Smarter **Risk**

Fundamental Review of the Trading Book –

Is your bank prepared?

#SmarterRisk

New banking regulations are piling up, and banks are struggling to make strategy calls

For example, as of April 2015, J.P. Morgan had more than 950 people working on just four strands of regulation that include over 750 distinct requirements.

Regulatory requirements with major impacts for J.P. Morgan

1) the leverage ratio
2) rules on global systemically important banks
3) FRTB - new trading book reforms
4) CCAR - US regulators' annual stress tests

"That is 27 different capital ratios, with 225 models built recently. It doesn't count liquidity, which is another 400 people. And then if you look at derivatives, with 99 proposed and final regulations in the US and 237 final articles in the EU, we have more than 3,150 pages of regulation affecting this market and more than 700 people devoted to understanding and interpreting those."[1]

—Debbie Toennies, head of regulatory affairs for the corporate and investment bank at J.P. Morgan

[1] "Trading book fears grow as rules enter home straight," Risk.net, April 2015, http://www.workcast.com/?pak=7649850860535916&cpak=9408561048987496#

Banks are being forced to dedicate large teams to work out the impact.

On FRTB alone, J.P. Morgan has dedicated over 100 people to work out the impacts at a granular level.

For FRTB, J.P. Morgan looked at the capital requirements on a desk-by-desk basis, using the same definition of trading desks it is using for the Volcker rule's ban on proprietary trading.

> "We ran it at the Volcker desk level, and that was so we could start to think about decision-making under the FRTB… We wanted to see—not just at the highest level—what these numbers looked like, pushing it down to where we make decisions, so at the Volcker desk level, or the business level or the asset class level." [1]
>
> —Debbie Toennies, head of regulatory affairs for the corporate and investment bank at J.P. Morgan

[1] "Trading book fears grow as rules enter home straight," Risk.net, April 2015, http://www.workcast.com/?pak=7649850860535916&cpak=9408561048987496#

FRTB is the latest reform to the global regulatory framework for banks which began over 25 years ago, as dictated by the Basel Committee on Banking Supervision (BCBS).

Regulation of Trading book capital — a brief history

Basel I

88 **96**

1988: First Basel Accord, sets the foundation of market/credit risk rules

1996: Market Risk Amendment where banks can be approved to use VaR for trading book assets

Basel II

04 **06**

2004: **Basel II: International Convergence of Capital Measurement and Capital Standards: a Revised Framework**

2006: Banks can use Internal models to compute derivatives exposure

Credit Crisis

!

Basel 2.5/III

09 **10**

2009: **Basel 2.5**: First response to credit crisis, with complex new charges for trading assets

2010: **Basel III: a global regulatory framework for more resilient banks and banking systems**
Next response to the credit crisis with increase in capital requirements related to counterparty risk – through a revised default risk charge that now uses stressed EPE, and a new CVA capital charge. Banks can reduce these new capital requirements by applying for Internal Model Method (IMM) approval

2013: **Basel III: the Liquidity Coverage Ratio and liquidity risk monitoring tools**

Fundamental Review of the Trading Book

12 **13** **14** **15** **16**

May 2012: 1st Consultative Paper issued by BCBS

Sept 2012: Industry responses to 1st consultative paper
Algorithmics Response: http://www.bis.org/publ/bcbs219/cacomments.htm

Oct 2013: 2nd Consultative Paper issued

Jan 2014: Industry responses to 2nd consultative paper

March 2014: BCBS published update to standardized approach based on industry feedback. Proposed two alternatives; SBA and ACFA

April 2014: Deadline for HPE-Internal Models approach

Sept 2014: Publication of HPE results
Deadline for actual portfolio QIS - Internal Models approach

March 2015: Publication of QIS results

Dec 2014: Publication of out-standing issues

Jan 2016 Final Rule for FRTB: Minimum capital requirements for market risk
http://www.bis.org/bcbs/publ/d352.pdf
Clean-up of the mosaic of capital charges under Basel 2.5, imposing new requirements for how model approval is granted, across jurisdictions and within firms (e.g. desk level)

The final rule for 'FRTB – Minimum capital requirements for market risk was released in January 2016

2019 is the deadline for banks to implement the final rules. For many banks, this means work should start now.


Basel Committee
on Banking Supervision

STANDARDS

Minimum capital requirements for market risk

January 2016

BANK FOR INTERNATIONAL SETTLEMENTS

Minimum capital requirements for market risk

The Basel Committee has agreed to the following time-table for the implementation of the revised market risk framework:

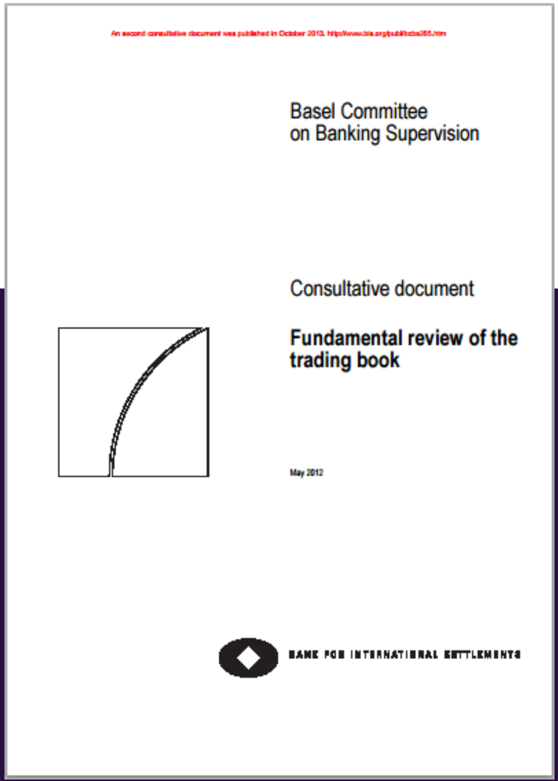
1 January 2019: Deadline for revised market risk framework to be implemented as final rules under domestic legislation.

31 December 2019: Deadline for regulatory reporting by banks based on the revised market risk framework under the revised standardized approach or internal models approach, with use of the latter subject to the approval of the national authorities

Source: Minimum capital requirements for market risk, Jan 2016, http://www.bis.org/bcbs/publ/d352.pdf

The banking industry anticipates significant operational challenges when implementing changes to comply with FRTB requirements.

Outstanding issues: The industry has voiced strong objections to FRTB, citing the operational challenges of implementing the proposals, and expected increases in regulatory capital requirements


An second consultative document was published in October 2013. http://www.bis.org/publ/bcbs265.htm

Basel Committee
on Banking Supervision

Consultative document

Fundamental review of the trading book

May 2012

BANK FOR INTERNATIONAL SETTLEMENTS

"The Committee has reviewed the comments received, including feedback provided in the course of a hypothetical portfolio exercise as well as the results of a comprehensive Quantitative Impact Study (QIS) that was conducted to assess the proposed trading book framework. In particular, the Committee notes the concerns expressed about the implementation challenges posed by certain elements of the new framework."[1]

Fundamental review of the trading book: outstanding issues—consultative document, Dec 2014

[1] "Fundamental review of the trading book: outstanding issues - consultative document," BCBS, Dec 2014, http://www.bis.org/bcbs/publ/d305.htm

Basel FRTB represents a profound change in how banks measure market risk within the trading book—where new requirements for additional analytics, more detailed reporting and increased governance are expected to cause severe operational strains for banks big and small.

New FRTB requirements and the impacts on banks

Increase in computation and reporting
- New reporting requirements at greater detail and higher frequency

New risk measures
- Introduce Expected Shortfall as the average beyond the 97.5th percentile
- Additional leverage ratio measure
- New incremental default risk model (IDR) to resemble banking book model

Desk level internal model approval
- Model accreditation at the desk level
- Tighter controls over accreditation—backtesting & P/L analysis

Internal models + New Standardized
- Requirement to compute Standardized approach for comparison purposes
- For both internal model and standardized approaches, models must be calibrated to period of stress for the bank's portfolio

Increased operational burdens & costs

More constraints on business strategy

Increase in regulatory capital

Trading / Banking book boundary
- Restrictions on movement between banking book and trading book
- Introduce interest rate and credit spread risk to banking book capital

Liquidity horizons for market risk
- Introduces different liquidity horizons for different risk factors

Less diversification benefits
- Restrictions on recognition of diversification across risk factors

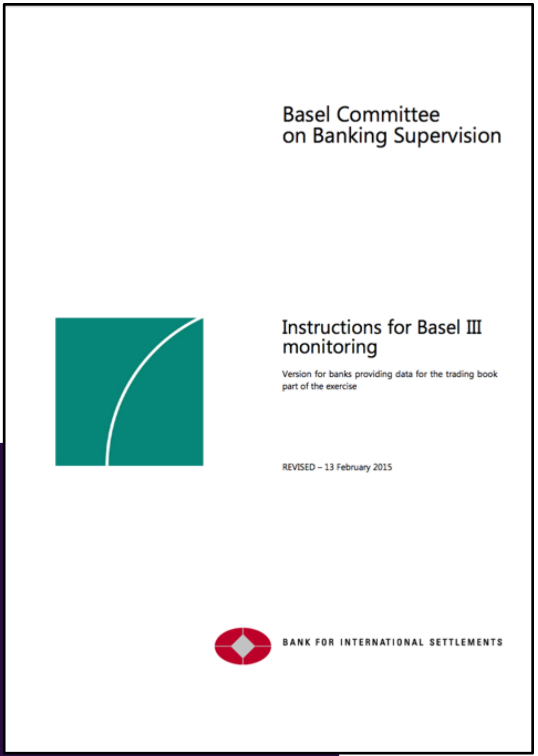
Standardized "floor" on reg. cap
- Standardized approach as a floor on capital, use as default model if no accreditation
- Structured credit products to be treated via standard method

Most banks will need to rethink their risk infrastructure due to FRTB.

The new standardized approach model is one example of additional analytics required under FRTB.

Larger banks worry about their capacity to support the standardized approach in addition to their internal models.

Smaller banks who don't have the analytics infrastructure to support an internal model approval worry that the standardized approach is approaching a level of complexity equivalent to internal models.[1]


Basel Committee
on Banking Supervision

Instructions for Basel III monitoring

Version for banks providing data for the trading book part of the exercise

REVISED – 13 February 2015

BANK FOR INTERNATIONAL SETTLEMENTS

"During the last QIS, we had more difficulty calculating the standardized approach than the internal model approach. Although some of these issues have been corrected in the most recent consultation paper, the intention was to create a very simple rule-based framework that banks can use as a replacement for the current standard approach. For a simplified rule, it is still burdensome to calculate."

—Marc Van Balen, global head of trading risk management at ING in Amsterdam[2]

[1] "Speaking as one - Convergence in Basel standards will require banks to rethink their risk infrastructures," IBM Smarter Risk journal, June 2015, http://ibm.biz/spkng-as-one
[2] "Fundamentally Uncertain", Risk.net, March 2015, http://www.workcast.com/?pak=5035679922566500&cpak=9408561048987496

Act now to prepare for the impacts of FRTB.

Banks must reform their business operations to cope with the new *Minimum capital requirements for market risk* and its impacts such as the new treatment of liquidity risk, the complexity of the standardized approach, and the rise in regulatory capital.

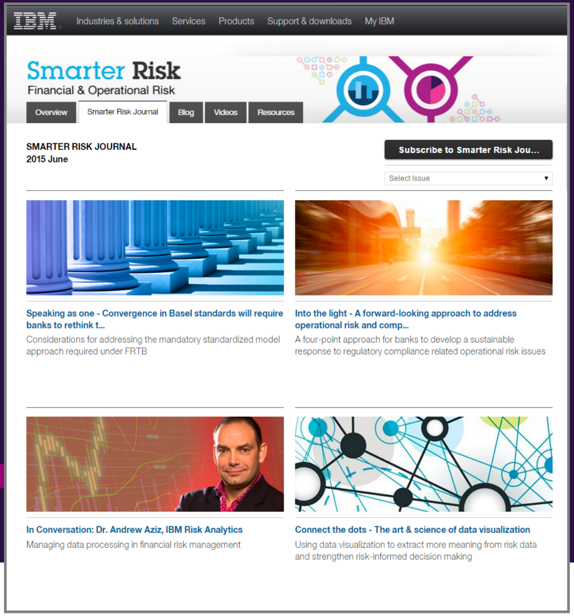
"The complete set of FRTB proposals represent an ambitious desire from regulators to 'get it right' and go well beyond revisions to the standardized and the models-based approaches.

"When the impacts of the various FRTB proposals are analyzed together, it is easy to imagine scenarios that would place an overwhelming burden on the current infrastructures of many banks."

[1] "Speaking as one - Convergence in Basel standards will require banks to rethink their risk infrastructures," IBM Smarter Risk journal, June 2015, http://ibm.biz/spkng-as-one

There will be no avoiding the impact of FRTB. Get ahead of it.

"For example, proposed new requirements to incorporate varying liquidity horizons in the Expected Shortfall (ES) calculation, when combined with the requirement to minimize correlation benefits between asset classes, could potentially require a staggering 63 ES simulations per trading desk—and FRTB also proposes that banks conduct additional desk-level model assessments to attain and maintain internal models approval."[1]

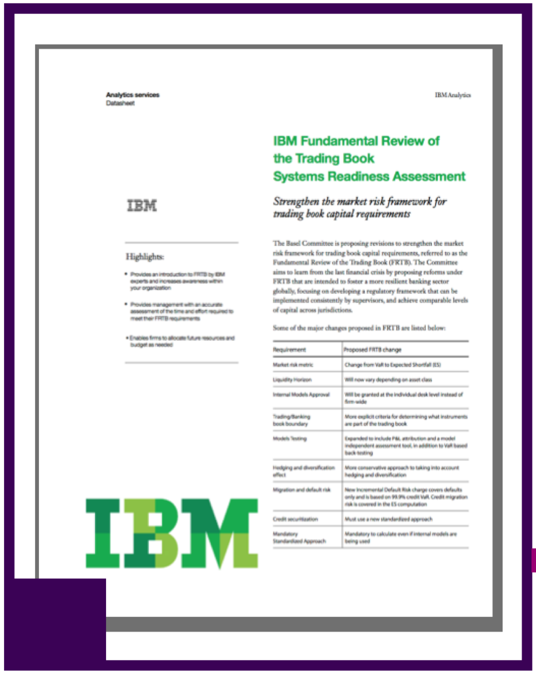


[1] "Speaking as one - Convergence in Basel standards will require banks to rethink their risk infrastructures," IBM Smarter Risk journal, June 2015, http://ibm.biz/spkng-as-one

Contact IBM to get an accurate assessment of the time and effort required to meet FRTB requirements

IBM is helping clients with getting started on meeting the demands of FRTB. Taking a considered approach to cost-effectively meeting multiple requirements means taking time to plan for success.

Meeting the demands from the Fundamental Review of the Trading Book requires redesigning risk systems at a fundamental level. Banks which take the path of rethinking their risk infrastructure will be able to also address the requirements of Basel's BCBS 239 Principles for effective Risk Data Aggregation and Risk Reporting.


Analytics services
Datasheet

IBM Analytics

IBM Fundamental Review of the Trading Book Systems Readiness Assessment

Strengthen the market risk framework for trading book capital requirements

IBM

Highlights:

- Provides an introduction to FRTB by IBM experts and increases awareness within your organization
- Provides management with an accurate assessment of the time and effort required to meet their FRTB requirements
- Enables firms to allocate future resources and budget as needed

The Basel Committee is proposing revisions to strengthen the market risk framework for trading book capital requirements, referred to as the Fundamental Review of the Trading Book (FRTB). The Committee aims to learn from the last financial crisis by proposing reforms under FRTB that are intended to foster a more resilient banking sector globally, focusing on developing a regulatory framework that can be implemented consistently by supervisors, and achieve comparable levels of capital across jurisdictions.

Some of the major changes proposed in FRTB are listed below:

Requirement	Proposed FRTB change
Market risk metric	Change from VaR to Expected Shortfall (ES)
Liquidity Horizon	Will now vary depending on asset class
Internal Models Approval	Will be granted at the individual desk level instead of firm-wide
Trading/Banking book boundary	More explicit criteria for determining what instruments are part of the trading book
Models Testing	Expanded to include P&L attribution and a model independent assessment tool, in addition to VaR based back-testing
Hedging and diversification effect	More conservative approach to taking into account hedging and diversification
Migration and default risk	New Incremental Default Risk charge covers defaults only and is based on 99.9% credit VaR. Credit migration risk is covered in the ES computation
Credit securitization	Must use a new standardized approach
Mandatory Standardized Approach	Mandatory to calculate even if internal models are being used

IBM

FRTB Readiness Assessment
http://ibm.biz/FRTB-readiness

Learn how other banks are preparing for FRTB

Fundamentally challenging – how banks are getting to grips with the Fundamental Review of the Trading Book:

An FRTB panel discussion that covers

- How big an impact will the Fundamental review of the trading book (FRTB) have? What types of bank will be most affected?
- Should banks expect an increase in capital requirements? What is the source of the increase, and which businesses will be hit? Is the advantage of capital modeling being eroded?
- How to avoid capital volatility? Modeling approval will be assessed at the desk level, and standardized approaches will be applied to any desk that loses approval. Banks will also face more punitive capital requirements for risk factors that are deemed “non-Modell-able”. Making capital numbers predictable means addressing these issues – and a number of others.
- Which performance indicators will emerge as the keys to managing a trading business?
- How are banks addressing the new data management and reporting challenges?

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