

June 20, 2018

Comments on the consultative document: *Revisions to the minimum capital requirements for market risk*, issued by the Basel Committee on Banking Supervision

Japanese Bankers Association

We, the Japanese Bankers Association (“JBA”), would like to express our gratitude for the opportunity to comment on the consultative document: *Revisions to the minimum capital requirements for market risk*, issued on March 22, 2018 by the Basel Committee on Banking Supervision (“BCBS”).

We respectfully expect that the following comments will contribute to your further discussion.

<<Executive Summary>> (§ 2.2 and Annex B)

In revising minimum capital requirements for market risk, the internal models approach (“IMA”) needs to be appropriately designed. An appropriately -designed IMA will enable a prompt response to risk changes, avoidance of losses by financial institutions and the enhancement of risk management through continuous communications between public and private sectors, thereby contributing to sound business management by financial institutions and further stabilisation of the financial system.

However, we are concerned that the proposals in the consultative document may not provide incentives to financial institutions to apply the IMA. In order to address this concern, the following three approaches would be necessary: (i) appropriate calibration of capital charges; (ii) adjustment of requirements in response to differences in the market structure across jurisdictions; and (iii) a design that ensures stable capital management by financial institutions.

Firstly, with regard to “(i) appropriate calibration of capital charges,” several JBA member banks estimated the IMA capital charge under certain assumptions in response to the consultative document. The result of the estimation indicated that the stress scenario capital charge (“SES”) under the IMA was excessively high compared to the capital charge calculated using the expected shortfall model (“IMCC”). In addition, as a result of excessively high SES capital charge, the IMA capital charge may also become too high compared to the capital charge under the standardised approach (“SA”).

To our understanding, the BCBS’ original intention in developing a standard for

minimum capital requirements for market risk is to reduce the level of capital charges under the IMA to the level lower than capital charges under the SA, thereby incentivising financial institutions to enhance their risk management to a certain extent. It would be necessary to re-verify whether the proposed revisions are in line with this intent.

For the second approach “(ii) adjustment of requirements in response to differences in the market structure across jurisdictions,” for example, in Japan banks and other financial institutions account for the majority of municipal bond holdings, while such holdings by the household and funds are limited unlike in the U.S.. Since Japanese financial institutions tend to hold municipal bonds until maturity, market prices for municipal bonds are not commonly available. As a result, municipal bonds are classified as illiquid instruments and risk factors associated therewith are more likely to be deemed as non-modellable risk factors (“NMRFs”). Therefore, a flexible framework that takes into account such factors specific to each jurisdiction is necessary.

Finally, with respect to “(iii) a design that ensures stable capital management by financial institutions,” if the SES capital charge for illiquid instruments is excessively high, financial institutions would be forced to reduce the positions subject to SES in order to diminish capital requirements because there are few risk mitigation measures (e.g., hedging) for such illiquid instruments. Consequently, a strong procyclicality could arise in the market for illiquid instruments from the increased selling pressure on the positions attributable to regulatory requirements, and the market for such instruments may be disrupted or extinguished, which in turn may adversely affect the market as a whole.

Furthermore, it is difficult to assess the characteristics of P&L attribution (“PLA”) test metrics and the appropriateness of thresholds based on hypothetical P&L data generated through simulations under certain assumptions. Therefore, if the proposed revisions are enforced without conducting a test using actual data, we are concerned that financial institutions’ capital allocated to such risks will become constantly instable.

As discussed above, if the IMA requirements set out in the consultative document (e.g., the criteria for determining modellable risk factors (“MRFs”)/NMRFs and the level of thresholds established for PLA test purpose) are introduced as proposed, financial institutions will not be incentivised to apply the IMA, which may produce unintended consequences in some jurisdiction such as market turmoil.

In order to avoid such a situation, the BCBS will need to reconsider regulatory requirements and appropriately calibrate the IMA (especially SES) in light of results of analyses and discussions conducted through, among other things, a quantitative impact study (“QIS”) using not only hypothetical data but also actual data.

Furthermore, in order to realise the timely and consistent implementation of the standard from 2022, the BCBS should set an appropriate monitoring period to enable calibration up to the implementation date even after the finalization of the standard.

In addition to the above, we would like to comment on the following individual issues from practical perspectives.

Please note that our comments marked with an asterisk “*” relate to those matters that are not directly questioned in the consultative document but are recommended for consideration in conjunction with the proposed revisions.

<<Particularly important issues>>

[Non-modellable risk factors (“NMRFs”)]

(Regulatory requirements for NMRFs) (§2.2 and Annex B.2, paragraph 183(c))

With respect to the regulatory requirements for NMRFs, we would like to reiterate our request further review of the modellability assessment and SES measurement requirements as well as appropriate calibrations to ensure that financial institutions will be incentivised to use the IMA.

As a result of the aforementioned estimation by several JBA member banks, it was indicated that, if revisions proposed in this consultative document are reflected, SES resulted in approximately 3 to 6 times higher than ES, and consequently, IMA capital charges including DRC exceeded SA capital charges in some cases.

For the SA, the consultative document proposes revisions to risk weights. However, given that SES entails ongoing considerations, including the easing of measurement requirements, regulatory requirements related to NMRFs should be finalised after monitoring quantitative impacts over a certain period of time.

(Real price) (§ 2.2.1)*

We request the BCBS to consider including the following prices in the “real price” in the process of NMRF determination.

(1) Prices for which the validity as the amount to be recognised in the balance sheet is verified and inputs used to calculate such prices.

Reason: The validity of the price is verified by product control and accounting audit.

(2) Prices reconciled to the valuation by the counterparty in the mark-to-market of collateral

Reason: These prices are reconciled to the valuation by the counterparty. And

exchanging variation margin based on these prices has the same economic effect as clearing (settling) price fluctuations that occur as a result of market volatility (i.e., executing a new transaction). Applicable prices are those reconciled to the valuation by the counterparty based on the details of each transaction.

(Buckets) (§ 2.2.1 and Annex B, §B.2, paragraph 183(c))

The consultative document proposes two alternatives for applying the bucketing approach to the modellability assessment. Alternative 1 is an approach whereby the supervisor approves buckets defined by financial institutions, whereas Alternative 2 is an approach whereby buckets used by financial institutions are designated by the supervisor. Given the relationship with the PLA, we consider that Alternative 2 is the preferable approach.

When setting buckets in Alternative 2, if the bank is capable of verifying that there is a high correlation between risk factors, the bank should be allowed to group the risk factors and assess the modellability based on the group unit (for example, in the case of Curve, the correlation distance methodology (e.g. Pearson) could be used).

In consideration of the above, we propose specific buckets as follows:

Maturity Dimension: 1M, 2-3M, 6-9M, 12-24M, 36-60M, 84-360M

Strike Dimension: High Strike, ATM, Low Strike

However, if the number of curve and surface risk factors in a bank's internal model is fewer than the number of buckets in Alternative 2, Alternative 1 should also be permitted for the purpose of adjusting the requirements setting forth bank's internal models. Even in this case, the sufficiency of risk factors is verified through the PLA test and back testing.

(Buckets) (§ 2.2.1, Annex B, §B.2, paragraph 183(c))*

Furthermore, buckets should also be introduced for the modellability assessment of credit and equity risk factors because, given characteristics of markets in Japan, such risk factors may be determined as an NMRF if the modellability assessment is conducted on the basis of an issuer or individual security. In the research conducted by JBA member banks for Japanese-yen denominated bonds excluding government bonds, the MRF determination based on the modellability assessment conducted on a basis of an individual security has improved from about 1% to about 20% as a result of the following grouping.

Credit: Region x Rating (or Credit quality) x Industry

Equities (including factors other than those related to prices): Market capitalisation ×
Region × Industry

(Gap between observations for modellability assessment) (§ 2.2.2)

The requirement for modellability assessment should consider seasonality of transactions, instead of requiring no more than a one-month gap between any two price observations, because, depending on the timing, there may be more than a one-month gap between the transaction observation dates, even for risk factors with sufficient liquidity.

[Non-modellable risk factors (“NMRFs”) – Stress scenario capital charge (“SES”)]
(SES measurement on a basis of curve/surface) (§2.2)*

SES measurement for the yield curve and volatility surface, etc. should be conducted on a basis of curve or surface rather than individual risk factors inherent therein or buckets used in the modellability assessment. It is because that this method is consistent with risk management practice by those financial institutions that do not necessarily manage positions on a basis of risk factors and appropriately reflects hedging effects. For quantitative impacts, please refer to the result of QIS conducted by JBA member banks which is provided separately.

(Liquidity horizon) (§2.2)*

Given that applying both the liquidity horizon requirement (i.e., using at maximum one year) and other SES measurement requirements in combination would result in overly conservative SES capital charges, the liquidity horizon used for ES measurement should be used. For quantitative impacts, please refer to the result of QIS conducted by JBA member banks which is provided separately.

(Observation period) (§2.2)*

There are implementation concerns, such as an increase in calculation burdens for identifying stress periods for each measurement unit of SES and an increase in the amount of data due to calculating SES for each measurement unit of SES. Therefore, for observation periods, using the same one-year stress period as MRF capital charges (“IMCC”) should be allowed.

(Aggregation method) (§2.2.3)

Since the estimation for idiosyncratic equity risk resulted in imposing considerably high capital requirements, it would be necessary to allow banks to recognise

diversification benefits for idiosyncratic equity risk under the aggregation method, similarly to the approach taken for credit spread risk. Specifically, according to the research conducted by JBA member banks, SES for equities would be approximately 15 times higher if diversification benefits are not considered.

(Aggregation method) (§2.2.3)*

Applying both the simple aggregation requirements and other SES measurement requirements in combination would result in overly conservative SES capital charges. In order to allow for appropriate calibration of IMA capital charges, the following aggregation formula which is based on a constant correlation should be applied to aggregate SES. The result of the estimation by several JBA member banks indicated that it is impossible to limit SES within a range of ES unless the following formula is used.

$$SES = \sqrt{\sum_{i=1}^I ISES_{NM,i}^2 + \sum_{j=1}^J ISES_{NM,j}^2} + \sqrt{\left(\rho * \sum (SES' \text{ of all other NMRFs})^2 + (1 - \rho^2) * \sum (SES' s \text{ of all other NMRFs})^2\right)}$$

(Phase-in application of SES) (§2.2 and Annex B.2, paragraph 183(c))*

There is a concern that the risk factor eligibility test (REFT) may lead to varying results for the same risk factor depending on the amount and scope of transaction data held by financial institutions. However, the result of RFET should be the same for the same risk factor, and hence it is necessary to design a framework in a manner to avoid any variability. A data pooling framework is currently discussed primarily by information vendors and other stakeholders. Nonetheless, the consistency of initiatives taken by respective jurisdictions has not yet been achieved. Therefore, such initiatives are considered not sufficient from a perspective of reducing the variability discussed above. Given this, we request the BCBS to separately set a leading period to establish a globally aligned framework. Also, if the IMA capital charge exceeds the SA capital charge to a certain extent during the period for establishing the framework, it is requested to allow the phase-in application of SES (e.g., the total of SES×α% in the initial year, and the total of SES×100% after 5 years).

(Conducting QIS focusing on NMRFs) (§2.2)*

To consider appropriate calibration of IMA capital charges, an ad-hoc QIS focusing on NMRFs should be conducted to calibrate the SES measurement requirements. To our understanding, the BCBS aims to finalise this consultative document within 2018 and plans to conduct a QIS at the end of September. However, we are concerned that the compilation of the planned QIS results will not be completed within 2018 (i.e., a

scheduled finalisation deadline) and therefore, believe that a separate QIS will need to be conducted so that its results can be taken into account in finalising this consultative document. Obviously, a post-finalisation QIS is also important.

[Profit and Loss Attribution (PLA)]

(Necessity of full validation using actual data in setting PLA test metrics) (§2.1.1, 2.1.2 and Box 2)

We believe that these metrics should be determined through assessments based on actual data because the appropriateness of the behaviour and thresholds used for selecting test metrics cannot be assessed by hypothetical P&L data generated using the simulation established under certain assumptions.

In this view, the PLA test metrics will need to be appropriately calibrated in light of, among other things, the QIS conducted using actual data. More specifically, given that the metrics use one-year data, the period of at least 2 years is necessary.

In addition, we believe that the Spearman correlation threshold needs to be determined by taking into account the following:

- Because it is calculated from only 250 data, a considerable amount of estimation errors may arise.
- Similarly to hedge portfolios, when profit and loss (PL) are minimal, the ranking between the hypothetical P&L (HPL) and risk-theoretical P&L (RTPL) will be changed, which may tend to result in a low correlation.

Alternative 2 uses the Chi-Squared test as a test method for assessing the profit and loss distribution. The following, however, needs to be considered when using this test method:

- Since the original purpose of the Chi-Squared test is to assess whether the observed data (RTPL in this case) is consistent with the theoretical distributions (or expected frequency), this test assumes that HPL with which RTPL is compared is always known theoretically. In practice, however, the distribution of HPL is theoretically unknown.
- The comparison of histograms created by compulsory separating continuous profit and loss data at the specified bin (bin=5) is inconsistent with the original purpose of this test.

<<Other issues>>

[Revisions to capital requirements for non-linear instruments - Double-counting of FX curvature risk]

(Whether it is appropriate to apply an approach to divide by a scalar [X]) (§1.3 and Box 1)

We agree with the proposal to introduce an approach to divide curvature sensitivities by a scalar [X] to avoid potential double-counting of FX curvature risk.

It is reasonable to consider that the scalar [X] to be divided for eliminating the double-counting in the case of optional instruments for currency peg is 2.

This is because, for example, in the case of HKD/USD currency option, in converting currency option to the reporting currency (JPY), it will be decomposed into HKD/JPY and USD/JPY. The decomposed currency pairs are considered to be a rough correlation of 1, and as a result the curvature risk will be double-counted in full.

(Alternative approach if the proposed approach is not appropriate) (§1.3 and Box 1) *

Since the proposed approach of dividing by the fixed scalar may result in calculating a smaller risk amount, we request the BCBS to consider an alternative approach to apply a range of shock to the existing currency pair (e.g., USD/GBP) to calculate the curvature and then convert to the reporting currency (e.g., JPY), instead of calculating the curvature after decomposing such pair to the reporting currency.

[Profit and Loss attribution (PLA) – Data used for the PLA test] (§2.1.2 and Box 2)

The consultative document proposes to use data collected over the preceding 12 months. It is however difficult to conduct the PLA test using data for the most recent 12 months for certain cases, including when applying for IMA, when establishing a new trading desk, or when applying for an IMA for models modified after using the SA. Therefore, if the latest data are not available for 12 months, we suggest to allow test using data for available periods only.

[Trading desk requirements]

(Number of trading desks) (§2.1.4 and Annex C)

The proposed requirement has the following impacts on business operations for several JBA member banks, such as a change in the approach to delegate an existing trading execution authority, depending on the definition of a head trader and trader (e.g., the treatment of a trader who supervises multiple desks).

- ① Even if a financial institution plans to effectively use human resources by assigning traders to several positions across the group, this requirement may disrupt such an effective and efficient group operation.
- ② In the case of small-sized entities/offices, traders may be assigned to multiple groups for some reasons including resource constraints. However, this requirement may force such small-sized entities/offices to change their organization (for example, an increase in the number of head traders).

Given this, the BCBS should not limit the number of trading desks to which each trader can be assigned. If the number of trading desks would be limited, we request the BCBS to consider allowing supervisors to take a flexible action in light of the necessity from business perspectives if a financial institution can demonstrate its validity/rationale to the supervisor.

(Trading desk requirements) (§2.1.4 and Annex C)*

It may be difficult to apply the trading desk requirements to trading desks using the SA (e.g., entities with smaller activities and volumes of trading desks relative to the IMA, or consolidated subsidiaries). Therefore, the trading desk requirements should be limited to trading desks using the IMA.

(Notional desks) (There is no relevant description in the consultative document.)*

Since a notional desk is a quasi-desk, and it may be difficult to apply the trading desk requirements, the treatment of virtual desks (FX desks and commodity desks in the banking book) should be simplified (consistent with the current Basel 2.5 framework, the requirement should be limited to the calculation of capital charges, and it is excessive to require the assignment of traders and the management of trading desks, including a business strategy, as described in Appendix A).

[Revisions to FX risk factors and curvature risk capital requirement - Inconsistency in the convention used to express foreign exchange and inconsistency with the measurement using the reporting currency in curvature calculations] (Annex A, A.3, paragraphs 67(g) and 121)

We propose to change the definition in paragraphs 67(g) and 121 to “units of “reporting currency” per unit of “other currency” to ensure consistency of the convention.

In paragraphs 67(g) and 121, the convention used to express foreign exchange is

described as units of "other currency" per unit of "reporting currency." For example, in the case where a reporting currency is USD and FX risk denominated in AUD is measured, it is expressed as USD/AUD. Whereas, in paragraph 66(a) FN, this is reversely expressed as AUD/USD.

In the curvature calculation, AUD/USD risk is measured to calculate the present value before and after shocks in the reporting currency. The FX delta deducted from the AUD/USD risk is measured based on USD/AUD because it follows the definition of 67(g).

If FX is expressed using the reversed convention, a nonlinear effect will occur since the currency relationship will be an inverse number. For example, if the reporting currency is USD and an option denominated in AUD/USD is delta-hedged, the risk of AUD is hedged and evaluated by converting to USD. Scenario PL in this case should be consistent with the curvature of the option. However, since delta in the consultative document is defined in the reversed convention of USD/AUD (conversion to AUD), a non-linear effect which is different from the curvature would occur.

This nonlinear effect is not attributable to actual economy, but arises from an inconsistency in the convention. Therefore, to address this, it is advisable to revise the definition.

[Treatment of multi-underlying options and index instruments - Calculating multi-underlying options and index instruments]

(Curvature calculation) (Annex A, A.4, paragraph 69(a))

The consultative document allows not to use a look-through approach for the curvature calculation. However, the consultative document has not clarified to which bucket an instrument should be mapped. Therefore, we request to clarify this in the consultative document.

In addition, we seek to clarify that the delta-weighted approach described in the QIS Instructions issued in July 2015 can be applied.

(Vega calculation) (Annex A, A.4, paragraph 70(a))

The consultative document has not clarified to which bucket an instrument should be mapped when calculating vega for an option, instead of vega for volatility of constituents. Therefore, we request to clarify this in the consultative document.

In addition, we seek to clarify that the delta-weighted approach described in the QIS Instructions issued in July 2015 can be applied.

[PLA and backtesting frameworks at the trading desk level - Treatment of valuation adjustments that cannot be calculated at the trading desk level] (Annex B, B.4, II)*

For valuation adjustments that cannot be calculated at the trading desk level in Annex B4, it may be difficult to distinguish between IMA desks and non-IMA desks unless all desks are IMA desks. Therefore, if it is impossible to calculate valuation adjustments for the entire IMA desk, valuation adjustments should be deductible from HPL and Actual PL for firm-wide backtesting purposes.

[Revisions to the IMA capital requirement and PLA test failure consequences - Use of credit ratings for IMA and DRC measurement] (Annex B, B.3)*

Financial institutions using the IRB approach are required to use the probability of default (PD) by internal rating for the DRC measurement using the IMA. On the other hand, the SA requires reference to external ratings. As a result, for commercial paper (“CP”) with short-term rating, for example, there is a significant gap (IMA DRC capital charge > SA DRC capital charge) between the internal rating-based PD and the external rating-based PD in some cases. Therefore, with regard to the DRC measurement using the IMA, external rating should be allowed to be used for exposures with short-term rating (e.g., CP).

- Firm A: Internal rating-based PD 0.20%; External rating-based PD 0.07%
- Firm B: Internal rating-based PD 1.08%; External rating-based PD 0.10%
- Firm C: Internal rating-based PD 0.07%; External ratings-based PD 0.03%

[Measurement frequency for the standardised approach (SA)] ((There is no relevant description in the consultative document.))*

Under current practice, consolidated subsidiaries which do not have a trading book calculate RWA on a quarterly basis for financial reporting purposes. The amount of risks (that arise from non-trading purposes) of such subsidiaries is limited to FX and other similar positions, and, due primarily to constraints from system infrastructures, a holding company centrally receives quarterly data and measures the risk amount under the SA.

Consequently, it is impracticable for SA desks with smaller activities and volumes than IMA desks to conduct the measurement on a monthly basis due to constraints of system infrastructures and staff who have specialised knowledge. Therefore, we request to set the frequency of the measurement using the SA on a quarterly basis.