Associazione Italiana Financial Industry Risk Managers

Basel Committee on Banking Supervision

AIFIRM comments on *Consultative Document « Revisions to the minimum capital requirements for market risk » issued in March 2018 for comments by 20 June 2018*

1. Introductory Remarks

We welcome the opportunity to comment on the proposed revisions to the minimum capital requirements for market risk.

In our view, the consultative document issued by the BCBS takes significant steps to address the remaining challenges related to the implementation of the Fundamental Review of the Trading Book.

In general, we think that the extension of the implementation date and the new simplified alternative to the standardized approach represent important improvements to address outstanding issues. On the other hand, the extent of the proposed recalibration in risk weights seems to suggest a significant discrepancy between expected impacts and the data gathered so far. This could be a signal that further analysis is needed to identify a balanced and robust overall calibration, for both the standardized approach and the simplified alternative.

With reference to the internal model approach, we appreciate the effort undertaken to address outstanding issues in the context of profit&loss attribution and non-modellable risk factors, but we think that further fine-tuning is required. In particular, in the context of statistical tests for profit&loss attribution, we see the need of a monitoring period to determine an appropriate calibration of test thresholds.

2. Specific comments

2.1 Standardised approach

Revisions to the treatment of liquid FX pairs
We view as reasonable the proposal to treat currency pairs that arise as first order crosses of liquid currency pairs in the same way as liquid currency pairs. We notice, however, that the current proposal discretionally allows banks to apply the new treatment for crosses, thus softening the comparability of standardised capital requirements among banks. Therefore, given that the new treatment is fundamentally sound, we encourage the Committee to consider the possibility to make it mandatory.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 1 -

Revisions to correlation scenarios

Some risk factors are empirically observed to be consistently highly correlated in all market conditions. This might be the case, for example, of adjacent tenors on the same yield curve. We share the view that for these risk factors the "low correlations" scenario can produce correlations that are more conservative than what empirical data would support, and that this might make the outcome of the standardised approach overly conservative, or at least less meaningful than desired. The proposed revision to the "low correlations" scenario is based on a simple formula that, in our understanding, tends to reduce the difference between the "low correlations" scenario and the "medium correlations" scenario for correlation parameters higher than 0.75. In our view, the proposed change is a reasonable fix that improves, to some degree, the consistence of the "low correlations" scenario to what might happen in some stress scenarios.

Revisions to capital requirements for non-linear instruments

We notice that the revised framework for curvature risk remains strictly limited to instruments with optionality. This means that, for example, the curvature of a 30-years plain vanilla interest rate swap is not considered (see appendix 3.1 below). While this can be a reasonable simplifying rule for most portfolios, it might make sense to include linear instruments alongside instruments with optionality in calculating curvature risk.

1. The approach to apply shock scenarios

We support the Committee's proposal to revise the approach such that consistent scenarios are applied to risk factors falling in the same "bucket" for credit spread, equity and commodity risk classes.

Regarding the alternative approach of defining "sectors" as a subset of each bucket and applying consistent scenarios at that level, we can identify the following merits and drawbacks.

Merits	Drawbacks
Compared to the "consistent scenarios by bucket" approach, the "consistent scenarios by sectors" might lead to a more risk-sensitive approach and give results that are less far from internal models.	Defining "sectors" as a subset of each bucket would be a significant change of the structure of the framework, and would lead to a change in the data model for the FRTB implementation in software systems.

Defining appropriate "sectors" would require a significant effort to formulate a first consultative proposal, collect and evaluate comments, carry-out a quantitative impact assessment, etc. |

Overall, we think that the drawbacks of the introduction of "sectors" overweight the merits, and we would there recommend the "bucket-based" approach.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it

- 2 -

2. Cliff effects caused by the approach used to calculate aggregate capital requirements

We agree with the finding that the formulae used to calculate the aggregate curvature risk capital requirement can cause cliff effects under certain conditions. In our understanding, these cliff effects arise from the fact that, within the aggregation formulae, only some terms are floored at zero. While we support the proposal to modify the formulae to avoid cliff effects, we are not sure that the proposed fix fully removes them. For example, consider the following formula:

$$K_b^- = \sqrt{\max\left[0, \sum_k \max(CVR_k^-, 0)^2 + \sum_{l \neq k} \sum_k \rho_{kl} CVR_k^- CVR_l^- \psi(CVR_k^-, CVR_l^-)\right]}$$

where $\psi(CVR_k^-, CVR_l^-)$ is equal to 0 if both CVR_k^- and CVR_l^- are negative and equal to 1 in all other cases. Assuming that we are aggregating two curvature terms with opposite signs and equal absolute value, i.e. $CVR_1^- = -CVR_2^- > 0$, we have

$$\psi(CVR_1^-, CVR_2^-) = 1,$$

$$K_b^- = \sqrt{max[0, (CVR_1^-)^2 - 2\rho_{12}(CVR_1^-)^2]} = CVR_1^- \sqrt{\max(0, 1 - 2\rho_{12})}.$$

Therefore, K_b^- as a function of the correlation parameter has the behaviour shown in the graph below, that might be considered a potential source of "cliff effects" for correlation values near 0.5.

K as a function of rho
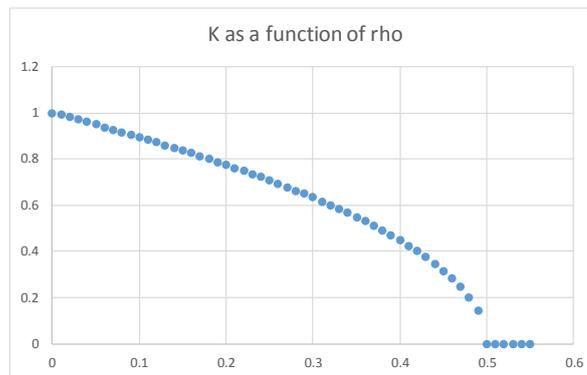
3. Potential double-counting of FX curvature risk

While we don't have empirical data to assess the materiality of the issue in real-world portfolios, we think that, even if the matter turned out to be of minor quantitative importance in most portfolios, it is a concrete issue, and encourage the Committee's effort to fix it. Given the cause of the issue, however, we are not sure that dividing by a pre-determined scalar X can result in an effective solution. Moreover, since the proposed scheme to fix the problem entails a discretion for banks, we notice that this could have drawbacks in terms of comparability of standardised capital requirements among banks. Therefore, if the Committee identifies a new treatment that it considers fundamentally sound, we encourage the Committee to consider the possibility to make it mandatory rather than discretionary.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 3 -

Revisions to risk weights

We welcome the proposal to reduce the risk weights for some risk classes based upon its monitoring of the impact of the January 2016 standard. We notice that the current risk weights ranges shown in Annex A are still rather wide, particularly for equity spot prices and equity repo rates, and we suspect that further analysis is needed before the final recalibration. While we are unable to provide specific quantitative analysis in response to this document, we encourage the Committee not only to consider impact data provided by banks and feedback provided to this consultative document, but also to perform further empirical analysis before finalising the calibration.

One specific aspect that in our view should be included in the final revision is a recalibration of the risk weights for credit spread risk for covered bonds (Delta CSR non-securitisations). The current 4.0% risk weight for this bond bucket is the second highest among the eight investment grade bond buckets and does not seem to reflect the relative stability of covered bond spreads compared to other investment grade covered bonds. For example, the covered bonds risk weight is twice the corresponding risk weight for the technology and telecommunications bucket. We therefore suggest a recalibration, that should lead to a lower risk weight for covered bonds, taking into account at least the following aspects: (i) empirical evidence on historical volatility of covered bonds spreads, (ii) empirical evidence on the correlation of covered bond spreads with systematic risk, (iii) the significantly higher recovery rates on covered bonds, which should imply a lower sensitivity of their market value to changes in risk-neutral default probabilities of the issuer.

2.2 Internal models approach

P&L attribution test

With reference to the input data for the P&L attribution test, we welcome the fact that the committee recognised that differences between the HPL (Hypothetical P&L) and the RTPL (Risk-theoretical P&L) might arise from the use of different data providers. Removing these sources of discrepancy can, however, be costly and not trivial form an operational point of view.

In our view, this makes even more important to have a smoother mechanism to handle failures in the test. The introduction of the "traffic light" approach is an important update to smooth PLA test failure consequences for trading desks whose performance is not so poor with regards to front office pricing model. A consistent alternative to a binary "pass or fail" test design is very useful to increase the possibility that a bank can make use of a single model approach (Internal or Standard) while reducing complexity and effort of implementation. Trading desks in the "amber zone" could still make use of the internal model approach and retrieve data to calibrate and enhance their model. We note, however, that it retains some "digital" effects. In particular, we suggest that a trading desk that failed the test entering the "red zone", should be allowed to return in the "amber zone" when it meets the corresponding requirements.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 4 -

Regarding the choice between the Kolmogorov-Smirnov and the Chi-squared test, we believe that a monitoring period will be necessary to determine an appropriate calibration based on real portfolios. One possible solution would be to start with a higher red zone threshold, that might be lowered at the end of the monitoring period.

Concerning Annex B, in which two alternatives are given for the definition of buckets (B.2 – Revisions to risk factor modellability), we support alternative 1, i.e. "banks must define the buckets they will use" (subject to one-to-one correspondence between buckets and risk factors used for RTPL), over alternative 2 which requires the use, at a minimum, of a set of standard buckets. As a further option we encourage the committee to consider a variant of alternative 2 with less granularity, especially for implied volatilities.

With reference to Annex C, we support the provision stating that, subject to regulatory approval, a bank may assign individual traders to up to two trading desks.

Non-modellable risk factors

We welcome the fact that the Committee is open to the revision of the treatment of idiosyncratic equity risk in the context of non-modellable risk factors, allowing the recognition of diversification benefits. A revision of this aspect would address a current shortcoming of the framework. While we are not able to provide quantitative evidence, in our view the issue is very likely to be material at least for some banks, and the amendment proposed in the text of paragraph 190 as included in Box 3 in the consultative document would be an important improvement.

2.3 Scope of market risk capital requirements

Treatment of structural FX positions

Regarding investments in consolidated subsidiaries and non-consolidated affiliates, we welcome the proposal to allow the amount of structural FX positions that may be exempted from market risk capital requirements to be measured based on FX risk stemming from an investment, rather than from the amount of the investment itself. We also welcome the clarification that structural FX positions in foreign branches of a bank can be included in the scope of the structural FX exemption.

With reference to Annex E.1, we highlight that:
- it should be possible to hedge capital ratios both with derivatives and with cash instruments;
- all FX positions should be considered in the net and structural FX position, whatever its accounting classification, irrespective of the fact that it belongs to the banking book or the trading book, and the entity within the group by which it is booked;
- in general, hedging the capital ratios from FX risk will aim at reducing, rather than eliminating, the sensitivity of the ratios to exchange rates.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 5 -

Boundary between the trading book and the banking book

With reference to equity investments in funds, we notice that the consultation paper seems to imply the exclusion from the trading book of funds, including hedge funds, for which no daily real prices are available. While we understand that there might be concerns with the inclusion in the trading book of illiquid funds for which pricing information is available only on a non-daily basis, we notice that moving these instruments to the banking book might be, in many cases, inconsistent with the way they are traded and risk managed. An alternative solution might be to allow non-look-through funds in the trading book with an additional capital charge, or - if this is not feasible - to allow trading book classification for funds that meet at least one of the following conditions: (i) daily prices or (ii) daily look through.

2.4 Simplified alternative to the standardised approach

In line with the comments we provided on the "Simplified alternative to the standardised approach to market risk capital requirements" consultative document, we welcome the proposal to allow a fairly wide range of banks to adopt a simplified approach based on the Basel II market risk framework.

Given that the adoption of the simplified alternative is subject to supervisory approval, we see a risk that different approaches taken by national supervisors can create disparities.
We therefore suggest that:
- the indicative criteria could be supplemented by a few additional criteria (e.g. trading activities should not represent the main revenue source for the bank).
- if a bank satisfies all the indicative eligibility criteria (i.e. the three criteria listed in the document and any additional criteria), the national supervisor should either allow the use of the simplified alternative or explain the specific reasons that prevent its use.

While the simplified approach should not be available to G-SIBs, it might make sense to allow subsidiaries and branches of G-SIBs with limited and unsophisticated trading activities to apply it. In this case, risk weighted assets calculated at the entity level using the simplified approach should be considered when calculating consolidated risk weighted assets at the group level.

For what concerns the capital requirements, we notice that an ample prudential margin seems to be embedded in the proposed scaling factor ranges.

While we understand that the recalibration proposed is intended to be comparable with, but slightly more conservative than, the revised "full" standardised approach, we are concerned that the multiplier range for general and specific equity risk (3.00-3.50) might be too high in comparison to the ranges for other risk classes (1.25-2.50). The large difference in multipliers seems to imply that the Basel II standardised approach strongly underweights general and specific equity risk, but we are not aware of empirical evidence supporting this conclusion.

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 6 -

3. Appendices

3.1 Curvature of IRS

According to the standard market practice, plain vanilla Interest Rate Swap (IRS) is typically priced using the so-called "multi-curve approach", where an index (or forward) yield curve (e.g. Euribor 6M yield curve) is used to calculate the floating cash flows and another discounting yield curve is used to discount future cash flows at the valuation date (e.g. EUR OIS yield curve). Hence the IRS shows a linear dependence with respect to the forward yield curve (since cash flows depends linearly on forward rates), such that only its delta sensitivity is non-null. On the other hand, the IRS shows a marginal non-linear dependence with respect to the discounting curve (since discount factors depends non-linearly on discount rates), leading to a residual non-null curvature. Such residual curvature is small but observable in long maturity IRS, as shown in the table below for a 30Y, 100mm notional IRS, where the gamma 1bp is 683 EUR (market data as of 5/23/2018).

IRS Leg 1	*IRS Leg 2*	*Valuation results*
Receive	Pay	NPV: 0.00 EUR
Notional: EUR 100 MM	Notional: EUR 100 MM	DV01: 240,484.13 EUR/1bp
Maturity: 30Y	Maturity: 30Y	Gamma: 683.07 EUR/1bp^2
Fixed rate: 1.57267%	Floating Rate: Euribor 6m	
Conventions: Annual, 30/360	Conventions: Semi Annual, ACT/360	

We notice that such gamma sensitivity may be comparable to the gamma sensitivity of a similar non-linear instrument, such as the Swaption shown in the table below (Swaption receiver 1Yx5Y strike close to ATM 100mm notional amount, gamma 1bp -507 EUR).

European Swaption		*Valuation results*
Position: short receiver	Strike: 0.68%	NPV: -726,320.48 EUR
Notional: EUR 100 MM	ATM Strike: 0.702095%	DV01: -23,811.72 EUR/1bp
Expiry: 1Y	Underlying Swap: pay fixed (Annual, 30/360), receive Euribor 6m (Semi Annual, ACT/360)	Gamma: -507.21 EUR/1bp^2
Tenor: 5Y		Vega: -19,574.52 EUR/1bp

Aifirm - Associazione Italiana Financial Industry Risk Managers
Sede Legale: Aifirm c/o F. Metelli, Albaleasing Via Sile 18, 20139 Milano
www. aifirm.it - email: segreteria@aifirm.it   - 7 -