

MARS Collateral Management: Make the right call.

Bloomberg Terminal

Risk & Valuations



Bloomberg



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- 04 Access powerful functionality
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Manage collateral, minimize complexity.

The wave of reform that followed the 2008 financial crisis has placed increased emphasis on collateral and highlighted the vitally important role it plays in the market. The amount of collateral required has increased significantly, as has the range of products and market participants covered.

The Bloomberg Terminal® gives you a powerful tool to manage these constantly evolving changes and mitigate counterparty credit risk. MARS Collateral Management is an automated, end-to-end solution that delivers everything you need to manage and monitor exposures and positions and take control in a changing regulatory landscape.

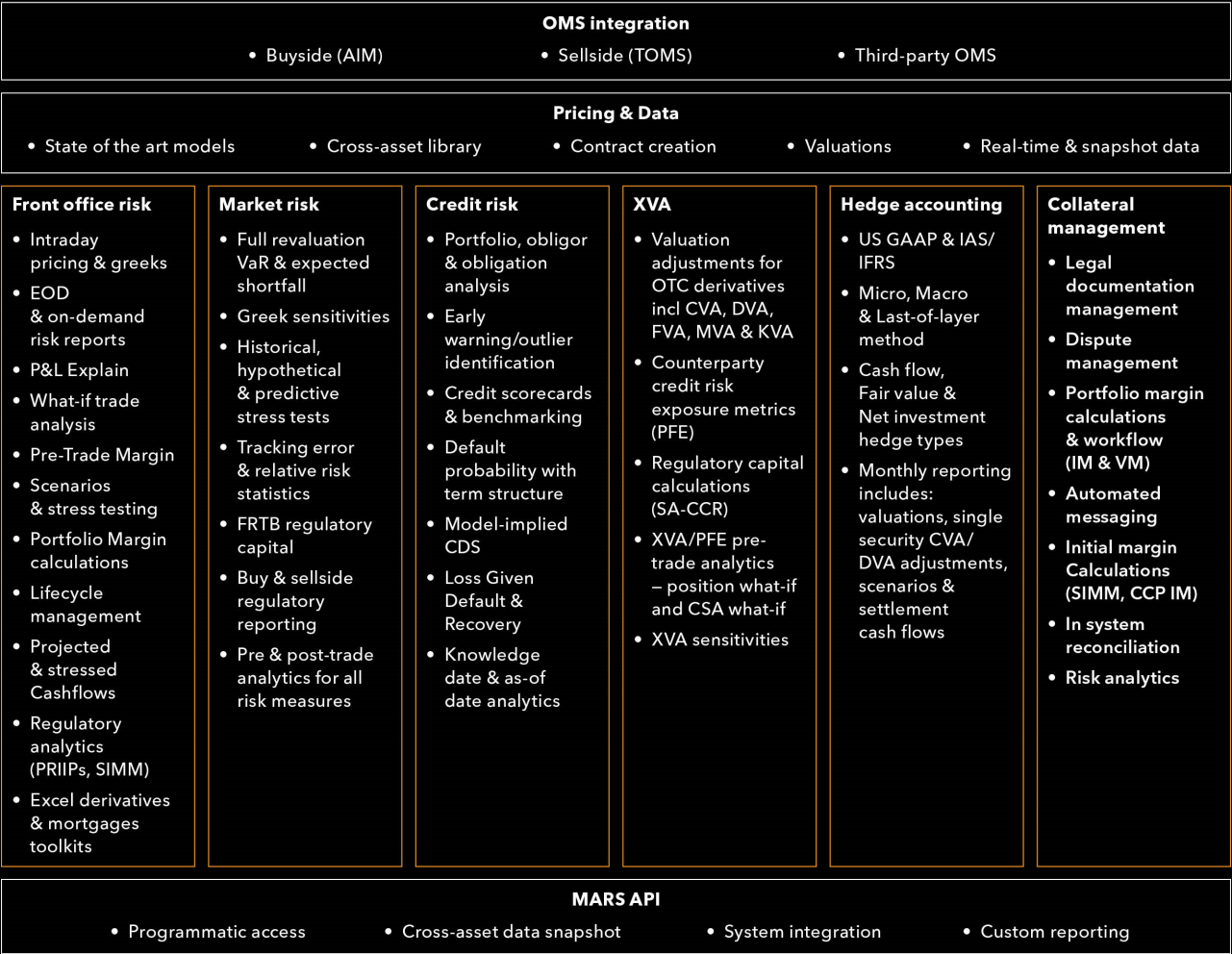
Broad product coverage

If you can price a product on the Bloomberg Terminal®, you can manage its associated collateral. With product coverage across multiple asset classes, including equities, fixed income, commodities and FX, MARS Collateral covers the vast majority of derivatives.

Powerful analytics

Leveraging the power of Bloomberg market data, front-office pricing calculators and communication tools, MARS Collateral contains an extensive suite of metrics including configurable IB, collateral risk and an in-system reconciliation tool.

Bloomberg Multi-Asset Risk System (MARS)



Navigate a changing industry.

Posting high-quality assets such as cash and bonds as collateral against derivatives exposures is a long-standing credit mitigation technique used by most sell-side and larger buy-side firms. In the lightly-regulated derivatives space, collateral management was carried out in silos as a back-office function. Since the introduction of regulation designed to increase transparency and reduce systemic risk in the financial industry, firms have begun to consolidate their operations with the aim of managing their collateral process more holistically and efficiently.

Operational and regulatory challenges

The transition has been accompanied by sizeable challenges, with firms required to address new questions over where their collateral is held, how it can be optimized, what action to take when they do not have eligible collateral immediately to hand

and how to independently calculate their derivative and collateral valuations using market-standard pricing models. Bloomberg's MARS Collateral Management solution directly addresses these issues.

	Challenge	Bloomberg solution
Complexity	Collateral Management is becoming increasingly complex, exposing risks on fragmented infrastructure and manual processes.	Calculates, aggregates and displays margin calls across products and legal entities. Built in calculators, including ISDA SIMM and grid approach.
Volume	Total outstanding collateral in the market is expected to dramatically increase.	Segregates collateral positions by agreement in distinct portfolios to ensure accurate record keeping.
Frequency	The number of margin calls is expected to significantly increase.	Enables you to: <ul style="list-style-type: none">• Manage collateral agreement details• Define the frequency and timing of margin calls• Monitor all margin events• Automatically send and receive margin calls via an electronically generated message
Tracking	Firms must have a holistic view into their inventory to ensure proper allocation and optimization of collateral.	Allows you to track your exposures, collateral positions and agreement terms in real-time. If a counterparty defaults, you know exactly how much collateral you hold for recovery.

Access powerful functionality.

MARS Collateral Management is a multi-product, multi-asset collateral management and straight-through processing hub, incorporating powerful tools such as Bloomberg RecStation, RSTN <GO>, for portfolio reconciliation, Bloomberg data for risk analytics and Acadia technology for electronic messaging. All these tools are fully integrated into the Bloomberg Terminal and its wider suite of risk management solutions.

Component	Functionality
Legal Entity & Documentation Manager LEDO <GO>	<ul style="list-style-type: none"> • LEDO allows users to enter and monitor terms and conditions of their legal collateral agreements (e.g., CSAs)
Exposure Management BCOL <GO>	<ul style="list-style-type: none"> • Independent valuations for both initial and variation margin (regulatory compliant) • Netting set creation • Bloomberg reference data to value collateral
Margin and Dispute Management	<ul style="list-style-type: none"> • Margin call management • Eligibility and sufficiency monitoring • Dispute management
Risk Analytics	<ul style="list-style-type: none"> • Scenario Analysis • SIMM Backtesting • SIMM Pre-Trade
Electronic Messaging	<ul style="list-style-type: none"> • Automated communication of margin calls via Acadia or email (MSG)
Portfolio Reconciliations	<ul style="list-style-type: none"> • Proactive portfolio reconciliations

Legal entity management

Legal Entity Details

1) Details
2) Contacts
3) Counterparty Map

Short Name* DEMO 1 CPTY Entity Type* Counterparty

Entity Id* LEI 213800509DEMOC4ABC80

Legal Name* DEMO COUNTERPARTY PLC

Industry Banks Country of Incorp. GB

Counterparty Risk Normal

Credit Rating Moody's S&P Fitch

Long Term Ba1 BBB- BBB+

Short Term NP A-3 F2

*Required Field

1) Save Cancel

Legal Entity Details LEDO <GO>

Manage your legal entities on LEDO using up-to-date entity information such as LEI, legal name, industry and credit rating.

Legal documentation management

Legal Documentation Manager (DEMO)					
Legal Entities		Master Agreements		Collateral Agreements	
Groupings					
Bulk Mode		Bulk Actions		Add + Show Additional Columns	
Business Line	Agreement Name	Principal	Counterparty	Status	Business Line
ETD (1)				ALL	ALL
OTC (15)	1) BVAL DEMO CPTY SIM	DEMO BVAL PRIN	DEMO BVAL CPTY	Active	OTC
OTC Cleared (1)	2) DEMO 1 CPTY - OTC	DEMO PRINCIPAL	DEMO OTC COUNTERP	Active	OTC
REPO (1)	3) DEMO 1 GMRA	DEMO PRINCIPAL	DEMO REPO COUNTERP	Active	REPO
SECL (1)	4) DEMO 2 CPTY	DEMO PRINCIPAL	DEMO SIMM COUNTERP	Active	OTC
TBA (1)	5) DEMO 2 CPTY - OTC	DEMO PRINCIPAL	DEMO SIMM COUNTERP	Active	OTC
Status	6) DEMO 3 CPTY - UMV	DEMO PRINCIPAL	DEMO UMV COUNTERP	Active	OTC
Active (17)	7) DEMO 4 CPTY - NVA	DEMO PRINCIPAL	DEMO NVA COUNTERP	Active	OTC
Inactive (1)	8) DEMO 5 CPTY - CLR	DEMO PRINCIPAL	DEMO CLEARING COUN	Active	OTC Cleared
Incomplete (2)	9) DEMO 6 CPTY - TBA	DEMO PRINCIPAL	DEMO TBA COUNTERP	Active	TBA
	10) DEMO 8 CPTY - ETD	DEMO PRINCIPAL	DEMO ETD Counterpar	Active	ETD

Collateral Agreement Details

LEDO stores all terms relevant to margin management – valuation and timings; thresholds and regulatory compliant independent amounts/initial margins; eligibility criteria and interest terms; product coverage.

Margin call management

Multi Asset Risk System: Collateral												
Views Actions Contact Export Settings												
Margin Dispute Interest Reconciliation Substitution Transactions Inventory Risk Backtesting												
Summary History												
Hide Filters												
Event Type												
Cpty. Call	12	40	BVAL DEMO CP...	Prin. IM	N	No Action	OTC	Open	0	-6,448,339 USD	Both	
No Action	11	40	BVAL DEMO CP...	Cpty. IM	N	No Action	OTC	Open	0	3,069,100 USD	Both	3,100,...
Prin. Call	6	40	DEMO 1 CPTY -	VN	N	Prin. Call	OTC	Open	1,830,000	52,421,778 USD	1,820,750 Both	
Margin Type		40	DEMO 1 GMRA	VN	N	Cpty. Call	REPO	Open	-1,168,848	4,444,457 USD	0 Both	
Cpty. IM	8	40	DEMO 2 CPTY	VN	Y	Cpty. Call	OTC	Open	-5,440,000	2,697,782 USD	-2,734,916 Both	
Cpty. VN	1	40	DEMO 2 CPTY	Prin. IM	Y	Cpty. Call	OTC	Open	-670,000	-16,323,075 USD	-663,562 Both	
Prin. IM	9	40	DEMO 2 CPTY	Prin. IM	Y	Cpty. Call	OTC	Open	-20,520,000	25,425,139 USD	Both	4,896,...
Prin. VN	1	40	DEMO 3 CPTY	VN	N	No Action	OTC	Open	0	-278,679 EUR	0 Counterparty	
VN	10	40	DEMO 4 CPTY	VN	N	Prin. Call	OTC	Open	550,000	-550,000 EUR	0 Counterparty	
Status		50	DEMO 5 CPTY	VN	N	Cpty. Call	OTC Cleared	Open	-24,650,128	39,366,309 USD	Counterparty	
Open	29	50	DEMO 5 CPTY	Prin. IM	N	Prin. Call	OTC Cleared	Open	203,936	-7,305,317 USD	Counterparty	
		50	DEMO 6 CPTY	VN	N	Cpty. Call	TBA	Open	-610,000	624,527 USD	0 Both	
		50	DEMO 8 CPTY	VN	N	Cpty. Call	ETD	Open	-52,941,120	0 USD	Counterparty	
Business Line												
Hide Positions												
Exposure Collateral												
Clear Filters												
Asset Type Currency Notional Market Value Mkt Val Base Ccy Exposure Portfolio Security Unique Custom ID User Mkt Val User Mkt Val Base Ccy												
Portfolio Totals												
Interest Rate												
/SWAP 1.66 12/2Swap	USD	25,000,000	-1,059,165.21	-867,032.64	-3,265,566.32	-158,092.00	DEMO UMV PORTFOLIO	SLE10004 Corp	ID11111199	-111,832.40	-91,546.00	-158,092.00
/SWAP 1.66 12/2Swap	USD	50,000,000	-2,080,778.60	-1,703,325.36	-3,265,566.32	-158,092.00	DEMO UMV PORTFOLIO	SLE10004 Corp	ID11111199	.00	.00	-158,092.00
/SWAP 1.66 12/2Swap	USD	20,000,000	-849,264.98	-695,208.31	-3,265,566.32	-158,092.00	DEMO UMV PORTFOLIO	SLE10001 Corp	ID11111200	-81,292.45	-66,546.00	-158,092.00

Collateral Call Management

Use BCOL to manage your day-to-day margin call process, including sending margin calls, booking collateral, managing disputes and interest payments.

Trade management

Views

Actions

Contact

Export

Settings

Multi Asset Risk System: Collateral

MarginDisputeInterestReconciliationSubstitutionTransactionsInventoryRiskBacktesting

SummaryHistory

Hide Filters

Event Type

New EventsPending EventsEvent ActionsBulk Mode

Cpty. Call12AgreementMgn. TypeAcadiaSoftEvent TypeBusiness LineUmbrellaStatusCall A...

No Action1140 DEMO 1 GMRAVMNNo ActionOTCOpen-4,170,

Prin. Call640 DEMO 2 CPTYVMY40 DEMO 2 CPTY--Prin. IMYCpty. CallOTCOpen-5,440,

40 DEMO 2 CPTY--Prin. IMYCpty. CallOTCOpen-190,

Margin Type

Cpty. IM840 DEMO 2 CPTY--Cpty. IMYCpty. CallOTCOpen-20,570,

Cpty. VM140 DEMO 3 CPTY--VMNNo ActionOTCOpen

Prin. IM940 DEMO 4 CPTY--VMNPrin. CallOTCOpen550,

Prin. VM150 DEMO 5 CPTY--VMNPrin. CallOTC ClearedOpen-24,651,

Hide Positions

ExposureCollateralSIMM Breakdown

Asset TypeCurrencyNotionalMarket Value Mkt Val Base CcyExposure PortfolioSecurity

Clear Filters

Asset TypeCurrencyNotionalMarket Value Mkt Val Base CcyExposure PortfolioSecurity

/SWAP .46 12/11SwapUSD10,000,000

/SWAP 2.50 0VCUB - Interest Rate Volatility Cube

/SWAP 1.20 0ICVS - Interest Rate Curves

/SWAP .61 12SWPM - Swap Manager

Exceptions

90 Actions90 Products90 Views90 Info90 SettingsSwap Manager

Solver (Premium)LoadTradeCCPID SL700W

MainDetailsCurvesCashflowResetsScenarioRiskCVA12 Matrix

DealSL700WTISwapSL700WTJ

Leg 1:FixedReceiveLeg 2:FloatPay

Notional10MMNotional10MM

CurrencyUSDCurrencyUSD

Effective03/02/2017Effective03/02/2017

Maturity03/02/2022Maturity03/02/2022

Coupon2.500000%Index3MUS0003M

Pay FreqSemiAnnualSpread0.250 bp

Day Count301/360Leverage1.00000

Calc BasisMoney MktLatest Index0.22763

Reset FreqQuarterly

Pay FreqQuarterly

Day CountACT/360

Market

Leg Results

Seamless integration

BCOL provides direct links to trading systems, which allows you to access details of specific collateralized trades.

Communications management

ViewsActionsContactExportSettingsMulti Asset Risk System: Collateral

MarginDisputeInterestReconciliationSubstitutionTransactionsInventoryRiskBacktesting

SummaryHistory

Hide Filters

Event Type

New EventsPending EventsEvent ActionsBulk Mode

Cpty. Call11AgreementMgn. TypeAcadiaSoftEvent TypeBusiness LineUmbrellaStatusCall Amt. Collateral Ba... Delivery Amt. Valuation Agent...

No Action1340 BVAL DEMO CP...Prin. IMNNo ActionOTCOpen0-6,290,049 USD-126,551 Both

Prin. Call540 BVAL DEMO CP...Cpty. IMNNo ActionOTCOpen03,053,924 USD22,040 Both

40 DEMO 1 CPTY--VMNNo ActionOTCOpen-33,380,00052,421,778 USD0 Both

40 DEMO 1 GMRAVMNNo ActionOTCOpen-29,151267,546 USD0 Both

Margin Type

Cpty. IM840 DEMO 2 CPTYVMY40 DEMO 2 CPTY--Prin. IMYCpty. CallOTCOpen-2,800,0000 USD-2,796,706 Both

Cpty. VM140 DEMO 2 CPTY--Prin. IMYCpty. CallOTCOpen-12,190,000-18,359,095 USD-12,189,747 Both

Prin. IM940 DEMO 2 CPTY--Cpty. IMYCpty. CallOTCOpen-16,430,00025,661,850 USDBoth

Prin. VM140 DEMO 3 CPTY--VMNNo ActionOTCOpen0-282,736 EUR0 Counterparty

VM1040 DEMO 4 CPTY--VMNPrin. CallOTCOpen550,000550,000 EUR0 Counterparty

Hide Positions

ExposureCollateralSIMM Breakdown

Product ClassSecurityUnique Custom IDIncremental IMInitial Margin

Total (30)

Commodity (10)

+CLG1

+CLQ0

Exceptions

Margin Event Details

PrincipalDemo PrincipalExposure2,166,668

CounterpartyDEMO 4 CPTYPrincipal IA0

Event TypePrin. CallCounterparty IA0

StatusSentThreshold0

Margin TypeVMCredit Support Amt.2,166,668

Valuation Date11/09/16Total Collateral Held754,244

Base CurrencyEURSettled Collateral754,244

Collateral in Transit0

Total Requirement1,412,424

MTA50,000

Rounding10,000

Call Amount1,420,000

Close

Margin call from Bloomberg L.P. to Bloomberg

FromCollateral Testing (BLOOMBERG/ 731 LEX)

ToCollateral Testing (BLOOMBERG/ 731 LEX)

Principal: Bloomberg L.P.

Counterparty: Bloomberg Tradebook (Bermuda) Ltd.

Valuation Date: November 9, 2016

Base Currency: EUR

Principal Exposure: 2,166,668

Principal IA: 0

Counterparty IA: 0

Counterparty Threshold: 0

Credit Support Amount: 2,166,668

Collateral Held by Principal: 754,244

Total 1,412,424

MTA: 50,000

Rounding: 10,000

Final Call Amount: 1,420,000

Payable to: Bloomberg L.P.

Seamless messaging

Connect to counterparties and internal colleagues through BCOL, using MSG, IB, FTP and automated margin messaging.

Risk analysis



Scenario Analysis

Project margin calls to monitor potential obligations to withstand market disruption.

Regulatory initial margin requirements



ISDA licensed vendor for SIMM

Calculate end of day, pre-trade and support SIMM backtesting.

Portfolio reconciliation

ActionsSettingsCollateral Management Workflow

MarginDisputeInterestReconciliation

Hide Filters

Reset Filters

Pair Status

Unmatched

Matched

Manual

NPV Status

Unmatched

N/A

Matched

Asset Class

CDS

Equity

FX

Interest Rate

Submitter

Counterparty

Principal

Collateral Agreement	Pair Status	NPV Status	Deal Id	Submitter	Asset Class	Notional	Market Value
41) Unmatched	N/A		SPRR061W	CoPrincipal	CDS	10,000,000	251,770
42) Unmatched	N/A		SPRS0VGY	CoPrincipal	CDS	10,000,000	-577,239
43) Unmatched	N/A		ESS598591	EcPrincipal	Equity	10,000	40,268
44) Unmatched	N/A		ESS598613	EcPrincipal	Equity	50,000	1,787,595
45) Unmatched	N/A		ESS598613	EcPrincipal	Equity	50,000	1,787,595
46) Unmatched	N/A		ESS598613	EcPrincipal	Equity	50,000	1,787,595
47) Unmatched	N/A		ESS598604	EcPrincipal	Equity	97,154	-521,300
48) Unmatched	N/A		ESS598604	EcPrincipal	Equity	97,154	-521,300
49) Unmatched	N/A		OPTFYR35	CuPrincipal	FX	1,000,000	31,937
50) Unmatched	N/A		TRDREF139	Counterparty	FX	-1,250,000	-22,467
51) Matched	Matched		OPTFYR28	CuPrincipal	FX	-10,000	-2,766
52) Matched	Matched		TRDREF137	Counterparty	FX	10,000	2,940
53) Matched	Unmatched		OPTFYR32	CuPrincipal	FX	-5,000,000	-240,916
54) Matched	Unmatched		TRDREF132	Counterparty	FX	5,000,000	300,428
55) Matched	Matched		OPTH2LR9	CuPrincipal	FX	-1,000,000	-91,427
56) Matched	Matched		TRDREF141	Counterparty	FX	1,000,000	90,119
57) Matched	Unmatched		SL1T3K5U	CoPrincipal	Interest Rate	10,000,000	257,952
58) Matched	Unmatched		TRDREF140	Counterparty	Interest Rate	-10,000,000	-351,748
59) Manual	Unmatched		SL451PNP	CoPrincipal	Interest Rate	50,000,000	1,284,288
60) Manual	Unmatched		TRDREF127	Counterparty	Interest Rate	-50,000,000	-1,705,892
61) Matched	Unmatched		SL451PNS	CoPrincipal	Interest Rate	35,000,000	899,427

Portfolio reconciliation

Integrated portfolio reconciliation tool that allows the user to quickly identify and manage any discrepancies between the user's and their counterparty's portfolios.

Identify & communicate mismatches

ViewsActionsSettingsMulti Asset Risk System: Collateral

MarginRecStation Trade Details

Hide Filters

Reset

Pair Status : Matched. NPV Status : Unmatched.

Match Exceptions

Field Name	Principal Value	Counterparty Value	Tolerance	Match Text
Market Value	-2,489	2,940	10	

Field Name

Principal Value

Counterparty Value

Principal

Bloomberg L.P.

Bloomberg SEF LLC

Counterparty

Bloomberg SEF LLC

Bloomberg L.P.

End Date

05/23/2020

05/23/2020

Trade Date

05/24/2016

05/24/2016

Valuation Date

11/09/2016

11/09/2016

Notional

-10,000

10,000

Currency

XAU

XAU

Asset Class

FX

FX

Asset Type

Option

Option

Market Value

-2,489

2,940

Mkt Val Base Ccy

-3,177,193

3,968,286

Test User

Thursday, November 10, 2016

Test User 2

10:49:34

PTC: RecStation

Principal Name: Bloomberg L.P.

Counterparty Name: Bloomberg SEF LLC

Status: Matched

Asset Class: FX

Product Type: Option

Notional: -10000

FIFW RSTN DTS MATCHID=OPTFYR28 Curncy_20161109 <GO>

Test User 2

10:49:34

Please check the details of this trade

Chat

Match

Close

et Value	-444,539
	261,179
	-33,490
	2,587
	465,907
	465,907
	568,559
	-9,809
	305,864
	970,833
	142,936
	159,057
	-94,321
	351,748
	-2,489
	2,940
	300,428
	3,339
	-22,467

Identify & communicate mismatches

Communicate reconciliation results with counterparties and internal colleagues using the built-in IB messaging tool.

Connect to a holistic solution.

MARS Collateral is built on Bloomberg's Multi-Asset Risk System risk engine, providing a truly holistic, one-stop solution for collateral management. MARS consolidates positions from individual securities pricers, such as SWPM, OVME, OVML, CDSW and DLIB, into easy-to-manage portfolios. The MARS pricing engine calculates the valuations on these positions, enabling users to run many different types of risk calculations and analytics.

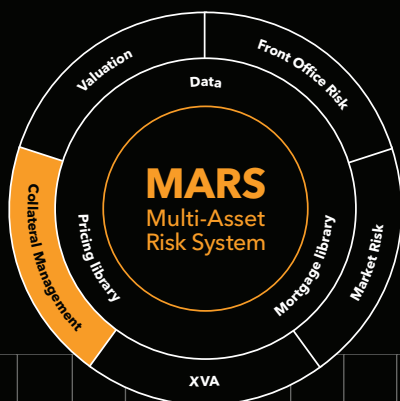
Valuations are fed to MARS Collateral at a portfolio level and then run through a comprehensive margin calculation process, netting valuations and collateral positions at the collateral agreement level. Users are provided with an event workflow to easily send and receive margin calls, track disputes, settle interest and reconcile their positions with counterparties. The entire, end-to-end process takes place on the Bloomberg Terminal – eliminating the need to log-in to and manage several disparate applications.

MARS Collateral Management connects you to:

Real-time data

- Derivative and collateral positions are valued with accurate and up-to-date data
- All exposures and positions are calculated using market-leading Bloomberg data, avoiding the need to buy-in and integrate external resources

MARS Multi-Asset Risk System



Your documentation

- Collateral documentation is captured field-by-field to ensure accurate calculation of margin calls
- LEDO <GO> holds collateral eligibility criteria and haircut schedules, thresholds, minimum transfer amounts and initial margin requirements

The market

- Auto-filled Bloomberg legal entity information and agency credit ratings in LEDO <GO> help provide real-time mitigation of credit risk
- Gain direct access to the latest market data, company news CN <GO> and trading systems (e.g., Swap Manager, SWPM <GO>)

Risk Analytics

- Calculate ISDA SIMM, SIMM backtesting and SIMM-pretrade analysis
- Run scenario analysis across your agreements to proactively manage counterparty risk

The financial community

- Communicate with internal colleagues and external counterparties via Bloomberg's chat and email tools, IB and MSG
- Easily add trade information to an IB chat and send it to internal or external parties, the so-called 'Security Pill' feature

The Multi-Asset Risk System provides consistent and consolidated valuation, product lifecycle analysis, market risk, counterparty risk and collateral management.

MARS is powered by Bloomberg's world-class pricing library, market data and mortgage cash flow engine and enables front-office, risk and collateral professionals to analyze their trading and investment portfolios, mitigate risk and prepare for the unexpected.

Bloomberg Valuations

OTC derivatives	Cleared swaps	TBA	Repo	Listed derivatives
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Bloomberg Collateral Management

Legal document manager			Collateral positions	
Margin calculator				
Margin management	Collateral optimization	Full asset inventory	Risk analytics	Reporting



Electronic messaging



Custodian/CSD



Reconciliation



Counterparty



Learn more

To learn more about Bloomberg’s risk solutions, visit **RISK <GO>** on the Bloomberg Terminal or contact us at riskinfo@bloomberg.net.

Take the next step.

For additional information,
press the <HELP> key twice
on the Bloomberg Terminal®.

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