



Initial Margin (IM) Analytics & Optimization for Front & Middle Office

OTC trading is more onerous and expensive than ever before. Cleared and bilateral margin requirements make holding costs and collateral requirements much more significant. True best execution needs to consider all the real world costs of holding a trade in the overall execution decision.

Charles River customers have access within the Investment Management Solution to pre-trade margin analytics and optimization services, including tools for Cleared OTC, Global Futures and Options (ETD), & Bilateral (SIMM). Customers can calculate what-if Initial Margin and carry cost on all available trading routes on derivative instruments prior to execution.

Regulations created in the aftermath of the financial crisis, including the Clearing Mandate for standardized swaps and BCBS/IOSCO margin framework for uncleared derivatives, require firms to post increasing amounts of collateral as Initial Margin. Additionally, the emerging Uncleared Margin Rules (UMR) now require designated firms to post and secure Initial Margin for uncleared swaps. CRD customers have access to a full ISDA SIMM Licensed calculator that provides on demand calculations at pre-trade, intraday & regulatory end of day requirements.

What All Firms Trading Derivatives Need To Know

OTC Cleared & Bilateral, Futures & Options (ETD)



**Initial Margin
impact (directly
from CCP)**



**Cheapest CCP
& clearing
broker (FCM)**

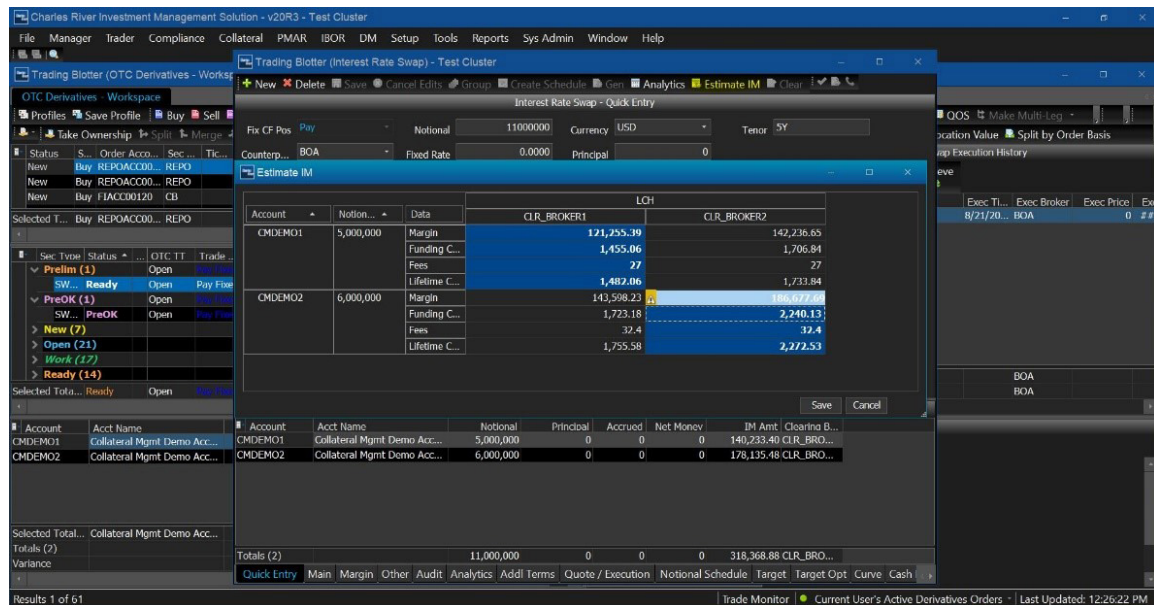


**Lifetime Costs
Analysis (IM, collateral
funding impact,
CCP & FCM fees)**



**Collateral -
availability,
trading impact
& cost of usage**

Initial Margin Estimate in Charles River IMS generated in Cassini



Account	Notion	Data	Margin	Funding	Fees	Lifetime
CMDEMO1	5,000,000		121,255.39	1,455.06	27	1,482.06
CMDEMO2	6,000,000		143,598.23	1,723.18	32.4	1,755.58

Account	Act Name	Notional	Principal	Accrued	Net Money	IM Amt	Clearing B.
CMDEMO1	Collateral Mgmt Demo Acc...	5,000,000	0	0	0	140,233.40	CLR_BRO...
CMDEMO2	Collateral Mgmt Demo Acc...	6,000,000	0	0	0	178,135.48	CLR_BRO...

Totals (2)	11,000,000	0	0	0	318,368.88	CLR_BRO...
Variance						

Front Office Benefits

The ability to obtain pre-trade estimates directly from the Charles River IMS as part of the OTC derivatives trading workflow helps improve trading decisions by providing an accurate and consistent view of margin impact and lifetime trade costs across the trade lifecycle. This helps firms make the most efficient use of scarce margin and minimize drag on portfolio returns. Charles River IMS also enables the front office to have full visibility into pledged collateral levels in real time.

Middle Office Benefits

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 help ensure margin calls are fulfilled and communicated in a timely manner between the front and middle office.

Screenshots are for informative purposes only; no live data being used.

Cassini Systems



Founded in 2014, Cassini Systems offers an award-winning derivatives margin analytical platform that provides the industry's only front-to-back margin and cost analysis across the entire lifecycle of a trade. Cassini users can calculate any margin on any cleared or uncleared derivatives asset; analyze drivers and movement in margin exposure; reduce Initial Margin levels; and maximize margin efficiency with the firms' industry-leading, advanced algorithms.

Cassini services have a proven track record of enhancing portfolio returns at every point in the daily business cycle, empowering traders and portfolio managers to analyze instantly in the pre-trade stage the all-in, lifetime cost of a transaction. Top-tier hedge funds, asset managers, and global banks rely on Cassini for powerful, flexible, automated tools to manage their portfolios of over-the-counter and exchange-traded derivatives products. Cassini was named Best UMR Service of the Year in the Risk Markets Technology Awards 2022 and the Derivatives Technology Provider of the Year by the 2022 GlobalCapital Derivatives Awards. For more information, visit www.cassinisystems.com

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 nearly US\$48 Trillion in assets. Together with State Street's middle and back office capabilities, Charles River's cloud-deployed 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 demands of their product and asset class mix. Headquartered in Burlington, Massachusetts, we serve clients globally with more than 1,250 employees in 11 regional offices. Learn more at www.crd.com

(Statistics as of Q4 2022)

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