



20 February 2015

Mr. William Coen
Secretary General
Basel Committee on Banking Supervision
Bank for International Settlements
Centralbahnplatz 2
Basel
Switzerland

Deutsche Bank AG
Winchester House
1 Great Winchester Street
London EC2N 2DB

Tel: +44 20 7545 8000

Direct Tel +44 20 7545 1903
Direct Fax +44 20 7547 4179

baselcommittee@bis.org

Dear Mr. Coen,

Deutsche Bank's (DB) response to the Basel Committee on Banking Supervision consultative document on the Fundamental Review of the Trading Book.

Deutsche Bank welcomes the opportunity to comment on the Basel Committee on Banking Supervision's (BCBS) third consultation paper (CP3) on the Fundamental Review of the Trading Book (FRTB).

We appreciate the Committee's open and constructive dialogue with the industry and welcome the introduced changes, particularly the proposal of a Sensitivity Based Approach (SBA) as a revised Standardised Approach, and the adoption of the "cascade" approach as the algorithm to incorporate liquidity risk into Internal Models. Both approaches represent concrete improvements and a steer toward the achievement of a risk sensitive, pragmatic, simple and transparent capital framework.

Nonetheless we believe that there are still areas needing further development that should be the focus of both the BCBS and the industry over the coming months. We deem the following to be of particular importance:

- 1) An appropriate calibration of the proposed set of Liquidity Horizons (LH) is needed to improve the credibility of the overall framework. The incremental capital charge stemming from the proposed framework still seems to be excessive for certain product categories as it does not reflect experience gained from severe market disruptions. The currently proposed LHs could lead to the levels of capital an institution must hold increasing by a factor of 5;
- 2) Internal risk transfer, where it is not clear to us what issue the BCBS feels cannot be effectively fixed by implementing more effective risk management practices coupled with greater transparency. We believe that the current proposal unnecessarily limits effective risk management;
- 3) In the Standardised approach, double counting issues related to securitisation products are yet to be addressed. Furthermore, the proposed treatment of vega and indices could lead to disproportionate operational burden. Finally, should the treatment of basis risk via the disallowance factor still be open for consideration, the generated charge should be not driven by volumes or result in cliff effects from small variation in portfolio risk composition; and



- 4) We believe that insufficient attention has been paid to the impact of these proposals on the real economy. The proposed treatment and calibration of capital requirements and liquidity horizons will negatively impact, amongst others, on credit spreads for both sovereigns and corporates, as well as adversely impact equity markets. We also believe that the Committee must pay considerable attention to possible negative impacts of these proposals on liquidity in markets, price discovery, and hedging that is offered to end users of financial services.

Given the importance of this review of the market risk framework, and potential impact on the economy, we suggest that an even more rigorous process to design, implement and test new proposals is needed. We would favour running further, more targeted QISs and, where possible, additional meetings between the relevant members of the BCBS and industry to ensure that improvements made in many areas of the framework are replicated throughout the revised FRTB. Many conceptual issues and implementation inconsistencies need to be resolved, in particular non-modellable- risk-factors and the appropriateness of including equities positions within the Incremental Default Risk (IDR) framework. Although we are aware of some potential pressures we believe that such a major initiative cannot be rushed and the proposed timeline to complete the FRTB by 2015 seems to us overly ambitious given its likely impact.

DB has contributed to the joint trade association response. This consultation response should be seen as a supporting document to that work. In the Annex I to this letter, we highlight some of the key concerns we have identified with the FRTB proposal. We would like to stress that the FRTB will have a considerable impact on a number of product lines with consequential impacts on the wider economy, we outline these in Annex II.

We hope you find our comments useful and we remain at your disposal for follow-up discussions.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Daniel Trinder".

Daniel Trinder
Global Head of Regulatory Policy
Deutsche Bank



Annex I : Deutsche Bank detailed comments on the proposed framework

Question 1: What are your views on the specific refinements described in the three sections of this consultative document?

Section 1: Internal Risk Transfer (IRT)

We share the Committee's intent to enhance transparency and governance around banking book (BB) and trading book (TB) interactions, in particular internal risk transfers (IRT). The Committee's differentiation between generalised interest rate risk (GIRR), and other risks, already outlines the challenges banks and the Committee face when properly measuring and managing this risk.

Many of the items discussed in the FRTB context will have a profound impact on the Committee's enhanced prudential framework for Interest Rate Risk in the Banking Book (IRRBB). We therefore strongly suggest aligning the FRTB and IRRBB effort, as both approaches advocate increasing transparency around BB risk sources, and the mitigation of any arbitrage potential between TB and BB.

In addition, we would like to understand what shortcoming the Committee feels cannot be properly addressed through well-established risk management functions and documentation. Specifically, we would welcome clarification on the following issues:

- IRT option 1 – further clarification about the external risk hedging requirements. Where there are direct relations between an IRT and associated external hedges, we propose allowing any market participant to act as an eligible third-party protection provider. This would ensure that all eligible IRT transactions are direct offsets of the internal transactions;
- Depending on a potential definition of eligible hedges for option 1 and 2, exact matches of volume, tenor, and conditions for internal and external transactions are not deemed to be possible. Therefore we suggest a wider definition of eligible hedge transactions given the nature and the size of many interest rate risk hedges, and the ability to manage this more effectively through a macro-hedging programme; and
- Additionally the CP states that the TB needs to engage in a derivative transaction. While the IRT options generally require restrictions, the restrictions themselves should be outcome focused and not limit the instrument types to be used for hedging purposes.

The proposed options for, and restrictions to, internal risk transfers, will have significant consequences to the internal set-up, costs and risk positions as well as bank capital requirements. The precise impact for firms will depend on their funding and interest rate risk management approaches. We believe that the following are some of the unwanted consequences that could result from the current calibration of the IRT requirements:

- In order to minimise capital charges in the TB, banks could centrally match risk positions within the BB and only transfer identified risks to the eligible TB which has an external hedge already available. Consequently this could lead to the effect that risks are not managed where they can be managed actively but where capital charges can be minimised. Furthermore the BB could be forced to keep risks which are not in the BB's interest;



- Not allowing for internal risk diversification would synthetically increase market flows as all BB related hedge transactions would need to be offset versus the market. This would increase costs, feeding through to impact pricing and product offerings, to BB clients (for example fixed rate mortgages and corporate financing). Furthermore, this option has the unintended consequence of increasing credit risk and thereby RWA and the leverage ratio; and
- Capital requirements will increase as any risk mismatch of TB and BB transactions will trigger capital charges under the TB. Currently, the overall position is measured after internal offsets and diversification. As a result banks could be charged for risks which are offset within the TB environment and therefore do not exist from an economic perspective.

Based on our analysis of the proposals, we believe that both options will have a strongly negative impact on institutions' ability to manage risks effectively. We think option 2 is less severe as it allows the aggregation of Banking Book risks in a segregated Trading Book; therefore we based our suggestion on GIRR IRT on this option 2.

Recommendation

Although we prefer option 2, we suggest refining it to address the concerns delineated above. IRT-transactions should be executed with IRT-eligible TB-desks. The IRT must be documented with respect to the banking book interest rate risk being hedged, and the sources of such risk. This should be based on the work of the Committee's Task Force on Interest Rate Risk in the Banking Book. IRT-transaction seen from the TB view is recognised in the TB market risk framework, together with the other TB transactions. IRT transaction seen from the BB view is recognised in the BB prudential framework, which is currently outlined in the work on IRRBB. IRT eligible desks should perform special duties to fulfil required governance details. Specific governance will be required around risk management techniques, products, risk limits and policies and controls. This would ensure risks are appropriately managed on an ongoing basis.

Interest rate risks occur in many aspects of banking. Scalability of interest rate risks as well as simple aggregation of fixed rate payer and fixed rate receiver positions allows banks to effectively manage those risks across the whole institution. While we agree that enhanced governance and a prudential risk framework is required (as part of the IRRBB work) we strongly suggest minimising any risk management fragmentation, which will only lead to synthetically created counterparty risks and flows, impairs effective risk management and unnecessarily increases costs.

Section 2: The revised standardised approach for market risk

2.1 Treatment of basis risk

We recognise the improvements made to the treatment of basis risk. The dropping of the trade-level disallowance method from following the results of the Q3 2014 QIS, where it was evident that the standardised approach charge would be driven by the number of transactions and was not risk-sensitive, is key.

Correlation scaling is a positive enhancement to better capture basis risk, especially in conjunction with refined risk factors. A fundamental improvement occurs as a result of the concept of accounting for basis risk between the net risk, across instruments, at risk factor



level rather than by charging the gross positive and negative risk across instruments, unless identical contractual terms are identified. Furthermore the nature of correlation scaling should overcome cliff effects compared to the trade-level disallowance method.

Regarding Basis Risk and the application of correlation scaling, we would like to highlight that despite the positive attributes described above, the approach is yet to be tested. Ahead of testing, it is important that a methodological flaw in the correlation scaling method, which can potentially lead to an unrealistically large charge for well-hedged basis positions in the presence of an asymmetric correlation structure, is resolved.

2.2 Risk Factor Refinement

2.2.A General remarks

We welcome the risk factor refinements incorporated in the latest consultation. We are particularly pleased with the departure from treating basis risk using disallowance on positive and negative gross sensitivities from trade level. This section is now a more coherent and market practice aligned risk representation based on netted sensitivities at the risk factor level. Such improvements need to be seen alongside concerns around comparability and simplicity, especially in the computation of vega risk and treatment of Indices, (discussed below). Additional clarification is required in relation to specific asset classes, especially FX, Commodities and Equities.

2.2.B Open concerns - Double counting and operational complexity

With the treatment of FX risk, the Committee reintroduces the tenor dimension concept which seems to be designed to cope with the capitalisation of cross currency products. However cross currency risk is already captured under the GIRR refined risk factor approach; hence following both this refinement and changes to the FX treatment, the final capital charge for cross currency products will be double counted.

The Commodity asset class CP3 defines risk factors under the following dimensions:

- commodity type
- grade
- delivery location
- in addition in the paragraph 77 of the Annex 1 other two dimensions are mentioned:
- “maturity difference over six months”
- index constituents/single name

Under CP3 all the above dimensions need to be considered under correlation scaling in order to capture basis risk. With respect the “maturity difference” refinement, grater clarifications are required. If “contractual maturity” is meant when the Committee talks just about “maturity,” then the inclusion in correlation scaling approach would mean a disproportionate increase in computational requirements. In addition the refinement required to capture Index basis will also bring operational challenges and will introduce a charge to positions that by construction are flat risk. In commodities, for investible index/ETF products banks that are authorised participants trade with ETF issuers at NAV (net asset value) and in addition the value of a commodity Index is replicable by its future components.

For Equities, CP3 proposes defining the equity risk factor under one dimension while recognising basis risk across Equity spot, dividend forecast and repo risk. Conceptual issues



arise with Repo risk and dividend risk as they are treated as basis to equity spot. Repo rates are adjustments to the interest rate between lending/borrowing cash and lending/borrowing equity securities, therefore the associated sensitivity (similar to an interest rate sensitivity) cannot be related to equity price sensitivity and treated as respective basis in the same way the Bank would treat the basis between CS01 deriving from Bond and CDS. A similar conceptual issue arises for the Dividend forecast sensitivity.

2.2.C Open concerns - Operational complexity for treatment of Vega

Regarding the treatment of Vega, CP3 proposes further refinement to account for Vega moneyiness defined as the ratio between spot and strike. We would like to highlight that such treatment may not be common across asset classes, where moneyiness may be defined as the ratio between forward and strike. Furthermore we observe that the strict requirement of vega risk representation in terms of implied volatility Sticky Delta, especially across moneyiness, increases the implementation complexity of the overall framework as it may depart from the sensitivity risk reports currently produced and monitored effectively by banks.

Recommendations

FX

Following the above mentioned concerns, we suggest considering the capitalisation of cross currency basis only via GIRR risk factor refinements and to keep the FX risk factor without its maturity dimension to avoid double counting and to align the risk representation to market practice, where FX risk is generally intended only in relation to FX spot sensitivity.

Commodities

We propose that the commodity risk factor should be defined under a two dimension commodity forward curve type tenor vertex (like in the GIRR and CSR case) potentially split across 3 tenor buckets (<1Y, >1Y and <5Y, >5Y).

Basis risk should be recognised between same commodity type but different grade and delivery location and index constituents/single name refinement should be dropped.

Equities

Further clarity should be provided around how dividend forecast and repo risk sensitivities are defined, as different banks may model dividend and repo sensitivities in different ways (dividend yield sensitivity rather than cash dividend sensitivity). It is also important to assess the proposal via an impact assessment considering the repo rate and dividend as separate risk factors rather than a basis of the equity spot prices.

Treatment of Vega

The framework would benefit from allowing more flexibility when deciding which moneyiness reference to use, reducing implementation complexity, and maintaining established market risk best practise.

2.3 Treatment of Indices

We welcome the look through approach for treatment of linear products and in the context of delta risk. However, conceptual and operational challenges arise when the approach is applied to Index options, in particular by calculating vega and curvature index decomposition. Index vega decomposition doesn't reflect market practice, since long index options are



generally hedged with short index options. Furthermore, since options on indices are modelled directly on the index itself, application of curvature risk charge would introduce operational challenges. Instead, each constituent should be shocked, requiring a complete rebooking of the transaction under a different modelling setting that permits a revaluation, leading to elevated operational costs.

Recommendation

For options on Indices, a look through approach should be considered preferential, but not mandatory, for the calculation of vega and curvature risk. A fall back solution, in addition to the decomposition approach, should be provided as per the last QIS where the index is considered as a risk factor on its own. Greater clarity is also required when considering the capitalisation of basket options and of each basket constituents.

2.4. Securitisation

The proposed treatment for securitisation under Standardised Approach consists in the simple sum of credit spread risk charge (CSR) and default risk charge with risk weights based on banking book charge (at the 1 year maturity). While the move to a 1 year maturity in the latest consultation is a material improvement, this process can still potentially lead to double counting given the stressed level of shocks assigned to the CSR as well as the severely constrained portfolio diversification benefit under the standardised approach. An improved level of granularity of the risk buckets (both along credit grade and asset type dimensions) can also help improve the accuracy and reduce the punitive nature of the calculation. Conceptual improvements in the regulatory banking book (including the incorporation of the concept of simple transparent securitisations) should also be considered. Given the considerations above the Bank would welcome further improvement and remediation actions from the Committee for securitisation products capitalisation

Section 3: Internal Models

3.1 Liquidity Horizons (LH)

3.1.A General remarks

We welcome the incremental improvements in this area introduced by CP3. However we would like to highlight the excessive layer of conservatism stemming from the steepness of the proposed LH curve and “cliff effects”. We believe that the Committee should mitigate such concerns by:

- Flattening the LH curve;
- Reducing the gap between LH buckets; and
- Reducing the number of LH classes.

3.1.B Analysis of amendments introduced by CP3

- Scaling Approach

We appreciate that CP3 has addressed the drawbacks of applying long-horizon shocks of differing duration to compute portfolio P&L. Separately to the data challenge, e.g. sample size becoming very small for risk factors considered illiquid, the proposal put forward in CP2 would have had the combined effect of:



- Disregarding empirically observed correlations between risk factors;
- Having a more volatile capital level depending on the chosen time-window used to calibrate SVaR; and
- Introducing potential arbitrage opportunities while re-pricing trades under market shocks which may have been very far from the current market conditions.

The alternative proposed in CP3, the “cascade approach”, essentially preserves short horizons correlations across risk factors, captures cross terms and carries the interpretation of horizons P&L since they are just scaled from consistent short horizons P&L (e.g 10 days).

Although we still have some concerns with the revised proposal, this is a welcome step in the right direction, striking a good balance between comparability and risk sensitivity.

- “Broken hedges”

We welcome the fact that the Committee addressed one of the key methodological drawbacks through QIS Q3 2014, “broken hedges.” A capital charge that would have increased more for fully hedged strategies than for directional positions using the same set of underlying LH would have been inconsistent and unjustified.

The proposed solution enabling the use of LHs as a floor is a simple and pragmatic solution. However, it is not yet a risk sensitive measure since the same risk factor could be allocated to different LH buckets depending on whether it is meant to model a directional position or a hedge.

- Reduction of length of LHs for key interest rates and FX Currency pairs

We recognise that the LHs are meant to reflect a time window of highly stressed market conditions and that pragmatism requires broad categorisation. Under CP2 the LHs were too long for the risk factor categories; even in crisis scenarios. This view is reaffirmed by experience showing that a number of interest rate and FX markets have proven to be highly liquid during stressed times.

An appropriate calibration of the LH framework is a fundamental requirement to enhance the overall credibility of the framework. We recognise that the refinements introduced within CP3 represent a step in the right direction but it is a paramount that the following remaining material concerns are resolved.

3.1.C Open concerns

- De-risking profile

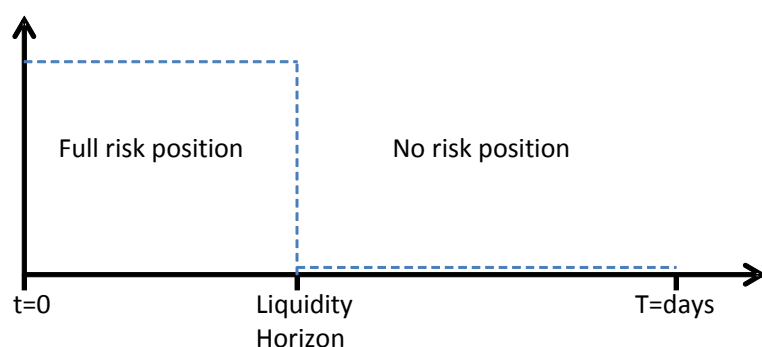
We appreciate that it is practically impossible to define a single liquidation strategy that will be appropriate and applied regardless of the specifics of the different market and stress conditions. We therefore welcome the fact that the Committee has maintained, within the definition of LH, the assumption that banks are able to derisk only at the end of the LH. Although not perfect, it has several advantages such as ease of implementation and increased transparency.

Nevertheless, during the calibration phase, we would appreciate the Committee bearing in mind that the current assumption embedded within the model does not reflect the dynamic nature of the current risk management frameworks in place across the industry.



Contrary to the Committee's approach (illustrated in Figure 1), de-risking strategies rarely show such a simple profile. Instead risk roll-off profiles may deviate for various reasons. Some de-risking might be effective within the LH, particularly where the bank takes a defensive position by, for example, over hedging.

Figure 1: BCBS proposed approach to modelling the risk profile during severe market disruption: full risk position until LH, followed by complete risk roll-off (a “Risk-on/risk-off” profile)



We acknowledge that a model assumption of a “risk on/risk off profile” as per Figure 1 is simplified. Potential variations to modelling the shape of risk profiles will serve to increase the complexity of the framework:

- Introducing further model parameters to mimic more complex profiles would require their justification and calibration. In certain cases, due to lack of empirical evidence, practical experience, further model parameters regarding the shape of potential risk roll-off profiles could not be robustly calibrated; and
- The effect of introducing further model parameters is equivalent to varying the LH within the simple “risk on/risk off” model approach. From the experience of our Pillar II methods, where we have analysed the potential impact of using different liquidation strategies the results have shown that in comparison to more realistic alternatives the “risk-on risk-off” liquidation profile remains conservative.

In essence, the proposed method provides the most pragmatic way to recognise the dynamic nature of banks’ trading portfolios while keeping the transparency of the calculations and risk assessment capability. That said it is important to bear in mind the extra layer of conservatism embedded into the proposed framework.

Recommendation

We suggest reducing the steepness of the proposed LH to incorporate the effects of bank’s day-to-day risk management operations into the LH framework.



- Effects of mean reversion

We welcome the scaling approach that computes P&L over a single time horizon, preserving empirically observed correlations between risk types, and then adjusts this for liquidity by applying the square root of time rule. We believe this approach strikes the right balance between the objectives the Committee is trying to achieve.

During the calibration phase we would appreciate taking into account the effects of mean reversion empirically observed in historical returns time series; in other words when using SQRT (T) especially while calibrating large LH (T) the Committee should recognise that the larger the value of T, the more excessive the shock propagation will materialise, leading to a material overstatement of the capital charge.

The industry has considerable experience in modelling the effects of mean-reversion within Pillar II models; although estimating and calibrating the exact impact for every single risk factor is challenging, the examination of historical shocks across asset classes could show that mean reversion effects as early as after one month.

Figure 2: Assessing the effects of mean reversion – A case example using CDX HY

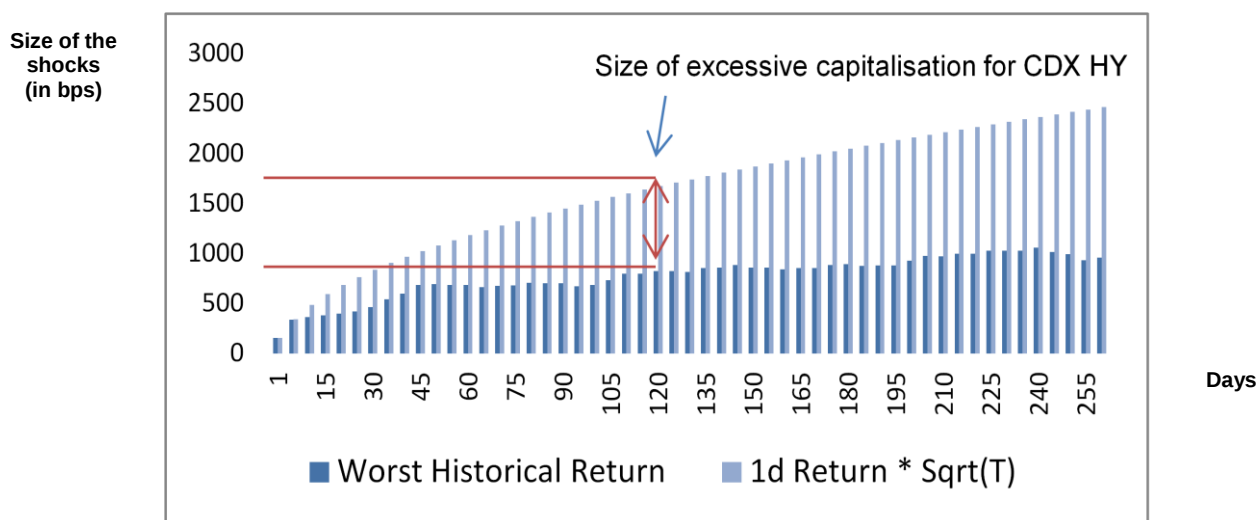


Figure 2 provides a graphical representation of the effects of mean reversion for a CDX HY risk factor time-series that under the current proposal would fall into the 120 days LH bucket. The size of conservativeness could be roughly assessed by means of comparing the “root time” propagation rule and the worst historical instantaneous shocks for different time horizons.

Recommendation

Particularly for buckets associated with large LHs we recommend reducing, or introducing a cap to the LH of those buckets based on empirical analysis of the degree of over charge due to sqrt(T). This would strike a sensible balance between simplicity and comparability as well as risk sensitivity; particularly with regard to the latter this proposal will preserve the credibility of the framework.



- “Cliff effects”

The proposed series of LH could cause very large capital instability following minor market events due to large gap between LH buckets.

For example:

- If a BBB rated corporate bond is downgraded to BB, then its LH will jump from 60 days to 120 days (a 40% increase in capital); and
- If an IG sovereign bond is downgraded to HY, its LH will go from 20 days to 60 days which is a 73% increase in capital.

Recommendation

We suggest the Committee reduces the current gap between LH buckets and the number of LH categories.

Both proposals (or a combination of the two) strike a good balance between simplicity and comparability (lower number of categories to handle) as well as risk sensitivity (decreasing instability of the capital charge).

- Oversized Liquidity Horizons

Although we welcome changes made in CP3 we would like to reiterate the concept that, compared to current levels, the incremental capital charge stemming from proposed set of LH buckets is still excessive for certain product categories and it appears to introduce a disconnect with market liquidity.

For example:

- Precious metal prices and energy prices are also 20 days with base metals prices having LH as long as 60 days;
- Corporate IG and sovereign HY are given a 60-day horizon, which is 2.4 times that for a 10-day horizon. Corporate HY is given a 120 days horizon which will attract approximately 3.5 times the capital relative to a 10-day horizon; and
- Risk stemming from Small Cap volatilities, dividends, and Equities (other) is allocated to the liquidity horizon bucket of 120 hence producing a capital charge that is 3.5 times the current charge.

Moreover the current proposal still does not handle scenarios with risk positions having a residual maturity shorter than their LH, and/or positions with path dependency, and/or positions with clauses that will cause them to knock-out far before the end of LH.

The current proposal could significantly overstate risk and provide an inaccurate representation of the true risks in the portfolio. We would be interested to understand what LH should be applied for a large and very liquid US mortgage based securities: from our interpretation of the CP3 guidelines we understand a LH of 250 days should be used but this it is not commensurate with the liquidity of such a product.

Recommendation



We recommend re-evaluating the extensively long LH for a number of buckets and improving the allocation of product categories into more appropriate categories in order to better reflect market experience.

We would appreciate the Committee sharing the approach followed so far to calibrate the different LHs so that more tailored feedback could be provided.

- Operational issue

Within the proposed “cascade” approach running a capital charge based on Full Revaluation implies a large increase in the number of operational “runs” to be supported by banks’.

Example:

We estimate the regulatory capital for a single trade with its risk factors being mapped to three different LH buckets (e.g. 10, 20 and 250 days).

Following the cascade approach we would need to fully revalue this trade three times¹:

- Apply Full Revaluation in order to calculate the baseline “Expected Shortfall” (i.e. shocking all three Risk Factors using a 10 day horizon shock);
- Repeat a Full Revaluation run in order to calculate Expected Shortfall by only shocking the two Risk Factors being mapped to a LH of 20 and 250 days respectively (using a 10 day shock); and
- Apply Full Revaluation to calculate Expected Shortfall via only shocking the third Risk Factors (with LH of 250 days) (using a 10 day shock)

Although we appreciate the underlying rationale and objective that the Committee is attempting to achieve (capturing the cross risks across different set of nested risk factors for longer time horizons) this calculation could appear to be excessive when considering the (conservative) implied assumption within the cascade approach, i.e. that the ES calculated for nested risk factors are assumed to be zero correlated with each other.

Recommendation

We suggest applying Full Revaluation for the baseline calculation (i.e. when shocking all Risk Factors using a 10 day horizon shock) as well as apply a Greek-based approach for the subsequent runs referring to the series of nested risk factors.

- Clarification on new LH applied to Yield curves

Although we welcome CP3’s introduction of a shorter LH for certain interest rate yield curves, further clarification on which yield curves can benefit from this shorter LH would be extremely useful. The wording used in the LH table enclosed in CP3 paragraph 181 seems to suggest that only the domestic currency yield curve – if EUR, USD, GBP, AUD, JPY, SEK, or CAD –

¹ See Appendix 1 for more Details



can be mapped to the 10D-LH: “Interest rate – domestic currency of a bank: EUR, USD, GBP, AUD, JPY, SEK, and CAD”.

We do not believe it is the intention to grant a shorter LH only to the domestic currency yield curve provided it is one of the above-mentioned currencies. The above-mentioned currency yield curves are very liquid and banks should be permitted to map them to the shorter 10D-LH irrespective of their domestic currency. We acknowledge that other currency yield curves may be less liquid, in particular for non-domestic banks and therefore only domestic banks should be entitled to map them to the 10D-LH. We would additionally appreciate clarity about the exhaustive nature of the currency list, for example is the intention to exclude currencies such as CHF, NOK and DKK?

Recommendation

In conclusion, we advocate modifying the CP3 wording as follows: “Interest rate – domestic currency of a bank, EUR, USD, GBP, AUD, JPY, SEK, and CAD” to reflect that the shorter 10D-liquidity horizon applies to yield curves in both the domestic currency of the bank and the listed currencies.

3.2 Incremental Default Risk (IDR)

The revised IDR proposal helps to eliminate some concerns highlighted in the industry responses to the first FRTB consultation, namely the potential double-count around rating migration risk. This is positive in terms of simplicity and the accuracy of risk-calculation.

Although we view the move from IRC to IDR as positive, we would appreciate some clarity on four elements of the proposal:

(a) In order to avoid double counting of the risk from mark-to-market losses and the risk of loss from default, the model may assess default risk from the perspective of the incremental loss from default in excess of the mark-to-market losses already taken at the time of default. This makes sense, however it is not clear how the increment in excess to MTM losses is to be calculated. For example, should the computation be directly linked to an IMA model, is an external calibration required or does it refer to the current MtM reflecting today's loss;

(b) We would like to better understand if there is a specific economic interpretation of the two-factor default simulation model that banks are required to use. Is the requirement to model one global and one idiosyncratic factor, or two global systematic factors (e.g. one global country and one global industry) or should each issuer be assigned to two systematic factors out of a larger set of [x] factors;

(c) The European Banking Authority guidelines on IRC stated that IRBA PDs and LGDs may be used and alternatively, the use of PDs and LGDs provided by external sources (e.g. rating agencies) may also be used by institutions as they are generally considered appropriate. CP3 now states that estimated IRBA PD and LGD must be used, but still saying that PDs & LGDs provided by external sources may also be used by banks provided they can be shown to be relevant for the bank's portfolio. We would appreciate clarification on whether banks still have the choice to use both approaches, or whether IRBA parameters now have to be used if available. In the latter case, we have concerns with respect to compliance restrictions as internal parameters, in particular internal assessment of credit worthiness, should not be made available to



the front office. This restriction would limit transparency to the IDR results and input parameters to the front office and impact risk management capabilities.

Also, in line with the joint trade association response, we see no empirical evidence of a 0.03% Default Probability floor as no historical AAA and AA sovereign defaults over a 1y time horizon can be observed in the rating agency time series. Imposing such a high floor is likely to have a significant detrimental impact on the liquidity of sovereign debt markets. There will be knock-on effects in terms of pricing, as marking-making for G4 currencies becomes more expensive.

Moreover and in line with the view of the Industry association, we believe there are several conceptual challenges around the mandatory inclusion of equity products in IDR, as follows:

- The one year LH is not appropriate for equity products as they are generally more liquid. It is also inconsistent with the liquidity horizon settings prescribed for the ES model;
- The double counting between MtM loss taken at the time of default and jump-to-default loss is particularly apparent for EQ products validating our above request for clarity on this issue particularly in relation to EQ products; and
- When following the requirement to calculate the loss by dropping underlying EQ price to 0 it is unclear whether higher order, or cross-effects on other pricing parameters, have to be taken into account. Already the computation of first order effects is complex for non-linear products, in particular with multi-name underlyings.

Due to the inconsistencies listed above, and the missing rationale for an additional capital charge based on default risk for equities, we do not support a mandatory inclusion of all equity products in the trading book. We support maintaining optional inclusion in order to properly model the risk of units where credit and equity products are strongly interlinked, i.e. equity products with a credit risk component (e.g. convertible bonds) and their corresponding equity hedges.

Recommendation

We recommend that the Committee continues to allow for optional use of IRBA PDs/LGDs or external data as in IRC. It should also exempt sovereigns receiving a 0% risk weight from 3bp PD floor in IDR. We also suggest an optional inclusion of equity position by trading unit. If inclusion of equity stays mandatory we recommend implementation of a short-term liquidity horizon of 2 weeks (unless used as hedges) and allow for usage of simplified, approximate models for modelling of jump-to-default risk of complex equity products.

Question 2: Do these specific proposals strike the right balance between simplicity, comparability and risk sensitivity?

The current proposals for new internal capital models as well as a new standardised approach generally balance the need for simplicity, risk-sensitivity and accuracy. For example, the new internal model no longer explicitly requires complex modelling of specific risk. Instead, businesses with significant specific risk are most likely to fall under the standardised approach due to the minimum requirement of a good match between reported and risk-based P&L. On the other hand, the move to a sensitivities-based approach for the



new standardised approach was a necessary step away from too much simplicity in favour of a more accurate and risk-sensitive approach.

We note, however, that an internal model approval process based on the proposed multitude of criteria and following a "regulatory desk structure" is very complicated likely to be operationally very disruptive. A number of businesses will need to restructure significantly in order to meet future client demand within a potential patchwork capital structure of approved and unapproved products and desks. Here, we urge the Committee to ensure that too great a focus on simplicity does not distract from good risk management practices.



Annex II: Economic impact

Whereas we agree with the goals of the FRTB in relation to addressing weaknesses in risk management and promoting consistent implementation, questions remain about the significance of the increased capital requirements and ultimately the impact on the wider economy.

Recognising that the FRTB is only currently at the consultative stage, and some of the provisions might be clarified or amended, it appears likely that capital demand for some of the business lines will increase by 50% to 250%. Historically, increased capital demand of this kind leads to banks to restrict liquidity, or exit markets completely.

In its current iteration, the LHs make several assumptions that could provide perverse incentives:

- First, the approach assumes a full holding period for the instrument, with a sale on the last day. This might encourage the carrying of more illiquid and risky instruments; and
- Second, a cliff effect caused by a sudden upgrade or downgrade could prevent some businesses from providing liquidity for clients during volatile periods where clients might need to rebalance their inventories most.
- Finally, the framework ignores the mean reversion – the worst historical returns are typically below what the scaled square root of time suggests – these overly onerous risk weights might force banks to withdraw from trading less liquid instruments in the High Yield HY space.

This reduction in liquidity would result in fewer markets where clients can hedge or reduce risk. The combination of decreased liquidity, and increased RWA costs, could result in a further reduction of firms engaged in Fixed Income sales and trading. This could lead to fewer players and greater market concentration in a small group of banks. This would similarly mean that issuers would face higher financing costs, as HY investors will want a higher liquidity premium and lower liquidity is less likely to reduce capacity and willingness for investors to participate in the HY market.

A significant decrease in debt trading could lead to a reduction in secondary trading capacity across the sector, reducing price discovery and meaning that asset and fund managers would be incentivised to focus on issuers that are easier to price or exit risk. Lower rated and smaller issues would likely feel the biggest impact as investors would be incentivised to operate in names that are large ticket and have the most liquidity.

Considerably more work needs to be done to assess the impact of the FRTB on clients, corporates and other end users of financial products. Some of the most disproportionately affected products are likely to be those with most significance for the wider economy, such as credit, small cap equities, emerging market assets and foreign exchange hedges for exporting or importing companies. Further analysis in this area is especially important given the number of regulatory initiatives being finalised that will impact on capital, bank business models and market liquidity.

Examples:



We approximate the impact of LH through using benchmark volatilities for VaR and SVaR, and comparing VaR/SVaR RWA contribution to Scaled Expected Shortfall RWA contribution on a standalone basis (no diversification or portfolio effects).

1. Credit spread – sovereign

- LH for IG sovereign increases to 20 – this means approximate scaling of 1.4;
- LH for HY sovereign increases to 60 – this means approximate scaling of 2.4

2. Credit spread – corporate

- Liquidity horizon for IG corporate increases to 60 – this means approximate scaling of 2.4;
- Liquidity horizon for HY corporate increases to 120 – this means approximate scaling of 3.5

3. Equity price small cap options

- LH for equity price small cap volatility increases to 120 – this means an approximate scaling of 3.5.

Appendix 1: Scaled P&L example

$$ES = \sqrt{\left(ES_T(Q_1) \cdot \sqrt{\frac{LH_1}{T}}\right)^2 + \sum_{j>1} \left(ES_T(Q_j) \cdot \sqrt{\frac{(LH_j - LH_{j-1})}{T}}\right)^2}$$

A portfolio has exposure to FX, IR and CS risk factors, with the following LHs:

FX	10
IR	60
CS	250

The set of LHs provided is:

j	LH _j
1	10
2	20
3	60
4	120
5	250



Step 1: Calculate the 10-day 97.5% Expected shortfall for:

- The whole portfolio
- IR and CS risk factors
- CS risk factors only

Step 2: Calculate the scaled ES:

Using $T = 10$ and the table above, the formula becomes:

$$ES = \sqrt{\left(ES_{10}(Q_1) \cdot \sqrt{\frac{10}{10}}\right)^2 + \left(ES_{10}(Q_2) \cdot \sqrt{\frac{(20-10)}{10}}\right)^2 + \left(ES_{10}(Q_3) \cdot \sqrt{\frac{(60-20)}{10}}\right)^2 + \left(ES_{10}(Q_4) \cdot \sqrt{\frac{(120-60)}{10}}\right)^2 + \left(ES_{10}(Q_5) \cdot \sqrt{\frac{(250-120)}{10}}\right)^2}$$

Q_i is the subset of risk factors with LHs at least as long as LH_i . This gives:

$Q_1 = \text{FX, IR and CS (all risk factors with LH} \geq 10)$

$Q_2 = \text{IR and CS (all risk factors with LH} \geq 20)$

$Q_3 = \text{IR and CS (all risk factors with LH} \geq 60)$

$Q_4 = \text{CS (all risk factors with LH} \geq 120)$

$Q_5 = \text{CS (all risk factors with LH} \geq 250)$

Thus, the total scaled ES becomes:

$$ES = \sqrt{(ES_{10}(\text{FX, IR, CS}))^2 + (ES_{10}(\text{IR, CS}))^2 + (ES_{10}(\text{IR, CS}) \cdot 2)^2 + (ES_{10}(\text{CS}) \cdot \sqrt{6})^2 + (ES_{10}(\text{CS}) \cdot \sqrt{13})^2}$$