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To Participants in Quantitative Impact Study 2.5

After careful analysis and consideration of the second quantitative impact study (QIS2) data that you submitted and the important feedback that was received through the consultative process, the Basel Committee has responded by reviewing the proposed New Basel Capital Accord and is considering several modifications. These modifications are intended to help the Committee to achieve its stated objectives to (1) maintain equivalence on average between current required capital and the revised standardised approach and (2) provide modest incentives regarding the aggregate level of required capital under the Foundation IRB approach.

However, before finally deciding on which modifications should be made, the Committee needs statistical information on the effect that such revisions would have on different banks. In order to gather this information all the Group 1 banks are being asked to participate in an update to QIS2. This current exercise – QIS2.5 – will entail calculating the Foundation IRB capital requirements as set out in the Committee's second consultative paper (CP2) but after making various modifications which the Committee is considering.

The Committee is reviewing the impact of the following modifications;

- Adjusted risk weight functions for various portfolios under the IRB approach;
- A revised treatment of specific provisions under the IRB approach whereby specific provisions could be used to offset the capital requirements of loans falling into the defaulted loan category. The capital requirements would be calculated on the gross loans (i.e. before the specific provision has been deducted);
- For simplicity, the granularity adjustment (which had been proposed for non-retail exposures) under the IRB approach should not be calculated;
- The removal of the *w*-factor when treating credit risk mitigation techniques. Rather than applying the *w*-factor in Pillar 1 (minimum capital requirements), the Committee is considering leaving supervisors to consider in Pillar 2 the various risks *w* was supposed to cover. See also www.bis.org/publ/bcbs_nl2.htm for further discussion;
- Greater recognition of collateral (i.e. receivables and physical collateral).

As the Committee will need the new calculations quite quickly (by the end of November at the latest), we are providing worksheets with the new weights already included. Banks will need to input figures on exposures into these worksheets. Included in the following instructions are detailed directions on which exposures should be included to avoid various data problems experienced in QIS2.

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QIS2.5 Instructions

General

1. The objective of the QIS2.5 exercise is to provide statistical information on the impact of a number of modifications to the Foundation IRB approach currently under consideration by the Basel Committee. The worksheet designed for this purpose seeks to calculate the capital requirements taking into account these various modifications to CP2 being considered. A worksheet has been constructed for capital requirements under the existing framework ("Current Accord") followed by several worksheets that calculate capital requirements under Foundation IRB approach. These worksheets include the risk weights of the various exposures after taking into account the potential modifications.

2. In completing the worksheets, banks can use data either related to the earlier QIS2 submission or more recent balance sheet data if that would be helpful. However, before using QIS2 data, banks need to check that it complies with the instructions set out for this exercise, which have been included to avoid data problems seen in QIS2.

3. Information provided in the "Current Accord" worksheet should be based on the 1988 Basel Capital Accord. Banks can use local implementation rules where they could differ very substantially from the Basel Accord.

4. Except where otherwise noted in these instructions, the Basel Committee's **January 2001 consultative document on The New Basel Capital Accord** should be the applicable source of reference when completing the QIS2.5 exercise**.**

5. Where options are set out in the consultative paper, banks should use the options they are likely to use when the New Accord is implemented. Where the New Accord will allow national supervisors discretion over certain options, banks should take guidance from their national supervisors.

6. Banks are asked to complete the worksheets for consolidated group exposures on a worldwide basis. All operating entities with material exposures should be included. As far as possible, all exposures within given portfolios (e.g. corporate, retail) should be included.

7. It is essential that a single consistent portfolio be used as the basis for calculating risk-weighted assets under the current requirements and proposed Foundation IRB requirements.

8. It is accepted that some banks may not have exact data on all the requested elements and therefore estimates are acceptable as long as they are representative of a bank's portfolio.

Instructions - how the worksheet works

9. **You are only required to enter data in the shaded cells**. All other cells are either automatically calculated or are linked to cells in other parts of the worksheet. These unshaded cells are protected and should not be changed.

10. Detailed instructions and explanations regarding the content of these data cells are provided below in the “Completing the worksheet” section.

11. Where you have not been able to comply with any of the instructions, you must clearly set out these areas in the “Notes” worksheet. **NOTE**: it is better to use estimates than not to comply. Please also include a discussion of these estimates in the "Notes" worksheet along with any comments that clarify or explain key areas where judgements had to be made. If necessary, you should consult with your national supervisor.

12. The QIS2.5 exercise consists of several worksheets intended to capture current portfolio data (the “Data” worksheet) and to calculate risk-weighted assets under the existing capital framework (“Current Accord”). Also included are worksheets for each of the four loan portfolios that form the basis for assessing the effect on the Foundation IRB approach (see paragraph 27 below). These include worksheets for the large corporate, medium- and small- sized corporate, sovereign and interbank portfolios. There are also two separate worksheets for the retail portfolio to accommodate a bank’s use of an Expected Loss (EL) or “PD/LGD” framework. In addition, a worksheet is provided that requests information on small and medium-sized enterprises (SMEs) and their associated probabilities of default (the “Firm Size” worksheet). Finally, a “Notes” worksheet is provided for users to indicate any estimates that were used, and any notable clarifications and explanations regarding the data.

13. The bank’s total capital should be reported in the Data worksheet as Tier 1 + Tier 2 less supervisory deductions.

14. Please note in the Data worksheet the data’s “as of” date and indicate whether these data were the original data used for the QIS2 exercise.

15. Based on the data you enter in the Data worksheet, an estimate of risk-weighted assets will be calculated under the current capital regime. Only limited data input is necessary in the Current Accord worksheet and this input is detailed below in the Current Accord worksheet section.

16. In addition to information requested in the Data worksheet on the amount of exposures, there are essentially four different inputs required from banks in order for the Foundation IRB worksheet to calculate risk-weighted assets. These include information on the distribution of exposures between probability of default (PD) bands, and the type of collateralisation for each portfolio. In addition, information regarding the distribution of the bank's retail exposures between loss given default (LGD) bands is also requested. These inputs are needed separately for drawn and undrawn exposures. (Off-balance sheet exposures should be converted using the appropriate conversion factors and added to drawn exposures – see paragraph 43ff below.)

17. Finally, the IRB worksheets request information on the amounts of specific provisions for each portfolio separately, and the amounts of general provisions for the book as a whole.

18. The calculation of risk-weighted assets under the Foundation IRB approach will be based on a combination of the inputs described above. You should use as detailed a distribution of PD bands as you currently use for internal purposes. You can, therefore, expand the number of bands to meet your needs. For banks adopting the PD/LGD approach for retail, it would also be appropriate to expand the number of LGD bands. No other part of the worksheet should be altered.

19. Assumptions regarding maturity are embedded in the risk-weight functions in the worksheet. Corporate, sovereign and interbank exposures are assumed in the risk weight curve to have a three-year average maturity. Banks, therefore, do not need to consider the maturity element.

20. The calculation of risk-weighted assets under the Foundation IRB approach is based on several modifications to the original risk-weight formula, these also being embedded in the worksheet's cells. The original formula for all portfolios was included in the Committee's second consultative paper.

21. One of the modifications under consideration is the removal of the scaling factor and incorporation of a higher confidence level (99.9% rather than 99.5%, as originally proposed in CP2).

22. Another modification under review assumes that asset correlation is a declining function of PD for non-mortgage portfolios. The worksheet sets a correlation value for each PD value. This correlation value (for non-retail portfolios), which ranges from 20% for the lowest PD to 10% for the highest PD, is then used by the main formula to calculate the risk-weighted assets.

23. The worksheet's risk weight formula for residential mortgages applies a fixed correlation value of 15% (i.e. it does not vary with PD), while the formula for other retail exposures does allow asset correlation to vary with PD. In this latter case, the maximum correlation value is 15% (for the lowest PD) and the minimum value is 4% (for the highest PD).

24. The Committee is also considering revisions related to the coverage of expected losses, including the use of general provisions (in excess of the amount included in Tier 2), specific provisions and, under certain circumstances, margin income to offset capital requirements. The Foundation IRB worksheet incorporates these potential revisions to allow the Committee to assess their impact on capital requirements.

25. A further modification under consideration is greater recognition of collateral. As detailed below, the Foundation IRB worksheet requests information on loans secured by either physical collateral or receivables.

26. With regard to SMEs, the requested information is intended to enhance the Committee's understanding of the effect of its proposals on loans to SMEs and whether additional modifications may be necessary to develop capital requirements appropriate to borrowers of varying sizes.

Completing the worksheet

A. Portfolios

27. A key assumption of the worksheet is that all exposures fall into the following four categories: corporate, sovereign, interbank and retail. Banks are requested to provide information on each of these categories.

28. In order to simplify the exercise, other portfolios that were specified for the QIS2 exercise (i.e. equity exposures in the banking book, narrowly defined project-finance/specialised lending, and securitised assets) do not need to be included in

these worksheets. Banks can include securitised assets they hold in the PD bands corresponding to the PD associated with the external rating. The capital requirements proposed for higher quality tranches (rated AAA to A) are the same as IRB corporate and this approach should suffice. But banks should indicate in the notes if they hold a significant amount in lower-rated tranches, indicating the amount held by rating.

29. However, for the purposes of assessing potential changes going forward, it would be useful to provide data on the size of these “other” exposures. Cells to this effect have been added to the “Data” worksheet for securitised assets - including the amount of deductions from capital, equity exposures in the banking book and specialised lending (i.e. project finance).

Corporate

30. For calculations under the Foundation IRB approach, the corporate portfolio should be split into two categories: large corporate exposures, and medium-and small sized corporate exposures. Separate worksheets are provided for banks to show this information.

31. This split is intended to help banks allocate exposures according to the type of collateral held against the exposure (because the distribution may differ between large and smaller corporates). However, if it is not helpful to split the exposures in this way, banks should put all corporate exposures into one of the sections (e.g. large corporate) and leave the other worksheet blank. Please indicate the approach taken in the notes.

Retail

32. For calculations under the Foundation IRB approach, the retail portfolio should be split into three categories: residential mortgages, other retail (not including small business exposures), and small business exposures included as other retail.

33. Loans to small businesses meeting the criteria for retail exposures (see below) should be included in this latter category of the retail portfolio, for the purposes of calculating the risk-weighted assets in the Foundation IRB approach. The calculation for the Current Accord assumes that all these small business exposures would have received a 100% risk weighting.

34. The Committee’s second Consultative Paper stated that an exposure will be categorised as a retail exposure if it meets all of the following criteria:

(1) Orientation of exposure: the exposure is to an individual person or persons, and/or guaranteed by such person or persons. Lending to a small business which does not meet this criterion (and which meets additional criteria to be developed by the Committee) may be included in this treatment with the explicit approval of supervisors, provided (a) that the bank treats such exposures in its internal risk management and risk assessment processes consistently over time in the same way as other retail exposures and (b) they also meet the other three criteria outlined below.

(2) Product Criteria: the exposure takes the form of any of the following: credit cards, instalment loans (e.g. personal finance, leasing), revolving credits (e.g. overdrafts), residential mortgages, and small business facilities.

(3) Low-value of individual exposures: supervisors may choose to set a maximum loan amount for an exposure to be treated as retail in nature.

(4) Large number of exposures: the exposure should be one of a large pool of loans, which are managed by the bank in a comparable fashion. Supervisors may choose to set a minimum number of exposures within a pool for exposures in that pool to be treated as retail.

35. To enable the Committee to assess the overall effect of this proposed definition, it is important that all exposures meeting this classification should be included under the retail portfolio. It is recognised that not all banks have systems enabling this element of corporate loans to be clearly identified, but it is essential that banks estimate the proportion of small business exposures that could be placed in retail. The “Foundation IRB portfolio” section of the Data worksheet contains cells to accommodate this information. The data should be entered in the “small business exposures included as other retail” category. These exposures should not be included in the corporate portfolio.

36. As a corollary, in the “Firm Size” worksheet include ONLY those exposures to SMEs that do not meet the Committee’s retail definition and, therefore, were not included in the small business category noted above.

B. Exposures

Drawn exposures

37. Defaulted assets that have not yet been fully written off must be included in the capital calculations. Drawn exposures under each portfolio should be reported gross of specific provisions (i.e. outstanding balances must not have been reduced by specific provisions or partial charge-offs).

38. Banks should indicate separately the amount of specific provisions for each portfolio (corporate, sovereign, interbank and retail) in the “Data” worksheet. The Committee has proposed a revised treatment for specific provisions under the Foundation IRB approach, in which specific provisions can be used to offset the EL charge on defaulted assets in each portfolio. The risk-weighted assets calculated by the worksheet will make this adjustment.

39. In the “Data” worksheets, banks should report the amount of general provisions held in excess of the amount included in Tier 2. The capital requirements calculated by the worksheet will be adjusted automatically to reflect this.

Undrawn exposures

40. Undrawn commitments should be reported after credit conversion. As the credit conversion factors differ under the Current Accord and the Foundation IRB approach, banks must report the amounts of undrawn commitments for each approach separately in the “Data” worksheet, applying the relevant conversion factors.

41. Banks should not include commitments that are unconditionally cancellable, or those that effectively provide for automatic cancellation at any time by the bank without prior notice due to deterioration in a borrower's creditworthiness. The proposed new Basel Capital Accord provides that a 0% conversion factor will be applied to these commitments. Therefore, commitments that meet either of these criteria should not be included in the undrawn commitments section. (In QIS2, some banks included a portion of these commitments but this is not the correct approach because it does not reflect the extent to which the commitment is fully irrevocable.)

42. The only exception to this is retail: a bank can include commitments that are unconditionally cancellable as long as the LGD is adjusted to give a correct overall figure for expected loss.

Off-balance sheet exposures

43. In calculating capital requirements, banks should add the counterparty exposures for off-balance sheet items to the drawn exposures. Off-balance sheet exposures should be included after applying the appropriate credit conversion factor. Credit equivalent amounts should be calculated for these contracts according to the current rules.

44. It is important that trading book counterparty exposures (e.g. on swaps) are included in the calculation of risk-weighted assets under the Current Accord and under the Foundation IRB approach. It is therefore essential that banks fully include these exposures under corporate, sovereign and interbank portfolios in the Data worksheet. Allowances for netting under the Current Accord should be assumed to carry forward under IRB.

45. Banks with significant securities financing business (repos/reverse repos, securities lending/borrowing) must include this business in the appropriate portfolio. Banks should complete the QIS2.5 on the basis of the repo data exercise developed by the Basel Committee in September and circulated to many participating banks (contact your national supervisor if further information is required). Banks should use the methodology they would wish to employ (either standardised haircuts, own estimate haircuts or VaR modelling, and taking account of netting). However, for the purposes of the QIS2.5 exercise, banks should assume carve-outs for government repos and, therefore, haircuts should be set at zero for these transactions. Banks should calculate any haircuts on a portfolio basis using a 5-day holding period.

C. PD/LGD breakdowns

46. The worksheet implicitly assumes that LGD breakdowns are the same for all PD bands and vice-versa for corporate, sovereign, interbank and retail. While not ideal, this seems the only viable assumption if we are to keep requirements for QIS2.5 to a manageable level. The worksheet will automatically calculate the PD/LGD breakdowns based on this assumption. That is, these matrices will recalculate automatically once the yellow cells in the adjoining rows and columns are filled in.

47. For the retail portfolios, banks can use either a PD/LGD approach or an EL approach. Banks should fill in the appropriate cells for the retail approach of their choice and leave the cells in the other Retail worksheet blank.

PD bands

48. For the Foundation IRB calculations, banks should define the PD bands (set out as rows) for each portfolio to match those used internally. Banks should use as detailed a distribution of PD bands as are currently used for internal purposes. You can, therefore, expand the number of bands to meet your needs. No other part of the worksheet should be altered.

49. The distribution of exposures within these PD bands should be shown in the worksheets related to the IRB approach. Where banks have exposures that are not allocated internally to PD band, please redistribute such exposures on a pro rata basis to PD bands according to the distribution of allocated exposures. Alternatively, if the bank has clear information on the credit quality of the unrated portion, a distribution should be estimated. (In QIS2, some banks simply applied a conservative PD to any unallocated/rated exposures but this is not the correct approach. Other banks used assumptions that went in the other direction. The important thing is to try and reflect as far as possible the true risk.)

50. Under the Foundation IRB approach, banks should assess the appropriate PD bands for sovereign exposures denominated and funded in the domestic currency. Where a bank uses external ratings for sovereigns, it should not automatically assume that the PD associated with the external rating should be applied to exposures denominated and funded in the domestic currency as, generally, the sovereign will have the capacity to repay the debt in full. As such, assigning the exposure to a band with a lower PD than that associated with the external rating may be more appropriate.

51. Banks should slot exposures that are guaranteed by another counterparty, or where credit protection is provided by another counterparty, according to the PD banding of the guarantor or protection provider. Where the credit protection or guarantee provided by another counterparty covers only part of the exposure, banks should slot the portion of the exposure guaranteed/protected into the PD band of the guarantor/protection provider and the remainder into the PD banding of the obligor.

LGD bands

52. Banks should allocate exposures according to the type of collateral held against the exposure. Ten categories are shown in the worksheet:

(1) Unsecured
(2) Collateralised by physical collateral
(3) Collateralised by receivables
(4) Collateralised by commercial real estate (CRE)
(5) Collateralised by residential real estate (RRE)
(6) Collateralised by cash
(7) Collateralised by gold
(8) Collateralised by equities on a main index
(9) Collateralised by government securities
(10) Collateralised by other securities

Banks should allocate exposures using the guidance set out below:

– If the exposure is **fully unsecured** allocate the full amount to the unsecured category (1).

– If the exposure is **fully collateralised** by financial collateral or gold (after adjustments for haircuts), then banks should put all of that exposure in the collateralised category (any of categories 2 to 10).

– If the exposure is only **partly collateralised by financial collateral** (after adjustments for haircuts), then banks should put the proportion of the exposure that is unsecured in the unsecured category* (1) and the remainder in the appropriate collateralised category (any of categories 6 to 10).

– For exposures collateralised by **commercial or residential real estate**, if any exposures are 140% covered by collateral, 100% of the exposure should be placed in category 3. For exposures which are less well covered by collateral but meet a minimum coverage of 30%, the following proportion of the exposures should be placed in category 3:

  = (percentage of exposure collateralised / 140%) x amount of exposure

  The remainder should be placed in the uncollateralised column* (1).

– For exposures collateralised by **receivables**, if you have exposures that are 125% covered by collateral then place 100% of the exposures in the appropriate column (3). For exposures which are less well covered by collateral, the following proportion of the exposures should be placed in column 3:

  = (percentage of exposure collateralised / 125%) x amount of exposure

  The remainder should be placed in the uncollateralised column* (1).

– The treatment of exposures collateralised by **physical collateral** has not been firmly agreed by the Committee, other than it should reduce the LGD to 45% where the exposures is fully collateralised. To determine the allocations between categories for partially collateralised exposures, banks should use an identical treatment to commercial or residential real estate as a working assumption. If you have exposures that are 140% covered by collateral then place 100% of the exposures in the appropriate column (3). For exposures which are less well covered by collateral but meet a minimum coverage of 30%, the following proportion of the exposures should be placed in column 3:

  = (percentage of exposure collateralised / 140%) x amount of exposure

  The remainder should be placed in the uncollateralised column* (1).

53. These calculations do not have to be carried out loan by loan. A bank can estimate the split for a whole portfolio. For example, if a bank has corporate loans totalling 100, approximately 35% of which are collateralised by commercial real estate with coverage of 140% or more then 35 could be slotted into category 3 and 65 into the unsecured category. If 35% was collateralised by commercial real estate but the

* Unless there is other collateral that can be utilised, in which case the allocations should reflect this. Where banks have two forms of collateral for one loan they should allocate the loan to the category with the lowest LGD.

degree of collateralisation was only 110% then 28 would be slotted into category 3 and the remainder into uncollateralised.

54. "W" should simply be ignored in all calculations.

D. Additional Effects of the New Accord

55. The Committee has recently issued proposals on the treatment of asset securitisations, equity exposures in the banking book and specialised lending. In the Notes worksheet, please discuss and, if possible, assess the potential impact on the bank's capital requirements, if you believe these exposures will have a material impact. Please indicate in some detail how these estimates have been derived in the "notes".

E. Definition of Default

56. Please discuss in the Notes worksheet the definition of default for each portfolio that the bank uses when setting PDs, highlighting any differences with the definition set by the Committee's – see below:

A default is considered to have occurred with regard to a particular obligor when one or more (i.e. any) of the following events have taken place:

(1) it is determined that the obligor is unlikely to pay its debt obligations (principal, interest, or fees) in full;

(2) a credit loss event associated with any obligation of the obligor, such as a charge-off, specific provision, or distressed restructuring involving the forgiveness or postponement of principal, interest, or fees;

(3) the obligor is past due more than 90 days on any credit obligation; or

(4) the obligor has filed for bankruptcy or similar protection from creditors.

57. If possible, banks should estimate the percentage impact on risk-weighted assets that results from moving from its current default definition to the Committee's definition. A separate worksheet ("definition of default") is provided to record this information.

F. Current Accord Worksheet

58. Credit risk mitigation needs to be considered carefully for the Current Accord. Since the current CRM treatment is essentially a substitution treatment, it is probable that all CRM is implicitly picked up in the exposure breakdowns (i.e. a corporate loan secured by OECD sovereigns shows up as an exposure to OECD sovereigns). Additional CRM effects not captured through the substitution treatment may be reflected in the "Credit risk mitigation impact" cell on the Current Accord worksheet.

59. Banks will also need to specify the following information to enable the current capital requirements to be calculated.

– Percentage of sovereign exposures to OECD governments;

- Percentage of interbank exposures to banks in OECD countries and exposures to banks in non-OECD countries with a maturity of less than one year;

- Percentage of commitments that are over 1 year.