

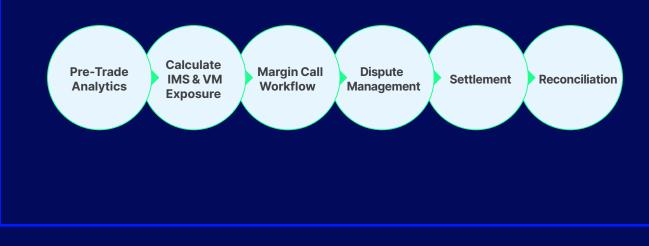
Collateral Management across the Front & Middle Office

Recent changes to collateral management regulations have increased the scale and complexity of margin requirements, straining the resources of buy-side firms' operations and technology teams.

As regulations stabilize, firms' priorities are shifting from keeping pace with regulatory compliance to enhancing their collateral management operations and addressing key administrative challenges. Manual processes and disparate systems are no longer viable solutions. Budget scrutiny, higher volumes, extensive collateral schedules, and new workflow models demand modern, streamlined technology capabilities to maintain resiliency and manage risk.

The Charles River Investment Management Solution (Charles River IMS) enables firms to address these challenges by managing the entire collateral management lifecycle across products on a single platform, from pre-trade analytics and exposure calculations through to margining and settlement.

Charles River's Collateral Management Solution for the Front and Middle Office





Front Office Capabilities

Our collateral management solution is designed with the needs of portfolio managers and traders in mind. Fully integrated into Charles River IMS, the solution empowers the front office with decision-making tools embedded in the order management workflow and clear visibility into collateral usage in their portfolios.

Key Benefits:

- **Transparency**: Minimize margin requirements and impact to portfolio performance based on pre-trade estimates of initial margin for listed, cleared, and bi-lateral OTC derivatives.
- Clearing Venue / Broker Selection: Firms can select the optimal clearing venue or clearing broker based on pre-trade margin estimates, fees, and collateral funding costs.
- Visibility: The front office gains a real-time view into pledged assets throughout the day, mitigating settlement risk and smoothing the substitution process.



Middle Office Capabilities

Charles River IMS enables collateral management teams to stay in sync with trading activity. Informed by a timely view of available assets, teams can leverage electronic workflows to ensure margin obligations are fulfilled and deadlines are met.

Key Benefits:

- Validate: Calculate initial and variation margin amounts across product types to understand daily obligations and confirm accuracy of counterparty calls.
- Automation: Exception-based processing using configurable rules helps minimize manual interventions
- **Connectivity:** Collaboration with industry standard tools for electronic margin calls and reconciliation.
- Settlement: Custodians and other service providers can benefit from SWIFT instructions enabling straightthrough processing (STP).
- **Substitutions and Interest:** Intuitively manage substitution and monthly interest exchange in the same workspace as margin exchange.



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.

(Statistics as of Q4 2023. Assets are inclusive of clients using the platform for purposes of secondary compliance.)

Learn more at crd.com/MiddleOffice

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