by trader, issue or venue, for both current and past trades. With access to CEP in the Charles River IMS, traders, portfolio managers and compliance officers can more closely monitor trading activities and measure trading effectiveness across a growing number of venues and protocols. Charles River IMS also provides access to ICE Data Services' Best Execution score, which provides a trade-by-trade measure of relative execution quality; the score is a percentile rank of the trade vs. comparable transactions in the marketplace.



Intraday NAV Calculations

Data available via Charles River IMS helps ensure that funds can calculate NAVs at any time during the trading day, using continuously updated evaluations for constituent securities. This facilitates the intraday monitoring of a fund's holdings to help ensure early identification and isolation of those positions most likely to undergo significant changes during the official overnight NAV setting process. Some institutions elect to match the timing of the official NAV setting with local market convention.

About ICE CEP

ICE's CEP provides high quality continuous, evaluated pricing for approximately 2.6 million fixed income instruments globally from liquid to less liquid and hard-to-value instruments.

ICE's evaluation process is driven by market data, including axes, trades, bids, quotes and various forms of market color from buy-side, sell-side sources, electronic trading platforms and public trade reporting systems. ICE's evaluation workflow is designed to rapidly process and apply incoming data while retaining close evaluator oversight of market conditions.

ICE combines extensive content, technology and algorithms, and experienced evaluators and data science teams to systematically capture, analyze, validate and apply market data to the fixed income instruments it evaluates. As market data is received and processed, automation rules drive the generation of CEP.

As exceptions are identified based on built-in tolerances, ICE's team of experienced evaluators are notified.



**See Continuous Evaluated Pricing
(theice.com) for more information
on ICE's CEP.**

Asset Class Coverage

ICE CEP is available for the following asset classes:



Global

- Corporate Bonds (Investment Grade & High Yield)
- Emerging Markets
- Money Markets
- Sovereigns
- Bank Loans



United States

- Municipal bonds
- MBS TBAs
- MBS pass-throughs
- Agency/government sponsored enterprise (GSE) debentures
- Preferred stocks



About ICE

Intercontinental Exchange, Inc. (NYSE: ICE) is a Fortune 500 company that designs, builds and operates digital networks to connect people to opportunity. We provide financial technology and data services across major asset classes that offer our customers access to mission-critical workflow tools that increase transparency and operational efficiencies. We operate exchanges, including the New York Stock Exchange, and clearing houses that help people invest, raise capital and manage risk across multiple asset classes. Our comprehensive fixed income data services and execution capabilities provide information, analytics and platforms that help our customers capitalize on opportunities and operate more efficiently. Together, we transform, streamline and automate industries to connect our customers to opportunity. Learn more at theice.com. ICE's fixed income evaluations, including CEP, are provided in the US through ICE Data Pricing & Reference Data, LLC and internationally through ICE Data Services entities in Europe and Asia Pacific. ICE Data Pricing & Reference Data, LLC is a registered investment adviser with the US Securities and Exchange Commission. Additional information about ICE Data Pricing & Reference Data, LLC is available on the SEC's website at www.adviserinfo.sec.gov. A copy of ICE Data Pricing & Reference Data, LLC's Form ADV is available upon request.

About Charles River Development, A State Street Company

Investment and wealth managers, asset owners and insurers in over 30 countries rely on Charles River IMS to manage USD \$59 Trillion in assets. Together with State Street's middle and back office services, Charles River's cloud-based front office technology forms the foundation of State Street Alpha®. Charles River helps automate and simplify the 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 partner ecosystem enables clients to access the data, analytics, application and liquidity providers that support their product and asset class mix. With more than 120% increase in headcount over the last 5 years, Charles River serves clients in 11 regional offices. Learn more at crd.com (Statistics as of January 2024)

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* Assets under management as of December 31, 2023 includes approximately \$64 billion of assets with respect to SPDR® products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

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