

27 September 2013

Mr Wayne Byres  
Basel Committee on Banking Supervision  
Centralbahnplatz 2  
CH-4002 Basel  
Switzerland

barclays.com

Dear Mr Byres,

**BCBS254: THE NON-INTERNAL MODEL METHOD FOR CAPITALISING COUNTERPARTY CREDIT RISK EXPOSURES**

Barclays welcomes the opportunity to comment on the consultative document. We support the Basel Committee's objective to improve the measurement of counterparty exposures on derivative transactions, in cases where banks are not permitted to use their internal models.

Our response to the consultation questions is enclosed in Appendix 1. Our key messages are reflected below.

**Standardised approaches are not a panacea**

We note that the current QIS exercise is focussed on calibration for netting sets with specific features, rather than focussing on the overall impact of NIMM on RWAs, leverage ratios or large exposures. We would encourage the Committee to set out its expectations on how NIMM will affect these different measures, which will be an important factor in determining whether the methodology is fit for purpose.

The Committee has not proposed that NIMM should replace the internal models method (IMM) within the risk-based capital framework. Barclays welcomes this decision. We believe internal models have a legitimate role to play in counterparty exposure measurement, although we recognise the challenges that arise in terms of comparability between banks and regaining market confidence in risk-weighted measures of financial strength.

If banks are required to apply NIMM for leverage or large exposures purposes, there is clearly scope to compare the output of their internal models for RWA purposes against a common baseline. It is important that such comparisons do not result in NIMM becoming a de-facto floor for IMM; the focus instead should be on banks explaining and justifying the legitimate differences between the two measures – for example, NIMM's restrictions on cross asset-class hedging or the use of remaining maturity rather than duration weighting.

**The framework should clearly distinguish between current and future exposure**

Counterparty risk on derivative instruments encompasses both the risk of immediate loss in the event of a jump to default and exposure to future variability on the underlying position. NIMM employs the familiar terms 'replacement cost' and 'potential future exposure,' but aspects of the proposals appear to blur the two concepts:

1. The replacement cost element is subject to a supervisory scalar of 1.4, adopted from the IMM framework. We understand this as an adjustment for general wrong way risk; it does not reflect the close-out exposure amount in the event of an immediate default.
2. For trades subject to margining, the replacement cost element includes the threshold and minimum transfer amounts under the margining agreement; the effect is that a trade could be deemed to have a positive replacement cost even at inception, where its on-market fair value is zero.
3. Current surplus collateral and out-of-the-money trades are subject to an adjustment to take account of fat-tail changes in future exposure – recognising that the supervisory add-ons are subject to model risk; but it is not clear why these concerns should only arise in the case where collateral has been received.

We offer practical suggestions for addressing each of these points in our response to the consultation questions, with the aim of maintaining a clear distinction between current and future exposure.

#### The same risks should be treated consistently

The potential future exposure on a derivative instrument is a function of the underlying market risk. We believe there could be greater consistency between the standardised rules for counterparty risk and those for market risk. There are three areas where NIMM adopts a markedly less risk-sensitive approach than the comparable market risk rules:

1. The recognition of hedging effects across maturity buckets for interest rate products.
2. Weighting interest rate products by remaining maturity, with no option to use duration-weighting.
3. Applying fixed supervisory delta adjustments to non-linear products, rather than using the actual delta.

While we recognise the Committee's aim for an approach that is "*comparatively simple and easy to implement*," it is not clear why this should represent a simplification relative to the current standardised market risk framework.

#### Wider recognition of hedging effects and market correlation

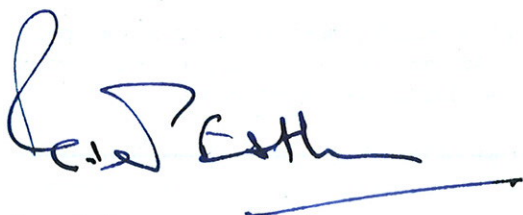
Overall, we welcome the Committee's decision to base the recognition of hedging effects on the direction of each transaction over its lifetime, rather than the Current Exposure Method's limited focus on spot prices. We also welcome the explicit recognition of the benefits of margining. However, the design of NIMM imposes unrealistic constraints on hedging effects within and across asset classes. For example, the foreign currency add-ons are siloed by currency pair; no offset is recognised between foreign currency transactions and interest rate transactions.

Correlation of events and markets needs to be taken into account. Barclays acknowledges that this is very challenging to implement in a simple, robust manner, especially as correlations may behave very differently under stress conditions.

Barclays notes that European insurance regulators have recently confronted similar challenges in designing the 'Solvency II' framework. We believe the key to reflecting correlation effects appropriately is to be explicit regarding the targeted level of soundness and then to use the available empirical data to justify the calibration of parameters in an open and transparent manner. There will, of course, be instances where the Committee is not fully confident in the adequacy of the data or believe that additional prudence is warranted, or that design considerations such as simplicity should prevail. Setting out these decisions, alongside the basis for calibrating the supervisory factors and correlation assumptions, would improve confidence in NIMM, as well as ensuring that any comparisons with banks' internal models are appropriately informed.

I hope you find our comments and suggestions helpful. Please do not hesitate to contact Sam McAuliffe ([sam.mcauliffe@barclays.com](mailto:sam.mcauliffe@barclays.com) or +44 20 3134 1176) if you have any questions or comments on any of the issues raised in this response.

Yours sincerely,



Peter Estlin  
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Group Financial Controller  
Barclays plc

## Appendix 1: Response from Barclays to questions raised in the consultative document

### 1. Should the Basel Committee replace the CEM and SM with the NIMM in all areas of the capital framework? What are the benefits and drawbacks of using NIMM in each of these areas?

For large exposures, we believe that NIMM should be tested against the output of internal models to compare their effectiveness in estimating peak exposures robustly, before determining which approach should be used.<sup>1</sup> While we understand the appeal of a single, comparable measure across all banks, NIMM contains a number of simplifying assumptions which could serve to understate or overstate the true risk exposure. The planned implementation of the large exposure requirements in 2019 allows time to ensure the exposure methodology is fit for purpose.

The current proposals for the leverage ratio include the potential future exposure on derivatives, calculated using the current exposure method (CEM). This introduces a forward-looking, risk-adjusted element into what is otherwise a point-in-time, risk-neutral measure of financial leverage, where a holding of cash or residential mortgages is treated in the same way as a holding of a CDO equity tranche. To the extent that a risk component is deemed necessary within the leverage ratio, NIMM potentially offers additional risk sensitivity. The most obvious drawback would be its relative complexity and the effect of its design restrictions, which could produce unintended distortions.

We note that the current QIS exercise for NIMM is focused on risk-based capital rather than leverage impacts. As a general rule, we would expect NIMM to produce lower measures of leverage than CEM for banks with comparatively simple derivative activities (limited to a few of the pre-defined hedging sets and asset classes). This is because NIMM removes the pure 'tax on scale' arising from the 40% floor on netting benefits in CEM. Where firms operate across the pre-defined hedging sets and asset classes, leverage under NIMM may appear higher than under CEM – in effect, there is a 'tax on scale and relative complexity.' While incentivising simplicity may be a desirable policy goal in its own right, it is difficult to relate this to the concept of leverage.

Where banks do not have approval to use the internal model method (IMM), we agree that NIMM should replace CEM and the standardised method for RWA purposes. The Committee may wish to consider allowing conservative simplifications to NIMM in order to reduce the operational burden on less complex banks – for example, removing the division between systematic and idiosyncratic risks.

To the extent that a separate calculation of default fund requirements is necessary, we appreciate the Committee's efforts to move away from an approach based on CEM. Given the limited scope of the QIS exercise, it is not possible to conclude on the suitability of NIMM for these purposes.

### 2. Is the proposed approach of retaining the general structure of the CEM with respect to replacement cost and the potential future exposure add-on appropriate? Is the division of the broad asset classes appropriate?

The basic concept of dividing counterparty risk between current and potential future exposure is clear. The execution in NIMM is somewhat less clear, specifically:

- (a) the 1.4 scalar is applied to the 'replacement cost' element
- (b) for margined transactions, the replacement cost element includes the exposure that would arise immediately before a margin call, taking account of minimum transfer amounts

Neither of these aspects is consistent with the replacement cost representing "*the loss that would occur if a counterparty were to default and were closed out if its transactions immediately,*" since they both encompass future rather than current exposure. The 1.4 scalar is used as an adjustment for general wrong way risk under IMM; to the extent that a similar adjustment is deemed necessary in the context of a non-modelled approach, it could be incorporated directly into the supervisory factors and correlation assumptions. If adjustments are needed to reflect bid/ask spreads or the risk premium for exotic products, this should be specific to the product rather than a single value.

<sup>1</sup> Please see our response to BCBS246: Supervisory framework for measuring and controlling large exposures

The division of the broad asset classes is appropriate for a non-modeled approach, although we disagree with the simple aggregation of add-ons across the asset classes.

### 3. Are there specific product types that are not adequately captured in the outlined categories?

We would welcome further guidance on the treatment of inflation-linked products under NIMM.

Where contracts are exposed to multiple sources of underlying risk, there needs to be a mechanism for allocating them to the appropriate asset class and hedging set. An example would be a cross-currency extinguishing swap which has features of both an FX product and a credit derivative. We would suggest the following approach:

- (1) If the bank is able to identify the primary risk factor, assign the trade in full to the primary asset class and the appropriate hedging set.
- (2) If the bank is not able to identify the primary risk factor, assign the trade in full to each relevant asset class and hedging set i.e. the same trade is counted multiple times.
- (3) If the bank is not able to identify the relevant asset classes, assign the trade to a separate netting set and apply a supervisory factor of 40%, which represents the worst case in the Committee's proposal.

### 4. Does the above approach reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?

Barclays would propose that the replacement cost element of the exposure is defined consistently, for both margined and unmargined transactions, as:

$$\max\{V - C; 0\}$$

We agree that the effect of margining practices should be reflected in the exposure measure, but believe this should be via the potential future exposure element rather than the replacement cost. For higher values of TH + MTA - NICA, which reduce the benefit of margining, we suggest the add-on should approach the value that would apply for an unmargined transaction. One simple, conservative formulation to achieve this would be:

$$AddOn^{aggregate} = \left( 1 + \left( \min \left\{ \frac{\max\{TH + MTA - NICA; 0\}}{\sum_a AddOn^{(a)}}, 1 \right\} \cdot 2.333 \right) \right) \cdot \sum_a AddOn^{(a)}$$

This is based on the general pattern that the supervisory factors for margined trades are 30% of the equivalent unmargined factors. Where TH + MTA - NICA is nil, the add-on would be determined purely by the supervisory factors for margined trades. Where TH + MTA - NICA equals or exceeds the margined add-on value, the add-on is scaled-up as if the netting set was unmargined.

### 5. Of the options under consideration for recognising offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?

Because of the bucketing of the tenor domain into three gross maturity segments, along with using remaining maturity, instead of duration as the risk factor, simple curve trades and butterfly curve trades (e.g., 10yr/30yr, 5yr/10yr/30yr) will not be risked properly, under either of the two approaches.

Of the options described, Barclays would prefer that the interest rate add-on allowed for partial offsetting between the maturity buckets ('approach 1'). An assumption of no offset ('approach 2') would not be reflective of realistic yield curve movements.

The potential future exposure to a derivative counterparty is a function of the market risk on the underlying position. Barclays would suggest that 'approach 1' could be better aligned with the non-modeled framework for interest rate risk in paragraphs 718(iii) to 718(vii) of the Basel Accord. The interest rate risk framework is more sensitive than either of the options in the consultative document as it recognises:

- (a) offsets within the same maturity banding are not perfect (for example, 4 month long versus 5 month short);
- (b) offsets between some maturity bandings are expected to be risk reducing (for example, 15 month long versus 11 month short);
- (c) offsets between other maturity bandings may amplify sensitivity to interest rate changes (for example, 1 month long versus 10 year short).

Barclays recognises that a more sophisticated approach to interest rate offsets would increase the complexity of NIMM. However, it seems inappropriate that a bank operating under standard rules would need to calculate the market risk on an interest rate derivative using two fundamentally different 'standardised' methodologies: one for the purpose of its market risk RWAs and a separate, less sensitive approach for potential future exposure arising from the same market risk.

6. Is the proposed approach of using a different methodology for determining the add-on for each asset class appropriate? Is each proposed add-on methodology for each asset class effective at capturing the main risk driver of that asset class?

#### Supervisory delta adjustments

Barclays disagrees with the proposal that the delta adjustments for non-linear instruments should be fixed at  $\pm 0.5$ . We note the explanation given in footnote 10 and the Committee's desire to strike a balance, but it is easy to see the potential for distortions to arise. For example, a long, deeply out-of-the-money put option would be assigned a supervisory delta of -0.5, generating a disproportionate risk offset in the calculation of the add-on. Similarly, the potential exposure on a long, in-the-money call option would be understated by the proposals. At the very least, we would suggest that the actual delta should be used in circumstances where this would be permitted in the standard rules for market risk (for example, the delta-plus method set out in paragraph 718(lix) of the Basel Accord), leaving  $\pm 0.5$  as a fallback for other cases.

#### Add-on for interest rate derivatives

Please see our response to question 5.

Under the proposal, the notional subject to the add-on would be weighted by the remaining maturity of the trade, floored at one year. The Committee notes that effective EPE for interest rate derivatives is approximately proportional to duration, so using remaining maturity is a conservative assumption.

The proposal overstates the risk for long-dated swaps in particular because:

- the duration for long-dated swaps are significantly shorter than remaining maturity, unless the rates are very low; and
- the supervisory factors have been benchmarked to a 1 year swap, whereas volatility for rates in the long end is significantly lower than in the short end, on a relative basis.

We would also note that the approach does not reflect the observed correlations for long-term rates across major currencies which are significant and relatively stable.

We suggest that banks should be permitted to use a duration-weighted measure of notional, at least to the extent that this would be permitted for their standard market risk calculations (as per paragraph 718(vii)).

#### Add-on for foreign exchange derivatives

As proposed, each currency pair would form a distinct hedging set, with no diversification benefits recognised across hedging sets. The Committee notes that this approach ensures broad coverage of basis risks in foreign exchange transactions.

We believe the approach could be more reflective of the actual relationships between currencies, particularly in cases where explicit pegging operates – although we accept that full offset may not be appropriate given the possibility that policy could change or break down. Barclays would highlight the EBA's proposal on the identification of closely correlated currencies,<sup>2</sup> which sets out an objective framework for measuring the relationship between currencies over the medium term. We would encourage the Committee to explore a similar approach for NIMM and permit partial offset within the foreign exchange asset class.

Alternatively, the add-on could be adapted to reflect the net open currency position across all currency pairs, translated back to the bank's base currency. This approach would be more consistent with the standard market risk rules in paragraph 718(xli). The supervisory factor could be increased to compensate for potential basis risks.

#### Add-on for credit derivatives

Banks should be given discretion to look through a full index position and treat it as a series of positions in the constituent names. Such positions would then be permitted to offset single name credit derivatives on the same reference entity.

We would welcome clarity on the treatment of tranching credit derivatives, particularly those which reference credit derivative indices such as iTraxx. We assume that the supervisory delta adjustments for 'CDO tranches' should apply, but that the resulting weighted positions would remain eligible for full offset as they refer to the same reference entity.

#### Add-on for equity derivatives

Banks should be given discretion to look through a full index position and treat it as a series of positions in the constituent names. Such positions would then be permitted to offset single stock positions on the same issuer.

#### Add-on for commodity derivatives

The Committee is proposing that supervisors should have discretion to specify distinctions between commodity types in order to capture basis risks. This contrasts with the approach on equity derivatives, where the beta factor is fixed "to ensure a consistent implementation across jurisdictions." We would suggest the commodity types should also be set by the Committee and applied consistently.

7. Are the proposed minimum time risk horizons for each transaction category (unmargined, non-centrally cleared, centrally cleared) appropriate? Should the Basel Committee consider factors other than the IMM for determining the appropriate time risk horizon for the NIMM (eg harmonising with other international or national legislation)?

We agree with the proposal to use the same minimum time risk horizons as IMM. As a general observation, we believe these minimum horizons could be made more reflective of the scale and liquidity of each market.

Barclays would welcome further clarity on the purpose and calibration of the 3/2 term in the formula for scaling the add-on, i.e.

<sup>2</sup> EBA (2013) *Draft Implementing Technical Standards on closely correlated currencies under Article 354(3) of the draft Capital Requirements Regulation* EBA/CP/2013/21

$$AddOn_{Margin}^{(a)} = \frac{3}{2} * \sqrt{\frac{MPOR}{1yr}} * AddOn^{(a)}$$

We would observe that the scalar applied to the add-on would only be 1 where the margin period of risk is 111 days, which does not seem intuitive given the statement that supervisory factors are calibrated with a one-year horizon.

#### 8. Do the suggested formula and 5% floor appropriately recognise the benefits of overcollateralisation?

We welcome the Committee's recognition that 'excess' collateral and negative mark values on individual trades reduces the future exposure on a netting set.

The Committee notes that the formula "*accounts for fat-tailed distributions for changes in exposure.*" We interpret this to mean that the formula adjusts for model risk in the NIMM whereby the add-on may understate the risk of future changes in exposure value. It is not intuitive why such considerations should apply only in scenarios with collateral. Similarly, it is unclear why the collateral received should be adjusted downwards rather than the exposure adjusted upwards; this reduces the incentive to call for additional collateral, which would otherwise be effective in mitigating the impact of changes in exposure.

As a principle, we are reluctant to see the introduction of floors on grounds of conservatism as this reduces both the risk sensitivity and transparency of the methodology. To take an extreme example, a trade that was fully cash-collateralised up-front and therefore subject to no future exposure would still generate a positive add-on under the proposal. In practice, traders can only request collateral that is reflective of the economic risks.

If a floor is deemed necessary to address residual risks and reduce cliff effects, Barclays would suggest a simpler formulation, for example:

$$\max \{5\% * AddOn_{Aggregate}; AddOn_{Aggregate} + \min\{V - C; 0\}\}$$

#### 9. Is the proposed approach to aggregate across asset classes appropriate?

The proposal envisages that the add-ons between asset classes should be subject to simple aggregation, without any benefit for diversification. The Committee acknowledges that the impact of this has not been fully assessed and that it is open to considering alternatives. We note that, by contrast, CEM did not impose restrictions on cross-asset class netting beyond the general floor set at 40% of the gross add-on.

Barclays recognises that cross-asset diversification effects are challenging to incorporate within regulatory measures; there is a natural concern that historic patterns of correlation will tend to break down in stress conditions. By the same token, a completely siloed approach disregards the genuine relationships between risk types (for example, interest rate and foreign exchange), leading to the possibility of divergent outcomes for banks with nearly identical economic exposure.

One approach would be to allow combinations of trades to be compressed into economically-equivalent positions. For example, a bank with a 6 month Euro-denominated interest rate swap and a 6 month Euro-US dollar foreign currency swap would be permitted to replace both of these trades (in the same netting set) with a synthetic 6 month US dollar swap. The synthetic position would be permitted to offset other US dollar-denominated transactions within the interest rate asset class. However, we recognise that this may present concerns over the comparability of the exposure measures between banks; it could also be the case that the 'optimal' representation of a set of trades changes from period to period.

An alternative would be to set supervisory factors for the correlation between different asset classes. We note this is contemplated for the revised standardised approach in *BCBS 219 Fundamental Review of the Trading Book*. We would also draw the Committee's attention to the standardised capital requirements for insurers that have been

developed in the European Union via ‘Solvency II.’ Those requirements apply a correlation matrix for different classes of market risk as follows:

$$SCR_{mkt} = \sqrt{\sum_{rxc} CorrMkt_{rxc} * Mkt_r * Mkt_c}$$

where  $Mkt_r$  and  $Mkt_c$  are the capital requirements for individual market risks,  $SCR_{mkt}$  is the overall capital requirement for market risk and  $CorrMkt_{rxc}$  is a matrix as follows:

|                         | Interest rate | Equity | Property | Spread | Currency | Concentration | Countercyclical premium |
|-------------------------|---------------|--------|----------|--------|----------|---------------|-------------------------|
| Interest rate           | 1             | 0.5    | 0.5      | 0.5    | 0.25     | 0             | 0                       |
| Equity                  | 0.5           | 1      | 0.75     | 0.75   | 0.25     | 0             | 0                       |
| Property                | 0.5           | 0.75   | 1        | 0.5    | 0.25     | 0             | 0                       |
| Spread                  | 0.5           | 0.75   | 0.5      | 1      | 0.25     | 0             | 0                       |
| Currency                | 0.25          | 0.25   | 0.25     | 0.25   | 1        | 0             | 0                       |
| Concentration           | 0             | 0      | 0        | 0      | 0        | 1             | 0                       |
| Countercyclical premium | 0             | 0      | 0        | 0      | 0        | 0             | 1                       |

(In some circumstances, the correlation for interest rate risk with equity risk, property risk and spread risk is set to zero. There is no adjustment for commodity risk as this is not a permitted asset class for insurers).

Source: European Insurance and Occupational Pensions Authority (2012) *Revised Technical Specification for Solvency II Valuation and Solvency Capital Requirements calculations (Part I)*, EIOPA-DOC-12/467.

The European insurance regulator described its overall approach to calibrating correlation assumptions in a technical document,<sup>3</sup> noting that its conclusions were broadly similar to those of a study conducted by the largest EU insurance groups.<sup>4</sup> A similar exercise could be conducted for determining the correlation assumptions within NIMM.

#### 10. Are there any risk factors that should be included in their own category or accounted for in another manner?

The Committee notes that NIMM “builds in a level of conservatism to capitalise adequately” factors such as exotic trades. In the interests of transparency and risk sensitivity, we would prefer that NIMM was calibrated to reflect the generality of trades, with separate rules to address very complex and non-standard products. See, for example, our response to question 3 on products exposed to multiple risk factors. The observed risk premium could be used to more accurately reflect the actual replacement cost on exotic trades.

We note the Committee’s description of its approach to calibrating NIMM. We would welcome further detail on the data sources used for the preliminary calibration, the simplified IMM and the benchmarking exercise against IMM model results. We believe that greater transparency over the hypothetical portfolios used for calibrating NIMM could improve confidence in the robustness of both NIMM and IMM, and could help to improve understanding of dispersion in IMM results.

<sup>3</sup> CEIOPS’ (2010) *Advice for Level 2 Implementing Measures on Solvency II: SCR Standard Formula Article 111(d) Correlations*, CEIOPS-DOC-70/10.

<sup>4</sup> CRO Forum (2009) *Calibration recommendations for the correlations in the Solvency II standard formula*

11. Is the proposal to introduce the multiplier in order to allow reduction of the PFE add-on in the IMM shortcut method appropriate?

Notwithstanding our response to question 8, we agree that the IMM shortcut method should reflect the same approach to recognising excess collateral as NIMM.

## Appendix 2: summary of our suggestions

| Element  | Basel Committee proposal   | Suggestion from Barclays  |
|--|--|---|
| Wrong way risks  | 1.4 scalar applied to replacement cost and potential future exposure | Incorporate directly in the calibration of supervisory factors  |
| Replacement cost   | Different treatments for margined and unmargined trades              | Unified treatment; adjust for threshold amounts etc via the potential future exposure                                       |
| Non-linear items   | Other than for CDOs, use a fixed delta adjustment of $\pm 0.5$       | Use the actual delta, as per the standardised market risk rules   |
| Notional interest rate positions   | Weight by remaining maturity   | Weight by duration  |
| Interest rate hedging sets   | <1yr, 1-5yr, >5yr, either with limited offsetting or no offsetting   | Align with standardised market risk rules   |
| FX hedging sets  | Treat different currency pairs separately                            | Allow offsets for closely-correlated currencies, or align with standardised market risk rules                               |
| Equity hedging sets  | Indices and single name positions treated separately                 | Ability to look through index and treat as positions in the constituents  |
| Credit derivative hedging sets   | Indices and single name positions treated separately                 | Ability to look through index and treat as positions in the constituents  |
| Commodity hedging sets   | Discretion for supervisors to set commodity types                    | Committee to define commodity types   |
| Calibration of supervisory factors   | Conservatism built in to address exotic products                     | Calibrate for the generality of trades, address non-standard products separately  |
| Adjustment for minimum time horizon  | 3/2 scalar applied   | No scalar applied   |
| Floor for overcollateralisation and negative mtms  | Reducing function  | Simple floor  |
| Aggregation between asset classes  | Simple aggregation, with no diversification effects                  | Supervisory factors for correlation between asset classes   |
| Use in the leverage ratio, large exposure requirements and CCP default fund calculations in place of CEM | Open to consultation   | Committee to set out expectations of impact relative to CEM, to allow an assessment of whether NIMM is fit for each purpose |