
# As action time nears, be aware of these 3 big FRTB issues

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The Fundamental Review of the Trading Book (FRTB) will represent the beginning of a new era for market risk management.

Essentially, FRTB will replace current rules for market risk capital in certain global financial jurisdictions and is intended to better capture the risk of a bank's trading book positions. FRTB will also cause banks to be faced with anticipated increases in overall capital requirements.

Originally published in 2016 by the Basel Committee on Banking Supervision, FRTB replaces part of the Basel 2.5 reforms, which were introduced in 2009 to address the undercapitalization of trading book exposures during the 2007-2008 global financial crisis. The crisis caused large losses for many institutions and led to depletion of loss-absorbing capital and the need to raise new capital. This, in turn, led to regulations to increase capital requirements so that banks hold sufficient capital to absorb potential losses. FRTB specifies how to determine the minimum amount of capital a bank is required to hold.

While FRTB rules were published in January 2016 and implementation was originally set for January 2019, this date was pushed back until 2022 so that the industry would have more time to implement the new regulations and figure out how to absorb the higher capital requirements. FRTB was then delayed again until January 2023 due to the arrival of the global coronavirus pandemic.

In this paper, we review three of the core issues and challenges that demonstrate some of the ways FRTB will impact the capital markets. Let's start by looking at the current timelines for global FRTB implementation by financial jurisdiction.

## 1 The FRTB Implementation Timelines Raise Questions

First, it needs to be indicated that FRTB will apply only to banks with at least $250 billion in assets in U.S. dollars and deals only with the trading book, as opposed to the banking book.

These are the implementation timelines:

| JURISDICTION | GO LIVE |
|---|---|
| Korea | Live since Jan 2023 |
| China - Mainland | Jan 2024 |
| Hong Kong | Jan 2024 |
| Canada | Jan 2024 |
| EU | Jan 2025 |
| UK | Jan 2025 (not finalized) |
| U.S. | Jan 2025 (not finalized) |
| Japan | March 2025 – for domestic banks |

There are some concerns regarding the timelines, and the main one is about regulatory arbitrage across jurisdictions. Korea is already live. China mainland, Hong Kong and Canada will go live in January 2024, while the EU will go live in January 2025. The U.S. and UK are intended to go live in January 2025, and finally Japan will go live in March 2025 (only for domestic banks).

As mentioned, a key concern is the regulatory arbitrage costs—a practice where firms or clients use more favorable laws in one jurisdiction to avoid less favorable regulation in another jurisdiction. What this means is that some jurisdictions may not want to be an adopter of FRTB before the U.S. and UK go live. Given the dominance of New York and London for trading book activity, the U.S. Federal Reserve and the UK's Bank of England are both key players in the development of FRTB policy. Given the deepness of the U.S.-UK relationship on financial markets, market participants believe the two jurisdictions will be aligned on their FRTB policies.

What this means is that there are questions of whether there may be adoption flexibility for other jurisdictions depending on what the U.S. and UK do. Flexibility in the sense that some regulators may postpone the implementation of FRTB if the U.S. and UK do not publish by their given go live date, and also flexibility in terms of whether there may be room to make amendments to the FRTB rules. For example, the UK is thinking about doing something specific regarding carbon trading.

According to Ernst & Young LLP, what should be noted here is that while The Bank of England Prudential Regulatory Authority's (PRA) proposed implementation of FRTB capital rules is broadly aligned with Basel's proposals, there are some exceptions:

"For the Standardized Approach these relate to the definition of gross Jump to Default, a requirement to use a "sticky strike" approach for the calculation of Vega, and the introduction of a new 'Carbon Trading' risk bucket. A new approach is also proposed for the treatment of Collective Investment Undertakings enabling the use of third-party risk weights under certain conditions.

"For the Internal Models Approach, the PRA's consultation includes divergences to Basel and the EU in several areas. These include the ability of banks to include the impact of Non-Modellable Risk Factors (NMRFs) when performing desk level backtesting, a detailed specification on NMRF stress period selection, and a new capital charge for non-data-related risk modelling deficiencies under the existing Risks Not in Model (RNIVM) framework."

## 2 Going with the Standardized Model Approach or the Internal Model Approach

There are two pathways for determining the appropriate level of capital for the risk a bank is taking: the standardized model approach (SA) or the internal model approach (IMA). The choice between the two comes down to which one gives the most sufficient capital to absorb losses, and each bank will need to evaluate the pros and cons of each approach.

The SA method is based on risk sensitivities and is a computationally extensive method. However, since there is no requirement for the SA to pass quantitative P&L attribution and back-testing criteria (as it is the default method and fallback for IMA), it is an easier method to implement and operate than the IMA. On the other hand, the SA is likely to lead to a materially higher charge than IMA for most trading desks. The SA must be calculated not only for those desks that are out-of-scope for IMA, but for all desks as a quantitative breach for an IMA desk requires an immediate change to SA.

There are more complexities in using IMA. For a bank that intends to use the IMA, attaining approval depends on a trading desk conducting and successfully passing the backtesting requirements and the profit-and-loss attribution (PLA) test. The IMA tests, however, are difficult to pass and this is creating concerns that many trading desks will end up with no choice but using the SA by default.

Even when desks qualify for the IMA, they don't want any of the risk factors to be deemed NMRFs, which leads to more capital requirements, and if the risk factors are deemed NMRFs, then banks will need to pass difficult statistical tests imposed by the regulations.

Additionally, in the U.S. there is something called the NPR (Notice of Proposed Rulemaking), which will include the final rules for FRTB. The NPR was supposed to be published in May 2023, but that has not yet happened. Certainty around FRTB implementation can only be achieved once those documents are released. What is certain, from a U.S. perspective, the NPR means that the option for adopting IMA would be challenging. The reason is that the banks must be ready by January 2024 to start the testing and produce one year's worth of evidence that IMA works and that the risk factors can be adequately modelled (to avoid the risk factors from being considered non-modellable) and satisfy the RFET (Risk Factor Eligibility Test). It will be difficult to accomplish this within a one-year time frame.

Nonetheless, successful implementation of the IMA should allow banks to allocate capital more efficiently. Another beneficial aspect of the IMA, one that is discussed in a webinar Numerix hosted in May 2023, is that it may be easier to use the IMA during troubling market conditions—i.e., when volatility is high. Why? Because high volatility means big shocks. For example, during the big P&L movements experienced during the COVID pandemic and the start of the war in Ukraine, it may have been easier to load on the capital requirements when adopting the IMA—and the capital requirements might have been lower as well. The reason is that when you look at the Spearman test that assesses the risk theoretical P&L (RTPL) and the hypothetical P&L (HPL), the correlation between them gives better results with high volatility because the covariance between RTPL and HPL is bigger.

So, if a bank wants to go for the IMA, which is more demanding in terms of resources and cost, the benefit is that the capital requirements are likely to be lower than for the SA.

This is counterintuitive and perhaps not the intention of the Basel Committee on Banking Supervision as one would expect to have higher capital requirements in troubled times.

## 3 A Pressing Issue: the Technology Requirements and the Data Challenge

To meet FRTB's requirements, banks will need to rethink—and potentially completely overhaul—their technology strategy. Some firms will be pushed to re-evaluate the legacy software and analytics in their arsenal, and explore new and more powerful technologies and methodological approaches that are open-ended, agile, and transparent.

FRTB's demands will include technologies that can meet the massive increase in data integration, data storage, data validation and computational power requirements (it is estimated that computational needs may grow 20 to 30 times). In particular, whether targeting the SA or the IMA, both options require banks to adopt a more complex set of data and analytics to calculate and understand risk charges and capital at an individual desk level.

Since the demands on technology platforms, in terms of additional calculations and data usage, will be huge and transformative, adhering to the new methodologies will likely require complex and time-consuming overhauls of risk systems. That is why many banks may elect to choose partnering with a suitable vendor. Technology vendors can play an important role in FRTB implementation programs.

## DISRUPTION CAN BRING OPPORTUNITY

It is true that FRTB is widely seen as a seismic change to the way banks evaluate and measure market risk. But to "look on the bright side," we believe that with disruption comes opportunity. A comprehensive and successful implementation of FRTB could, in several ways, result in positive transformational change for banks. There are two particular outcomes that will matter. One is that there will be less risks to a bank's reputation—making the investment in the technology will help ensure financial stability and bank solvency. The second is that by having the best risk management technology in place sends the message that the firm is dedicated to protecting the clients and the markets it serves.

To learn more details about FRTB, download our on-demand webinar FRTB in a Fast-Changing World: Is the Regulation Still Relevant?

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