Fundamental Review of the FRTB comments
On the 22nd of March 2018, the Basel Committee on Banking Supervision (BCBS) published its consultative document (CD) on the proposed revisions to the new market risk framework, *Fundamental Review of the Trading Book* (FRTB). The BCBS invited interested parties to provide comments on the suggested proposals in the CD by 20th June 2018.

As published on the BIS website, 42 parties (comprising organisations and individuals) responded to the BCBS’ invitation for comments.

As the anticipated release of the final FRTB standard is fast approaching, this paper reviews the comments submitted by these parties with the view to highlight the key areas of concern raised by the industry participants on the revisions proposed by the committee. This review should enable quick analysis of whether these key areas have been addressed in the final standard once it is published.

**SUMMARY OF PROPOSALS IN THE CONSULTATIVE DOCUMENT**

According to the BCBS, the revisions detailed in the CD are designed to address issues identified as part of the ongoing monitoring of the January 2016 FRTB standards.

The impact of these revisions is varied – whereas the proposed changes to RWAs used in the Standardised Approach (SA) will lead to a reduction in capital allocation, the introduction of strict market data principles to determine modellability of a risk factor will inevitably lead to more capital add-ons under the Internal Models Approach (IMA) as more risk factors are deemed to be non-modellable.

The impact of the proposed revisions across the key areas of the standards are discussed below:

**A. Standardised Approach:** The highlights of the proposed revisions to the Standardised Approach include the following:

i. The recognition of a currency pair as liquid if it can be formed from the combination of any two currency pairs which are in the current list of liquid currency pairs as defined in the FRTB standards. This new currency pair can thus be allocated lower risk weights.

ii. Modifications to the curvature risk measurement to ensure a) application of consistent shock scenarios to risk factors within the same bucket and b) application of a floor to the formulae used to calculate the aggregate curvature risk capital.

iii. Reduction of risk weights for the following risk classes: Interest rate, Equity and FX.

**B. Internal Models Approach:** Proposed revisions under the IMA address key elements of the Profit and Loss Attribution (PLA) test and provide a set of principles to determine whether a risk factor can be included in the Expected Shortfall (ES) model or should be subject to Non-Modellable Risk Factor (NMRF) charge. With regards to the PLA test, the committee proposes the following:

i. Alignment of the market data input used to calculate the Hypothetical P&L (HPL) and Risk-theoretical P&L (RTPL)

ii. PLA test frequency to be updated to quarterly and will use the preceding 12-months data sample.

iii. The introduction of two new metrics: Spearman Rank correlation coefficient, to measure the correlation between the HPL and RTPL; and a choice of either Kolmogorov-Smirnov (KS) or Chi-squared test, to assess the similarity between the distribution of the HPL and RTPL data.

iv. The introduction of the “modified traffic light” approach to smooth the transition of a trading desk from using IMA to SA to calculate its capital requirement. This minimises the volatility in capital allocation.

In addition to revisions made to the PLA test, the committee also outlined a set of principles to govern the selection of market data used to calibrate internal models and forms part of the NMRF framework. The committee also welcomed comments on the effect of seasonality on the NMRF framework as well as comments on whether the current treatment of idiosyncratic equity risk results in high capital charges for equity risk NMRF.

Furthermore, a choice of alternative bucketing options is proposed for risk factors that represent a point on a curve or surface to meet the Risk Factor Eligibility test (RFET) requirement. Alternative 1 provides banks with the flexibility to define the buckets for risk factors with the condition that buckets must not overlap while alternative 2 stipulates the use of standard buckets defined by the committee.

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1. Revisions to the minimum capital requirements for market risk: https://www.bis.org/bcbs/publ/d436.htm
2. https://www.bis.org/bcbs/publ/comments/d436/overview.htm
3. Minimum capital requirements for market risk: https://www.bis.org/bcbs/publ/d352.htm
ANALYSIS OF COMMENTS RECEIVED FROM INDUSTRY PARTICIPANTS

OVERVIEW

The responses of 41 parties were reviewed to understand the key areas of concern of industry participants to the revisions proposed by the committee. It was observed that the views expressed by each party strongly reflected the nature of the business undertaken as well as the geographical location and size of the market in which they operate.

Figure 1 (right) shows the breakdown of the respondents by sector while figure 2 shows the breakdown of the areas of interest addressed by each respondent type.

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FOCUS AREA BY RESPONDENT TYPE

Of the 42 parties listed on the BIS website, only 41 submissions were relevant for this work.

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Table 1 above shows the heat map of comments generated for each respondent reviewed. This figure was produced by mapping the commentary provided by each respondent to the relevant section of the CD. It is clear from Table 1 that the revisions proposed for the Internal Models Approach generated the most interest from respondents.

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<th>INTERNAL MODELS APPROACH</th>
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Table 1: Heat Map of Respondents’ Comments Against the Elements of the CD
Specifically, 71% of the respondents expressed either an opinion or provided recommendations on the suggested revisions to the IMA. On an aggregated-comment basis, comments related to the proposals on the IMA constitute about 57% of the total number of comments reviewed (see figure 3. right). The focus on the IMA is not surprising given the open questions regarding the impact of seasonality and idiosyncratic equity risk on NMRF as well as the stringent market data requirements to establish risk factor modellability.

KEY TAKEAWAYS

STANDARDISED APPROACH

The aim of the committee’s proposals is to ensure that the overall level of capital requirements resulting from the use of the revised Standardised Approach is commensurate with the actual risk. The views expressed by respondents to each of the elements are considered below.

REVISIONS TO LIQUID FX PAIR

All the respondents who addressed this issue welcomed the revisions proposed by the committee. However, 40% of these respondents further suggested modifications which they believe will make the revisions more robust. Examples of suggestions offered include:

- The need for the committee to make the application of the new treatment mandatory rather than discretionary to foster comparability of capital requirements among banks.
- Request for the generalisation of liquid FX pair via triangulation to Polygon.
- Suggestion to define a list of liquid currencies instead of currency pairs. This is expected to broaden the scope of applicability of the first order crosses.
- Recommendation to the committee to recognise as liquid, FX pairs that are easily traded or widely used in a particular jurisdiction or market.

REVISIONS TO CORRELATION SCENARIOS

Some 73% of respondents agree with the committee and believe that the proposed changes to the calculation of the low correlation scenario better captures the behaviour of basis risks in stressed market conditions.

However, the remaining 27% of respondents are not convinced. One of the issues raised concerns the prescribed correlation coefficients in the January 2016 Standards which was determined based on an impact study of primarily European financial institutions.

Some respondents argued that these correlation coefficients do not necessarily capture the relationship between risk factors in other jurisdictions. As a result, the suggestion is for the local regulators to be allowed to set the applicable level of correlations for their market.

REVISIONS TO REQUIREMENTS FOR NON-LINEAR INSTRUMENTS

Respondents were largely in support of the committee’s proposal for consistency in the application of shock scenarios to risk factors in the same bucket as well as the introduction of a floor to the formulae used to calculate aggregate curvature risk to prevent observed cliff effects in certain trading book portfolios.

However, with regards to FX curvature risk, 67% of the respondents disagreed with the committee’s proposals and prioritised the issue of asymmetry in FX capital charge calculation over the potential FX double-counting issue raised in the CD.

The consensus opinion was that banks should be allowed to calculate FX curvature capital in a currency other than its reporting currency and for this exposure to be converted, using the prevailing spot rate, to the bank’s reporting currency. This approach is expected to create a level playing field in the FX market and reduce RWA variability among banks.
REVISIONS TO RISK WEIGHTS

The proposed reduction to the risk weights of the General Interest Rate risk (GIRR), Equity risk and FX risk classes was welcomed by all respondents. However, 65% of respondents believe that the reductions should be extended to cover the Credit Spread Risk (non-securitisation) risk weight. Figure 4 (right) summarises the views expressed by respondents to the proposed revisions to the Standardised Approach.

INTERNAL MODELS APPROACH

The Committee's proposals in the IMA section of the CD were designed to provide additional clarity on elements of the IMA proposed in the January 2016 standards to facilitate its effective implementation. The clarifications covered the PLA test (input data alignment, test frequency & new test metrics and test failure consequence), Risk Factor modellability requirements and Market Data principle for internal model calibrations. The comments from respondents on each of the issues is reviewed below.

PLA TEST METRIC

The committee's proposal for the test frequency to be updated to quarterly and be based on 12 months of time series data was warmly received by respondents. However, on the newly proposed PLA test metrics, particularly the choice between Kolmogorov-Smirnov (KS) and Chi-squared tests, opinions were split.

Only 29% of the respondents indicated their preferred choice of metric with the majority, 59%, expressing no preference. The view expressed by this group is that metric selection should be based on the performance of each metric after being subjected to rigorous testing using real portfolio data.

The remaining 12% suggested the use of alternative tests such as Anderson-Darling and Cramer-Von Mise or proposed a different approach for PLA testing. Figure 5 below summarises the opinions expressed by the respondents.

OPINION ON PLA TEST METRIC

Respondents also expressed concerns about the thresholds proposed by the committee. The prevailing view is that a monitoring period is required to calibrate the thresholds and must be done using real portfolio data.

In addition, respondents suggested the need to ensure that the “Amber zone” is sufficiently widened to prevent capital volatility for trading desks.

PLA TEST FAILURE CONSEQUENCE

Respondents welcomed the committee's proposed traffic light approach to classify trading desks based on their PLA test performance.

It is the general view among respondents that the committee takes steps to make the transition between zones symmetrical – a desk should be allowed to switch from Red to Amber to Green like how desks in the Green zone can switch from Green to Amber to Red. Furthermore, respondents called on the Committee to set a cap on the capital requirements for desks in the Amber zone at the level of the capital requirement calculated using the Standardised Approach.
RISK FACTOR MODELLABILITY – REAL PRICE BUCKETING PROPOSAL

The committee proposed two alternatives for establishing buckets for real price observations. The first alternative (Alternative 1) gives banks the flexibility to define non-overlapping buckets for risk factors. The second alternative (Alternative 2) requires the use of pre-defined buckets for risk factors. The popular choice among respondents is Alternative 2 with 61% of respondents indicating Alternative 2 as the better option citing that it will promote consistency across the industry.

However, this group also requested for modifications to be made to Alternative 2 to account for the unique aspects of different markets. Figure 6 (right) shows the breakdown of the split in opinions expressed by respondents.

NON MODELLABLE RISK FACTORS (NMRF) FRAMEWORK AND SEASONALITY

The committee’s invitation for comments on the effect of seasonality on the NMRF framework was met with great interest.

A key requirement to determine the modellability of a risk factor is the Risk Factor Eligibility Test (RFET). The RFET stipulates that a risk factor can be included in the Internal model if there are at least 24 real price observations over a 12-month period and no more than one-month gap (30 days) between any 2 observations.

Respondents believe that the RFET requirement, particularly the 30-day gap between observations, is too strict and ignores the effect of seasonality in the market. It is the view of all respondents that the 30-day gap rule should be relaxed, and the following suggestions were offered:

- Allow for 3 observations during a 90-day period and retain the 24 observations per year
- Require that the weighted average gap between observations is less than 30 days
- Link the maximum gap between observations to the longer of the liquidity horizon for each risk factor or a month.

It is the view of respondents that any one of these suggestions will address the effect of seasonality without weakening the modellability test.

REVISIONS TO THE SCOPE OF MARKET RISK CAPITAL REQUIREMENT

In this section of the CD, the committee proposes a revision to the treatment of structural FX positions and sought to tighten the boundary definition between trading and banking books to address identified shortcomings which allowed banks to engage in regulatory capital arbitrage between both books.

TREATMENT OF STRUCTURAL FX

The committee proposes that the amount of structural FX position that can be excluded from market risk capital requirement must be measured based on the FX risk stemming from an investment rather than the amount of the investment itself.

The limit on the amount of such exempted position would be the amount of the risk position that neutralises the sensitivity of the bank’s capital ratio to movements in exchange rates. Although respondents were generally supportive of this revision, they advocated for further amendments in the following areas:

- An expansion of the scope of the exclusion to include other regulatory ratios, not only the risk-based capital adequacy ratio. Examples of such ratios include insolvency ratio, leverage ratio and other regional stressed based regulatory requirements.
- Replacement of the granular supervisory approval requirement with the requirement for banks to obtain supervisory approval on the principle or framework for managing Structural FX risk. And for subsequent approval to be obtained when there is a change in the risk management approach of the bank.
BOUNDARY BETWEEN TRADING BOOK AND BANKING BOOK

The prevailing view expressed by respondents is that the current revisions guiding the classification of positions between trading or banking book is too rigid and prescriptive.

The majority of respondents advocated for ‘Trading Intent’ to be used as the basis or deciding factor to guide the allocation of trades between books.

Furthermore, whilst respondents acknowledged the need to prevent regulatory capital arbitrage, achieved by moving positions between both books, most expressed concerns on the impact of the strict requirements on Treasury’s ALM function.

The consensus opinion is that ALM transactions must be excluded from the Internal risk transfer restrictions. Finally, with regards to equity investment in funds, respondents called for a relaxation of the current requirements.

The view expressed by respondent is that banks should be allowed to assign to the trading book an equity investment in a fund if the fund satisfy the daily price requirement or look-through.

NEXT STEPS

The proposals in the consultation document provided clarification on certain key elements of the rule. For instance, the overall framework for the PLA test is now largely known and thus, industry participants can incorporate these changes into their ongoing implementation plans.

However, other proposals such as the determination of NMRFs generated many questions that need to be addressed. For example, with regards to the RFET, majority of the respondents would like to see the requirement of a minimum 30-day gap between observations relaxed and have provided the committee with alternative approaches that can be implemented.

In addition, open questions remain on issues such as the effect of seasonality and treatment of idiosyncratic equity risk on the NMRF framework. It now remains to be seen whether the committee takes on board the recommendations provided by respondents to the various issues raised in the final version of the FRTB standards.
ABOUT RISKCARE

Riskcare is a financial services consultancy and outsourcing company with offices in London, New York and Sydney.

Over the past 23 years we have built up experience and knowledge that sets us apart in delivering advanced, complex and transformational change to the capital markets industry.

We service a broad range of clients, including investment banks, institutional investment companies, hedge funds, exchanges, commodities trading houses and insurance corporations.

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