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Re: Second Consultative Document Fundamental Review of the Trading Book¹ - BCBS 265 – Capturing market illiquidity, treatment of credit, trading book banking book boundary, model independent approval process, disclosure requirements and floors

Dear Ms. Barger and Mr. Adkins,

This letter contains initial comments from the International Swaps and Derivatives Association, Inc (“ISDA”), the Global Financial Markets Association (“GFMA”) and the Institute of International Finance (“IIF”, together “the Associations”), on the Basel Committee on Banking Supervision (“BCBS”) Second Consultative Document *Fundamental Review of the Trading Book* dated October 2013 (“Fundamental Review” or “FRTB”). Following the submission on 3rd January 2014 of the industry comments on the proposed revised standardized framework, this letter focuses solely on the trading book banking book boundary, the model independent approval process, capturing market illiquidity, the treatment of credit, disclosure requirements and floors.

We propose, in this paper, to revise the proposed approaches of the FRTB. We would like to emphasize that, from an industry standpoint, the topics of factoring in market liquidity and the Standardized Approach (“SA”) are the most concerning ones followed by the Treatment of Credit and the Model Independent Approval Process. Below we discuss the various components of our alternative proposals. More time is required to specify all those components in detail but we believe that it is very feasible to meet the BCBS’s objectives within the frameworks that we describe.

We stress again our commitment to participate constructively in the consultative process. We do sincerely hope you find our initial remarks helpful.


Yours faithfully,



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¹ Basel Committee on Banking Supervision, October 2013

1. Trading book banking book boundary

We understand and support the goal of harmonizing the trading book or banking book designation across jurisdictions, but would like to take the opportunity to highlight a few areas where a rigid approach in terms of a presumptive list for a banking book or trading book would result in a construct that was not aligned with risk management. So with regards to the presumptive list, we request the Committee consider the below cases, which may require an exception or an amendment to the general presumption. The more general point is that no presumptive list can address all variations found in the industry and we think it is important for the Basel Committee to clarify how it will provide some flexibility to national regulators to make the presumptive list work for the individual circumstances that specific banks may face.

General Criteria: Any instrument which is managed on a trading desk shall be included in the trading book

- There are instances where the trading desk manages instruments which are regulatory banking book instruments, along with regulatory trading book instruments. This criterion to include such instruments in the trading book would conflict with the required banking book designation.
- Examples are:
 - A distressed debt trading desk which makes markets in distressed and defaulted names. This desk may, at times, have private equity due to restructuring/ bankruptcy events related to the debt they trade. The desk may make markets in the private equity, which is a regulatory banking book activity, along with the rest of its trading book inventory².
 - Assets held with the intent to securitize are typically managed and hedged by the trading desk, but are regulatory banking book exposures.
 - Assets held for regulatory risk retention, where certain jurisdictions have mandated that sponsors of securitizations retain on their books 5% of the value of the assets that they securitize, in order to better align the interests of participants in the securitization process. Typically, these positions would be managed by the trading desk, although they are regulatory banking book exposures.
 - A trading desk might have activities or manage products for which the bank's supervisor has requested a banking book classification through its supervisory authority.

These examples point to the need to introduce more flexibility in this general criterion and not presume that any instrument managed on a trading desk shall automatically be included in the trading book. It seems there are two potential options – either to allow flexibility for a trading desk to manage banking book positions in certain instances or to allow flexibility for these positions, which are managed by a trading desk, to be designated as trading book positions.

Criteria #11(a): Instruments held as accounting trading asset or liability

- This presumption creates a link with the accounting framework, which differs from jurisdiction to jurisdiction (e.g. US GAAP, IFRS, and Japanese GAAP). The deviation process and the extent of the deviation will therefore depend on the accounting framework prevailing in each jurisdiction.
- In addition, accounting frameworks are in a state of transition which may be disruptive to capital frameworks, if regulatory accounting were too closely linked (e.g. we understand that “Held For Trading” and “AFS” categories are being considered for removal with IFRS9 application)
- We request clarification on structured notes, which are often booked as long-term debt (for US GAAP and IFRS). These instruments have market risk that is often hedged by a trading desk, but are not currently treated as having market risk capital held against them in all jurisdictions, as they are often not booked as a trading liability, but rather as long term debt. In these jurisdictions, the hedges are trading book positions and would function as open risk positions.

² Note that this activity would have to be covered by this desk's trader mandate under the U.S. Volcker rule regardless of trading book or banking book designation.

We recommend that the presumptions are clarified such that the structured note and its hedge may be both treated as trading book positions, if the intent and risk management criteria are satisfied. Additionally, assuming banks are allowed to have a difference to accounting designation and include such positions in the trading book, we would seek to clarify that the own name credit risk on the structured notes does not need to go through the IDR calculation.

- Similarly, underwriting commitments are an example of the conflict among trading book/banking book boundary presumptions. While commitments are not included within trading assets for accounting purposes, underwriting activity is presumed to be trading book. Often banks have commitments to underwrite for short time periods before the activity funds – we request that the accounting presumption be flexible enough to allow underwriting commitments to be classified for regulatory capital purposes along with the associated underwriting activity, rather than being tied to the accounting designation.
- We recommend additional language to clarify that instruments which are hedges to banking book exposures, including those hedges that qualify for hedge accounting treatment, are intended to be exempted from the trading book presumption. More generally, the framework should specify that the presumptive list does not intend to break apart a position from its hedge, which would serve to divorce capital charges from economic risk. Examples are:
 - Options and futures hedging banking book positions
 - Interest rate or fx swaps hedging Tier 1 instruments for which the hedge accounting is not applicable
 - Credit hedges that are not recognized for credit risk mitigation (e.g. index/single name proxy hedges).
- We request clarification for treatment of CVA hedges as part of the review of CVA VaR.
- In terms of designating a banking book hedge, we assume that the current process (applicable in certain jurisdictions) of designating a banking book hedge at inception will be incorporated in the new framework. We request clarification of the treatment of a hedge if it is deemed to no longer be effective.
- We request clarification on netting of longs and shorts in the banking book as part of the upcoming IRRBB and CSRBB review. We recommend that longs and shorts on the same underlying be netted (e.g. if a loan that was hedged was sold, requiring a reduction in the CDS hedge, typically the derivative would not be cancelled, but offset by a new derivative - we recommend that the two derivatives should be considered on a net basis).
- Basel 3 LCR requires banks to maintain a liquidity buffer and to demonstrate market liquidity of the securities. We request confirmation that such securities would not necessarily be treated as trading book positions, where they are not risk managed as such.

Criteria #11(b) and 11(c): Instruments from market making or underwriting activities

- As noted under the general criteria, a trading desk may hold a mix of trading and banking activity and make a market in such products (e.g. private equity). Therefore, there should not be a presumption that market making and underwriting activity is always in the regulatory trading book, if such products are specifically designated as banking book by the regulations.

Criteria #11(d): Equity investment in a fund (except if daily prices are not available)

- Basel 3 LCR requires banks to maintain a liquidity buffer, a portion of which can be composed of collective investment units (CIUs). It should be made clear that CIUs which are invested for the purpose of the liquidity buffer are presumed to be classified as banking book, where they are not held with trading intent..
- Equity positions in funds may be held in order to hedge synthetic short positions arising from client activity (i.e. client wishes to have long exposure to such fund). Such business is market-making/client facilitation and should not be presumed to fall in the banking book. If the trading intent and risk management criteria are satisfied, such positions should be allowed to be classified as trading book.

Criteria #11(e): Listed equity

- Banks often hold strategic investments that can take the form of listed shares. These are long term investments for which a trading book classification would not be suitable.

- Besides strategic or industrial investments, banks often hold participations in market infrastructures (central counterparties and exchanges) or other types of “industry” participations. We request clarification that such investments would qualify for the banking book.
- Basel 3 LCR requires maintaining a liquidity buffer, a portion of which can be composed of listed equities. We request clarification that assets that are invested for purposes of the liquidity buffer could, though not necessary, be classified as banking book.
- Frequently, trading desks make a market in equities which are listed only on market maker supported venues (e.g. pink sheets). We recommend that these also be considered for the trading book, if they are risk managed as such.
- We request clarification that open-ended mutual funds would be eligible for the trading book, if risk managed as such.

Criteria #11(f): Naked short positions

No comment

Criteria #11(g): Options

- Please refer to our comments in 11(a) relating to options in the banking book
- We request that “options” should be more specifically defined. It is our understanding that the intent is to capture stand-alone derivative instruments, rather than any instrument with an embedded option, such as a mortgage with prepayment (which would result in a migration of a significant portion of the current banking book into the trading book).
 - As an illustration, collars (buy floor/sell cap, or buy cap/sell floor) and swaptions are instruments eligible for hedge accounting and should be eligible for the banking book
 - Should there remain a presumption specific to derivative options, we recommend the presumption be limited to “net sold options” for the trading book

Other Comments:

- **Internal Trades**

Certain banking book hedges are only allowed to be recognized if they are with external counterparties.

- With regards to market hedges to banking book positions, we request clarification that internal hedges would also be eligible, as long as they were designated as such at the outset. These banking book hedges should receive banking book treatment, as they are risk managed as such. The risk would also show up in the trading book for the internal trading desk, acting as counterparty on the other side of the hedge, and would therefore be capitalized appropriately, as part of the trading desk portfolio.
- With regards to credit risk and CVA hedges, understanding that it would be a departure from current rules, we also request that internal hedges be eligible hedges, as long as they were designated as such at the outset.
- **Repos.** We recommend that the framework specify that repos can be booked in trading book, regardless of accounting classification. This is currently an area of unnecessary international divergence. This classification can be important because it drives eligible collateral for counterparty risk, at least under current Basel 3 framework.
- **Valuation frequency.** The proposal seems very restrictive regarding the valuation frequency required for an instrument to be eligible to the trading book. If daily valuation cannot be performed, a weekly frequency should still be considered as acceptable for certain exposures (funds with weekly NAV).
- **Switching Instruments.** We believe that the surcharge for switching instruments between trading book and banking book should be calculated under Pillar 2. In practice, moving between the regulatory books should be rare, but maintaining the documentation for the surcharge can be complicated and the process unevenly implemented across jurisdictions. For example, it is unclear how an increase in the position after the reclassification should be handled.
- **Explicit Approval.** We note that a prior approval is required if banks intend to deviate from the presumption list. This will impose a heavy documentation burden on banks, even for activities that banks only intend to maintain in the banking book (e.g. strategic investments). We recommend that a

request is not deemed to be necessary if the strategy for the holdings is included in banks defined policies and procedures and/or if the activity is part of the explicitly permitted deviations from the presumption list (which we request to be defined and listed in the rule text). As requested by the TBG, we provide in appendix 1 a sample of the most important deviations.

- **Accounting Reclassification.** We request confirmation that if an accounting reclassification triggers a regulatory capital reclassification, it is unnecessary to obtain explicit regulatory approval. One example of such would be if the default of a counterparty resulted in an accounting reclassification of a trading book derivative to a banking book claim.
- **FX and Commodity Exposures.** The proposed rules require that any FX or commodity positions held in the banking book be included in the market risk capital charges and be treated as if they were held within the trading book. We request clarification that the intent was to require market risk capital only for the FX or commodity exposure in the banking book, rather than requiring all risk factors for the position to be subject to market risk capital. Requiring all risk factors to be subject to market risk capital would potentially split hedges, to the extent the banking book position was a hedge to a banking book exposure (e.g. cross currency swaps).

In general, we would envision that the presumptive list would be periodically updated and amended. For example, as requests for exemptions from the presumptive list are considered by the various national regulators, we would recommend that there be a feedback mechanism across jurisdictions to consider if those permitted exemptions or deviations should be formally adopted by BCBS, through an FAQ or otherwise, to ensure that acceptable exemptions and deviations remain harmonized across jurisdictions. We would encourage the BCBS to acknowledge that there will always be need for regulators to apply some form of judgment on the appropriateness of a presumptive list to individual institutions on a case-by-case basis.

In closing, we would like to emphasize our support for the goal of clear standards for banking book versus trading book designation and for harmonizing the trading book or banking book designation across jurisdictions. We appreciate the opportunity to provide our input and look forward to the acceptance that this will require some flexibility to treat separately the particular circumstances that an institution will be in.

2. Model independent approval process

Summary

We do not fundamentally object to a Model Independent (“MI”) Standard. However, the measure proposed is risk insensitive. A leverage ratio is an inappropriate standard for evaluating the robustness of a model of desk-level market risk. This, coupled with a hard and fast rule of model eligibility (as opposed to triggering an investigation), could lead to more volatility in the level of capital.

The proposed MI Standard is inappropriate because the magnitude of the balance sheet assets of a trading desk, or more broadly the desk’s credit exposure (the full leverage ratio exposure measure captures both credit and issuer risk exposures), provides very little information about its market risk. The magnitude of the assets (or the Exposure) does not take into account the degree to which the market risk of the desk is reduced by offsetting trading positions that appear as balance sheet liabilities. The liabilities can hedge both directional market risk and relative value/basis risk.

A simple hypothetical example illustrates this point. Assume a desk only trades US Treasury Securities and that it hedges each long position with a short position that has essentially the same tenor, but a different coupon. A desk with many such hedged pairs, each pair with slightly different tenors and different coupons, would have very little sensitivity to changes in the level or shape of the Treasury yield curve and would have no credit spread sensitivity. Consequently the ES of the desk would be very small and so would the stress loss of the desk, for any realistic stress scenario of changes in the Treasury yield curve. Yet the magnitude of the balance sheet assets (and liabilities) of the desk could be very large because each of the securities in the hedged pair are different and cannot be netted against each other.

The ratio of ES/Assets or ES/Exposure would be an inapplicable measure of the robustness of the internal risk model used to calculate desk level ES.

In appendix 2 we give other, richer examples.

The essential problem of the proposed MI Standard is that the magnitude of the denominator of the proposed MI ratio is risk insensitive: it is not a measure of either the amount of directional market risk or the amount of relative value/basis risk on the trading desk.

A leverage ratio is an appropriate tool for measuring one aspect of the financial positions of a bank holding company, or a bank legal vehicle, but it is an inappropriate tool to evaluate the robustness of a bank's internal model to measure market risk at a desk level. Per the recent BCBS leverage ratio framework, the leverage ratio is intended to “reinforce the risk-based requirements with a simple, **non-risk based** “backstop” measure” (emphasis added).

A better MI Standard would be risk sensitive to the risk the model is measuring – i.e. market risk. One risk sensitive alternative would be to measure the ratio of ES to the stress loss from an appropriately defined set of stress scenarios that included both a) directional stress shocks and b) relative value/basis stress shocks

We believe that a MI Standard must be risk sensitive, or else it will generate many false negatives – i.e. inappropriately exclude the use of market risk model for a desk. One example of a risk sensitive MI Standard would be the comparison of the ES of a desk to the stress loss on the desk conditional on a set of appropriately defined stress scenarios. These stress scenarios are independent of, and over and above, the shocks required to be applied in the ES calculation. Each appropriately defined stress scenario should be a combination of a stress of directional market risk and a stress of the relative value/basis risk of the desk, as described in more detail in appendix 2.

We think that an appropriate MI Standard would measure the average of the ratio of (ES/Stress Loss) over a specified period (e.g. the ratio could be calculated daily or weekly and averaged over one quarter).

We propose that a desk, which passes all other criteria for using an internal model, but fails the Stress Test Standard (as defined herein), should have its regulatory capital defined by its stress loss rather than by the standardized approach. In the cases where the average ratio of ES/Stress Loss falls below a certain pre-defined level, this should trigger a notification to the supervisory authority, followed by a re-confirmation by the supervisor of the appropriateness of the stress test, and thereafter followed by a remedial plan submitted by the firm to the supervisor, failure of which would lead to revocation of the model/use of the standardised approach.

An appropriately defined MI Standard must be defined in the context of other limits

We think that an appropriately defined MI standard must be defined in the context of the existing limits of the bank. Each bank, as required by the BCBS's own rules, must have limits on the market risk of each trading desk. This should include limits on both directional market risk and limits on relative value/basis risk.

In addition, each bank will be subject to a BCBS defined Large Exposure limit, which will limit the bank's total exposure to an obligor as a percent of its regulatory defined capital. A bank's total exposure to an obligor will include credit risk arising from all sources, including the a) issuer risk of trading positions (i.e. from debt and equity securities), b) counterparty credit risk, c) loans, d) AFS positions, etc.

A bank's policy on trading limits typically includes a process for obtaining an approval from an appropriate level of risk management to allow a limit exception, within a defined range, on a temporary basis. Correspondingly, we think that a comparison of ES to stress losses should be based on an average of the ratio over a defined period (such as a quarter), as described above to avoid noise that could result from a single day risk limit exception.

Defining Stress Scenarios

The potential stress loss of a trading desk can be ascertained by two types of stress scenarios: directional stress scenarios and relative value/basis risk stress scenario. These scenarios can be specified by historical events and by hypothetical future events that have the potential to cause large losses. We think the industry needs to work with the BCBS to define suitable stress scenarios and that the suitability of stress scenarios needs to be continually reviewed.

Directional Stress Scenarios

Directional stress scenario to test desk internal models should be made in the context that trading desks have limits on certain market factors and that the firm as a whole is subject to large exposure limits to individual obligors (e.g. corporations, financial institutions, sovereigns). Consequently, directional stress scenarios only need to entail large correlated changes in each type of market factor – i.e. systemic stress scenarios of general market factors (e.g. all equity prices in a country), rather than stresses of idiosyncratic market factors – i.e. a stress shock of a single equity price..

A preliminary definition of directional stress scenarios would entail large correlated changes in market factors within each asset class:

- a) Stress change (increase or decrease) in the level and shape of sovereign yield curves
- b) Stress widening or narrowing of all credit spreads, including the spread between the sovereign yield and LIBOR/OIS.
- c) Stress increase or decrease in the value of a base currency (e.g. the USD) relative to other currencies
- d) Stress increase or decrease in equity prices
- e) Stress increase or decrease in commodity and energy prices.

The actual risk of a trading desk will be determined by the magnitude of the change in market factors over the time required to hedge or liquidate an open risk position (please see our section on capturing market liquidity). Experience and common sense argues that trading liquidity of debt securities will likely be reduced during an economic crisis when all credit spreads are widening. Similarly, trading liquidity may be reduced for equities when all equity prices are falling.

However, trading liquidity is very unlikely to dry up when the converse occurs – i.e. when debt and equity securities increase in value over a sustained period of time. More generally, all else held constant, the solvency of a bank is unlikely to be under strain when the economy is growing, loan losses are low, and debt and equity securities are increasing in value. Consequently, directional stress scenarios to test internal models need only include scenarios in which credit spreads widen and equity prices fall.

In contrast, depending on the specific nature of the economic crisis (e.g. inflationary or deflation crisis) the level and shape of the sovereign yield curve, the value of the base currency against other currencies, and the level of commodity and energy prices could either increase or decrease during systemic stress scenario.

Consequently a realistic directional stress scenario would be defined by:

- a) Stress increase or decrease in the level and shape of sovereign yield curves
- b) Stress widening of all credit spreads, including the spread between the sovereign yield and LIBOR/OIS.
- c) Stress increase or decrease in the value of a base currency (e.g. the USD) relative to other currencies
- d) Stress decrease in equity prices
- e) Stress increase or decrease in commodity and energy prices.

We think one set of realistic directional stress scenarios are the ones associated with historical crisis, in which the stability of financial institutions were at potential risk. Historical examples of such directional stress scenarios would include full year changes in market factors observed during 1974 (inflationary),

2008 (deflationary), and more narrowly, the 2012 (Eurozone sovereign debt crisis). Hypothetical stress scenarios should also be considered if there are directional risks not captured by historical stress scenarios.

Relative Value/Basis Risk Stress Scenarios

Relative value risk arises when a bank buys asset A and sells asset B in the expectation that the ratio of the prices of A/B will increase. A loss will occur if the ratio of prices falls. The relative value positions will have no change in value if the price of A and B increased or decreased by the same percentage, as would occur if A and B were in the same asset class and had the same sensitivities to the same general market factors.

A portfolio of relative value positions can experience a large loss if many market financial institutions hold similar relative value positions and try to unwind them at the same time. This has occurred in the past, for example during the Russia/LTCM crisis in 1998 and for some banks and hedge funds during the summer of 2008.

Basis risk arises when a firm hedges a position in one asset with a short position in another asset to which it normally is highly correlated – e.g. a portfolio that was long heating oil and short crude oil. Such a portfolio might have little or no change in value if all energy prices increased, or decreased, but could have a large loss if the ratio of the price of heating oil to crude oil fell.

Stress tests for basis risk have to be specific to the composition of the positions on a trading desk. They can be identified either mechanically, by a risk report that captured and highlighted large basis risk, or they can be identified and specified by an independent risk manager. The appropriateness and robustness of relative value/basis risk stress scenarios would have to be evaluated by the bank's supervisors. These stress scenarios will likely be a mixture of historical relative value/basis risk scenarios and hypothetical scenarios. The latter would have to be backward engineered to assure that any desk with a large amount of a particular basis risk had its ES tested in an appropriate manner.

3. Capturing market illiquidity

Executive Summary

We support TBG's objectives of factoring in market liquidity and appreciate TBG's effort to balance simplicity, risk sensitivity and comparability when designing the approach. However, after detailed evaluation and much industry discussion, we have identified a number of gaps and complexities in the current FRTB proposal that we believe need to be resolved before it can deliver on TBG's objectives. We discuss these issues in this section.

We also believe there are simpler ways to achieve TBG's objectives with less uncertainty than the approach proposed. We will go over these alternatives in this section. These alternatives all share a number of common features. They are essentially variants of the same approach. They differ by how much flexibility they have incorporating granular liquidity horizons and how close they are to the current B2.5 framework. The one closest to the current framework requires the least amount of development and has less uncertainty but is more constrained on other aspects.

One common feature is that none of these variants uses overlapping long horizon returns. In the next section, we explain why the use of overlapping long horizon returns would give rise to a number of modeling/statistical issues that can introduce significant uncertainty in the final capital level. Furthermore, actual long horizon returns can provide false precision when they are accompanied by rather coarse liquidity horizon buckets and risk factor categories from regulatory assessments.

Another key common feature is that they all involve scaling from simulated P&L over a common horizon (which is equivalent to scaling the final metrics in some cases) as opposed to scaling the inputs. This can

avoid many issues related to correlation between returns from different horizons and better compatibility with risk sensitive measures particularly when regulatory liquidity horizons are used.

Given the tight timeline to respond, and the complexity of this topic, we can only deliver on the skeleton of these alternatives. We would like the opportunity to work with the TBG on developing the details. We value highly this unique opportunity to review and strengthen the market risk framework.

Last but not least, we would like to highlight that firms always want to develop their own risk sensitive framework and, in this case, their own assessment of market liquidity as they have different business models and portfolios and have the need to manage their risk and capital accordingly. A regulatory capital framework that is not sufficiently risk sensitive would necessitate the maintenance of parallel systems and could well create conflict between risk and capital management.

Identified gaps/complexities with the FRTB proposal

- TBG's approach to factor in market liquidity has the following key elements:
 - A. Define liquidity in the risk factor (RF) space as time to extinguish RF exposures via hedging or unwinding
 - B. Specify Liquidity horizons (LH) from 10 days to 250 days for a small number of broad RF categories based on regulatory assessment
 - C. Directly apply long horizon shocks derived from overlapping long horizon RF returns instead of scaled short horizon shocks or scaled output
- While the approach is conceptually straight forward to understand, we believe, in practice, it has a lot of complexities and open issues which, if not dealt with, can undermine risk sensitivity, reduce comparability and affect feasibility over the short run. Below are some issues we have identified.
 1. The use of longer, varying horizon and overlapping returns presents new modeling challenges. For instance,
 - How to model the drift (trending or mean reverting) for long horizon returns?
 - How to deal with autocorrelations arising from the use of overlapping returns?
 - How to model correlations of different horizon (and therefore partially overlapping) returns?
 - How do factor models work when risk factors have different horizons?
 - How to deal with lead-lag relationships for varying horizon returns?
 - How to model common trends / co-integration type behavior?

There are many theoretical/statistical questions to be resolved, and industry standards to develop before the framework can be implemented and deliver on risk sensitivity and comparability.
 2. The categorization of risk factor is not independent of the representation/definition of risk factors.
 - E.g. we can represent two rate factors as 1 rate and 1 spread.
 - We can represent an index basis as index vs constituents.

As such, the mapping to factor category is not very precise yet it can have a large impact especially where there is a big difference between the assigned horizons of various risk factor categories.
 3. Imprecise risk factor categorization together with rough horizon bucketing can also lead to cliff effects.
 - E.g. when ratings go from BBB- to BB+, the horizon changes from 60 to 120 days meaning that the shock can go up by more than 40%! Hedge ratios and diversification effects can be greatly affected thus creating a conflict between risk and capital management - a portfolio hedge that reduces P&L volatility can lead to higher capital and vice versa.
 4. While the choice of risk factor categorization and horizon bucketing has a big effect on both absolute and relative capital charge across products and can have huge effects on incentives and risk concentration, it is unclear how the current assessments were determined

- E.g. why do FX rates have longer horizons than equity prices?
 - Why should DM and EM rates have the same liquidity?
 - Why are HY sovereigns the same as IG corporates?
5. As the market environment changes and new crisis is developing, what is the mechanism to update the horizons for more appropriate weightings?
 - The market situation can change much faster than regulatory rule sets which are subject to many legal procedures.
 - Without sufficient linkage to risk measurement, there is plenty of room for setting wrong incentives and creating distortions. It is unclear what mechanism there is to monitor and correct for such distortions when they arise.
 6. The use of varying and long horizon returns could present challenges translating factor shocks to P&L that need to be resolved before the framework can be used.
 - Delta/gamma type approaches would not work well for very large shocks and therefore need to be replaced
 - Pricing grids would need to be recalibrated to accommodate a larger and a wider range of shock combinations.
 - Pricing model assumptions might need to be adjusted to allow for a broader range of input values.
 - The operational challenges are much greater than that of fixed stress tests due to the large number of randomly simulated scenarios.
 7. Data infrastructure would need to be overhauled and massive amount of data would need to be repopulated.
 - Shocks might need to be redefined (e.g. absolute or relative change) with data repopulated
 - Proxy and data-backfilling would need to be redone
 - Factor models and residuals would need to be re-estimated
 - A mechanism would need to be established to map risk factors to the prescribed categories.
 - Data would need to be revalidated
 - Database would need to be reworked for varying horizon returns while the current system is running.

Simpler alternatives

- We present below a number of alternatives that we believe are simpler than the proposed approach to varying degree. We start off with the one closest to the current Basel 2.5 (“B2.5”) framework and move to approaches that offer more flexibility but with more complexity.

Variant 1: liquidity addon

- Currently, under B2.5, a 10 day 99% VaR is used with a 3 multiplier which effectively converges the 10 day VaR into a 90 day VaR
- With the 97.5% Expected Shortfall (ES) comparable to the 99% VaR, we could start with a 90 day 97.5% ES with no multiplier as the base case or a 10-day 97.5% ES with a 3 multiplier with all risk factors.
- If we were to follow the risk factor categories in FRTB2, there are only a few of them that have a horizon longer than 90 days. Specifically,
 1. corporate HY credit
 2. equity small cap vol
 3. equity other (e.g. equity structure products)
 4. non-energy and non-precious metal commodities vol
 5. commodities other (exotics)
 6. credit structured products
 7. credit other

The RF categories 1-5 above have a 120 day horizon. The RF categories 6 and 7 have a 250 day horizon.

- With this setup, we can add to the 3 times 10-day ES (~90-day ES) a number of standalone ES add-ons, one for each of the set of categories that is longer than 90 days, representing the additional holding period over and above 90 days. Note that the illiquid risk factors are also included in the base firmwide 3 times 10 day ES.
- The firmwide liquidity adjusted ES is equal to:

$$[\text{FW LaES}] = 3 * [\text{FW 10-day ES}] + \text{DB} * \text{addon}$$
 Where,
 - $\text{addon} = \text{Sum} \{ 3 * [\text{Category } j \text{ 10-day ES}] * W_j; j=1, \dots, 7 \}$
 - $W_j = (\text{sqrt}(H_j/90) - 1)$, H_j is the horizon of RF category j in number of day
 - DB is a parameter between 0 and 1 representing any diversification benefit allowed. DB=1 means no diversification benefit.
- [Category j 10-day ES] can be calculated as a risk factor based ES by only shocking the risk factors identified with category j . However, given the liquidity categorization in FRTB2, we believe it is better to calculate the addon as the ES of desks/segregated accounts with products having exposures to risk factors in category j as well as their hedges. Even though the liquid hedges (e.g. index hedges) can be unwound much faster, in practice they will only be unwound together with what they are hedging.
- The equation above also makes it clear that while there might still be a multiplier on the FW liquidity adjusted ES (FW LaES) to account for model performance based on backtesting, there is no reason for this multiplier to be subjected to a minimum value of 3 as it is already accounted for in the first component on the right hand side of the equation representing a common 3 times 10-day ES (or 90-day ES). Having a further 3x multiplier on top of it is a double count.
- This liquidity add-on approach keeps the essence of the TBG objective of penalizing illiquid risk factors by having an add-on to capture a longer horizon than the standard horizon for the more liquid factors.
- It keeps all liquid factors under the same horizon without further distinguishing liquid risk factors with varying horizons that are below 90-days. From that perspective, it takes an approach that focuses on a number of risk factors that pose particular concern over their liquidity over a stressed period rather than attempting to have a view on the liquidity of every risk factor – which is a much more difficult task.
- It fully recognizes hedging and diversification based on consistent correlations among returns of the same horizons.
- It captures the additional risk of longer (than standard) horizon by scaling. Any additional precision from using actual long horizon return is small compared to the relatively imprecise horizons.
- It does not further attempt to correlate the returns of the less liquid risk factors beyond 90-days. The approach avoids the complexity of correlation between returns of different horizons. Some degrees of hedging and diversification benefit between the liquid and illiquid risk factors are already reflected in the 3 times 10-day ES. Other than that, the addon is “added” to the 3 times 10-day ES. As an alternative way, under the assumption that non-overlapping period are uncorrelated, perhaps the add-on could be added using square-root of sum-of squares.

Variant 2: cascade of non-overlapping periods

- This variant extends the first to cover a broader range of distinct liquidity horizons (including those of the relatively more liquid risk factors) yet avoids the issues of correlations between long and short horizon returns. This is done by having a cascade of non-overlapping period ESs which under the assumption of zero correlation across non-overlapping periods would mean that these ESs can be aggregated using a square-root of sum of squares calculation. (Variant 1 is essentially a cascade of 2).
- The idea is that if we have a range of liquidity horizons: $[H_1 < H_2 < H_3 < \dots < H_n]$, then one can represent them as a number of non-overlapping periods. Specifically, time 0 to time H_1 , H_1 to H_2 , H_2 to H_3 , etc. with corresponding length, H_1 , $H_2 - H_1$, $H_3 - H_2$, etc.
- In the first non-overlapping period from 0 to H_1 , the portfolio will contain all risk factors as none have been extinct. In the 2nd period from H_1 to H_2 , the portfolio will only contain risk factors with horizon longer than H_1 . In the 3rd period from H_2 to H_3 , the portfolio will only contain risk factors with a horizon longer than H_2 , and so on and so forth. If $V_1(0, H_1)$, $V_1(H_1, H_2)$, $V_1(H_2, H_3), \dots$ are the 1-day variance (we can start with 10-day instead) of each of these

portfolios respectively, then the relevant variance over each of the non-overlapping period by scaling are $V1(0,H1)*H1$, $V1(H1,H2)*(H2-H1)$, $V1(H2,H3)*(H3-H1)$ etc. so the overall standard deviation can be calculated as the square-root of the sum of the variances:

$$\text{sqrt}[V1(0,H1)*H1 + V1(H1,H2)*(H2-H1) + V1(H2,H3)*(H3-H1), \dots]$$

- The idea is that we would apply the same approach in the expected shortfall space to calculate the expected shortfall as the square-root of the sum of squares of the ESs for the sequence of portfolios reflecting the sequence of risk factor extinction over time.
- This approach addresses issues with correlations between long and short horizon returns by defining a sequence of non-overlapping periods.
- It is more general than variant 1 (which can be viewed as a special case). It distinguishes all the liquidity buckets in the FRTB proposal. However it is more complicated as it requires the creation of portfolios of distinct horizons.
- Furthermore, if there are a large number of liquidity horizon buckets, then this would entail the creation of a large number of portfolios with distinct horizons.

Variant 3: A business level P&L scaling approach

- This variant does not require the creation of portfolios with distinct horizons but requires scaling simulated P&L vectors directly. While variant 1 and 2 can also utilize the scaling of P&L vectors, they can be performed by scaling from short horizon ES metrics.
- The idea is to apply the weighting (time scaling) directly on a baseline simulated short horizon (e.g. 1-day or 10-day) P&L at a desk or business activity level and then obtain the firmwide P&L simply by summing the horizon scaled desk or business level P&Ls.
- This would provide a better linkage between capital measurement and desk level risk measurement while respecting hedge relationships within a desk based on one single horizon which can help reduce uncertainty.

$$[\text{FW P\&L vector}] = \text{Sum}\{ [\text{desk } j \text{ P\&L vector}] * \text{sqrt}(H_j); j=1, \dots, N\}$$

- With the horizon scaled simulated P&L vector at the firmwide level, we can obtain the corresponding 97.5% ES directly from the tail scenarios.
- The appeal of this approach is that it is more direct and transparent. The liquidity horizon scaling is equivalent to scaling up a position's size to reflect the higher risk due to illiquidity. It does not involve actual horizon returns. As such, while the different P&Ls carry the interpretation of horizon P&Ls, they are really just scaled from consistent short horizon P&Ls. There is no actual aggregation of P&Ls from different horizon returns and the problems that come with it.
- By scaling from the same short horizon return, the approach essentially adopts the same short horizon correlations everywhere. In other words, the correlation between long and short horizon returns is assumed to equal the correlation between short horizon returns.
- We do not think this a drawback as the correlation between long and short horizon returns tend to be rather unstable and often run into insufficient data problems.
- The key issue of this approach is how to determine the liquidity horizon of a desk/business. To avoid comparability issues, one possibility is to stay at a very high level – e.g. only having 5 businesses defined as a collection of desks corresponding to the typical 5 product categories in financial reporting – FX, EQ, IR, CR, CM. This would greatly simplify things but would go against a more granular bucketing / categorization in the FRTB2 proposal.
- One method is to calculate a weighted average horizon per desk based on the factor weights in the desk and the regulatory horizons of the factors. The factor weights can be factor level ES. Alternatively, one can create a statistical index to represent the liquidity of a portfolio. We are in the process of exploring/testing these options.

4. Treatment of Credit

Strengths of second Consultative Paper proposals

Migration risk will be captured in stressed ES and removed from IDR. This removes a potential double count and simplifies the default risk measure. It allows firms to account for overlap in IDR of risk already captured in the ES price risk model. While not clear yet, the move to standardization of co-dependence modeling (number of factors, calibration approach and distributional assumptions) should aid comparability. The removal of the constant level of risk assumption together with a 1 year uniform capital horizon is simpler, helping comparability and removing material model dependence.

Remaining issues to address

- The definition of scope could be more direct. It reads (§186 (c)) “All positions... with the exception of those ... whose valuation depend solely on commodity prices or foreign exchange rates are subject to the default risk model”.
- The meaning of an n-factor model is not clear. The perception that more factors give a larger result is incorrect.
- While we support zero-tolerance to any blanket “risk-free” assumption, the value of the floor must be appropriate and carefully calibrated. A floor of 3bps for local currency sovereign bonds may have a large impact on the real economy limiting the ability of firms to participate in market-making in G4 currencies. Further, it is inconsistent with;
 - the Banking Book treatment, which does not have a floor for sovereigns
 - discretion left to national supervisors to lower the risk weight for sovereigns under the standard approach to zero
- The historical observation that default rates on highly rated governments is extremely low – for example, since they began rating sovereigns in 1975, S&P report³ no defaults whatsoever on investment grade sovereigns, over the 1 year time horizon relevant for IRC calculation. Even over a 15 year horizon, the longest reported and far above the standard applied in IRC, no defaults at all were observed on AAA or AA rated governments. Correlation based on equity prices cannot be implemented for sovereigns, quasi-sovereigns and municipal bonds. Their use is inconsistent with AIRB.
- The mandatory inclusion of Equity positions in IDR has no clear rationale on top of raising several conceptual difficulties:
 - It is not clear what is meant by the default probability of equity. Is it the probability of a jump to zero price?
 - Does the TBG make the assumption that if a firm issues publicly rated debt, the probability of default over 1 year equals the probability of equity price going to 0 over 1 year (the Merton model would assume that)?
 - It seems totally unrealistic to think that such equity position would be kept in the trading book over one year with no form of active management. This contradicts the fact that equities have been assigned the shortest liquidity horizon under the expected shortfall framework
 - What should the PD assumptions be for firms with loans but no publicly rated debt issuance?
 - What should the PD assumptions be for firms with no loans and no publicly rated debt issuance?

Counterproposal – these points indicate the direction for debate, and leave out detail

1. A scope definition wording based on default risk.

³ See <http://www.standardandpoors.com/ratings/articles/en/us/?articleType=HTML&assetID=1245350156739>, table 19.

The current definition of IDR scope is made by exception – “all positions except Commodities and FX”. We think that defining scope by inclusion is more direct and hence simpler and better for facilitating global consistency and comparability.

186. (c) – CURRENT. All positions subject to the market risk framework, with the exception of those positions subject to standardised charges or whose valuations depend solely on commodity prices or foreign exchange rates are subject to the default risk model. Therefore, sovereign exposures (including those denominated in the sovereign’s domestic currency), equity positions and defaulted debt positions must be included in the model.

186. (c) - PROPOSAL All positions subject to the market risk framework with exposure to the risk of losses due to issuer or sovereign default (with the exception of those positions subject to standardised charges) are subject to the default risk model. For example, sovereign exposures (including those denominated in the sovereign’s domestic currency), equity positions and defaulted debt positions must be included in the model.

- Prefer a small number of factors in the interests of simplicity and comparability across firms. Propose Gaussian single-factor copula as standard.
- Propose the use of the same correlations as A-IRB, which would ensure standardization across firms and thus reduce RWA variability, and ensure consistency between the Trading Book and Banking Book.
- Propose no floor for sovereigns to align with the banking book treatment and the standardized method, and to reflect the historic experience that default occurs extremely rarely, if ever, for the most highly rated sovereigns. As a fall back, propose a nominal 1bp PD floor for sovereigns. The industry is currently working on paper to estimate PD floors for both corporate and sovereigns.
- Propose to keep the inclusion of equity optional given the conceptual difficulties raised by such inclusion. Banks that do not opt for the inclusion shall demonstrate to their supervisor that they properly capture event risk for equity exposures in the Expected Shortfall calculation.

2. Correlation trading portfolio

The Committee is considering removing the Comprehensive Risk Measure (CRM) from the revised model-based approaches and moving correlation trading portfolios to the revised standard method. We believe it is too early to conclude that a model-based framework is not feasible for the correlation trading portfolio.

While no explicit rationale is provided in BCBS 265, we understand that the Committee is concerned by the complexity inherent to correlation trading and the CRM model which aims at capturing “all price risks” of this activity at 1 year horizon and a 99.9% confidence level.

In this respect, we would like to stress the following:

- The CRM model has been implemented and validated by national supervisors in several jurisdictions and many investments have been realized to overcome the related operational issues
- The CRM model is tightly benchmarked to two regulatory metrics: a floor (equal to 8%*standard approach) and 25 prescribed historical stress tests
- The CRM models have also been benchmarked in the context of the second phase of the SIG hypothetical portfolios exercise. We remind hereafter the main findings:
 - CTP’s Portfolios were incompletely described (with no specific description of hedge) so that variability in results is partly due to difference in the booking of positions,
 - Comparing variability on exotic products (depending on several market parameters) and those on vanilla products is not fully appropriate,
 - Nevertheless, the observed variability in results is quite equivalent between CRM and IRC: 81% vs 77% as mentioned by EBA in its report,
 - The highest variability is observed on the standard approach (floor calculation). Its revision in BCBS 236 suggests that the same type of methodologies will still form the

basis of the standard method and hence we do not expect major changes in this observed pattern.

- We therefore strongly disagree with the Committee’s conclusion that the use of standard approach will “narrow variability”.

Furthermore, we would like to highlight that as opposed to complex and less liquid products such as re-securitizations or leveraged super senior tranche which are already excluded from the scope of the CRM and subject to the standard method, there is no obvious reason to establish *ex ante* that correlation trading portfolios as defined in the Basel 2.5 framework cannot meet the criteria laid down in the FRTB for the inclusion in the model-based approach. On the contrary, we believe the new framework allows assessing the eligibility and suitability based on much more objective criteria:

- Eligibility to the prudential trading book based on the way risks related to correlation trading are effectively managed
- Longer liquidity horizon can be assigned as part of the Expected Shortfall modelling
- Robust model approval process relying on P&L attribution and Backtesting at the correlation trading desk level
- Stress-tests based capital add-on for risks that could be deemed “non-modellable” such as base-correlation

Finally, while the “all-price risks” CRM might seem a complex model, we believe all the simplifications that are proposed to streamline the IRC approach and standardize some of its underpinning assumptions can also be efficiently replicated in the CRM model.

By contrast, the standard method, despite all the proposed enhancements, will never accurately capture neither the risks that are inherent to correlation trading, nor the hedges of those risks.

As a consequence, the use of the standard approach instead of the CRM could lead to the undercapitalization of those risks or even worse, mis-hedging them to avoid an excessive capital charge.

To conclude, we ask the committee to reconsider its current position on CRM removal. There is no rational justification to such prohibition, not least based on the latest SIG benchmarking results.

The CRM could be simplified along the same lines as the IRC model and would be used in conjunction with the current prescribed stress tests and a floor based on a percentage of the revised standard method and recalibrated accordingly.

At minima, and considering the fact that the standard method is unable to cope with correlation trading activities in an economic way, a grandfathering clause needs to be introduced for existing exposures at the time of implementation of the FRTB to avoid a massive and undue increase in capital requirements.

5. Disclosures and floors

The industry has noted that the BCBS has recently published its second report on the regulatory consistency of RWAs for market risk in the trading book, which completes the first report published in January 2013, adding more complex trading positions into the exercise.

Consistent with the findings in the January 2013 report, the results show significant variation in the outputs of market risk based regulatory capital produced by the banks’ internal models. The results also show that variability typically increases for more complex positions and re-confirms the finding that differences in modeling choices are a significant driver of variation in market risk RWAs across banks. We believe the findings of the report point to the need for further investigation on key drivers of inconsistency and whether these drivers are warranted. As the industry has noted in the response to the BCBS’ discussion paper on “The regulatory framework: balancing risk sensitivity, simplicity and

comparability”, we believe further investigation is required to assess how much of the variability is driven by acceptable and unacceptable differences. It is imperative that this is understood properly.

In terms of policy recommendation, we understand that the conclusions support reform areas that are being addressed by the TBG, namely:

1. Improving public disclosure and the collection of regulatory data to aid the understanding of market risk RWAs
2. Narrowing the range of modeling choices for banks
3. Further harmonizing supervisory practices with regard to model approvals

The industry is supportive of the Committee’s objectives and we believe that reliable and comparable information on risks within the banking system fosters regulators trust in the banks as well as other stakeholders’ belief in efficient functioning of the markets. However, we share the concerns expressed in the BCBS’s second RWA paper - “it is desirable to have some diversity in risk modelling practices; if all banks modelled in the same way, they could create additional financial instability”. Therefore, we have reservations particularly on using standard approach as a floor and the Pillar III disclosure of standard approach numbers on a desk level.

In the two sections below, we discuss the standard approach as a floor and the proposed Pillar III disclosure requirements on a desk level in the context of the above BCBS objectives as well as on their own merit. We identify some adverse consequences that are apparent in certain implementation scenarios and also highlight solutions without these pitfalls that should satisfy the regulators’ concerns regarding the density of internally modelled capital and comparability between institutions.

Disclosure

The industry believes that it is not helpful if banks using internal models will be required to disclose their standard approach capital charges on a desk level, given the approximations in the revised SA and differences between banks in their desk structures. It is highly likely that Pillar III standard approach disclosures will become the binding stakeholder capital metric for banks if its disclosure is mandatory and therefore there will be little incentive to further develop more robust internal models.

Also, we see downside in such disclosures as they may start driving the optimization of desks and the consequent capital allocation to be aligned in a way that is suboptimal from a business perspective.

If the Pillar III disclosure requirements are adopted in a way that forces banks to disclose the numbers for comparable set of desk structures across the industry, regulators are likely to end up with two prescriptive binding capital measures (the Leverage Ratio and Standard Approach) that lack risk sensitivity and thus ability to adapt to changes in economic risks. Such binding measures have unintended consequences for two reasons:

1. They will standardize risk appetites across the sector, which is likely to reduce flexibility and diversity of business models as well as increase pro-cyclicality due to the exposures and holding periods becoming much more aligned
2. Consequent misalignment of regulatory capital requirements with economic risks in the exposures will lead to suboptimal risk management practices as the standard approach capital requirement will to large extent become the binding constraint, especially in the developed markets

To avoid these adverse consequences from public disclosures on a desk level, we believe that it is essential to allow for aggregation of desks along firm specific business lines that can be different from one bank to another. Furthermore, if there is a supervisory desire to obtain more granular data for comparability reasons, this should not be a public disclosure but used for supervisory purposes only.

Floors to internally modelled capital

While we recognize the regulators' concerns about internally modeled capital requirements and the desire for more comparability between risk positions across the industry, we believe that the standard approach (SA) based capital level should not be used as a direct floor to internally modeled capital. This application of such floors will not provide the right incentives for continuous improvement of risk models. It may also lead to transformation of risk appetite across firms in a way that substantially reduces the sensitivity of risk management practices to real economic risks of a particular trading business. This is as the SA's simplistic risk factor approach is unlikely to help identify risks that may build up outside the SA "model".

Additionally, the industry notes that using standard approach as a floor to modeled capital is closely linked with the disclosure requirements (as the disclosure is likely to make it a floor in stakeholders' eyes) and the industry believes that the use of standard approach directly as a floor will lead to similar unintended consequences as the disclosure requirements.

The industry is willing to engage with the TBG to help identify ways to reduce the variance in modelling outcomes, especially if they produce inadequately low capital levels under risk scenarios such as the recent "triple A crisis" as well as for more complex trading positions. We believe that the TBG's objectives are better achieved through model portfolio exercises in combination with harmonization of supervisory approval practices rather than through a standard approach based floors.

Floors on sovereign exposures

The industry shares the regulators' concerns on sovereign defaults and we agree that such risks should be captured in the overall prudential framework. However, we prefer to include sovereign default risks in the stress testing framework (e.g. ECB's new stress testing methodology includes stress tests on sovereign exposures) rather than through setting a floor on modelled capital that applies to all sovereign exposures, including the G-4 countries. As noted by the industry at the meeting with the TBG on 10th December, at an event of a major sovereign default, more than one basis point floor would be inadequate in capitalizing for such risks and therefore it is best addressed elsewhere.

In addition, we note that the BCBS's Leverage Ratio already applies a 300 bps charge (with substantially higher requirements potentially in certain jurisdictions) on all bank assets and therefore there already is a material constraint to excessive sovereign risks in the overall regulatory framework. The leverage based requirement will reduce bank sovereign debt exposures in excess of the liquidity requirements and also apply higher capital charges to these exposures when capital is reallocated along the business lines depending on the binding capital measure.

Therefore, we believe that the proposed floor for sovereign exposures in the solvency ratio framework is unnecessary and only acts as a limit to modelling freedom with punitive impact on certain sovereign exposures, especially when funded locally in the same currency. Consequently, the industry recommends the TBG to remove the floor from the proposed trading book proposals as it is already being addressed in the wider framework.

6. Appendices

Appendix 1

Most important deviations from the Trading Book/Banking Book Boundary presumption list:

Deviation	Description
Derivatives under hedge accounting	<p>Derivative instruments in most accounting frameworks are account for their changes in their market value through P&L. When they are designated as hedging instruments, their changes in market value are offset by the changes in values of the so-called hedged item (hedged risk component of the hedged items). In the balance sheet, the hedged item is represented next to the hedging item (fair value hedge), or in Other Comprehensive Income (cash flow hedge, net investment hedge). The trading book presumption should <i>not</i> apply to derivatives <i>and</i> hedged items that are accounted for in a hedging relationship (hedge accounting).</p>
Banking book hedges not eligible to hedge accounting	<p>Examples include:</p> <ul style="list-style-type: none"> • Derivatives hedging non maturing asset or liability (such as core deposits, savings accounts...), sub-libor items (such as core deposit, saving accounts, sub libor debt instrument...), equity instrument (e.g. Tier two fixed rate debt) • Credit hedges that are not recognized for credit risk mitigation (e.g. index/single name proxy hedges) <p>The trading book presumption should <i>not</i> apply to banking book hedges not eligible for hedge accounting, subject to demonstrating that the derivatives mitigate risks from the banking book, and that there is no trading intent.</p>
Basel III-LCR-required liquidity buffer	<p>Basel III LCR requires maintaining a liquidity buffer with regular transactions to demonstrate market liquidity of the securities. This could lead a portion of the LCR –buffer being accounted for as Held-for-Trading, even though the intent may <i>not be</i> a trading intent.</p> <p>Subject to demonstrating that these securities are not held with a trading intent, are not managed together with transactions in the trading book but are held primarily to build up and maintain a liquidity buffer, such assets should not be considered in the trading book. This should apply to listed equities and collective investment units that are eligible to the LCR-buffer.</p>
Long term holdings in listed equity	<p>Long-term investments in listed equity are generally part of strategic participations and held on a long term basis.</p> <p>Such exposures should not be considered in the trading book.</p> <p>As pointed it out in footnote 21 of BCBS 265, equity positions arising from deferred compensation plans, convertible debt securities , loan products with interest paid in the form of “equity kickers”, equities taken resulting from a debt previously contracted, bank-owned life insurance products, and legislated programmes should also be excluded from the market risk framework.</p>
Embedded options	<p>Most loans (including mortgages, instalment loans, commercial loans) and deposits (term deposits, savings deposits) have early termination embedded options.</p> <p>The trading book presumption should <i>not</i> apply to such products.</p>

Appendix 2

Problems with Proposed Model Independent (MI) Standard

In the FRTB proposal, the Model Independent Standard (MI Standard) is one of three desk-level criteria, each of which has to be met in order for a bank to use the internal model approach to calculate regulatory capital for trading risk. The proposed MI Standard is:

$$\frac{Reg\ Capital}{Exposure} > Threshold$$

In the following discussion it is assumed, as per the suggestion in the FRTB, that:

- Reg Cap = ES + add-ons for non-modellable risks
- Exposure = Same measure as in B-III Leverage Ratio
- Threshold = Some minimum set per type of trading desk

Problems Applying Proposed MI Standard To A Trading Desk Of Debt Securities

- **Simple example of problem with proposed standard**

Consider a trading desk that only traded US Treasuries. Assume in this example that the desk is long Treasury securities of various tenors and coupons, and that each long position is hedged by a short position in a Treasury security that has a similar tenor but a different coupon. The long and short positions within a hedged pair could not be netted because they were different securities, although from the same issuer.

Netting would be used in calculating the balance sheet assets and liabilities only for positions in the same security. The total asset of the desk would be the sum of the market value of the net long positions in particular securities, the total liabilities of the desk would be the sum of the market value of the net short positions in particular securities.

Given the essentially linear nature of each Treasury security, the VAR or the Expected Shortfall for a simple portfolio of Treasury securities will be a function of: 1) the set of factor sensitivities to changes in the Treasury yield curve, and 2) the volatilities and correlations of changes in the Treasury yield curve.

The market factor sensitivities can be expressed in several equivalent forms:

- a) Factor sensitivities to +1bp increase in the Treasury yield-to-maturity over a specified set of tenors.
- b) Factor sensitivities to +1 bp increase in the forward Treasury rate, over a specified set of forward periods.
- c) Factor sensitivities to +1 bp increase in zero coupon Treasury rates, over a specified set of tenors.
- d) Factor sensitivities to +1 bp increase in principal components of the Treasury yield curve, for an appropriately defined set of principal components.

In our hypothetical example the VAR and ES of the Treasury trading desk could be very small, yet the amount of the balance sheet assets could be very large. The breakage in the two measures occurs because the factor sensitivities of the trading desk, whether measured in the form of a, b, c, or d, takes into account the impact of the short Treasury positions that are hedging the long positions. Depending on the level at which the threshold is set, this breakage may result in such a portfolio being excluded from the internal model approach. In any case, whatever the level of the threshold, it does not make sense for a portfolio of this type to be most susceptible to exclusion under the threshold test.

- **More general example of a trading desk of fixed income securities.**

The prior example of a trading desk that only traded US Treasury securities, illustrates why total assets (or total exposure) is a poor measure of market risk. Other examples can be created.

Consider a desk that trades USD investment grade corporate debt. Assume that each long position in corporate debt is hedged with a short position in the corporate debt of a different issuer who had the same credit rating. The market risk of each such hedged pair can be decomposed into the components of the yield curve of each security:

- a) A base yield (i.e. USD Treasury or USD LIBOR) for a specific tenor.
- b) A general spread to the base yield by risk rating and specific tenor
- c) An idiosyncratic (i.e. issuer specific) spread by issuer and tenor

For each hedged pair, the sensitivity of the position to changes in market factors a) and b) would be zero, leaving only the basis risk of the idiosyncratic spread of each issuer. A large portfolio with many such hedged pairs would have no sensitivity to change in the level or shape of the base yield curve (e.g. LIBOR or Treasury) and no sensitivity to changes in general spreads to the base yield by rating and tenor. It is important to note that the portfolio described would have no sensitivity to a dramatic widening of general credit spreads by rating and tenor.

Instead the market risk of the desk would consist of pairs of idiosyncratic spread risk by issuer and tenor. However, by its nature, idiosyncratic spread risk is specific to each issuer and in a large diversified portfolio, the total VAR or ES of that risk would tend to be small. In contrast, the total assets and total liabilities of the desk could be large.

An actual trading desk will consist of offsetting hedged pairs, as described above, as well as corporate debt positions that were hedged with offsetting Treasury positions or LIBOR interest rate rates. These latter type of hedged pairs would have no sensitivity to a change in the level or shape of the base rate but would have sensitivity to changes in general spreads (by rating and tenor) and idiosyncratic spreads (by issuer and tenor). The former would not be diversified away and would be a large contributor to the VAR or ES of the portfolio.

However the general point remains. One cannot determine the amount of market risk on the desk simply by measuring the assets (or the exposure) of the desk. Neither the assets nor the exposure determines the amount of base rate risk, the amount of general spread risk, or the amount of diversified idiosyncratic basis risk on the desk. In the same way as for the simple example above, it does not make sense for a portfolio of this type to be highly susceptible to exclusion under the threshold test.

- **Simple example for a derivative portfolio of USD LIBOR interest rate swaps.**

Assume a bank has a large USD interest rate swap business with its end-user wholesale customers. Assume the latter are a large number of non-financial corporations, small banks, and sovereigns. Further assume that for each pay fixed swap of a specified tenor and floating rate that it transacts with one wholesale customer, the bank did an offsetting receive fixed swap of the same tenor and floating rate with a different wholesale end-user. Let us make the further (not unreasonable) assumption that each end-user did swaps in a single direction (i.e. only paid fixed or only received fixed on each swap it transacted with the bank) and that no end-user posted initial or variation margin.

The trading desk, as a consequence of doing a very large number of pairs of offsetting swaps with a large number of wholesale customers, would have virtually no market risk but potentially a lot of counterparty credit exposure to each of its wholesale end-users.

There would be very little market risk because the bank had hedged the market risk of each interest rate swap with an offsetting swap of the same tenor and floating rate. The current and potential future credit exposure to each counterparty, however, would be large because of the unidirectional set of transactions with each counterparty.

The current exposure of a wholesale end-user could potentially be reduced by netting if the yield curve had changed over time such that some of the swaps with the end-user had a current market value that was positive and some other swaps with the end-user had a current market value that was negative. However, because we have assumed each wholesale end-user did swaps in one direction, the potential increase in the value of the swap portfolio with each end-user would not be reduced by netting.

The bank would have potential credit exposure to each wholesale end user, even though the current exposure could not increase to every end user at the same time.

Consequently the measured exposure of the trading desk (i.e. the sum of the exposure to each end-user) could be quite large even if the market risk of the desk was close to zero.

A more realistic hypothetical example would have had the bank hedging some of its market risk with other large market makers (instead of only with other wholesale end users) and would have had some of the wholesale end users entering into a mixture of pay and fixed received swaps. Nonetheless the general conclusion would still be true. The total leverage ratio exposure of the desk would not be a measure of the amount of market risk on the desk. The total exposure will always be a large number if wholesale end-users do not post margin. The total market risk potentially could be very small and could not be estimated from the size of the total credit exposure of the desk.

The simple example can be extended to any derivative portfolio with wholesale end-users who do not post margin, so long as the market risk to each underlying market factor was hedged by doing a pair of offsetting derivatives with different counterparties, there will be breakage between the two measures. Once again, we do not believe that it makes sense for a portfolio of this type to be highly susceptible to exclusion on this basis.