

Fundamental Review of the Trading Book

Are you covered?

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The Basel Committee for Banking Supervision's (BCBS) proposed Fundamental Review of the Trading Book (FRTB) – currently under industry consultation – aims to address the management of risk within financial firms' trading books.

Specifically, it seeks to deal with what it considers to be weaknesses in the current design of the regulatory capital framework as it relates to the trading book, by applying more rigorous qualification requirements for both the trading and banking books and for changes in the constitution of both.

The BCBS has outlined a series of proposed measures under FRTB that if implemented could force changes in the way firms approach their trading book operations, and may even lead some market participants to question their involvement in certain aspects of the business.

Indeed, the proposed changes are fundamental – potentially affecting a broad swathe of institution types and requiring significant infrastructure investment in order to comply. While industry consultation on the proposed rules is still pending, much of what's being discussed is expected to make it to the final rule-making, and that may come into effect during 2017.

Budget processes being as they are, much of the planning and building out will need to be completed during 2016, with the bulk of the heavy-lifting in terms of design and implementation taking place during the first half in order to ensure adequate testing time.

As a result, firms need to pay attention to developments around the FRTB and should start planning now for how they will organize themselves and their internal processes to achieve compliance by what appears will be a tight deadline.

This paper looks at the FRTB's key requirements, and how they will translate into processes in and around the trading book. It examines key elements of a technology platform solution that can meet the new requirements, and offers suggestions with respect to best practices for the design and build of such a platform.



Key Components of the FRTB

The BCBS's proposed Fundamental Review of the Trading Book (FRTB) is the regulator's response to perceived weaknesses in the current market risk framework – and its impact on banks' capital adequacy calculations – that emerged in the wake of the credit crisis of 2008.

Much hinges on the trading firm's intention; whether it acquires an asset either as part of a short-term market play or as a longer-term investment holding. Indeed, the proposed changes may mean that firms that currently don't consider they have a trading book actually will have one under the new definition.

By tightening the rules around what qualifies as a trading book holding – as opposed to a banking book holding – a distinction that has significant bearing on a bank's capital adequacy requirement, the BCBS hopes to make it more difficult for firms to move assets between these two books in order to optimize their capital availability. At the same time, it seeks greater diversification of risk within the trading book, a more stringent approach to liquidity horizons and the promotion of standardized risk models across the board.

The FRTB is aimed at addressing these issues with the intention of establishing a more realistic view of risk, resulting in appropriate capital adequacy provisioning, in the hopes of avoiding a repeat of 2008's credit crunch. It does this through a number of new requirements, four of which stand out as potential triggers for changes in firms' trading book processes and underlying systems.

Changes to trading book boundary

The BCBS proposes in effect to change the definition of the trading book. Under current rules, firms that buy an asset for trading purposes would typically hold that asset and its associated risk in its trading book, where it would attract an 8% capital cover requirement. But should the market move against that asset – and reduce the possibility of liquidating that asset at a profit – firms are able to transfer it to their banking books, which are designed for longer-term holdings and attract the lower, 1.6% capital cover.

This situation encourages firms to push non-performing trading book holdings to the banking book, thereby reducing the amount of required capital cover by 80%. The BCBS has concluded that this inconsistency results in trading firms inadequately assessing the risk and capital cover for what are in effect their most risky holdings.

To eliminate the temptation to arbitrage between books, the BCBS proposes

introducing strict rules around what qualifies for inclusion in the trading book. Much hinges on the trading firm's intention; whether it acquires an asset either as part of a short-term market play or as a longer-term investment holding. Indeed, the proposed changes may mean that firms that currently don't consider they have a trading book actually will have one under the new definition.

Under FRTB, trading firms will be required to determine whether positions they hold should be designated as trading book holdings and designate them accordingly. Firms wish to change the designation – and shift positions to the banking book, or vice versa – would be required to get regulatory approval.

This change is expected to have a high impact with respect to credit derivatives and securitization. Through securitization, a poorly performing bond currently can be transformed into a Triple-A rated derivative and transferred to the banking book. This proposal, which builds on measures first introduced under Basel II with respect to securitization and the trading book, would put a stop to this practice.

For some market participants – notably larger, more complex financial institutions – the preference is for proprietary models, since these are expected to yield lower capital requirements, freeing up funds for more productive investment uses.

Emphasis on the standardized model approach

Under existing rules, banks involved in proprietary trading have two choices when it comes to measuring their risk levels and applying them to capital adequacy calculation. They can work to get their proprietary risk measurement rules approved by regulators, and base their risk and regulatory capital levels on these. Or, they can take the standardized approach, adopting pre-approved models for their capital adequacy calculations.

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For the FRTB, the Basel committee has reviewed its processes around risk models and suggested some changes. Until now, regulators evaluated a bank's entire risk process in its assessment of its proprietary risk models. Where risk processes for elements of the business – perhaps specific activities, markets or geographical areas – were deemed insufficiently robust, they would be required to use standard risk models in the bank's capital adequacy calculations.

But this approach presented problems of granularity, as all banks had a mix of standard and proprietary model-based approaches. When regulators reviewed risk and capital levels across banks they were finding inconsistencies – often significant ones – with the capital requirements being calculated as a result. This situation made comparisons with their peers and competitors difficult for counterparties and investors as well.

Now, the BCBS is proposing approval of firms' proprietary models on a trading book basis rather than by institution. Firms often have different instances of their proprietary models for each trading book they maintain. And while a Tier 2 bank may have 100 different trading books, a large Tier 1 could have as many as 1,000. What's more, under FRTB firms will have to demonstrate adequate internal controls for each of their trading books. This requires firms to put in place a management structure to oversee the activities around each trading book.

Today, a bond can be hedged using an interest-rate future. By going long on the bond and short on the future, the trading desk can minimize net risk and qualify for lower capital coverage. As a risk mitigation tool, this approach works during normally functioning markets. But during a crisis – like the one in 2008 – this form of hedging is useless.

All of this points to a lot of approvals to continue using proprietary risk models for capital calculations. This places a new emphasis on the standardized approach, which all market participants will be required to show to regulators. As a result, the standard model will become the effective minimum requirement for capital calculations and most likely the default for comparison between banks' risk and capital levels. With their role as differentiator gone, proprietary models may disappear as banks' motivation for using them fades.

Introduction of new liquidity risk horizon schedule

FRTB introduces new measures of market liquidity to banks' trading books. Historically, banks have operated under the assumption that all positions within the trading book will be marked off within 10 days, typically using a 10-day Value-at-Risk (VaR) calculation to measure risk. Acknowledging that many positions aren't marked off in 10 days, the BCBS has proposed setting specific liquidity targets for each risk position. As a result, positions would be assigned various liquidity horizons, ranging as far as 20 or 30 days, or even a year.

This would add a new level of complexity to risk measurement, since each holding would be assigned a different liquidity horizon, making it more difficult to measure how each position impacts the overall risk of the trading book. It's expected that firms will shift from VaR to Expected Shortfall as a means of calculating trading book risk. Since this will involve a stress calibration, it's almost certain that the new approach will yield a higher capital level.

New parameters for risk diversification and hedging in the trading book

Under the current capital adequacy regimen, there is no way of demonstrating diversification of holdings within the trading book. On the assumption that diversification is good for any portfolio from a risk perspective – and indeed lower residual risk translates into a lower capital requirement – FRTB proposes to introduce a diversification calculation.

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BCBS is seeking to address this situation by assigning a level of risk to this form of hedged position. But more than that, any change to a hedge position will result in changes to the level of diversification within the trading book, which in turn will impact the required capital coverage. This means that firms will need to understand better their holdings and their classifications, and the impact any transaction will have on the overall diversification of the trading book.

New risk categories

As well as these major proposed rule changes, FRTB would introduce a number of other important changes. First, it would introduce new categories of risk type, including credit and default risk, to add to the existing asset-based categories (equities, commodities, etc.). This would bring the trading book's risk categories more into line with those used in the banking book.



Impact of Proposed Changes on Banks' Trading Book Practices

For many financial institutions – particularly those involved in proprietary trading or trading for their own account – the FRTB will make trading book operations more complex. In many instances, firms will require more time to decide on making investments, and for those assessing risk and capital levels, it will make it more difficult – at least in the short term – to understand the figures reported by the banks.

The proposed measures are currently in consultation, and while no specific date has been set for implementation, many market participants are assuming a 2017 introduction of the new rules.

In its March 2015 Basel III Monitoring Report, the Bank for International Settlement (BIS) outlined perhaps inconclusive preliminary results from its quantitative impact study (QIS) derived from the second consulting paper on FRTB. More telling, though, was the involvement in the QIS of some 56 Tier 1 and 11 Tier 2 banks from 19 countries, suggesting that the initiative is gaining attention, if not actual traction, among (primarily larger) market participants.

Certainly, observers suggest that risk managers have been aware of the implications of the proposed changes for some time. But that may be irrelevant. Although many risk managers may want to get involved in their banks' response to the trading book review, it should be noted that FRTB is a regulatory rather than a risk issue, and will need to be handled by the appropriate compliance or finance department representatives.

Although still in consultation, the QIS and other discussions around FRTB indicate a number of key implications for banks' trading book operations. The first of these involves the **collection of data and processing of daily calculations of regulatory capital.**

Shifting from VaR to Expected Shortfall as the basis of the regulatory capital calculation poses a number of challenges. First, the computational requirement for making this change is substantial since it will involve stress-testing by asset class, and will thus increase the need for modelling significantly. Second, back-testing in this environment is not well established, and banks may struggle

to master how to conduct it. And finally, these factors will have a major impact on the technology infrastructure needed to ensure the right data is being applied correctly to the right models.

The second implication involves **qualification for including a position in the trading book vs. the banking book**, and the process for modifying these designations. As indicated above, firms will need approval for moving holdings from one book to the other, which will restrict their ability to do so and places great emphasis on getting the designation right in the first place.

Distributing new business between trading and banking books requires a comprehensive audit trail capability. This is because all new trading book business will impact the risk profile of the overall book. To measure that impact, it's essential to understand the component risk elements on a historical basis. This applies too to the new diversification requirement.

Any audit trail capability needs to take into account the volume of trades and more widely the number of books involved. This can allow compliance staff to slice and dice the profile data as appropriate.

The third implication for trading book operations involves the new **emphasis on standard models.** The BCBS is introducing a more valuations-based assessment of portfolio risk, which will introduce a more sensitivity-based analysis than before. As such, the residual risk contained in a firm's trading book will rely in part on the valuation of its holdings, which will require a documented pricing model for all assets in the book.

Furthermore, banks will need to publish the results of their standard-model calculations for assessment by regulators and others. This points to the need for a model-management infrastructure to handle inputs into and outputs from standard models. This needs to use sophisticated tools for modelling market risk, and must be cheap and easy to maintain, not least because the flat capital reduction from standard models means there is no potential capital upside for banks using them.

Fourth, market participants will need to be able to **manage portfolios with multiple liquidity risk horizons**. Once again, this poses logistical challenges. For a start, the multiple calculations required are difficult both computationally and due to the lack of data to input. It's also hard to maintain consistency across these multiple liquidity horizons.

Finally, practitioners will need the ability to **calculate risk levels in a diversified/hedged portfolio**. This points to the need for a flexible engine for on-demand risk calculation. One complication here is that the calculation won't be a pure risk calculation, but will have to take into account regulatory requirements to meet the legal obligations. Furthermore, since this is a legal issue, the users of the system will not be risk managers but rather will be part of the bank's finance or regulatory compliance team.

Indeed, some banks are considering whether this will require the establishment of an independent internal risk control unit that operates outside of the risk and trading functions and uses its own models and risk calculation infrastructure. Pending future modifications of the proposed regulation following the latest QIS, banks need to explore whether they will need to take this approach.

In terms of capabilities, the system needs to take into account the scale and new complexity of the trading book and any



associated banking book. It's no longer acceptable to split a regulated position between the two books. And of course the system must be able to assign a risk value to a hedged position, and in the context of the diversification profile of the portfolio.

Finally, FRTB will require a more proactive management of market risk collateral and a regulatory reporting platform robust enough to handle the granularity and demanding timeframes of the new rules.

Although it's clear to many in the marketplace that FRTB will add complexity and cost to existing trading book operations, many questions remain unanswered. Perhaps chief among them will be whether – as they delve into the implications for their own specific situations – it remains economic to continue in key business activities in light of the new investments needed to keep them in compliance.

While the regulation hasn't been finalized as yet, banks should be evaluating how they will be impacted based on existing proposals. Infrastructure will play an important role in ensuring compliance with the eventual regulation, whether or not the bank decides it needs to establish an independent risk control unit to meet the new requirements.

Conclusions

Ironically, the regulators' drive to simplify may in fact introduce new levels of complexity. Larger, more complex banks are unlikely to forego their proprietary models at the drop of a hat, and thus the marketplace is likely to see a parallel operation of both internal and standardized models for risk calculation among many Tier 1 institutions.

While the regulation hasn't been finalized as yet, banks should be evaluating how they will be impacted based on existing proposals. Infrastructure will play an important role in ensuring compliance with the eventual regulation, whether or not the bank decides it needs to establish an independent risk control unit to meet the new requirements.

There is also the additional consideration of the ongoing BCBS 239 enterprise risk aggregation initiative, which like FRTB requires banks to respond rapidly and accurately to regulators' enquiries, whether they are scheduled or on an ad hoc basis. This will require a high degree of flexibility from the bank's chosen infrastructure for meeting its risk and regulatory capital calculation obligations.

To ensure they are optimizing their use of capital under the new rules, banks will need to identify all asset classes and trading desks that contribute to the capital charge. All

affected portfolios need to be analyzed and optimized according to capital parameters.

All of these changes point to the need for a consistent underlying data and IT structure to support this ongoing requirement. Banks will need to work with technology and implementation partners that have the required expertise as well as their systems knowhow. And all of this needs to be achieved at a reasonable cost.

This latter consideration may hold the answer to whether market participants will remain in the marketplace or decide to withdraw, having decided that the new rules are too onerous and compliance too difficult and expensive.

This underscores the need to select the right technology supplier, with the appropriate mix and level of regulatory, risk and technology expertise, and market-leading risk and regulatory calculation capability.

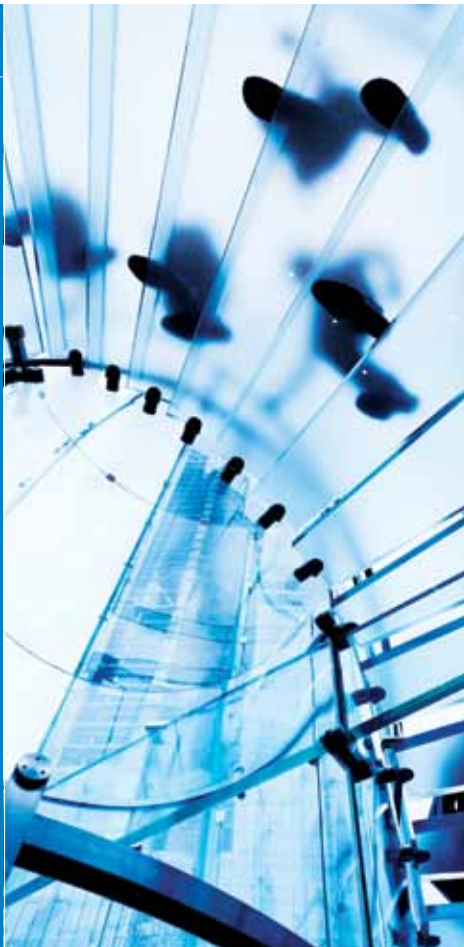


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