Saudi Banks Comments on BCBS Consultative Document concerning NIM for Capitalizing Counterparty Credit Risk Exposures

Bank # 1:

While conceptually straightforward, the proposed method requires significant work to implement and it is not clear for a bank with a modest counterparty risk portfolio that the improved method is of sufficient benefit in terms of capital accuracy to justify the efforts and costs required.

With regard to the specific questions, refer to the following:

***Q1*: 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 the NIMM in each of these areas?**

Response: Bank welcomes a uniform approach across the capital framework as it will ensure a consistent and simple treatment internally and across the wider banking sector.

***Q2*: 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?**

Response: Bank notes that there is no distinction between currencies of widely varying historic and implied volatility, rather the same add-on is applied to all.

Regarding the "prudential multiplier" of 1.4x - it would be helpful if a greater explanation could be provided as to how this has been derived. On the one hand the new methodology is more refined, yet the multiplier element seems to be a rather crude approach to build in prudence and in particular, it is not obvious why such a multiplier should be applied to the replacement cost part of the equation.

***Q3*: Are there specific product types that are not adequately captured in the outlined categories?**

Response: All major products are captured.

***Q4*: Does the above approach reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?**

<u>Response:</u> In general bank believes it does. However, the bank understands the document, i.e. it is proposed that the Replacement Cost of a portfolio of transactions covered by a Credit Support Annex (CSA) is the higher of actual market value and the threshold plus minimum transfer amount (MTA) specified in the CSA. If the threshold (and/or MTA) is large relative to the transactions it governs, this could result in instances where the Replacement Cost is far higher than any market value that could actually arise. Accordingly, the Bank would recommend some cap be applied to the deemed replacement cost – perhaps defined as a function of the expected positive exposure of the transaction(s).

<u>Q5</u>: Of the options under consideration for recognizing offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?

<u>Response:</u> It is unlikely that there is a significant benefit for the Bank in allowing offset between trades in different buckets. In the interest of prudence, the bank suggests not allowing offsets between time buckets.

<u>Q6</u>: 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?

<u>Response:</u> We have no comments.

<u>Q7</u>: 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)?

<u>Response:</u> Bank is comfortable that the minimum time horizons are appropriate. The bank would be interested in how they could be applied practically in view of a degree of debate around the legal certainty of margining documentation in developing countries.

<u>Q8</u>: Do the suggested formula and 5% floor appropriately recognize the benefits of over collateralization?

<u>Response:</u> Bank believes that it is sensible.

<u>Q9</u>: Is the proposed approach to aggregate across asset classes appropriate?

Response: Bank is comfortable with the proposed approach to aggregation.

***Q10*: Are there any risk factors that should be included in their own category or accounted for in another manner?**

Response: As noted above in Q2, other risk factors such as differing volatilities of differing currencies may be considered - otherwise bank is comfortable with the constraints for reasons of maintaining simplicity.

***Q11*: Is the proposal to introduce the multiplier in order to allow reduction of the PFE add-on in the IMM shortcut method appropriate?**

Response: Bank has not reviewed the IMM approach and accordingly has no comments.

Bank # 2:

The Bank supports this review which concerns a wide variety of derivatives transactions. This is because this review will reduce the scope for discretion by banks, and address deficiencies in the current methods. The Current Exposure Method (CEM) used by local banks to calculate the Counterparty Credit Risk (CCR) capital requirements is recognized in having material shortcomings due to risk insensitivity (e.g. failure to recognize diversification benefits and risk mitigants) which can materially overstate the true risk.

The implementation of this new methodology would have certain practical challenges as the new formula is more sophisticated and banks would require the appropriate systems and infrastructure to support such calculations, in some cases needing further IT investments.

The QIS study will be important in determining the impacts of the application of this new methodology to local banks in order to facilitate the calibration requirements allowing an opportunity for refinements.

Bank's detailed response to the 11 questions in the consultative paper is provided as below.

***Q1*: Should the Basel Committee replace the CEM and SM with NIMM in all areas of the capital framework? What are the benefits and drawbacks of using NIMM in each of these areas.**

Response: Yes, for the purpose of consistency NIMM is preferred to be implemented across all areas of the capital framework.

<u>Q2</u>*: 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.

<u>Response:</u> Yes, the approach of retaining the general structure of the CEM is appropriate as it essentially improves on the stipulations of CEM to cover its deficiencies. The division of the asset classes is also appropriate as asset classes with similar risk characteristics have been grouped together.

<u>Q3</u>*: Are there specific product types that are not adequately captured in the outlined categories?

<u>Response:</u> No, all product categories appear to have been adequately captured.

<u>Q4</u>*: Does the above approach reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?

<u>Response:</u> The proposed methodology for computing replacement cost of margined transactions is appropriate and adequate. No, there are no other collateral mechanics that the Basel Committee should consider.

<u>Q5</u>*: Of the options under consideration for recognizing offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?

<u>Response:</u> Banks would prefer the method of "Partial offsetting across maturity buckets" rather than "No recognition offsetting across maturity buckets" as the exposure would be lower. However it would be appropriate and correct if "No recognition offsetting across maturity buckets" is considered. There should be at least 5 maturity buckets instead of the three proposed [i) less than one year, ii) between one year and less than three years, iii) between three years and less than five years, iv) between five years and less than seven years, and v) Seven years and more].

<u>Q6</u>*: 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?

<u>Response:</u> Bank is of the opinion that the proposed approach of using a different methodology for determining the add-on for each asset class as appropriate. Bank does have a minimal number of equity derivative structures and predominantly FX derivatives and Interest Rate derivatives in its books. Bank is of the opinion that the proposed methodology for FEX derivatives and Interest

Rate derivatives is effective at capturing the main risk driver for these two asset classes.

<u>Q7</u>: 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 IMM for determining the appropriate time risk horizon for the NIMM (e.g. harmonizing with other international or national legislation)?

<u>Response:</u> There should be a higher and appropriate time risk horizon for unmargined FX transactions.

<u>Q8</u>: Do the suggested formula and 5% floor appropriately recognize the benefits of over collateralization?

<u>Response:</u> Yes, the 5% floor is acceptable as the floor applies only after appropriately recognizing the benefits of over collateralization.

<u>Q9</u>: Is the proposed approach to aggregate across asset classes appropriate?

<u>Response:</u> Yes, the proposed approach to aggregate Add-On's across asset classes is appropriate only for the purposes of capital calculations. However it would be appropriate for banks to maintain aggregated Add-On's by counter-party and for each counter-party by each asset category.

<u>Q10</u>: Are there any risk factors that should be included in their own category or accounted for in another manner?

<u>Response:</u> As indicated in response to previous query, it would be appropriate for banks to maintain aggregated Add-On's by counter-party and for each counter-party by each asset category.

<u>Q11</u>: Is the proposal to introduce the multiplier in order to allow reduction of the PFE add-on in the IMM shortcut method appropriate?

<u>Response:</u> Yes, this is appropriate.

Bank # 3:

Background

The assessment of credit exposures for derivative transactions depends on the bilateral nature of these transactions, fluctuations in their market risk factors (eg prices, volatilities, and correlations) and legal netting sets and collateral agreements (margining). Given these variables, three specific and distinct approaches have been designed in the CCR framework to compute the EAD of derivative transactions. Bank agrees that out of the three models for counterparty credit risk charge under current Basel framework, i.e. Current Exposure Method, the Standardized Method. The proposed Non-Internal Model Method (NIMM) maintains a balance between simplicity and risk sensitivity. Its structure is similar to the CEM and is calibrated to the recent stress periods, recognizes the benefit of collateral and is more reflective of legal netting arrangements.

Bank's responses to the questions posed in the documents are as follows:

Q1. ***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 the NIMM in areas like the leverage ratio, large exposures, and exposures to central counterparties (CCPs)?***

Response: Bank supports replacement of CEM/SM with NIMM. Bank is of the view that simple, standardized and yet risk sensitive approach of NIMM will be suitable for other areas as well and will lead to faster and consistent implementation by the banks.

Q2. ***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?***

Response: Bank agrees with the approach of retaining general structure of CEM. Replacement cost is known and issue is with respect to calculation of potential future exposure. Bank agrees with the approach of hedging sets which will vary with asset classes to account for basis risk and difference in correlations with asset classes. In bank's view, the division of asset classes into interest rate, FX, Credit, Equity and Commodity derivatives is appropriate.

Q3. ***Are there specific product types that are not adequately captured in the outlined categories***?

Response: Given background of emerging market banking scenario, bank is of the view that all the relevant products are covered.

Q4. Does the approach suggested in the document reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?

<u>Response</u>: Bank agrees with the formulation of replacement cost without margin as:

$$RC = \max(V - C; 0)$$

Where V is the value of the derivative transactions in the netting set and C is the haircut value of net collateral held, which includes Net Independent Collateral Amount (NICA).

We also agree with the formulation of replacement cost with margin as:

$$RC = \max(V - C; \text{TH} + \text{MTA} - \text{NICA}; 0)$$

where V and C are defined as in the un-margined formulation, except that C includes the collateral balance due to past Variation Margin payments, TH is the positive threshold before the counterparty must send the bank collateral, and MTA is the minimum transfer amount applicable to the counterparty. TH + MTA – NICA represents the largest exposure that would not trigger a variation margin call and it contains levels of collateral that always needs to be maintained.

In bank's view, considering practices in emerging market where cash collateral is most widely used, no other collateral mechanism is required to be considered as of now.

Q5. ***(In respect of add-on for interest derivatives) Of the options under consideration for recognizing offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?***

The document proposes two approaches – one for partially offsetting across three maturity buckets and the other for no recognition for such offsetting. Bank is of the view that Central Bank should undertake a QIS study for this and adopt suitably either of the approaches based on the QIS studies.

Q6. ***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?***

<u>Response</u>: The PFE add-on consists of (i) an aggregate add-on component, which consists of add-ons calculated for each asset class and (ii) a multiplier that allows for the recognition of excess collateral or negative mark-to-market value for the transactions. Mathematically:

$$PFE = multiplier * AddOn^{aggregate}$$

where the aggregate add-on component and multiplier is defined as a function of three inputs: V, C and Add-On ^{aggregate}. The add-on has been defined separately for each of the five asset classes. Bank agrees with this approach.

Q7. ***Are the proposed minimum time risk horizons for each transaction category (un-margined, 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 (e.g. harmonizing with other international or national legislation)?***

<u>Response</u>:

The document proposes the following time horizons:

- One year for un-margined transactions;
- At least ten business days for non-centrally-cleared derivative transactions subject to daily margin agreements; and
- Five business days for centrally cleared derivative transactions subject to daily margin agreements that clearing members have with their clients.

Bank is of the view that Central bank may seek consensus among their banks. However, the time horizons proposed reflects the current standard time horizons.

Q8. ***Do the suggested formula for over-collateralization and 5% floor appropriately recognize the benefits of overcollateralization?***

<u>Response</u>: Bank agrees with the general principle “that over-collateralization should reduce capital requirements for counterparty credit risk”. Collateral may reduce the replacement cost component of the exposure under the NIMM. It also proposes to reflect the risk-reducing property of excess collateral in the PFE component. One approach might be to allow any amount of collateral to offset directly the positive replacement cost. However, this would reduce the exposure value to zero if sufficient excess collateral is held, although there is still residual counterparty credit risk. For prudential reasons, the Basel Committee

decided to apply a multiplier to the PFE add-on component that decreases as excess collateral increases without reaching zero (the multiplier is floored at 5% of the PFE add-on).

Q9. ***Is the proposed approach to aggregate across asset classes appropriate?***

Response: Since add-ons are simply summed up across asset classes, in the Bank's view, it does not allow for diversification across asset classes. Also, Central bank should conduct empirical studies of the inter-asset correlation and accordingly decide if summation of the add-ons is adequate.

Q10. ***(In respect of calibration of NIMM) Are there any risk factors that should be included in their own category or accounted for in another manner***?

Response: The NIMM is not calibrated to account for addressing certain risk factors, such as implicit volatilities, on certain products, such as exotic trades. As a result, the NIMM builds in a level of conservatism to capitalize adequately these factors. The Basel Committee has chosen the number of risk factors to be approximately the same as in the CEM and SM.

Considering developing countries banking sector, Bank is of the view that three-step calibration for NIMM as mentioned in the document is adequate.

Q11. ***Is the proposal to introduce the multiplier in order to allow reduction of the PFE add-on in the IMM shortcut method appropriate?***

Response: As the Bank does not follow IMM method, it has no comments on this aspect.

Bank would also like to point out that Supervisory Factor (SF) for add-ons in calculating PFE does not differentiate different currency pairs. For example, USD /SAR pair has less volatility as compared to USD/EUR or EUR/YEN, though SF is similar for all currency pairs (5% for un-margined FX transactions). Further, the minimum time risk horizon for un- margined transactions is one year and the add on factor does not differentiate between transactions with a maturity of 3 months or 12 months, for example. The adjusted notional amount is maturity independent and this will increase PFE for transactions with shorter maturities.

Bank believes that before Central banks implement these proposals after they are finalized by BCBS, it would be beneficial for the developing countries Banking Systems to conduct Quantitative Impact Studies (QIS) to gauge the impact of NIMM compared to the CEM approach currently being followed by the bank in developing countries. Central banks should also allow sufficient time for the banks to implement required systems.

Bank # 4:

1. **Page 2,3 (Para 13) - Key objectives in reviewing the non-internal model method (NIMM)**

   The Basel Committee intends to perform a quantitative impact study (QIS) in order to inform the final formulation of the NIMM and to assess the difference in exposure and overall capital requirements under the NIMM as compared to the Current Exposure Method (CEM). The Basel Committee is considering replacing the CEM and Standardized Method (SM) with the NIMM in other areas of the capital framework as well. The additional areas where the NIMM could be used include the leverage ratio, large exposures, and exposures to central counterparties (CCPs).

   Bank Response:

   Since the impact of proposed changes can be significant on the industry ; preferred approach would be to conduct an observation period (rather than implementation) for proposed NIMM. Observation period would provide time to evaluate the impact of such requirements and allow an opportunity for refinements, or for more appropriate and accurate methods of assessing the capital requirements. In case, observation period is not practical, a gradual transition (e.g. over 2 ~ 5 years) to introduce NIMM for Counterparty Credit Risk (CCR) would be more appropriate.

2. **Page-4 (para 15- 2nd bullet) - proposed revision Foreign exchange derivatives:**

   A hedging set would consist of derivatives that reference the same foreign exchange currency pair such as USD/Yen, Euro/Yen, or USD/Euro. Long and short positions in the same currency pair would be allowed to perfectly offset, but no offset would be recognized across currency pairs.

   Bank Response:

   Please confirm if due to the peg nature of GCC (excluding-KWD) currencies against USD, can the GCC excluding-KWD currency pairs (e.g. USD/AED, SAR/AED, USD/QAR) be considered in the same hedging set.

3. Page-11 (para 53) -Add-on for interest rate derivatives

The proposal captures the risk of interest rate derivatives of different maturities being imperfectly correlated. To address this risk, the proposal divides interest rate derivatives into maturity categories (also referred to as "buckets") based on the remaining maturity of the transactions. The three relevant maturity categories are: less than one year, between one and five years and more than five years. The proposal allows recognition of offsetting positions within maturity categories. Across maturity categories, the Basel Committee is posing two options: either partial recognition of offset or no recognition of offset

Bank Response:

Bank understands that banks in developing countries be allowed to use netting/offsetting for each hedging set for derivative transactions with the same counterparty that are subject to a legally enforceable netting arrangement while calculating capital charge under NIMM. BCBS should confirm the treatment of netted transaction of hedge position.

4. Page-19 (para 92) - Overview and summary table of proposed add-ons

The first calibration step consisted of estimating volatilities and correlations to be used for the asset classes. The estimates were taken from a variety of markets and represent volatilities and correlations commonly observed during a stress period. The stress period is generally considered to be the three-year period with largest estimate of volatility, although a shorter period was used in some cases. Within each asset class these volatilities were then used to establish the initial values of supervisory factors or correlations.

Bank response:

The volatilities and correlations estimates based on stress period could result in a large increase in capital requirements for the derivative transactions affecting all market participants at the same time which can create a pro-cyclical condition and results in absence of liquidity for the banking sector.

Bank # 5:

The adoption of a standard model for the assessment of counterparty credit risk will level the playing field for capital charges applicable for all participants in the derivatives markets as it has also been conservatively calibrated to the internal model method (IMM) approach.

The eligibility of developing countries as a netting participant would be fundamental to the implementation of the proposed methodology. In the absence of the aforementioned eligibility, developing countries banks would be severely handicapped vis-à-vis their competitors/counterparties in other jurisdictions.

Bank interpretation is that the proposed NIMM calculations do not appear to fully take volatility into account as there are a fixed set of weightings applied to various groups of asset classes. For example, foreign exchange derivatives will have a single volatility factor for all currency pairs.

The implementation of the NIMM would likely require significant changes to banks' existing source systems and the processes required in order to capture the additional elements required for the calculation. Sufficient lead time should be provided in order for banks to fully test and implement these extensive changes.

Bank # 6:

Bank is providing its replies to the listed questions as below.

Q1: Should the Basel Committee replace the CEM and SM with NIMM in all areas of the capital framework? What are the benefits and drawbacks of using NIMM in each of these areas.

Bank Comments: Bank supports BCBS consideration to use a consistent measure of counterparty credit risk across in all areas of the capital framework.

Q2: ***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?***

Bank Comments: Bank supports the goal to maintain a balance between simplicity and risk sensitivity. In this context, we agree with the approach of retaining the general structure of the CEM. However, the similarity with CEM doesn't go beyond the calculation of the replacement cost for unmargined transactions.

Regarding the division of the broad asset classes, in bank's opinion, it seems appropriate.

Q3: Are there specific product types that are not adequately captured in the outlined categories?

<u>Bank Comments</u>: Greater guidance and examples might be provided for assigning complex derivative structures to an asset class.

Q4: ***Does the above approach reflect the replacement cost of margined transactions? Are there any other collateral mechanics that the Basel Committee should consider?***

<u>Bank Comments</u>: Bank strongly suggest finalizing the formulation of the proposed approach after assessing the differences in terms of exposure and overall capital requirements between the proposed approach of calculating the replacement cost of margined transactions and CEM, through having parallel runs.

<u>Q5</u>: Of the options under consideration for recognizing offset across hedging sets, which treatment is preferred? What number of maturity buckets is appropriate to consider?

<u>Bank Comments</u>: Bank prefers the approach for recognizing partial offsetting across maturity buckets. Bank believes that the number of maturity buckets is appropriate.

<u>Q6</u>: 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?

<u>Bank Comments</u>: Bank's understanding is that the different methodologies for determining the add-on for each asset class are required due to the differences in recognizing offsetting benefits under each asset class (i.e. basis risk, correlations, etc.) In this respect, bank thinks the approach is appropriate. However, bank shares the same view of the Basel Committee that banks should not be allowed to make any modeling assumptions in the calculation of the PPE add-ons.

<u>Q7</u>: ***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 IMM for determining the appropriate time risk horizon for the NIMM (eg harmonising with other international or national legislation)?***

<u>Bank Comments</u>: Bank suggests finalizing the formulation of the minimum time risk horizons after assessing the expected QIS. Related to this, Bank proposes to

calibrate NIMM with CEM and SM in terms of exposure and overall capital requirements.

<u>Q8</u>: *Do the suggested formula and 5% floor appropriately recognize the benefits of over collateralization?*

<u>Bank Comments</u>: Bank suggests finalizing the formulation of recognizing the benefits of overcollateralization after assessing the expected QIS. Related to this, bank proposes to calibrate NIMM with CEM and SM in terms of exposure and overall capital requirements.

<u>Q9</u>: *Is the proposed approach to aggregate across asset classes appropriate?*

Bank Comments: Bank suggests finalizing the formulation of aggregating across asset classes after assessing the expected QIS. Related to this, it proposes to calibrate NIMM with CEM and SM in terms of exposure and overall capital requirements.

<u>Q10</u>: *Are there any risk factors that should be included in their own category or accounted for in another manner?*

<u>Bank Comments</u>: Bank believes that the addressed risk factors in NIMM are sufficient.

<u>Q11</u>: *Is the proposal to introduce the multiplier in order to allow reduction of the PFE add-on in the IMM shortcut method appropriate?*

<u>Bank Response</u>: Bank believes that it is important to calibrate the proposed NIMM with the replaced CEM and SM. This will reduce the chance of introducing unintended consequences.