

# FRTB PUTS DATA DEMANDS ON BANKS

By Jacob Rank-Broadley, Director, Regulatory and Market Structure Propositions, Refinitiv and Fausto Marseglia, Head of Product Management, FRTB and Regulatory Propositions, Refinitiv

June 2017



# Of all the new incoming regulations, few will have a greater impact on financial institutions' trading business than Fundamental Review of the Trading Book (FRTB)

The new FRTB requirements from Basel Committee on Banking Supervision (BCBS) pertain to capital requirements for banks. In fact, this is a critical update to the current Basel 2.5 framework, which introduces stricter rules for the treatment of market risk across national jurisdictions and addresses some of the weaknesses of the current framework. In practice, it could result in higher capital requirements to protect against their trading book positions. These requirements were finalized in January 2016 and are now in the process of being adopted at a regional and local level. In addition, rule makers continue to provide further clarity on the rules through channels such as FAQs.

## FRTB highlights

Among the notable changes being introduced by these new requirements is a stricter separation of the trading book and the banking book. This measure is intended to reduce the possibility of arbitrage between the two books and to ensure a more consistent application across banks. Banks will need to review their portfolios to determine if existing classifications of instruments as trading book or banking book are correct and whether any revisions are required.

FRTB also changes how models are approved and governed. Banks that want to use internal models must pass a set of rigorous tests so that they are not forced to use the Standardized Approach (which is typically associated with higher capital requirements). The current Basel 2.5 internal models approach has been revised and made more rigorous in a way that it enables regulators to provide approval for internal models at individual trading desk level instead of at entity level. These new rigorous tests include backtesting requirements and P&L attribution requirements. In addition, the framework introduces a new compliance test a desk must pass in order to be eligible to calculate capital based on an expected shortfall methodology for the internal model approach. This test is aimed at proving that there is a sufficient number of trades or intentions to trade related to those risk factors, in which case they are considered "modellable." Failing to prove that will force banks to calculate capital requirements for those desks using a more punitive methodology – the stressed capital add-on.



Complying with FRTB means banks will have to make changes to how they model risk for the purpose of regulatory reporting. While not overly onerous for many banks, FRTB mandates core market risk calculations should be based on Expected Shortfall (ES) as opposed to the long-standing Value at Risk (VaR) methodology.

From an implementation perspective, many banks are likely to struggle with requirements that mandate alignment between the front and middle office. Many firms lack this technical plumbing to align sources of data and will need to invest in the right technology and work alongside third-party experts to ensure they are compliant when this important regulation takes effect in 2019.

i Risk.net staff, "Internal risk transfer & FRTB," Incisive Media. December 2016.

Banks are still not entirely clear on the exact details of FRTB. They have plenty of questions they need answered before they can be confident in their market risk capital calculations, according to a survey of regional bankers by Risk.net in December. “The industry has a large number of outstanding questions on both the details of the standard and on some fairly fundamental points too,” said the capital manager at a UK bank responding to the survey.<sup>1</sup>

In addition to the uncertainty on some aspects of FRTB, there is also some uncertainty on how and when it will be implemented in some jurisdictions. In November 2016, the European Commission released its CRR2 proposal which included the European implementation of FRTB. These proposed rules made significant changes to the BCBS FRTB requirements and introduced a three-year phase-in after the entry in force of the regulation during which banks will only be required to hold 65% of their capital requirements. Also, the CRR2 proposal specifies that banks will have to apply the new rules two years after the entry in force of CRR2; however, no timeline has been provided. As such, it is unlikely that the EU will align to the BCBS deadlines. In Australia, the local prudential regulator (APRA) has advised that it does not envisage a new market risk standard being finalized earlier than the beginning of 2020. APRA also specified that once the standard is finalized, banks will have 12 months before it goes into effect. The likely delays introduced in Europe and Australia could lead to the BCBS FRTB requirements being delayed in other jurisdictions.

## The need for data

Banks will need access to more data and stronger analytics to meet these new risk management and reporting requirements. Most large banks will likely use an internal model, which means they will have to be even more prepared. These banks will need access to three sources of external data: time-series market data, reference data and “real” price data. In addition, large quantities of internal data are required as part of their capital calculations.

For banks using internal models, time-series data is a critical input into the capital models. FRTB mandates banks conduct Expected Shortfall (ES) and Default Risk Charge (DRC) calculations based on data sets that go back to 2007 and 10 years respectively. Some banks don’t have access to time-series data stores back this far since their current methodologies use a shorter calibration period. For these banks, they will have work to do in order to collect high-quality time-series data. Several banks reported that this requirement is particularly acute for the period of 2007-8 prior to the period that these firms established their current data stores.

Irrespective to whether a bank is using internal models or the standardized approach, accessing the right reference data is a critical requirement of their FRTB response. High-quality and complete instrument reference data allows banks to accurately classify instruments with the regulatory framework. There may be exposures today that haven’t been accurately classified under the Basel 2.5 framework, and in some circumstances, under FRTB; failure to address these gaps could lead to increases in capital requirements.

---

**Over a longer time horizon, banks may need to make difficult decisions relating to their business.**

---

Finally, one of the largest challenges for banks in FRTB is the introduction of the NMRF (Non-Modellable Risk Factor) requirements, a new test being introduced in order to determine whether the risk can be modeled with sufficient reliability. The new requirements specify that those banks using internal models must pass the NMRF test if they want the ability to calculate their capital based on an Expected Shortfall (ES) calculation and avoid the typically more punitive stressed capital add-on requirements. For this compliance test, banks are required to determine whether they have continuously available “real” prices for a sufficient set of representative transactions. In essence, this means that banks are required to collect executed trade and committed quote data for the purposes of determining whether they meet this regulatory requirement to have at least 24 observations per year with a maximum period of one-month between two consecutive observations.



The requirement to conduct the NMRF test creates two challenges for banks. Firstly, many of the markets they operate in are not fully transparent. This means that for many OTC markets, executed trade and committed quote data may not be readily available and hence there is a material challenge to source the data. Secondly, even once the data has been sourced, it needs to be organized and processed. Banks haven't had the need to collect and aggregate this type of data before and hence don't have the processes and systems in place to do this today. They will need to organize the data into a consistent set of data models; from here they can then map the data into risk factors and determine whether they pass or fail. In many cases, internally managing these data demands would require large investments in data, technology and people which may not be affordable for many smaller banks who are now looking at external vendors for solutions to reduce complexity and compliance costs.

### How are banks responding?

Banks are responding to FRTB through a number of planning exercises at the moment. Actions typically include participating in Quantitative Impact Study (QIS) and industry working groups as well as undertaking proof of concepts (PoCs).

Some of the more advanced banks have started their implementation phase through either undertaking request for proposals (RFPs) or implementing new systems.

Over a longer time horizon, banks may need to make difficult decisions relating to their business. In particular, in order to pass the necessary compliance tests, they may need to redesign parts of the business such as changing their desk structures and locations of teams. These changes may allow them to pass the P&L attribution, backtesting and NMRF requirements. For those parts

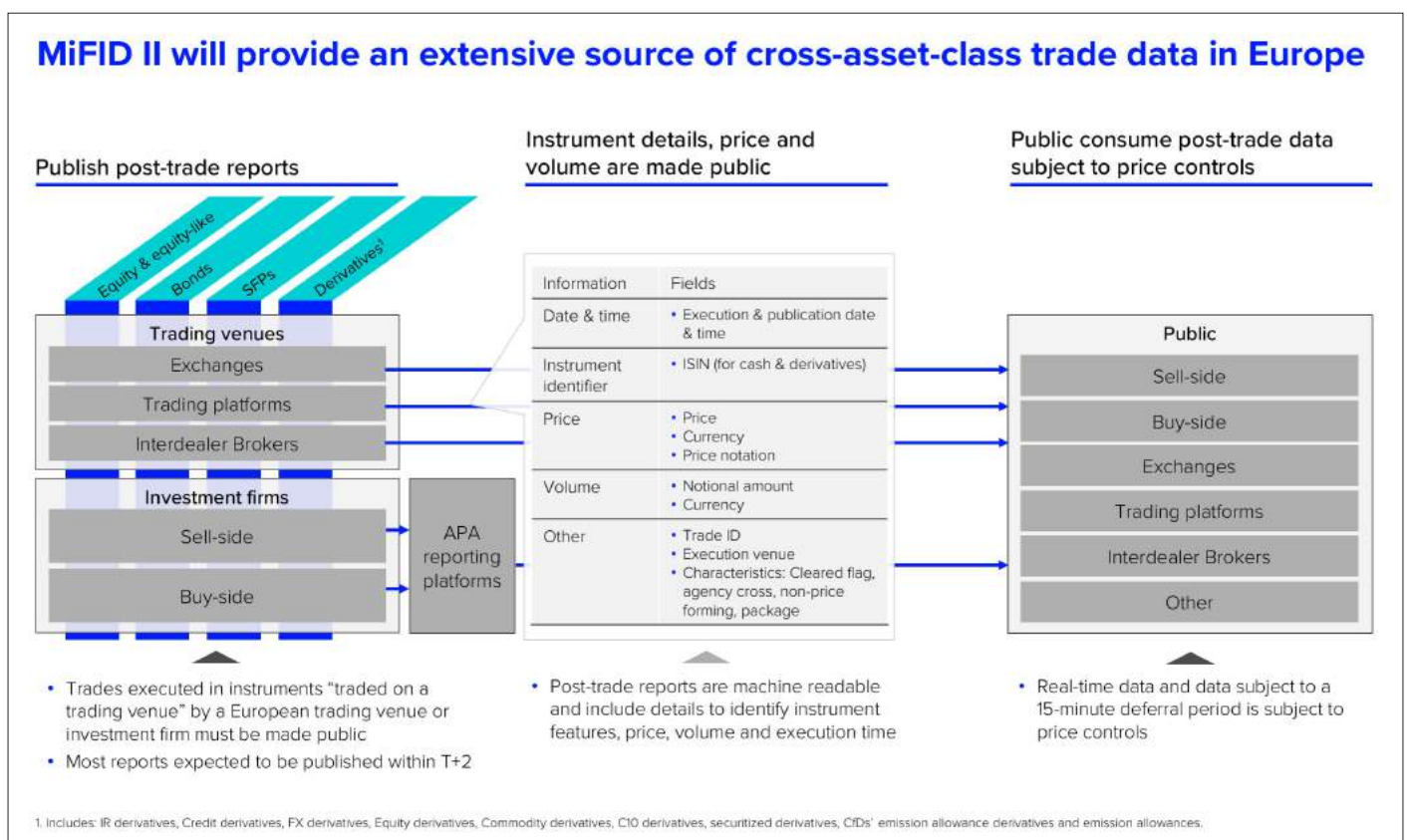
of the business less fortunate and cannot be capitalized under Expected Shortfall (ES), banks may need to consider whether it remains attractive to trade in these markets. Potential industry responses could include a repricing or a withdrawal of liquidity.

**At a high level, the regulation seeks to move trading onto more structured and transparent venues, enhance investor protection and reduce conflicts of interest.**

### Synergy with MiFID II

Another aspect for banks to consider when coping with FRTB is the synergies it will have with the upcoming European Union legislation, the Markets in Financial Instruments Directive 2 (MiFID II). MiFID II is a cornerstone of post-crisis regulation in Europe designed to address a wide range of conduct issues in capital markets. At a high level, the regulation seeks to move trading onto more structured and transparent venues, enhance investor protection and reduce conflicts of interest. This highly material regulation comes into effect in January 2018, prior to FRTB.

While the regulation is wide ranging, its relevance to FRTB is specific to the post-trade transparency obligations. MiFID II mandates that trading platforms as well as buy- and sell-side firms have obligations to publish details of trades that they execute. This obligation applies to a significant proportion of trading that





takes place in Europe. The obligations cover cash and derivatives across all asset classes, subject to an exception for spot FX markets. Both liquid and illiquid instruments are subject to the obligations, but the latter benefits from deferred publication to mitigate the negative impacts that those putting capital at risk may experience. It is this extensive source of information that could be used as a source of “real” price data under FRTB.

Despite the significant benefits that MiFID II post-trade data should bring in determining the NMRF requirements, there are a number of challenges that need to be addressed.

Firstly, the data models in MiFID II are not necessarily fully aligned with those proposed for use within FRTB. This means that banks seeking to use MiFID II post-trade data for their “real” price observations may need to map the data into a new data model. This can be critical for the purpose of linking executed trade data to risk factors. The work could vary from minor adjustments up to deriving certain fields.

Secondly, the way the post-trade rules are defined, it becomes the obligation of many different firms to publish post-trade

data. Each trading venue has the obligation to publish those trades that they execute and each buy- or sell-side firm must report through a new type of regulated entity called an APA (Approved Publication Arrangement). The fragmented nature of OTC markets and the likely competition between different APA providers mean that the MiFID II post-trade data will be fragmented. Firms will need a high-quality data vendor to help them access many data sources through a single set of infrastructure and connectivity.

### Changing the nature of the game

Simply put, no bank has ever before had to collect the wide-ranging type of data for this type of regulatory purpose until now. Accessing all this data and providing it in the manner required by the regulators will be a huge undertaking. Aggregating data from all the different sources banks work with will be a daunting task. Banks will need a one-stop shop they can partner with that can provide a broad range of market data, reference data and “real” price data to comply with this new regulation. Failing to do so could have a material negative impact on their business.

Visit [refinitiv.com](https://refinitiv.com)

**REFINITIV™**  
DATA IS JUST  
THE BEGINNING 