

COLLATERAL

Complexity associated with Uncleared Margin Rules (UMR) increases collateral obligations and funding costs

Most buy-side clients' current collateral management tools are relatively unsophisticated. A holistic and flexible solution, combining collateral management, cash management and securities lending capabilities, offers clients the opportunity to generate alpha by optimally mobilizing their assets to meet their collateral requirements and enhance returns.

Drivers of Change

The difference between success and failure in the collateral space has become increasingly apparent amid recent market volatility. A fragmented approach to managing collateral, funding and liquidity will unnecessarily increase client costs and can lead to acute funding pressures, asset fire sales or missed margin calls. With both timely and accurate data and advanced quantitative tools to parse that data into actionable analytics, clients can be better positioned for success.

Product Overview

Our Collateral+ solution is an integrated platform founded on modular components that empower clients to tailor their collateral management service. Solve for UMR compliance and increase overall operational efficiency with real-time, aggregated data transparency and added straight-through processing to meet collateral demands. Collateral+ may be paired with efficient pre-trade and collateral analytics enabling clients to decrease margin and funding costs, thus minimizing any associated portfolio drag. Moreover, our dedicated, global team is well-placed to support our global client base.



Comply with UMR through active Average Aggregate Notional Amount (AANA) monitoring and third-party segregation



Deepen operational resiliency and execution by outsourcing collateral aggregation, margining, segregation and validation to our collateral experts



Streamline and optimize the front- or middle-office with modular pre- and post-trade analytics and allocation management, supported by our strategic investments in advanced technology



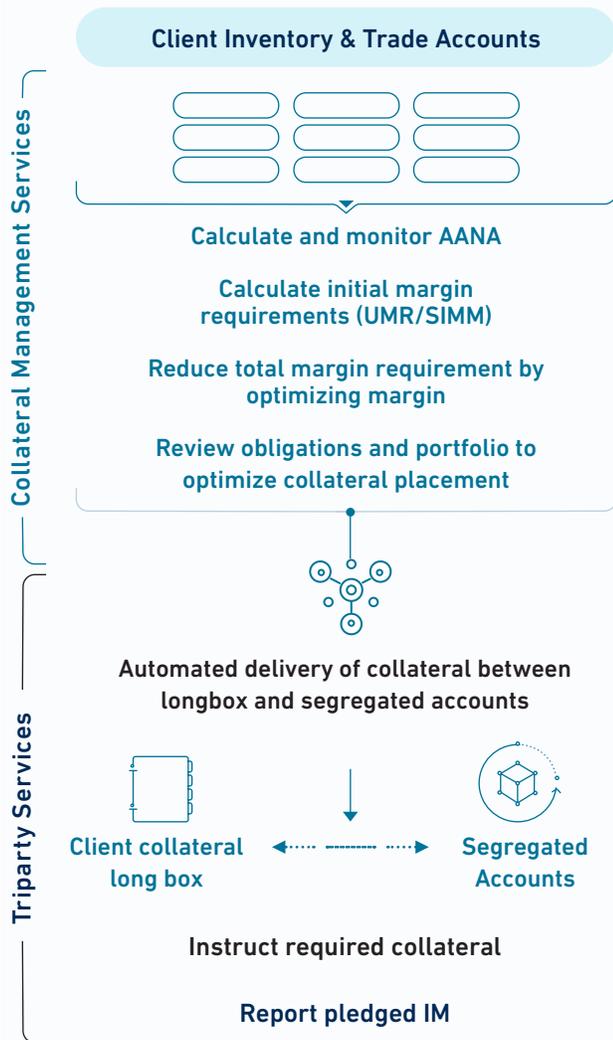
Capitalize on transformation opportunities to increase yield through cash management and securities lending



Segregation Support Models

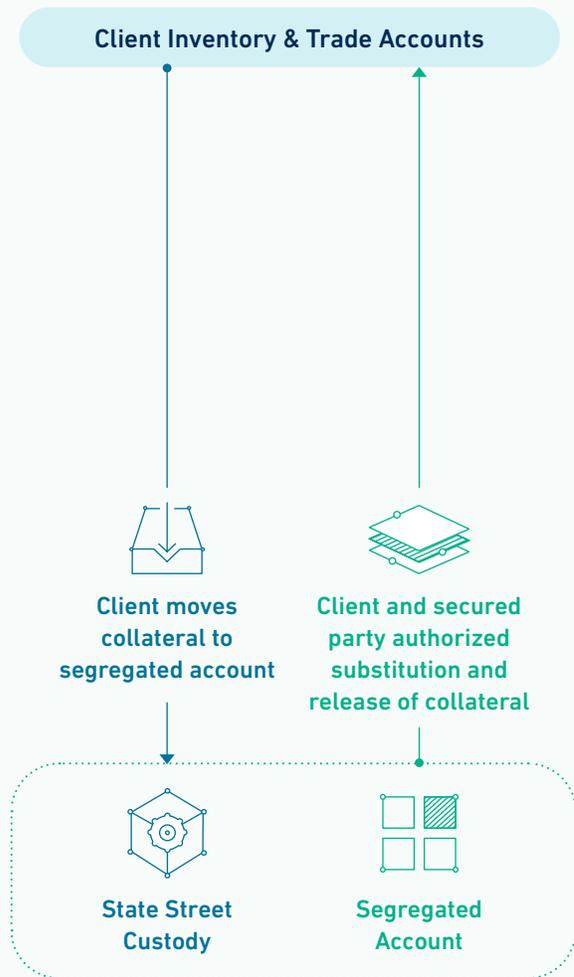
Tri-party

Automated collateral integration and segregation enables streamlined initial margin management. Counterparties agree required collateral values (RQVs), which are sent to the tri-party agent. The tri-party agent matches the RQVs received from each party and, from there, selects, values and validates eligibility of the collateral provided by the pledgor and moves collateral between the pledgor's long box account and the segregated accounts. Throughout, the tri-party agent monitors concentration limits, applies haircuts, supports substitutions and provides reporting for transparency.



Third Party

In contrast to the tri-party structure, the pledgor, its manager or an administrator values the collateral, selects the collateral to be pledged along with confirming eligibility and concentration limits, attributes necessary haircuts and provides settlement instructions to the custodian. We, as custodian, provide settlement, segregation and reporting services.



Additional Product Features

Margin Management

Our core processes for margin management include electronic maintenance of credit support documents, calculation of FX forwards and over-the-counter (OTC) derivative exposures, calculation of collateral balances, calculation of residual exposure, issuance of collateral calls and responding to collateral demands to or from counterparties, reconciliation of positions and valuations, resolving valuation disputes, processing collateral settlements, sweeping cash collateral into cash reinvestment vehicles and reporting.

Optimization and Analytics

We are enabling a modular approach to optimization, which addresses effectiveness and efficiency from two angles. First, collateral requirements for to-be-executed trades are made available to the front-office as part of its decision strategy prior to trade execution. Margin optimization utilizes pre-trade, what-if analysis for OTC and cleared products, as well as post-trade

optimizations suggesting novations and compressions to lower margin requirements. Second, effective portfolio collateral inventory supports optimal placement of collateral and integration with fee and rates schedules to identify the lowest transaction cost routes.

- Algorithmic collateral optimization ensures that available collateral is utilized in the most efficient manner
- Margin optimization minimizes overall collateral requirements and funding costs by suggesting optimal trade placements
- Collateral transformation includes upgrades to source eligible collateral to meet margin requirements and downgrades to monetize un-utilized, high-quality collateral

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