

12.09.13

Secretariat of the Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel
Switzerland

Re: Consultative document "The non-internal model method for capitalising counterparty credit risk exposures"

Dear Sir/Madam,

We wish to make some comments relating to the recent consultative document "The non-internal model method for capitalising counterparty credit exposure".

As a leading vendor of counterparty risk systems, SunGard fully supports the Basel Committee's initiative to replace the antiquated Current Exposure and Standardised Methods with a more risk-sensitive framework such as the Non-Internal Model Method (NIMM). We are in the process of specifying the necessary enhancements to our solutions, in order to cater for the new measure as soon as possible.

As we also provide advice to our customers on best practices in counterparty exposure measurement, we would like to raise the following issues, concerns and questions relating to the consultative paper:

1. The flooring of RC to zero, before the application of PFE add-ons (albeit with a 'multiplier' between 0.05 and 1), is in our view incorrect. As the purpose of the PFE add-on is to create a buffer for potential future exposure, best practice is to allow negative MTMs to directly offset the PFE AddOn. Hence the PFE AddOn should be added to the non-floored RC, and the final result should then be floored to zero within a netting set. The statement (in section 82) that "there is still residual counterparty credit risk" is not substantiated. If a transaction or a portfolio of transactions has a RC that is sufficiently negative, i.e. with potential future exposure that cannot realistically become positive over the life of the transactions, it is in our view wrong to assign a positive exposure to such transactions. A similar argument exists for transactions that are sufficiently over-collateralised, to the extent that net collateral value covers more than the RC + PFE add-on of the deals: it makes no sense at all to record positive exposure on such portfolios.

Essentially the NIMM formula results in an asymmetrical movement of EAD with MTM, which is counter-intuitive. For example, the EAD of a single-transaction portfolio starting with a MTM of zero will increase as the MTM of the transaction increases, but will not decrease as the MTM reduces (or not until the MTM becomes hugely negative). This is economically inconsistent.

2. The treatment of sold options in the proposed framework is problematic. The application of the NIMM formulae to a portfolio of sold options will result in positive EAD, which is blatantly incorrect. The BCBS does in fact recognise in Note 10 that "sold options do not present counterparty exposure". We therefore recommend that sold options should be subject to a special treatment (admittedly tricky to specify in the context of hedging sets!).
3. Section 30 & 31: Treating a Threshold Amount (e.g. under an ISDA CSA agreement) as EAD is debatable. A threshold represents a certain tolerance for unsecured exposure, however it does not represent exposure in itself. A fundamental principle of counterparty exposure measurement is that it should be based on the dynamics of the underlying transactions. Say there were no transactions in place with a counterparty but an ISDA CSA agreement has been signed with a \$10 million threshold. It seems wrong to show exposure of \$10 million when there are no

underlying trades. Similarly, why should EAD be equal to Threshold + MTA on a portfolio of transactions with an EAD (including unmargined PFE) totalling less than the Threshold amount?

If this is part of a strategy to discourage banks from agreeing large Thresholds with their counterparties, then the BCBS should state this.

One possible interpretation would be to treat the above two examples as 'unmargined' situations, i.e. no variation margin has been exchanged yet. In which case the Threshold + MTA would be ignored, and unmargined PFE AddOn factors would be used in the calculation. We would appreciate some guidance from the BCBS on this topic.

An alternate approach would be to always treat transactions under a Threshold type of collateral agreement as unmargined, i.e. subject to full PFE AddOns. The effect of the Threshold + MTA amounts should be taken into account **after** the application of unmargined PFE AddOns. The final EAD amount in such a collateralised (but not margined) netting set should be capped at an amount equal to [Threshold + MTA + Margined AddOn]. The 'Margined AddOn' component represents a buffer for potential exposure movements beyond the Threshold + MTA, during the close-out period (MPOR). For example if a single transaction with a MTM of 11 and a PFE AddOn of 5 is done under an ISDA CSA agreement with a Threshold+MTA of 12, the EAD of that transaction should be capped at 13.5 (12 + 1.5 being the margined equivalent of the PFE AddOn of 5). But if the MTM of that transaction were 3, the EAD (before Alpha) would be calculated as 3+5=8, with the Threshold+MTA having no effect.

4. Can the BCBS please clarify at what level the PFE AddOn calculation should take place: at the netting set level, or at the entire counterparty portfolio level, or at the individual trade level in the case of non-netted transactions? Can Hedging Sets apply to non-nettable transactions? Can a Hedging Set span different netting sets? Let us consider the example of two perfectly offsetting transactions, but they are in different netting sets, or they are non-nettable: can these transactions be placed in the same Hedging Set? Placing them in the same hedging set would result in a zero add-on, which is clearly incorrect as the trades are not nettable against each other. But placing them in different hedging sets would overstate exposure by doubling up the PFE AddOn component; scenario consistency dictates that the same risk factor cannot go up and down at the same time, and hence two offsetting transactions with the same counterparty cannot see their MTMs go up together, as they are economically (whilst not legally) offsetting each other; hence in this situation the PFE add-on component should be calculated based on the floored-to-zero value (or the highest absolute value) of each effective notional amount. Basically the BCBS needs to recognise the fundamental distinction between economic offset (aka scenario consistency) and legal offset (aka close-out netting). MTM amounts can offset each other in a legal offset situation (i.e. within a netting set), whereas the calculation of Effective Notional and PFE AddOns should allow for economic offsets within a Hedging Set.
5. Example 1 in Annex II uses a Swaption transaction, and indicates that there is no distinction between a cash-settled swaption and a physically settled swaption. This is in our view incorrect: the PFE of a physically settled swaption is generally much higher than that of an equivalent cash-settled deal (because of the much longer tenor of the exposure – see points below). Hence we think the Effective Notional of a swaption should be based on the duration of the counterparty's legal obligation (which ends on the swaption settlement date if cash settled), not on the duration of the underlying swap deal.
6. Section 47: The simple multiplication of notional amount by remaining maturity is in our view overly simplistic. It is wrong to assume that (maturity-adjusted) EPE (aka PFE?) increases in a linear fashion with time. Using the accepted principle that volatility increases with the square root of time, and that volatility is the key driver of PFE, we think notional amounts (or, more intuitively, supervisory factors) should be multiplied by the square root of time.

For example, using the NIMM methodology, the following two CDS trades with the same counterparty, referencing the same name, will completely offset each other in terms of PFE:

- \$50 bought protection with a 1-year maturity
- \$5 sold protection with a 10-year maturity

7. Section 47: We note that there is no maturity scaling for FX, Equities, and Commodity derivatives. Is the BCBS assuming that such transactions never have a tenor greater than 1 year? This would lead to a serious understatement of exposure on the likes of cross-currency swaps, assuming they belong to FX hedging sets. In our view there should be a consistent application of the principle that potential future exposure increases with time and hence all transactions' PFE should be scaled by their maturity (or square root of time per previous point).
8. Section 47: We do not see the point of flooring residual maturity to 1 year. Clearly a 6-month transaction will have a lower PFE than the equivalent 1-year transaction and this should be recognised by the capital treatment. Again, we would recommend that supervisory factors be scaled by the square root of time, with no flooring. This principle is actually recognised in the MPOR formula in Section 81
9. Section 81: Could the BCBS please justify the use of a 1.5 multiplier in the calculation of margined AddOns? It might also be worth clarifying that the '1 year' term in this formula is effectively 250 (business days in a year).
10. Still on the topic of time horizon, what will be the treatment of very short term transactions such as FX or securities 'spot' deals? Indeed a (small) amount of EAD may arise between trade date and settlement date. As previously mentioned, the lower PFE of such trades should in our view be reflected by weighting the Effective Notional or Supervisory Factor by the square root of time.
11. We note that short term (< 1 year) unsecured FX transactions will be seriously penalised by the NIMM methodology, compared to the CEM, as they will incur a 5% add-on, compared to a 1% add-on under the CEM.
12. Section 47 Note 7: Your definition of 'remaining maturity' for forward-starting trades is in our view incorrect. The calculation of remaining maturity should in our view be based on the trade date rather than the forward-starting commencement date of the transaction. The transaction terms are legally committed, and hedged, on trade date, and the transaction will have a fluctuating MTM value (Replacement Cost) from trade date onwards. Hence potential future exposure should in our view always be based on the time period between trade date and maturity date; and that maturity date should be the date when the legal obligation of the counterparty is extinguished, e.g. the swaption settlement date in the case of a cash-settled swaption (per point 5 above). OK, the volatility of a long-term rate may be greater than that of a shorter-term rate, but we shouldn't be mixing up the **tenor** of an underlying risk factor and the 'remaining maturity' of the exposure to a counterparty.
13. It may be worth clarifying that transactions with 'MTM Reset' clauses should base their remaining maturity on the period until the next reset date, as the MTM of the transaction will effectively be cash settled at that point in time and the RC will hence be reset to zero. A similar principle should apply to transactions with right-to-break (optional termination) clauses, subject to the bank satisfying their regulator that they have a credit review process that takes place well before each break date, leading to an independent credit decision to continue or terminate a transaction at the next break date.
14. Some of the points above may be related to the fundamental concept of EAD. Is EAD meant to represent Expected Exposure over a 1-year time horizon (similar to EEPE in the IMM approach), or maximum potential future exposure over the **whole time profile** of transactions at a **high confidence** level (e.g. 99%)? The latter approach should in our view be considered by the BCBS, at least in a conservative method such as NIMM.
15. Section 48: The blanket application of a 50% delta to all non-linear (e.g. option) transactions will cause a serious understatement of exposure (and hence capital) for in-the-money options. This opens up the spectre of regulatory arbitrage between options and forwards. In our view a conservative approach could be taken whereby options are treated in the same way as forwards, i.e. use the full notional amount as the basis of the add-on calculation. Alternatively, banks should be able to use the true delta, possibly floored to say 20%, of individual transactions (as provided by the front office system, alongside the MTM value). We see little

need to respect the put-call parity principle, especially in a crude conservative methodology such as NIMM.

16. Section 15: Some products cannot be easily allocated to a long or short position in a Hedging Set. For example: a basis swap between two interest rates in the same currency, a 'chooser' option (Call or Put at the option of the holder), etc. How does the BCBS propose to treat such instruments?
17. Section 44: There should be a clearer determination about products that may have more than one risk driver. We think it is not satisfactory to leave this up to the discretion of national supervisors. The paper mentions the example of Cross-Currency Swaps (which are common instruments carrying a substantial amount of counterparty risk) without specifying how they should be treated. It could be argued that most derivatives include an Interest Rate risk driver. The consultative document suggests that such trades could be allocated to more than one asset class. This could substantially complicate the methodology; for example, a CCS could not be easily allocated to an interest rate hedging set as it is based on two different currencies. We therefore recommend that the BCBS specify that derivative transactions should be allocated to a single asset class based on their **predominant** risk factor, but not leave the door open to a single deal being allocated to more than one asset class. For example, a CCS would generally be allocated to the FX category rather than the interest rate category. Otherwise the BCBS should clarify how PFE add-ons should be calculated for transactions involving more than one asset class.
18. Which Hedging Set should an Interest Rate Swap in two different currencies be allocated to? (e.g. quanto swaps)
19. Some products may not have an easily definable notional amount, for example binary options. Can the BCBS provide some guidance for such products? One suggestion would be to calculate the Adjusted Notional amount as grossed up from the cash payoff amount, using the relevant supervisory factor, hence arriving at a PFE Add-on amount equal to the 50% of the payoff amount. For example, a non-margined Binary FX Option with a cash payoff of \$1m would use an Adjusted Notional amount of $1 / 0.05 = \$20m$, and an Effective Notional amount of $20 \times 0.5 = \$10m$.
20. Finally, we note that the supervisory factors used in the NIMM measure remain crude 'one-size-fits-all' estimates based on the average volatility within broad asset classes. We think the BCBS should open up the possibility for banks to use their own estimates of volatility (based on strict regulatory guidance as to how these volatilities should be calibrated). This would provide a much more risk-sensitive approach. Indeed it is a fallacy to pretend that all interest rates, all currency pairs, all equities, etc. have the same sort of volatility within each asset class. The flat supervisory factors effectively provide a regulatory incentive to trade highly volatile underlying assets (by understating their supervisory factor), and a regulatory penalty on trading in low volatility assets (by overstating their supervisory factor). Again, this raises the spectre of moral hazard and regulatory arbitrage.

We hope you will take our comments into consideration in future revisions of the proposed NIMM approach.

Yours sincerely,



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