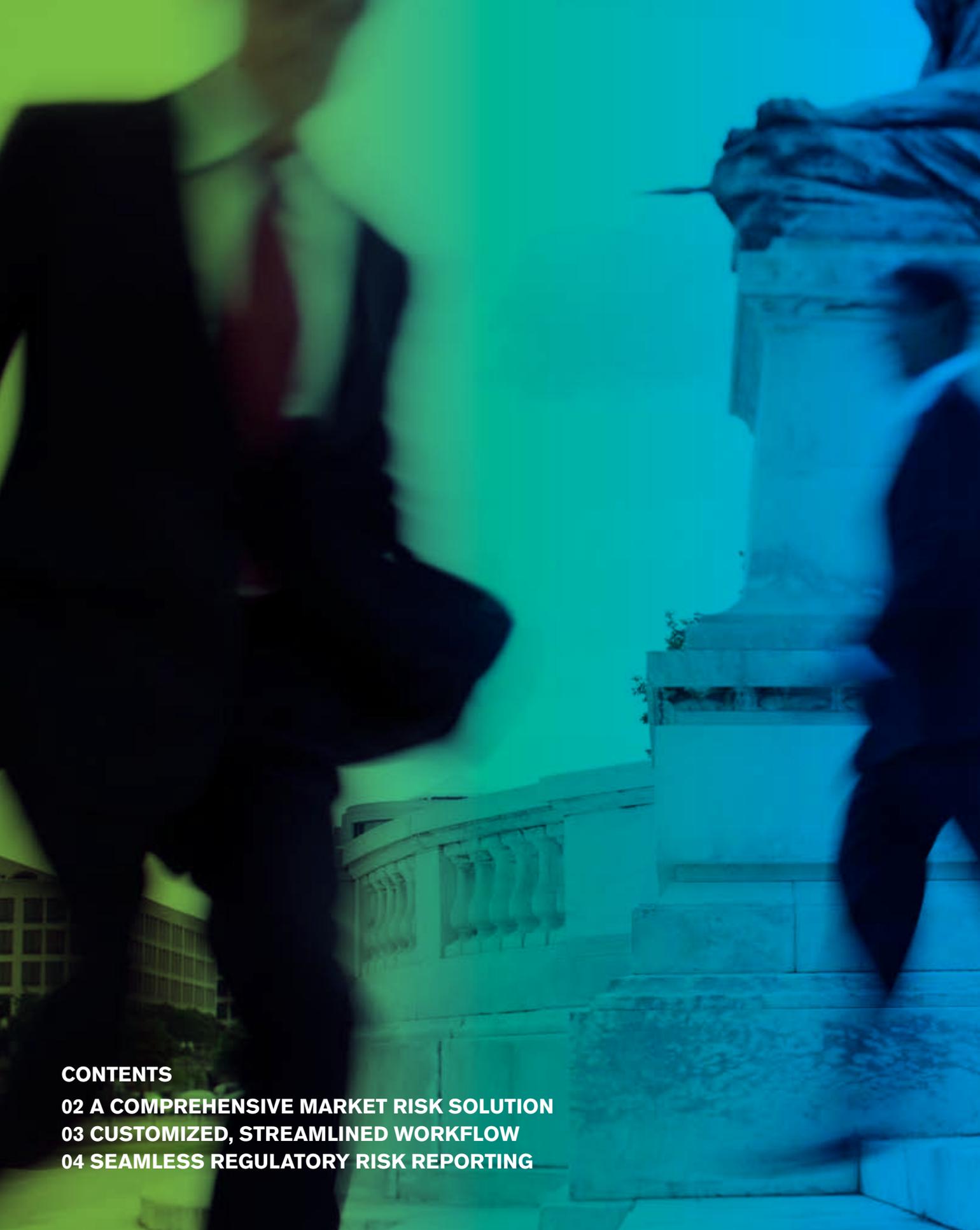


MARS MARKET RISK

A Bloomberg Professional Service Offering

COVER EVERY ANGLE

Bloomberg



CONTENTS

02 A COMPREHENSIVE MARKET RISK SOLUTION

03 CUSTOMIZED, STREAMLINED WORKFLOW

04 SEAMLESS REGULATORY RISK REPORTING

MANAGE RISK. CREATE TRANSPARENCY. DRIVE COMPLIANCE.

In today's complex and interconnected markets, both buy-side and sell-side firms need a powerful solution to monitor, assess and manage intraday and end-of-day risk. Bloomberg's MARS Market Risk solution delivers comprehensive market risk analysis in a powerful, versatile and highly intuitive experience. Broad asset class coverage empowers you, as market risk managers, to investigate situations from all angles while innovative analytics, calculators and portfolio tools enable you to fully understand exposure and spot potential pitfalls. Additionally, an automated enterprise workflow streamlines the entire reporting process — all so you can gauge risk levels precisely and make faster, more incisive recommendations for your firm.

A COMPREHENSIVE MARKET RISK SOLUTION

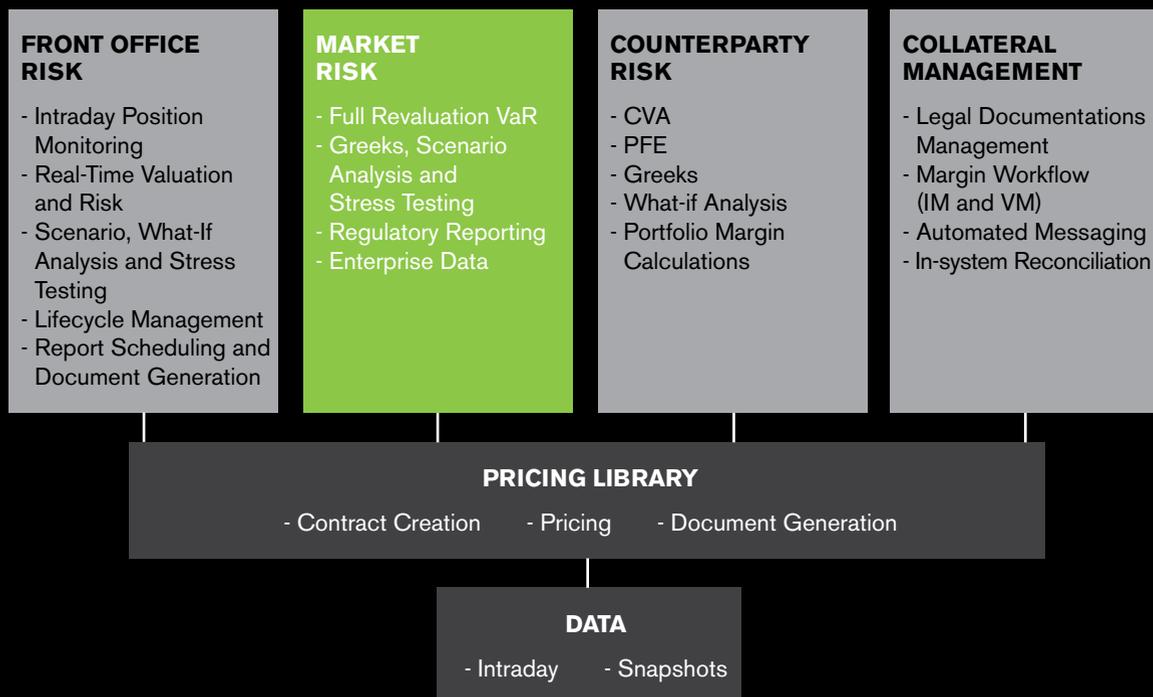
Built on Bloomberg's market-leading data, pricing and analytics MARS Market Risk is a complete risk analytics and reporting solution designed for chief risk officers to service the middle office risk function. Our multi-asset class offering includes all the standard risk measures that buy-side and sell-side institutions rely on for internal risk management, management reporting, investor reporting and regulatory compliance — comprehensive capabilities that allow firms to consolidate all risk calculations in one place.

BROAD PRODUCT COVERAGE

If you can price a product on the Bloomberg Terminal, you can manage its market risk. With product coverage across multiple asset classes, including equities, fixed income, commodities and FX, MARS Market Risk covers the vast majority of listed instruments and derivatives.

POWERFUL ANALYTICS

Leveraging the power of Bloomberg market data and front-office pricing calculators, MARS Market Risk contains an extensive suite of metrics including fully configurable VaR analytics, a flexible stress testing toolkit for historical and predictive scenario analysis, and Greek sensitivities.



CUSTOMIZED, STREAMLINED WORKFLOW

Every firm has unique regulatory, investor and internal risk management requirements and MARS Market Risk is designed to meet those needs. Customizable, interactive dashboards make it fast and easy for risk managers to access and share important metrics, while streamlined workflows eliminate costly, time-consuming processes.

PERSONALIZE YOUR MARKET RISK PERSPECTIVE

Detailed views can be set up to show the most important results for your trading strategies, while flexible risk aggregation and reporting allows users to interactively slice, dice and visualize data to drill down through complex hierarchies. In addition, risk models can be configured at a highly granular level, enabling you to implement custom risk calculations and consolidate all your risk calculations in one system.

ENHANCE SPEED, EFFICIENCY & ENTERPRISE PRODUCTIVITY

MARS Market Risk enables firms to use internal resources more efficiently, streamlining daily operations and helping make teams more productive. Our robust enterprise workflow includes automated daily position feed handling, exception reporting and downstream file delivery for enterprise-wide use. Additionally, historical results archiving enables trend analysis and storage of risk analytics.

VaR Summary			Multi-Year 1D 99% VaR		
	VaR	1D Chg		VaR	1D Chg
Stressed HVaR 99%	36,611,590	412,883	1 Year VaR	17,903,937	179,106
Equity HVaR 99%	19,524,265	53,087	2 Year VaR	17,652,072	226,025
Exp Shortfall 99%	18,724,881	18,969	3 Year VaR	17,875,708	449,662
HVaR 99%	17,903,937	179,106	4 Year VaR	17,652,072	226,025
MC VaR 99% DF=0.94	13,981,646	(1,051,025)	5 Year VaR	20,204,060	(6,957)

Historical Crisis Scenarios			Asset Class Scenarios		
	Stress P&L	1D Chg		Stress P&L	1D Chg
Black Monday	(102,738,881)	(448,420)	Equity Quote Down 20(...	(35,841,640)	(1,829,268)
Global Financial Crisis	(83,444,391)	(4,069,876)	Rates Up 250(Abs)	(15,234,264)	156,208
Gulf War	(33,179,934)	(902,849)	CDS Spread Up 250(Rel)	(13,404,548)	194,522
Subprime Crisis	(29,088,754)	(1,556,323)	Rates Up 200(Abs)	(12,447,023)	146,961
Terrorist Attack 9/11	(23,685,117)	(806,051)	CDS Spread Up 200(Rel)	(11,094,667)	169,750

Greeks Summary			Name Risk by CR01		
	Value	1D Chg		CR01	1D Chg
FX Vega	6,260,428	(316,141)	People's Republic of ...	(18,316)	249
Equity Delta	2,160,734	141,611	Walt Disney Co/The	(8,830)	71
FX Delta	999,673	(62,702)	Swedbank AB	(6,125)	(48)
Equity Vega	610,458	50,220	Werkdhave NV	(3,644)	23
Total CR01	(42,635)	591	Russel Metals Inc	(3,155)	(7)

BRM <GO>
Bloomberg Risk Management's interactive dashboards can be tailored to your company requirements.

SEAMLESS REGULATORY RISK REPORTING

MARS Market Risk provides everything chief risk officers and market risk managers need to drive regulatory compliance, including wide-ranging reporting solutions to satisfy both buy-side and sell-side regulation. Coupled with full support from our dedicated Client Solutions team, you can have complete confidence in meeting your regulatory needs both now and into the future. MARS Market Risk helps firms maintain transparency in their risk processes in order to meet regulatory reporting requirements while improving operations and reducing technology spend.

EFFECTIVELY MANAGE REGULATORY RISK REPORTING

MARS Market Risk can help you comply with a number of key regulations, including but not limited to:

- FORM PF Stress Testing
- AIFMD Regulatory Reporting
- UCITs Regulatory Reporting
- Basel-compliant market risk analytics
- CCAR Stress Testing

- Historical archiving of all risk results
- Exposure and leverage calculations, including both gross and commitment approaches for UCITS and AIFMD
- Flexible aggregation to view risk concentration and compare to limits
- Comprehensive stress testing capabilities with an extensive library of scenarios

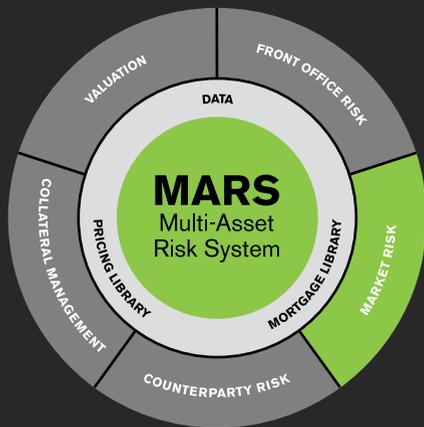
Regulatory risk functionality includes:

- Historical and Monte Carlo VaR and Stressed VaR with flexible parameterization and backtesting reports
- Customizable regulatory dashboards and output files

Gross Method		Current	Commitment Method		Current
Commodity Future		801,747	Netting Eligible		7,695
Interest Rate Swap		74,023	Netting Ineligible		1,224,495
Index Credit Default Swaps		63,023			
Options on Commodity Future		56,331			
Warrants and Rights		28,585			
Stress Test		Stress P&L	Top Issuer Exposures		Current
Gulf War		(24,637)	General Motors Co		22,948
Black Monday		(22,906)	United States of America		21,072
Subprime Crisis		(22,558)	Microsoft Corp		15,708
Russian Crisis & LTCM		(20,374)	Republic of Italy		11,366
Iran Invasion		(18,382)	Fairfax County Water Authority		10,074

EASIER REPORTING

BRM <GO> includes reporting tools to manage compliance with AIFMD and other regulation



MARS Multi-Asset Risk System

The Multi-Asset Risk System (MARS) 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.

ABOUT THE BLOOMBERG PROFESSIONAL SERVICE

The founding vision in 1981 was to create an information services, news and media company that provides business and financial professionals with the tools and data they need on a single, all-inclusive platform. The success of Bloomberg is due to the constant innovation of our products, unrivalled dedication to customer service and the unique way in which we constantly adapt to an ever-changing marketplace.

The Bloomberg Professional service is a powerful and flexible tool for financial professionals — whatever their needs — in cash and derivatives markets as diverse as equities, currencies, commodities, money markets, government and municipal securities, mortgages, indices, insurance and legal information. The Bloomberg Professional service seamlessly integrates the very best in real-time data, news and analytics.

In addition, Bloomberg users benefit from on-demand multimedia content, extensive electronic trading capabilities and a superior communications platform. Bloomberg customers include influential decision makers in finance, business and government. Business and financial professionals recognize the Bloomberg Professional service as the definitive tool for achieving their goals because it offers unparalleled assistance and functionality on a single platform for a single price.

LEARN MORE

Not only does Bloomberg's MARS Market Risk solution help address the needs you have today, it also prepares you for those to come. To learn more about Bloomberg's risk solutions, visit **RISK <GO>** or contact us at riskinfo@bloomberg.net.

BEIJING

+86 10 6649 7500

FRANKFURT

+49 69 9204 1210

LONDON

+44 20 7330 7500

NEW YORK

+1 212 318 2000

SÃO PAULO

+55 11 2395 9000

SYDNEY

+61 2 9777 8600

DUBAI

+971 4 364 1000

HONG KONG

+852 2977 6000

MUMBAI

+91 22 6120 3600

SAN FRANCISCO

+1 415 912 2960

SINGAPORE

+65 6212 1000

TOKYO

+81 3 3201 8900

bloomberg.com

The data included in these materials are for illustrative purposes only. The BLOOMBERG PROFESSIONAL service, BLOOMBERG Data and Bloomberg Industries (the "Services") are owned and distributed by Bloomberg Finance LP ("BFLP") in all jurisdictions other than Argentina, Bermuda, China, India, Japan and Korea (the "BLP Countries"). BFLP is a wholly owned subsidiary of Bloomberg LP, ("BLP"). BLP provides BFLP with global marketing and operational support and service for the Services and distributes the Services either directly or through a non-BFLP subsidiary in the BLP Countries. Certain functionalities distributed via the Services are available only to sophisticated institutional investors and only where the necessary legal clearance has been obtained. BFLP, BLP and their affiliates do not guarantee the accuracy of prices or information in the Services. Nothing in the Services shall constitute or be construed as an offering of financial instruments by BFLP, BLP or their affiliates, or as investment advice or recommendations by BFLP, BLP or their affiliates of an investment strategy or whether or not to "buy", "sell" or "hold" an investment. Information available via the Services should not be considered as information sufficient upon which to base an investment decision. BLOOMBERG, BLOOMBERG PROFESSIONAL, BLOOMBERG MARKETS, BLOOMBERG NEWS, BLOOMBERG ANYWHERE, BLOOMBERG TRADEBOOK, BLOOMBERG TELEVISION, BLOOMBERG RADIO, BLOOMBERG PRESS and BLOOMBERG.COM are trademarks and service marks of BFLP, a Delaware limited partnership, or its subsidiaries. ©2016 Bloomberg Finance LP. All rights reserved. S678261256 DIG 0616