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FRTB Standardized Approach for market risk

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Risk & Valuations

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FRTB Standardized Approach for market risk

The Fundamental Review of the Trading Book (FRTB) is the biggest global sell-side regulatory change that has taken place in more than two decades. It completely overhauls the framework for market risk as a result of the severe market stress in 2007-08. FRTB was created to ensure that regulatory market risk models deliver reliable capital outcomes and promote consistent implementation of the standards across jurisdictions.

The Standardized Approach (SA) is required for all entities regulated under the Basel market risk regime, regardless of whether or not they also run the Internal Models Approach (IMA).

The SA is a capital charge consisting of:

- Sensitivities-based Method (SBM) — a parametric market risk calculation based on standardized risk factor sensitivities and volatilities and correlations specified by the Basel Committee.
- Default Risk Charge (DRC) — a jump-to-default measure for individual issuers as well as securitizations based on standard netting rules to capture hedging effects.
- Residual Risk Add-On (RRAO) — an additional charge for non-vanilla instruments whose risk is not captured by either of the two metrics above.

FRTB standardized approach

The Standardized Approach for Market Risk

Sensitivities-based Method: Capital charges for delta, vega and curvature risk factor sensitivities within a prescribed set of risk classes

- General Interest Rate Risk (GIRR).
- Credit Spread Risk (CSR): non-securitization.
- CSR: securitization.
- CSR: securitization correlation trading portfolio.
- Foreign Exchange (FX) Risk.
- Equity Risk.
- Commodity Risk.

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Default Risk Charge (DRC) for prescribed risk classes

- Default risk: non-securitization.
- Default risk: securitization.
- Default risk: securitization correlating trading portfolio.

Banking book-based treatment of default risk, adjusted to take into account more hedging effects.

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Residual risk add-on (RRAO)

Risk weights applied to notional amounts of instruments with non-linear payoffs.

Full implementation of FRTB will be phased in over the next several years, but banks need to make plans for implementation now — both to upgrade their risk infrastructure to meet the new requirements and to estimate the capital impact in time to manage it on the business side.

Bloomberg's FRTB SA Solution

Bloomberg offers a full, yet modular, FRTB solution. Banks can choose to either outsource their entire FRTB SA calculation or combine Bloomberg's best-of-breed data, analytics and other features with their own internal systems and processes.

The end-to-end workflow entails:

Load positions – either directly and seamlessly from another Bloomberg system such as TOMS or using a standard loader format.

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Map to FRTB factors for GIRR, CSR, Equity, FX, and Commodity – clients can take advantage of Bloomberg's full complement of market data or load their own.

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Run instrument-level analytics – generate delta, vega, curvature, and jump to default based on standard Basel rules.

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Bucketing, netting, and hedging in accordance with Basel rules – generate exposures to which risk weights and correlations are applied.

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Capital calculation and agggregation – calculate total charges by risk type, aggregate them for total SBM, DRC, and RRAO charges, and calculate a total capital charge.

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Generate outputs, from instrument-level sensitivities to firm-level capital charges – results are available in Common Risk Interchange Format (CRIF) and in an interactive application for data viewing and updates.

4) Action | 1) Proxy Table | 2) What-if | 3) Permission | Bloomberg Risk Management

FRTB Demo Status Flash

Run Date: Mar 09 2018 Positions: Mar 09 2018

>> Total Capital C... Business Unit Firm ← M

Stat As Noted Breakdown By Firm HIGH Position View in USD Thousands

		GIRR				FX	CSR	CSR S
Firm Hierarchy	SBM	Total	Delta	Vega	Curvature	Total	Total	Total
Portfolio	614,491	331,430	272,633	15,017	43,780	26,253	2,853	151,
Fixed Income	489,424	331,848	273,052	15,017	43,779	2,746	2,575	151,
CMBS	305,161	153,171	153,171	--	--	--	--	151,
Govt/Agency/IRD	7,454	4,547	4,370	177	0	754	2,154	
NY	3,738	1,650	1,473	177	0	57	2,030	
London	4,226	3,128	3,128	--	--	710	388	
Asia	179	179	179	--	--	0	--	
Credit	3,278	590	487	32	71	1,797	200	
ABS	193,120	193,045	126,286	15,116	51,643	--	0	
Muni	1,662	611	559	52	0	697	295	
Exchange Traded	1,781	273	273	0	0	1,023	485	
Future	573	34	34	0	0	512	--	
Govt/Agency/IRD	1,316	251	251	--	--	580	485	
Currency	35,226	870	869	0	1	26,711	--	
FX	34,625	760	760	--	--	26,857	--	
Future	255	222	221	0	1	--	--	
Cash	1,663	--	--	--	--	1,663	--	
EQUITY	104,410	1,221	1,221	--	--	1,142	--	
AMERICAS	104,178	1,221	1,221	--	--	1,004	--	

Bloomberg's FRTB SA solution features capital numbers that are calculated bottom up from their risk factor and individual position components.

4) Action | 1) Proxy Table | 2) What-if | 3) Permission | Bloomberg Risk Management

FRTB Demo Status Flash

Run Date: Mar 09 2018 Positions: Mar 09 2018

>> Total Capital C... Business Unit Firm ← M

Stat As Noted Breakdown By Firm HIGH Position View in USD Absolute

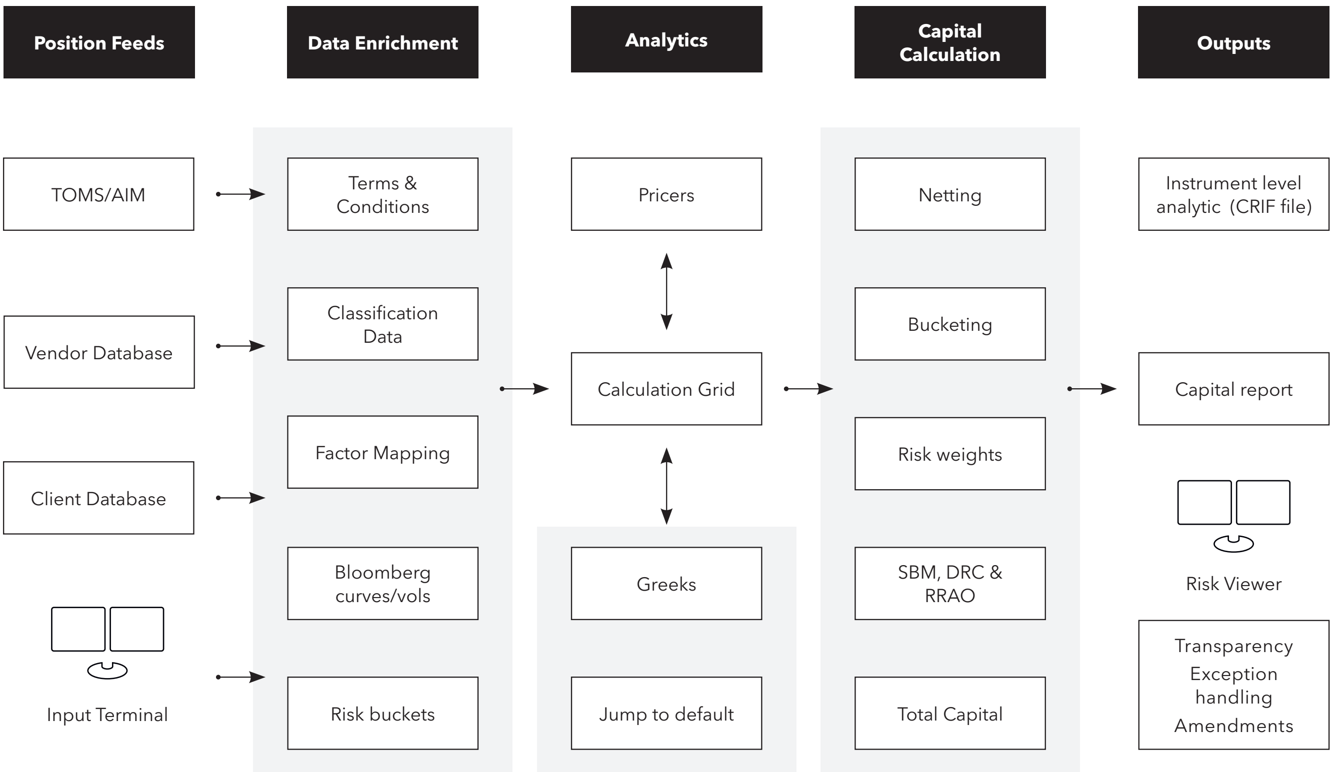
US Treasury BVAL Curve

Firm Hierarchy	Total	3M	6M	1Y	2Y	3Y	5Y	10Y
Portfolio	-1,209,747	-74	-219	-122,408	-83,811	-1,209	-3,291	-258,
Fixed Income	-1,209,747	-74	-219	-122,408	-83,811	-1,209	-3,291	-258,
CMBS	--	--	--	--	--	--	--	
Govt/Agency/IRD	-1,144,755	-74	-219	-91,184	-54,501	0	0	-258,
Credit	-64,992	0	0	-31,225	-29,310	-1,209	-3,291	
ABS	0	0	0	0	0	0	0	
Muni	--	--	--	--	--	--	--	
Exchange Traded	--	--	--	--	--	--	--	
Currency	--	--	--	--	--	--	--	
EQUITY	--	--	--	--	--	--	--	

The solution enables you to drill into individual sensitivity calculations both at the firm and instrument level.

An open architecture

The streamlined workflow of Bloomberg's FRTB SA solution allows clients to pick and choose the elements that are most relevant to their workflow and needs:



Choose a full front-to-back solution or an open environment using customer data and scenarios. With Bloomberg pricing models, you can craft a solution to fit your unique risk infrastructure.

Why Bloomberg for FRTB

Bloomberg's FRTB solution brings the unique advantages of our unrivaled data and analytics platform to the risk and data principles underlying Basel's Fundamental Review.

Advantages include:

A one-stop shop for instrument-level data

As the premier terms and conditions platform that covers any security listed anywhere, Bloomberg also features an unparalleled trove of descriptive data needed for FRTB classification. We have built the Basel classification rules into our platform, so you don't need to worry about the differences in credit bucketing rules between SBM and DRC – you get all of your data in one place.

Full cross-asset class coverage

The Bloomberg risk platform is driven by the same instrument-level analytics code that powers our Terminal functions, such as SWPM, OVME, OVML, CDSW and many others. Any instrument that's covered on the Terminal is covered for risk, with the same quality of pricing models you've come to expect as a Bloomberg customer.

Best-of-breed analytics with consistency across the front and middle office

FRTB is aligned with Basel's BCBS 239 principles, which prescribe that risk data must be consistent across the firm – particularly across the front and middle office. The sensitivities that drive Bloomberg's FRTB SA solution are standard across our platform, using a common engine to serve analytics to front office systems such as TOMS as well as to calculate middle office risk.

Curve-level granularity

The Bloomberg SA solution offers full transparency down to the level of individual instruments and the market data (e.g., curves) used to price them. You can pull up each bond, swap or mortgage in your book in its own viewer as well as each curve used in the calculation in the curve viewer. This means that you can see the instrument, level of the curve and instrument-level sensitivity for every point on each curve – each one in its own dedicated Terminal component.

Index lookthrough

FRTB SA prescribes that risk on indices, funds, and their derivatives be bucketed based on the underlying names. Thus, a complete FRTB solution must identify and incorporate the constituents of any index the bank is exposed to. Bloomberg provides integrated constituent data on virtually all index and fund families as part of our FRTB SA solution; our Terminal analytics automatically decompose the risk by constituent name.

Learn more

To learn more, please visit FRTB <GO> or contact us: frtbinfo@bloomberg.net.

About the Bloomberg Terminal.

Since 1981, business and financial professionals have depended on the Bloomberg Terminal® for the real-time data, news and analytics they need to make the decisions that matter. The Terminal provides information on every asset class — from fixed income to equities, foreign exchange to commodities, derivatives to mortgages — all seamlessly integrated with on-demand multimedia content, extensive electronic-trading capabilities and a superior communications network.

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