



MARKET RISK MANAGEMENT BANK

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Basel Committee on Banking Supervision

Department
MRMB Trading
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FRTB2 Response

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Response to Fundamental review of the trading book

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Dear Sir / Madam,

With this letter we would like to take the opportunity to respond to the second consultative document on the Fundamental review of the trading book published in October 2013 (BCBS 265).

We appreciate the efforts of the Committee to enhance the capital framework for the trading book and support a large part of the proposals. The sections below discuss our main comments to the consultation paper by topic. Additionally, we have been fully involved in and support the response to the consultation paper by the Dutch Banking Association (NVB).

We will be pleased to answer any questions that may arise from our response. We are more than willing to work with the Committee to further develop a consistent trading book framework.

Sincerely,

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1. General Comments

In general, we support the majority of the proposals by the Committee to strengthen the capital framework for trading books.

As mentioned in our response to the first consultation, we especially appreciate the steps made to replace the current patchwork of Basel 2.5 risk measures, the strong role of market liquidity in the framework and the concept of desk level validation. However, on certain items we have significant concerns for unintended consequences and see room for improvement. In the sections below, we further discuss the potential practical implications for consideration. Our concerns are accompanied by proposals that would still serve the intended purpose.

We would like to highlight that we have not experienced any backtesting issues during the recent credit and sovereign crises. Therefore, we feel that a fundamental review should not be rushed, reflect on the implications of the framework and provide the appropriate incentives for risk management.

Regarding the standardised approach, we are concerned that the stronger role of this approach as proposed in the consultation paper will provide a false sense of security as a fallback for internal models as well as for the purpose of comparison, which we will explain further in section 3.

Finally, the real impact of the proposals can only be assessed via Quantitative Impact Studies (QIS). We would like to highlight that in order for the QIS to be effective, close involvement between the industry and supervisors is essential and sufficient time and resources should be allocated from both sides. We are concerned that the current timelines set for the QIS and finalisation of the Fundamental Review are too short to allow for a fully effective QIS process and sufficient time to calibrate the framework in to a level that will not require substantial review in the short to medium term.

2. Timelines and QIS

We welcome the new 2 step approach to the impact studies, with a separate QIS for hypothetical and total bank portfolios. However, we feel that timelines are still overly ambitious.

Given the magnitude of changes proposed in the framework, banks will face significant implementation challenges. This all needs to be done in parallel with and using the same resources that are working on other regulatory topics (e.g. SSM/AQR in Europe).

Rushed timelines will likely lead to shortcuts made and an incomplete assessment of the revised framework. This can lead to a sub-optimal framework, with possibly over- or undercapitalisation and wrong incentives for risk management at banks (e.g. risk taking to reduce capital requirements).

Furthermore, if the Committee decides to adjust the framework based on industry comments, a lot of implementation and QIS effort will be redundant and will need to be re-done leading to a longer lead-time.

We think it is in the best interest of all stakeholders, including the regulators, to take sufficient time to do a thorough impact analysis, with multiple iterations where required.

3. Standardised Approach

3.1 Standardised approach as fallback or benchmark

Although we understand the desire of the Committee to obtain a standardised approach that is a more credible fallback for internal models and can serve as a benchmark, we would like to reiterate our previous response that a standardised approach likely fails to serve this purpose. The simplicity of a standardised approach will unlikely capture the situations where the internal model fails.

In practice, internal models have been shown to fail in the following situations¹:

- Basis, fixing and spread risks between different risk factors are not fully captured by the risk models. It is unlikely that the standardised approach will be able to capture all these basis risks without becoming both very complicated and extremely burdensome on regulators to specify risk weights for each detailed risk factor.
- Risk factors of complex instruments, like implied correlation and skew risk, are not included in the internal model, or the non-linearity is not modelled sufficiently, such as was the case in correlation trading products during the credit crisis. Again, these risk factors are likely not set up with the correct granularity and/or risk sensitivity in the standardised framework.

¹ Note that ING has not had any backtesting issues raising concerns about our internal model and we and many other banks have modelled all relevant risk factors including basis risks and risk factors of complex instruments in the internal model.

- Market circumstances change, like credit products and securitisations which were considered liquid before the credit crisis and which became illiquid during the crisis. Furthermore, when time series data is not updated frequently, internal models do not pick up changed circumstances. Unless regulators continuously recalibrate the inputs for the standardised model, the standardised approach will lag in recognizing these changed market circumstances and also fail to capture this risk.

Considering the above, the standard model will likely not capture the missing risks in cases where the internal models fail.

Furthermore, it could lead to incorrect conclusions when used as a benchmark: If two banks have the same result for the standardised approach, one of these banks can still have a much riskier portfolio than the other if it has exposures to the types of risks above that are not captured in the standardised approach. The same incorrect conclusion can be drawn by a lower risk sensitivity of the standardised approach compared to the internal model. As an example, equal risk weights used are used for broad categories. If bank A buys EUR 100 mio worth of a low volatility currency, and European bank B buys a highly volatile currency for the same amount in EUR, the standardised method will suggest that the risks are equal.

We therefore feel that the revised standardised approach can provide improved capital estimates for banks with small and relatively simple portfolios, but will provide a false sense of security and an unreliable benchmark for more complex portfolios.

Only an extremely advanced and detailed standardised approach which is continuously adapted to new products will provide a truly credible fallback and benchmark. This also means that regulators will need to stay ahead of the markets in assessing the risks of new products. In that situation, there is no longer a need for an internal model.

3.2 Cashflow based approach

If however the standardised approach is imposed on all banks with an internal model, we prefer to implement a sensitivity based approach, in line with the response as written by the ISDA, GFMA and IIF ('Industry response'). Such an approach will have multiple advantages compared to the current cashflow based proposal:

- It will cause less operational risk. Sensitivities are thoroughly validated and used for many purposes on a daily basis, leading to many pairs of eyes checking the results. This in effect leads to a 'use test' of the inputs of the standardised approach. The proposed discounted cashflows will only be used for regulatory purposes.
- It will provide the same results, but there is no need for dual implementation and maintenance of calculations and inputs. The cashflow based approach would lead to much effort with no added value.
- It will accurately capture the risk in floating legs of interest and credit risk sensitive instruments.

3.3 Disclosure of results and standardised approach as a floor

Disclosure of the results of the standardised approach to the public, can lead to wrong benchmarking conclusions (see above) and will lead to unnecessary additional burden on banks to explain the differences with the internal model, and continuous criticism on either internal or standardised model. Disclosure on desk level can also lead to wrong incentives for the setting of desk structures, that may not be in line with the best interest for the business.

We also have concerns with the introduction of a regulatory capital floor based on a standardised approach, as it will give a disincentive to use and improve internal models. As the standard approach will likely be less risk sensitive than the internal model, posing a floor could also give desks the incentives to arbitrage the standard approach, where the internal model would give the correct incentives to hedge economic risks.

3.4 Proposal

In our opinion, it would be preferable for both the banking industry and regulators to continue analysing and improving internal models rather than spend significant effort on implementing a standardised approach which will not serve the main purposes. Applying add-ons for missing or non-modellable risk factors, in combination with stress testing exercises that allow for comparability of banks will much better serve the purposes set out in the Fundamental Review and will allocate resources of both banks and their supervisors in a more effective way.

If the standardised approach is imposed on all banks with an internal model, we strongly ask the Committee to re-consider the cashflow based approach and implement an approach based on risk sensitivities.

4. Market liquidity

We fully agree that market liquidity is an important risk in the trading book that is currently lacking in the trading risk framework and appreciate this is addressed in the new framework. We also support a certain amount of prescription of liquidity horizons, to maintain consistency across banks and to limit the burden of proof for both banks and regulators.

However, we are concerned that the proposed bucket classification will have unintended consequences. We would like to highlight that any prescription that is not fully aligned with the way risks are managed, can lead to arbitrage.

4.1 Hedge relations will break

The current proposal could cause hedges to break and give an incentive not to hedge positions. Trading books often contain relative value trades or other basis risks, where an illiquid product is (proxy-)hedged using a liquid product. In these situations, only the basis risk should receive a higher capital charge for illiquidity. If these products are mapped to different liquidity buckets, the hedge will not give the appropriate offset which could provide an incentive to keep the position open.

For example, a relative value trade where a corporate bond (120 days bucket) is traded simultaneously with sovereign exposure to the same country (60 days) will lead to an outright credit spread exposure in Expected Shortfall if both are mapped to different buckets, whereas there will be no incentive for the bank to close the more liquid position in a situation of stress. Another example is an equity index position (large cap, 10 days), versus a portfolio of the underlying stocks (small cap, 20 days). Even though only a very small basis risk remains, a significant outright exposure will be reflected in the Expected Shortfall.

In these situations, it should be possible to allocate the liquid product to the same bucket as the illiquid product, or allocate only the basis risk to the longer horizon. Please note that even if the more liquid risk would be mapped to a longer horizon, the basis risk between the two positions will still be capitalised by using separate risk factors in the internal model.

4.2 Some horizons are too coarse or do not reflect typical maturity

Although we appreciate that the liquidity horizons reflect stressed circumstances and that broad categories need to be created for pragmatic reasons, we feel that they are too long for certain risk factor categories. We provide a few examples here.

- a) Some markets are more liquid than suggested in the proposal. For example, even in crisis situations, a number of interest rate and FX markets have shown a very high liquidity. To enable a better risk sensitivity of the internal model, we feel that a more granular split is required for these buckets.
- b) Some products have typical maturities shorter than the liquidity horizon. Via trading mandates, banks could restrict their traders to hold certain positions within maturity boundaries (e.g. only bonds with a remaining maturity up to a certain number of weeks/months). If the framework does not take these maximum maturities into account, it will not give an accurate representation of the true risks in the portfolio, and this could give incentives to alleviate the restrictions.
- c) Some products have clauses that will cause them to knock out far before the liquidity horizon (e.g. PPI products). Capitalising these products for a long liquidity horizon will significantly overstate the risk and could lead to removal of these types of clauses.

4.3 Proposal

We propose that the setting of liquidity horizons will be more flexible and follow a similar approach as the trading book/banking book boundary (proposal 1). In principle, banks should use the categories as prescribed by the Committee. But, if a bank has good arguments that the true liquidity risk of certain risk factors deviates from the prescribed categories, they should be able to adjust the liquidity horizons, based on the actual management of the trading book. This should be within tight guidelines to ensure comparability and subject to supervisory approval.

Additionally (proposal 2), we propose that certain risk factor categories (especially interest rate and FX rate) are made more granular to reflect that some markets are more liquid than others.

These proposals will allow for an internal model that provides a more accurate reflection of the risks in the trading book and will give the correct incentives to hedge, while at the same time keeping a large degree of consistency across banks. Differences will only exist for good reasons as a result of different management of positions.

5. Determining the eligibility of trading activities

5.1 Desk level validation

We support the main ideas behind the Committee proposals for desk level validation of internal models:

- Testing on desk level could highlight certain basis risks that are initially not significant on bank level, but can be substantial on desk level. The approach to validate the model at a more granular level can therefore assist in enforcing improved risk modelling for certain risk factors.
- We welcome the addition of P&L attribution in the validation process, as it forces banks to carefully investigate the P&L components and consider all relevant risk factors in the internal model.
- Additionally, for some asset classes it can be difficult to determine a reliable estimate of the market risk capital needed, which can be overcome by using capital add-ons for non-modellable risk.

However, we would like to reiterate our previous response that the practical implications of the validation approach should be carefully considered to avoid unintended consequences:

- Rules should not be too binary where a small violation of the requirement (which could be the result of statistical noise) would lead to a desk being unapproved.
- Backtesting and P&L attribution will be based on a 1-day horizon and under current market circumstances. The overall framework is based on the modelling of the full tail of the distribution and also takes into account longer liquidity horizons and stressed market data inputs. Model approval or failure based on 1-day backtesting and P&L attribution should therefore not be a mechanical exercise.
- As discussed above, the standardised approach will generally not capture the risks that cause the internal model to fail. Therefore we think that by default falling back to the standardised approach on desk level will not serve its purposes in this context.

In all situations where the desk level validation tools highlight risks that are not – or not correctly – measured, banks and their supervisors should first identify the cause of the breach, apply an add-on for any missing risks, and attempt to repair the model. This will give the incentive to improve the models and risks are captured adequately (often the standardised model will also not capture these risks). Only in cases where the model deficiencies are very severe should one fall back to the standardised model.

5.2 P&L attribution

As discussed above, we welcome the addition of P&L attribution in the validation process. However, one should take care that the unexplained P&L is not polluted by factors that are

not modelled as per design of the framework. This could lead to rejection of the internal model for the wrong reasons.

For example, the actual P&L contains a theta effect reflecting the passage of 1 day in time. The risk-theoretical P&L as defined in the proposal, on the other hand, does not contain theta by definition, given that the risk model assumes an instantaneous shock of risk factors (and not the passage of time). For some desks, this theta effect can be significant and could lead to rejection of the internal model even while all other risk factors are perfectly modelled. Again, the standardised approach also does not cater for this time passage, so a default fallback to the standardised approach will not serve its purpose.

In our view, this measure should test for risks that the model is really intended to capture. All P&L contributors that are not modelled due to prescribed model features, should be excluded from the P&L attribution process.

5.3 Model independent risk assessment tool

We do not support the model independent risk tool as proposed in the consultation, as it compares market risk capital with a credit risk exposure measure. We understand and appreciate the intent of the Committee to identify hidden risks without the use of a model, but are of the opinion that it will be extremely difficult or even impossible to come up with a simple and objective exposure measure that captures complex (basis) risks that are not included in the internal models. We think that only stress testing based on common sense will enable such type of identification². We refer to the Industry response for more details.

Again, even if a tool is in place that highlights hidden risks, this should not lead to automatic use of the standard model, as that will also not capture these risks. Banks should be allowed to define a non-modellable add-on and/or attempt to repair the model to include the missing risks.

5.4 Granularity of risk factors for eligibility

We would appreciate more clarification in the text of the proposals how to determine which risk factors are eligible for modelling and that can be taken into account in the reduced set of risk factors used in the stressed period.

We would especially appreciate clarification on the areas of the granularity of the definition of a 'risk factor' and whether proxies based on observable quotes acceptable if this provides a good backtest.

As a simple example, in case of debt instruments: is credit spread observable if there are traded quotes for corporate bonds in general, for a certain group of similar names, or should there be a tradeable price for every single issue? A 5 year bond now was an 11 year bond 6 years ago (if it even already existed). Therefore, the price at the time does not necessarily give an indication of the risks in the bond now, although it could be a very liquid bond and we

² Also refer to section 3.4

could proxy the risk factors with observable quotes from other liquid bonds at the time. If this would not be allowed, most interest rate and credit desks will not be modellable under the internal model approach, whereas they could be very liquid and risks captured accurately or conservatively.

Finally, as we interpret the proposal, certain risk factors with less observations must be excluded from the reduced set of risk factors. We agree that a reduced set would be helpful in determining the most relevant stressed period. However, when calculating stressed ES on a daily basis, we think a bank should be allowed to use the full set if they can provide risk factor shocks for the selected period. Even if these would be based on (observable) proxies, this could be a much better representation of the risk in the portfolio than using observed shocks from a recent (more benign) period for scaling purposes. Banks should not be forced to use less information, if their infrastructure is capable of using all available information.

5.4 Proposals

Proposal 1: Given the practical implications, we suggest that step 2 in the proposed process should allow for more flexibility. We fully support desk level testing to identify issues in the model and to address these issues. However, we propose it does not automatically lead to a switch from an internal model to the standardised model, but that banks and their supervisors should first identify the cause of the breach, apply an add-on for any missing risks, and attempt to repair the model. This will provide a more conservative level of capital but also a better incentive to improve the internal models. Only in cases where the model deficiencies are very severe or cannot be repaired sufficiently fast should one fall back to the standardised model.

Proposal 2: All P&L contributors that are not modelled as a result of prescribed model features, should be excluded from the P&L attribution process. This could be done either by removing them from the actual P&L, or by including in the risk-theoretical P&L. This exclusion would cover at a minimum intraday trading and time passage. Thorough investigation of unexplained P&L could lead to the identification of more risk factors that are not modelled by design.

Proposal 3: We propose that the model independent assessment tool is replaced by a set of stress tests, and a risk identification process based on common sense. We refer to the Industry response for more details.

Proposal 4: We would appreciate more clarification how to determine which risk factors are eligible for modelling and including in the reduced set of risk factors. It should be possible to replace risk factors by observable proxies, to avoid certain desks from automatically falling to the standardised model even when the internal model captures the risks in an advanced and/or conservative way. Furthermore, a bank should be allowed to calculate the stressed Expected Shortfall based on the full set if they can provide risk factor shocks for the selected period. Even if these would be based on (observable) proxies, this could be a much better representation of the risk in the portfolio than using observed shocks from a recent (more benign) period for scaling purposes.

6. Credit Risk in the Trading Book

6.1 Incremental Default Risk

We support the move from IRC to IDR, removing the duplication between migration risk and credit spread risk from the framework. Furthermore, we appreciate the attempt for a more consistent modelling across banks, since it is extremely difficult to backtest a risk measure with such a high confidence level and holding period. However, we have a few important concerns about the details of the proposals.

We are especially concerned about the proposal to use equity correlations as these are not necessarily good indicators of default correlations and it is not straightforward how to translate these correlations into correlations to be used in a (n-factor) default risk model. Also, they are not applicable to sovereign issuers, which can be a significant driver of the default risk in a trading portfolio. We would therefore prefer to use similar asset correlations as prescribed in the IRB model. If the Committee does decide to prescribe the use of equity correlations, more guidance would be required how to apply these to sovereign exposures and how to translate these to correlations used in the 2-factor model. Otherwise, we expect a wide deviation between implementations across banks.

In order to ensure a consistent interpretation across banks, more clarification is required what is meant with a 2-factor model. Both a one-factor Gaussian copula model with a systematic and an idiosyncratic factor or models with two systematic factors could be intended. We would prefer the use of a one-factor Gaussian copula in this context. If a different model is intended, further guidance would be required how to identify the relevant factors and how to calibrate the (equity) correlations to these factors, to ensure more consistency across banks than in the current framework.

Furthermore, more clarification would be welcomed regarding the intention behind the inclusion of equity portfolios and the long liquidity horizon for IDR (1 year) compared to the equity price risk inclusion in stressed ES (10 – 20 days). This leads to similar concerns as raised in section 4, but even aggravated due to a much longer horizon.

Finally, we would like to express our concern about the national discretion regarding sovereign exposures. This will not contribute to a better comparability and level playing field across banks in different jurisdictions.

6.2 CVA

For CVA VaR, the Basel 3 implementation in 2013 captures only credit spread risk. For banks that mark CVA to market, this methodology does not reflect the real P&L volatility as a result of market movements and does not provide an incentive to hedge that volatility. Furthermore the scope is different from the way CVA is included in the P&L. In the current proposals, the CVA capital charge is only briefly touched and still only applies to credit spread risk, with an indication that further work is still being undertaken in this area.

Even though CVA is perhaps a complicated concept, the resulting risks are not any different than for typical trading books. We think that all market risks (including credit spread risk) in CVA can be perfectly integrated in the modelling of market risk via ES which would lead to a much better capturing of the risk than the current Basel 3 proposals.

We are willing to work with the Committee to establish a fully consistent framework including CVA.