

Fundamental Review of the Trading Book (FRTB)
An ICMA briefing note on implementation challenges for secondary bond markets
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What is FRTB?

The Fundamental Review of the Trading Book (FRTB) is a comprehensive suite of capital rules developed by the Basel Committee on Banking Supervision (BCBS) as part of Basel III, intended to be applied to banks' wholesale trading activities. Finalised in January 2016 as the [Minimum Capital Requirements for Market Risk](#), it aims to address a number of identified shortcomings in the existing Basel II.5 framework, in particular: (i) an insufficient trading book/banking book boundary; (ii) the weakness of the Value at Risk (VaR) measures (which do not include "tail risks" of extreme losses); (iii) the need for more coherent and comprehensive risk capture (including market liquidity under stressed conditions); and (iv) the need for the standardised approach (SA) to serve as a credible fall-back for the internal models approach (IMA).

Originally, the revised framework was scheduled to be implemented as final rules under domestic legislation on 1 January 2019, with regulatory reporting under the framework becoming a requirement from 31 December 2019. However, on 7 December 2017, the Basel's Committee oversight body, Group of Central Bank Governors and Heads of Supervision (GHOS), [announced](#) a delay in its implementation until 2022. In the EU, FRTB will be implemented as part of the Revised Capital Requirements Regulation ([CRR II](#)), published in November 2016.

Why is FRTB important for fixed income market makers?

FRTB was never intended to increase the overall capital requirements of banks, which was largely achieved in the Basel II.5 framework. However, the results of cumulative quantitative impact studies (QIS) in the latest [BCBS Basel III Monitoring Report](#), published in December 2017, based on December 2015 data provided by 248 banks,¹ suggest that the weighted average overall capital increase will be significant: 52.3% for Group 1 banks, 50.9% for global systemically important banks (GSIBs), and 52.2% for Group 2 banks.

While the QIS are not granular enough to measure the impact on individual bank businesses, industry analysis suggests that much of the capital increases arise from the FRTB requirements (in particular the application of the revised SA and a minimum capital floor of 72.5% for IMA) and will directly impact banks' intermediation services for bonds and other securities. An industry QIS² based on 2015 data from 28 globally or locally significant banks points to trading book capital increases ranging from x1.6 to x5.3, depending on the underlying product.

Among the main implementation challenges firms and trading desks will face, and which have the potential to increase capital costs significantly, are two critical aspects of the revised framework: the treatment of non-modellable risk factors; and the P&L attribution requirement.

¹ 96 large internationally active ("Group 1") banks and 152 other ("Group 2") banks.

² [ISDA/GFMA/IIF: FRTB QIS Analysis, November 2015](#)

Non-modellable risk factors

The non-modellable risk factor (NMRF) is a capital add-on (under the Expected Shortfall model)³ that seeks to address the problem of risk modelling for instruments where there are not sufficient price observations to support robust modelling under the VaR framework. The FRTB framework requires 24 observable “real” prices per year, with a maximum gap of one month between consecutive observations.

The conditions for modellability are particularly punitive for less liquid instruments, such as corporate bonds or off-the-run peripheral sovereign and emerging markets. New issues by their very nature fail to meet the criteria. For many trading books, 50% to 70% of their risk factor population may be classified as non-modellable. A 2017 survey by Oliver Wyman⁴ suggests that the NMRF ES charge is likely to account for 30% to 50% of banks’ total IMA risk capital.

Industry recommendations focus on either amending the price observation requirements, such as relaxing the maximum one-month gap, or enhancing data availability, such as encouraging data-pooling solutions or allowing the use of prices applied in credit support annex (CSA) reconciliation. Otherwise, the NMRF provisions are likely to entrench further bifurcation between actively traded, liquid instruments and less frequently traded, illiquid products, as well as providing a deterrent to new issuers coming to the capital markets.

P&L attribution

FRTB introduces a new concept for the IMA: P&L Attribution (PLA). The PLA framework is applied at the individual trading desk level, and requires desks to monitor and report both their hypothetical P&L (HPL), produced by revaluing positions using daily mark-to-market, and their Risk Theoretical P&L (RTPL). This latter measure is an *ex-ante* P&L estimate based on the banks’ internal risk model. The difference between the two is defined as “Unexplained P&L” (UPL). Desks must report the Mean Ratio (MR) and Variance Ratio (VR) of UPL against HPL on a monthly basis, with the expectation that they should remain within a 10% and 20% threshold respectively. If a desk violates the threshold of either metric more than three months out of 12, the internal model approval is lost, and they must revert to applying the SA risk model.

This is potentially the single biggest challenge of implementing FRTB. Large banks typically have between 50 and 100 separate trading desks, each of which must adhere to the PLA requirements. Furthermore, there are potential issues with data sourcing, given that the HPL is typically based on desks’ daily “marks”, while RTPL must be based on risk model data, which is usually sourced independently by banks’ risk management divisions. Even a small difference in the prices used (which can arise from the use of different vendors, or applying different “close of business” times) can lead to large daily deviations that result in frequent violations of the thresholds.

³ The Expected Shortfall (ES), which replaces the Basel II.5 VaR model, is the expected value of all changes in the portfolio value in the tail of the P+&L distribution that exceed the VaR measure.

⁴ [IHS Markit/Oliver Wyman: FRTB Markit Modellability Model: Preliminary Results, May 2017](#)

Given the relatively significant gap between IMA and SA capital charges, the PLA requirements pose regulatory capital “cliff edge” risks for banks and trading desks, which would substantially increase the cost for banks providing market intermediation services. Industry recommendations include permitting the alignment of market data sourcing for HPL and RTPL, and applying the PLA as a reporting requirement but not as a binding constraint.

Conclusion

While FRTB was not intended to increase banks’ capital costs beyond those imposed by Basel II.5, it is clear from both BCBS and industry analysis that banks will see significant increases in their cost of capital, in particular to support their trading activities. The provisions under CRR II that allow for a phased implementation will provide some comfort for European banks, at least initially, but the implementation challenges will remain, not least with respect to managing non-modellable risk factors and ensuring close correlation between reported trading desk level P&L and internal risk models. Furthermore, the additional costs of liquidity provision are likely to impact disproportionately less liquid instruments and markets.

Given the potential impacts for secondary bond market efficiency and liquidity, the final calibration and implementation of FRTB are key priorities of ICMA’s [Secondary Market Practices Committee](#) (SMPC).

Prepared by Andy Hill

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