Basel Committee
on Banking Supervision

Quantitative Impact Study 3 Instructions

For banks providing data on the Standardised and Internal Ratings Based Approaches

October 2002

BANK FOR INTERNATIONAL SETTLEMENTS

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Quantitative Impact Study 3 - Instructions

Guidance on completion of QIS

1. Introduction

(a) Changes to the package since July

1.1. A draft copy of the Quantitative Impact Study 3 (QIS 3) information package was circulated in July. Since then, the package has been developed and improved. Most of the package remains the same, however, banks will notice the following changes:

1. The portfolio definitions and technical guidance sections have been combined to form one document entitled "Quantitative Impact Study 3 Technical Guidance" (or "Technical Guidance" for referencing purposes in these instructions).

2. Four worksheets have been added to the QIS workbook; a) Summary sheet, b) Checks sheet, c) Securitisation – Originators and d) Securitisation – Investors. These sheets are discussed in sections 4, 5 and 15.

3. Book B has been removed. In the July package, banks were given the opportunity to calculate the IRB advanced approach on a smaller book ("Book B"), subset of exposures used for the other approaches. Feedback from banks on this aspect of the worksheets has suggested that the distinction between book A and book B is unnecessary.

4. The IRB sheets require banks to input an estimate of the lower and upper boundary for each PD band, along with the estimated PD for the band see section 10. This is to enable accurate aggregation of results.

5. The standardised and foundation IRB SME retail sections have an additional memo item which asks banks to split SME retail exposures by size of exposure. This is to enable the Committee to analyse the impact of the €1m threshold for small business included in retail. National supervisors will indicate whether it is necessary for banks to fill in this table.

(b) Objective

1.2 The objective of QIS 3 is to gather data on the effects of the New Basel Capital Accord on banks' capital requirements. This information will be used to refine the calibration of the proposals for the New Accord.

(c) Timetable

1.3. The questionnaire must be completed and returned to your supervisor by **20 December 2002** or as prescribed by your national supervisor.

(d) Structure

1.4. The QIS 3 information package contains three main parts. The **instructions** (i.e. this document) provide guidance on the completion of the questionnaire. The **questionnaire** is contained in a **workbook** in which you input exposure amounts and other details (e.g. external rating, probability of default – "PD", loss given default – "LGD" etc). The worksheets have in-built formulae to calculate risk weighted assets based on the current draft proposals of the Basel Committee. The **Quantitative Impact Study 3 Technical Guidance** provides detailed guidance on the calculation of capital, portfolio definitions and information on boundaries between portfolios.

1.5. In addition to the main package, there is an **Areas of National Discretion Checklist** that contains a list of items where national discretion is permissible. Your national supervisor will provide you with this checklist setting out their decisions (for QIS 3 purposes) on the areas where national discretion is allowed. This checklist will provide guidance on which options you should use when completing the QIS 3 questionnaire and is provided so that the Committee could gain as close an approximation as possible of the impact on banks' capital. Please note that the list may be updated during the exercise – there may be other areas of national or supervisory discretion not included currently in the checklist, and minor modifications may be made to existing items. **Furthermore, the Basel Committee also recognises that the guidance provided by supervisors in response to this list may not reflect current or future discussions on implementation. As such, the use of this list should be regarded as part of the effort to facilitate completion of the QIS survey, rather than as a first step in the work on implementation of the Accord.**

1.6. These documents – the instructions, technical guidance, workbook and national discretion checklist – **replace** the documents given to banks in July.

1.7. A separate, reduced package (workbook, instructions, technical guidance and national discretion checklist) has been provided for banks **only** completing the standardised approach for credit risk and the basic indicator or standardised approach for operational risk. If you only intend to complete the standardised approach for credit risk only please ask your supervisor for this package.

(e) Dialogue with supervisors

1.8. Banks are strongly encouraged to maintain a continuous dialogue with their national supervisor throughout the QIS 3 process. This will enable banks to discuss solutions to problems as they occur and ensure proposals are interpreted accurately. Supervisors will be able to share insights and provide advice where necessary.

2. General

(a) Options and national discretion

2.1. Where options allowing banks to exercise discretion are set out in the National Discretion Checklist, banks should use the options they are likely to use when the New Accord is implemented. Where the New Accord will allow national supervisors to exercise discretion over certain options, banks should take guidance from their national supervisors. The National Discretion Checklist provided by your national supervisor will detail further these areas of national discretion. **NB: It should be noted that national discretion guidance is provided solely for the purpose of this exercise and is subject to change.**

2.2. Banks should apply the national discretions provided by their home supervisors across **all** their exposures.

(b) Estimates

2.3. It is recognised that banks may not have exact data on all the requested elements and, therefore, estimates are acceptable for the purpose of this exercise as long as they are representative of a bank's portfolio and can be justified. Estimates should be discussed with the national supervisor and identified in the "Notes" worksheet.

(c) Units

2.4. Banks should report data in the most convenient currency. Banks should record which currency has been used in the data worksheet. Supervisors will provide the relevant conversion rate for the reporting currency to Euros.

(d) Consolidated basis

2.5. 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.

(e) Consistent portfolio

2.6. It is extremely important that banks use a consistent portfolio throughout the calculations of capital requirements under the current Accord and the new standardised and IRB approaches. This is to enable the Committee to compare results across approaches and relative to the current capital requirements.

(f) Reference date

2.7. In completing the worksheets, banks should use data from March 2002 or later and should note the reporting date in the "Data" worksheet (different rules apply for operational risk, please refer to section 16(c) – Reference period). The use of data from a reporting date that is earlier than March 2002 should be discussed with your national supervisor.

(g) Structure of worksheets

2.8. **You need only enter data in the yellow shaded cells**. All other cells are either automatically calculated or are linked to cells in other parts of the worksheet. These unshaded cells should not be changed. There are separate sheets (generally more than one) for each approach. The worksheets calculate risk weighted assets using information linked to the Data worksheet and your own inputs that are entered in yellow cells.

2.9. In addition, some worksheets contain **green** shaded cells. These are for information only; they are designed to provide further information for the Committee in analysing the results. Banks should provide this information, although such information does not feed directly into the calculation of capital.

2.10. There are also pink cells which should be completed by supervisors. In general, these refer to areas where there is national discretion in the current Accord or in the proposed New Accord. Supervisors will complete these sections for the QIS exercise. If there are pink cells that have not been completed, banks should contact their national supervisors.

2.11. Some cells within tables in worksheets have been “greyed out”. Banks should not fill any data in these cells.

2.12. The worksheets have in-built ”CHECKS” (in red). Underneath each check, cells indicate whether the inputs tally with the relevant data (“Yes” or “No”). Please look at these checks to ensure the data input is consistent. If they are not you need to understand why and make adjustment.

2.13. 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 to leave cells empty. 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.

2.14. For many portfolios in the IRB approaches, banks can specify the number of PD, LGD, exposure at default (“EAD”) and maturity bands they wish to use. Banks should add rows and columns as appropriate. **But please take care to copy the appropriate formulae when adding rows or columns. It is important that new columns/rows are added within the yellow sections that already exist - this means banks must not add columns/rows at the beginning or end of the yellow tables.**

2.15. In some worksheets (e.g. purchased receivables and securitisation) there are cells in red with blue backgrounds which act as menus for drop-down boxes. Banks should take care to ensure these cells are not altered.

3. Data Worksheet

(a) Purpose

3.1. The data worksheet is intended to capture broad information about the portfolio used in the exercise. These data are fed through to the other worksheets to calculate risk weighted assets. Therefore it is vital this information is as accurate as possible.

(b) Portfolios - general

3.2. There are eleven broad categories of exposure. However, not all categories will be relevant for all banks. The eleven categories are:

- Corporate (not including SMEs, specialised lending or purchased receivables)
- Specialised lending (SL)
- Sovereign
- Banks
- Retail (not including SMEs)
- SMEs
- Equity
- Purchased receivables
- Securitised assets
- Trading book

- Investments in related entities

3.3. Definitions for all exposure classes are given in the QIS 3 Technical Guidance and some guidance is provided below. It is important that banks use consistent categories across the various approaches (i.e. exposures designated as sovereign under the standardised approach must also be designated as sovereign under the current Accord and IRB approaches). The Committee intends to analyse the relative changes in capital requirements for each portfolio – the exposures included in each portfolio must, therefore, be consistent.

3.4. In general, a **corporate** exposure is defined as a debt obligation of a corporation, partnership, or proprietorship. These are characterised by the fact that the source of repayment is based primarily on the ongoing operations of the borrower, rather than the cash flow from a project or property.

3.5. In certain circumstances, banks will be permitted to include some **specialised lending** exposures (defined in paragraphs 180-189 of the technical guidance) in their corporate portfolio. Banks will be asked to assess their specialised lending exposures to consider whether they can be treated under the IRB corporate framework or if they should use the separate specialised lending portfolio (based on slotting criteria – see section 13). However, banks must include all high-volatility commercial real estate lending (HVCRE) in the separate specialised lending portfolio – a definition is of HVCRE provided in the Technical Guidance, beginning at paragraph 188. Refer to section 13 below for further discussion on SL exposures.

3.6. Sovereign includes exposures to sovereigns (and their central banks) and certain domestic public sector entities (PSEs) - see item number 5 of the National Discretion Checklist for further guidance.

3.7. The **retail** portfolio will be subdivided into three portions:

- Residential mortgages
- Non-mortgage retail (excluding small businesses and qualifying revolving exposures)
- Non-mortgage retail (qualifying revolving exposures)

Capital requirements are calculated separately for each sub-section of the retail portfolio in all approaches (current, standardised and IRB).

3.8. The definition of retail is different for the standardised and IRB approaches. Banks completing the IRB approach must use the IRB definition for **both** standardised and IRB approaches (see Technical Guidance, beginning at paragraph 192). This is to ensure that the standardised and IRB results are comparable. Banks **only** completing the standardised approach should follow the standardised definition (see Technical Guidance, beginning at paragraph 42).[1]

3.9. The **small and medium-sized enterprise ("SME") category** is used here specifically for the QIS exercise to examine the effects of the new proposals on capital requirements on these exposures. The treatment of SME exposures must follow closely the

[1] Banks only completing the standardised approach should use the cut-down package (worksheets, instructions and technical guidance) designed for standardised banks – see section 1(d) of these instructions. Banks should consult with their national supervisors if this appropriate.

instructions contained herein. As the boundary for SME exposures lies between the retail and the corporate boundaries, careful attention must be given to these boundaries.

3.10. The SME portfolio will be subdivided into two portions: (1) those exposures that for capital purposes will be treated as corporate; and (2) those that (for capital purposes) will be treated as retail. SME exposures covered by the corporate risk weight curve are distinguished from corporate exposures based on the amount of the firm's annual sales. If turnover is less than €50 million, the exposure should be categorised as an SME within 'SME treated as corporate'. The proposals permit institutions to treat exposures to small businesses as retail exposures if the individual exposure is less than €1 million, the bank has sufficiently large numbers of such exposures, and it manages them as retail credits. These exposures should be included within "SME treated as retail". Exposures of €1 million or above should be included in the "corporate" SME sub-category.

3.11. **Equity** exposures are defined on the basis of the economic substance of the instrument. They include both direct and indirect ownership interests,[2] whether voting or non-voting, in the assets and income of a commercial enterprise or of a financial institution that is **not** consolidated or deducted in the related entities/scope of application section. The definition of equity exposures is provided in the Technical Guidance, beginning at paragraph 197.

3.12. **Purchased receivables** exposures should be entered as such provided such exposures are eligible for the top-down approach (see Technical Guidance, beginning at paragraph 201). Banks providing IRB data on purchased receivables under a bottom-up approach should report such exposures either in the "Corporate" or "SME" category.

3.13. The **trading book** is also defined as a separate portfolio. Capital requirements are calculated separately for the trading book for each approach. Total risk weighted assets are comprised of three elements that are discussed in more detail in section 6(d).

(c) Guarantees and credit derivatives - general

3.14. In completing the QIS 3 worksheets, banks should assign exposures that are guaranteed by another counterparty, or where credit protection is provided by another counterparty, according to the characteristics of the guarantor or provider of protection. Thus, if a bank has an exposure to a corporate guaranteed by another bank, this exposure must be treated as a bank exposure and included in the claims on banks portfolio. This should apply throughout the approaches – i.e. to the current, standardised and IRB approaches[3]. Under the current Accord, standardised approach and foundation IRB approach, the substitution treatment (i.e. replacing the risk weight or the PD of the borrower with that of the protection provider) will apply. The advanced IRB approach is explained in section 11 below.

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[2] Indirect equity interests include holdings of derivative instruments tied to equity interests, and holdings in corporations, partnerships, limited liability companies or other types of enterprises that issue ownership interests and are engaged principally in the business of investing in equity instruments.

[3] Credit protection other than collateral (e.g. a guarantee) provided by a securitisation special purpose vehicle to a securitisation exposure is not eligible for CRM treatment and should not be recorded in the portfolio of the protection provider – it should be recorded in the securitisation worksheet. However, if the guarantee is collateralised, the effects of such collateralisation must be recorded in the appropriate table of the securitisation worksheets.

3.15. Banks are requested to enter their exposures before and after the effects of credit protection. Thus, in the current and standardised worksheets, banks should first slot exposures with a guarantee or credit protection according to the risk weighting of the initial obligor in the column headed “pre-protection” and then slot exposures according to the risk weighting of the guarantor or credit protection provider in the column “post-protection”.

3.16. Banks should adopt a similar approach in the IRB worksheets. In the IRB worksheets, banks should assign exposures with a guarantee or credit protection according to the PD band of the initial obligor in the column headed “exposures before credit protection” and then assign these exposures according to the PD of the guarantor in the column headed “exposures after credit protection”.

3.17. Under the advanced IRB approach, banks can make their own internal assessment of the degree of risk transfer and can adjust either the PD or LGD. See the Technical Guidance, beginning at paragraph 267 for further detail. If a bank chooses to adjust the PD, it should follow the same approach as the foundation IRB approach described above and assign exposures to PD bands before and after the effects of credit protection. However, if the bank chooses to adjust its LGD estimates, it should enter the same quality distributions in both the “before” and “after” credit protection columns.

3.18. Where partial coverage exists, or where there is a currency mismatch between the underlying obligation and the credit protection, it is necessary to split the exposure into a covered and uncovered amount. The treatment in the standardised and foundation IRB approaches is very similar. In showing exposures ”after” the effects of credit protection, banks should slot the portion of the exposures guaranteed/protected into the PD band/risk weighting of the guarantor/protection provider. The remaining uncovered portion of the exposure is assigned the PD band/risk weighting of the underlying counterparty. Further details of how to determine the portions of exposures that are covered are given in the Technical Guidance, beginning at paragraph 162 – Proportional cover. The amount of exposure deemed to be protected should take account of any currency mismatch – see Technical Guidance, paragraph 164.

3.19. It is possible that guarantees and credit derivatives will create difficult boundary issues. In allocating exposures to a portfolio in the data worksheet, banks should follow the guidance beginning at paragraph 154 of the Technical Guidance and assign an exposure **according to the characteristics of the guarantor**. Exposures should not be moved between portfolios – thus if a corporate exposure has been guaranteed by a bank, it should always be shown in the bank portfolio (in the data sheet and throughout the approaches). However, to illustrate the effects of the credit protection, in completing the requirements described for each approach, banks should continue to reflect the risk-weight/PD of the underlying obligor in the “pre-protection” columns and then assign the risk-weight/PD of the protection provider in the “post-protection” column. However, both the “pre-protection” and “post-protection” figures should be reported within the portfolio of the guarantor.

(d) On-balance sheet (panel A)

3.20. Exposures must be reported both gross and net of specific provisions and partial write-offs and included in the appropriate yellow cell. Defaulted assets that have not yet been fully written-off must be included in the gross exposures. Specific provisions can be used to offset the expected loss (EL) charge in each portfolio in both the foundation and advanced IRB approaches. The risk weighted assets calculated by the worksheet will make this adjustment. The current and standardised approaches are calculated using exposures net of provisions.

3.21. Exposures must be included **before** application of a haircut on exposures (H_E) where relevant. H_E applies only in the comprehensive approach for collateral (i.e. it is not relevant for collateralised transactions in the current Accord and the simple approach in the standardised approach). See the Technical Guidance, beginning at paragraph 93 for further discussion.

3.22. Banks should report total trading book assets and assets for investments in related entities separately (panels A2 and A3) from assets held in the banking book.

3.23. In panel A4 banks should report assets that have not been included in QIS 3 that are included for current regulatory capital purposes (for example where a foreign subsidiary has been excluded from QIS 3). This will allow the Committee to evaluate the coverage the bank has achieved in the QIS 3 exercise.

3.24. Banks should also note any other assets not included elsewhere in the data sheets in the panel A5 (for example fixed assets which do not attract a regulatory capital charge). As far as possible, banks should aim to reconcile the total on-balance sheet assets in panel A6 to their balance sheet at the reference date.

3.25. Within panel A5, banks should also identify fixed assets. Fixed assets acquired through credit defaults should be identified separately from other fixed assets for the bank's own use. This is to enable the Committee to consider the risk-weights applicable to these categories.

(e) Off-balance sheet items and commitments (panel B)

3.26. Commitments and other off-balance sheet items must be recorded **before** credit conversion for each portfolio. Commitments and off-balance sheet items must be recorded separately after credit conversion in the relevant worksheets for each approach using the applicable credit conversion factors.

3.27. In the data provided for the current, standardised and IRB approaches, banks **should** include any commitments that are either unconditionally cancellable or that effectively allow automatic cancellation by the bank, at any time and without prior notice, resulting from a deterioration in the obligor's creditworthiness. However, a 0% conversion factor must be applied to these commitments in the standardised and foundation IRB approaches. In the advanced IRB approach banks may estimate their own credit conversion factor for these exposures as long as the LGD is adjusted to give a correct overall figure for expected loss. This applies to unconditionally cancellable commitments in the IRB retail portfolios since retail only has an advanced approach.

(f) Memo item

3.28. In panel B4, banks should split off-balance sheet exposures (including commitments) into those commitments that are of an original maturity of up to and including 1 year; commitments with an original maturity of more than 1 year; unconditionally cancellable commitments; and other off-balance sheet items (excluding exposures under repo-style and OTC derivatives).

(g) Counterparty Exposures under repo-style and OTC derivatives (panel C)

3.29. Enter banking book and trading book repo-style and OTC derivative exposures in panels C1 and C2 respectively. For OTC derivatives, the credit equivalent amounts (calculated using the current or original exposure method) should be recorded; this should be consistent with the bank's supervisory return and the 1988 Capital Accord.

3.30. Repo-style transaction exposures include off-balance sheet lending of securities that continue to be recorded on-balance sheet (including the posting of securities as collateral), as well as guarantees of securities lending transactions (e.g. guarantees issued by an agent lender). Cash posted as collateral in a repo-style transaction should be treated as a repo-style transaction exposure, rather than as a loan. In the data sheet, banks should record the **gross** exposure (i.e. the exposure amount (E) without any netting for collateral (C)).

3.31. Use panel C3 to record banking book and trading book repo-style and OTC derivative exposures not included in QIS 3.

(h) Other information

3.32. At the top of the "Data" sheet, banks are asked to provide the reporting date for this information – i.e. to which date the data relates. Banks are also asked to provide the reporting currency. Supervisors will input the relevant exchange rate.

4. Summary Worksheet

(a) Purpose

4.1. The summary worksheet collects data from the other worksheets by portfolio and approach and will be used to analyse the results for each bank. Banks do not need to enter any information on this sheet.

5. Checks Worksheet

(a) Purpose

5.1. The checks worksheet summarises the in-built checks (see paragraph 2.12) contained throughout the workbook. The cells indicate whether inputs in each worksheet tally with the relevant section in the data sheet. Banks should use this sheet to ensure that data input is consistent.

6. Capital Worksheet

(a) General

6.1. This sheet collects information on capital and deductions, provides a summary of risk weighted assets across all the approaches and calculates capital ratios for use in the QIS 3 analysis. Most of the cells in this sheet are unshaded (i.e. they are white) and they link to other areas of the workbook. You should not enter any data in these cells but must ensure the yellow cells are completed.

(b) Capital and deductions

6.2. Enter eligible Tier 1, Tier 2 and Tier 3 capital amounts in the relevant box. The capital numbers must relate to the **total banking group**, even if some exposures are not included in the QIS 3 exercise.

6.3. Supervisory deductions must be entered for the current Accord and proposed New Accord cells. Supervisory deductions should include goodwill, total capital from investments in unconsolidated banking and financial subsidiary companies and total capital for investments in the capital of other banks and financial institutions. The deductions for investments in unconsolidated banking and other financial subsidiary companies are calculated in the related entities sheet and will feed-through to the Capital worksheet automatically. Banks should record other supervisory deductions not captured by the related entities sheet in the cells provided.

(c) Banking book

6.4. In panel 1d – Offset for general provisions, please enter the figure for general provisions (or reserves for loan losses), under the foundation IRB approach. In many jurisdictions, general provisions in excess of 1.25% of risk weighted assets and general provisions not included in the definition of capital will be used to offset capital charges for the expected loss component of certain exposures in the IRB approach. Banks should record the amount of general provisions not included in capital (or in excess of the 1.25% limit) in the cell provided.

(d) Trading book

6.5. Trading activities carry several types of risks: counterparty credit risk, market risk (consisting of both "general market" and "specific" risk), and concentration risk. The New Accord imposes charges for the first two, while EU institutions may incur a further charge for large exposures.

6.6. Capital requirements are calculated separately for the trading book for each approach. Risk weighted assets are calculated for three elements. The first component is risk weighted assets required for counterparty trading book exposures; these are calculated separately for the current, standardised and IRB approaches. The second element is the capital charge for specific risk. The specific risk charge should be calculated using either the standardised or the internal models methodology. If you use the internal models methodology (unchanged from the 1996 Market Risk Amendment) enter the specific risk charge in the "Capital" worksheet (panel 2b), if not complete the relevant section in the current Accord, standardised and IRB approaches worksheets. The third element is the capital charge for market risk under the current Accord; enter this figure in the "Capital" worksheet (panel 2c). In addition, if banks in the EU have capital requirements for large exposures, they should record this capital requirement in the "Capital" worksheet in panel 2d (the worksheet will convert this to a risk weighted asset equivalent).

(e) Current Accord reconciliation

6.7. The purpose of this section is to ensure that the current accord risk weighted assets calculated in the QIS 3 workbook agree with supervisory returns. If your current accord figures do not agree with your supervisory returns then this should be discussed with your supervisor. Differences between the figures for the current accord and your supervisory return must be explained in the "Notes" worksheet.

6.8. In panel 3c fill in banking and trading book requirements for exposures not included in QIS 3 but that are included in the current Accord.

7. Related Entities Worksheet

(a) Introduction

7.1. The scope of application of the Accord will include, on a fully consolidated basis, any holding company that is the parent entity within a banking group to ensure that it captures the risk of the whole banking group. Investments relating to the scope of application (see the Technical Guidance, paragraphs 1-20) will receive either a risk-weight or a deduction treatment (at the discretion of the national supervisor). The related entities worksheet is structured to collect data for capital deduction and/or risk weighted assets treatment under the current national regime and the New Accord.

(b) Information required for QIS 3

7.2. Banks must ensure that (i) only investments relating to the scope of application are reported in this sheet, and (ii) none of the investments reported in this sheet are included in other portfolios - especially in the ”equity” portfolio, to avoid double-counting.

7.3. Banks should report the data by categories of investments relating to the scope of application as listed below in accordance with the Technical Guidance, paragraphs 5-17 - Scope of application and treatment of investments in related entities.

(a) Investments in unconsolidated majority-owned or controlled securities and other financial entities.

(b) Significant minority investments in banking, securities and other financial entities.

(c) Investments in insurance subsidiaries and significant minority investments in insurance entities,

(d) Significant minority and majority investments in commercial entities that exceed certain materiality levels.

(e) Other investments relating to Scope of Application (i.e. significant minority- and majority-owned commercial entities below materiality levels, and others if any).

(c) Inputs for QIS 3

7.4. Banks should fill in the amounts of investment for categories “a” through “e” in the column titled “Amount outstanding”.

7.5. Banks should report the data for the current national regime and the New Accord. In reporting these data, banks should first refer to item #1 of the National Discretion Checklist prepared by national supervisors that indicate the treatment (i.e. deducting from capital or risk weighting) applicable for their country under the current regime and the New Accord. Banks should also refer to the section where national supervisors describe the treatment for the categories “a” through “e” in panel C of the investment in related entities worksheet in the QIS 3 workbook, and follow the description provided by national supervisors in completing the data. It is essential that banks use consistent portfolios under the current regime and the New Accord.

If national supervisors instruct banks to:

(a) deduct investments from capital, then banks should report the amount deducted from capital in the column labelled "Deductions" ;

(b) risk weight investments, then banks should report the risk weighted amounts under the column labelled "Risk weighting treatment". Under the risk weighting treatment, banks should report data for all the relevant approaches to them (standardised/ foundation IRB/ advanced IRB).

(d) Memo item on surplus capital

7.6. Banks should indicate the amount of surplus capital held in insurance subsidiaries that is included in consolidated capital under the current Accord and the New Accord.

8. Current Accord Worksheet

(a) Basis for calculations

8.1. Exposures should be assigned to the appropriate category in the worksheet based on the local implementation of the 1988 Basel Capital Accord by the national supervisor. In some countries supervisors may have additional rules beyond the 1988 Accord or may have made modifications to the Accord in their national implementation. Since these areas may also be impacted by the proposals for the New Accord, banks should carefully discuss with their supervisors about how the Current Accord Worksheet should be completed.

(b) Structure of worksheet

8.2. Risk weighted assets are calculated separately for each portfolio (numbered one to eleven). Within each portfolio, risk weighted assets are calculated for drawn and off-balance sheet items together (panel a) and separately for commitments (panel b), OTC derivatives and repo-style transactions (panel c).

8.3. The full range of risk weights allowed in the current Accord is included in the worksheet for each wholesale portfolio, so as to allow participating institutions to reflect where national supervisors have exercised discretion over the risk weight to be applied to a given category of asset/counterparty. (This discretion may either have been made explicit in the current Accord, i.e. claims on public sector entities – PSEs, or applied locally by national supervisors.)

8.4. For the retail portfolio, where national discretion has been exercised (e.g. use of a risk weight other than 50% for residential mortgages) participating institutions should enter the appropriate values in the row provided and record this in the "Notes" worksheet.

(c) Drawn and off-balance sheet exposures

8.5. Drawn and off-balance sheet items must be reported, after applying the appropriate credit conversion factor, for all portfolios in the relevant yellow box.

(d) Commitments (undrawn exposures)

8.6. For all portfolios apply the appropriate credit conversion factor to commitments. Post conversion figures should be entered in the appropriate yellow box.

(e) Inputs for drawn and off-balance sheet exposures and commitments

8.7. Banks should assign the exposures to the appropriate risk-weight bucket in the column headed “all exposures”. These exposures should then be subdivided between three categories: (1) unsecured exposures; (2) collateralised exposures; and (3) exposures with credit protection. The treatment of credit risk mitigation and the inputs for categories (2) and (3) are explained below.

(f) Counterparty exposures (repo-style transactions and OTC derivatives)

8.8. Banks should assign repo-style and OTC derivative exposures to the appropriate risk-weight bucket in the columns headed “repo” and “OTC derivatives”. In the “pre-CRM” columns, OTC derivative counterparty exposures must be recorded as the credit equivalent amount (calculated using the current or original exposure method). In the “post-CRM” columns banks should assign exposures to the risk-weight buckets appropriate to the credit risk mitigant – either the collateral or credit protection taken against the exposure.

(g) Trading book

8.9. Inputs for the counterparty exposures in the trading book should follow those for the banking book.

8.10. Trading book on-balance sheet exposures and OTC derivative exposures giving rise to specific risk should be entered in the correct yellow box in the specific risk section (panel 11b).

(h) Netting arrangements

8.11. Banks should take account of netting agreements which are eligible under the current Accord in assigning “post CRM” exposures to risk-weight buckets. Banks should show the portion of gross exposures covered by the netting agreement in the 0% risk-weight bucket. The remaining unsecured portion after netting should be assigned to the risk weight bucket of the counterparty.

(i) Credit risk mitigation

8.12. The treatment of credit protection (guarantees and credit derivatives) is described in section 3(c). The treatment of collateralised exposures is described below.

8.13. “Pre-collateral” exposures should reflect the risk weight of the obligor. “Post-collateral” exposures must reflect the risk weight of the collateral taken against an exposure. Where a loan is fully or partially collateralised by cash and securities issued by certain bodies or others specified by the national supervisor, the part of the loan that is collateralised should be assigned the appropriate risk weight given to the cash or securities used as collateral or according to national regulations, where national regulations prevail. The remaining portion of the loan should be assigned to the risk weight appropriate to the underlying asset/counterparty.

8.14. Collateral should be calculated on a loan-by-loan basis. If collateral held against a particular loan exceeds the exposure amount banks are **not** permitted to use this collateral against loans for other counterparties.

9. Standardised Approach Worksheet

(a) General

9.1. Risk weighted assets are calculated separately for each portfolio (numbered one to eleven). Within each portfolio, risk weighted assets are calculated for drawn and off-balance sheet items together (panel a) and separately for commitments (panel b), OTC derivatives and repo-style transactions (panel c).

9.2. There are two methodologies for treatment of collateral in the standardised approach – comprehensive and simple (please refer to the Technical Guidance, beginning at paragraph 71). Banks **only** need to calculate capital requirements using one approach.

(b) Drawn, off-balance sheet and counterparty exposures

9.3. Off-balance sheet items must be reported, after applying the appropriate credit conversion factor, for all portfolios in the relevant yellow box.

(c) Commitments (undrawn exposures)

9.4. For all portfolios apply the appropriate credit conversion factor to commitments. Post conversion figures should be entered in the appropriate yellow box.

(d) Trading book

9.5. Trading book on-balance sheet exposures and OTC derivative exposures giving rise to specific risk should be entered in the correct yellow box in the specific risk section (panel 11b).

(e) SME retail

9.6. An extra memo item has been included for SME retail in panel 7(g) which splits SME retail exposures by size of exposure. Four size bands have been provided – banks should enter the **percentage** of total exposures (including drawn, commitments, repo-style transactions and OTC derivatives) in each size band. This is to enable the Committee to analyse the impact of the €1m threshold for small business included in retail. National supervisors will indicate whether it is necessary for banks to fill in this table.

(f) Inputs – risk weights

9.7. Banks should assign the exposures to the appropriate risk-weight bucket in the column headed “all exposures”. Guidance for this process is given in the Technical Guidance, beginning at paragraph 26.

9.8. In each portfolio, one risk bucket has been left blank (and coloured pink). This cell should be used where supervisors judge that a risk weight greater than 100% is warranted for unrated claims in their jurisdiction (see item #9 of the National Discretion Checklist). Where supervisors invoke this option please enter the relevant risk weight and corresponding exposure amount. If supervisors decide to use several different risk weights for different exposures please input a weighted average risk-weight.

9.9. For sovereign exposures, supervisors may recognise country risk scores assigned by Export Credit Agencies (ECAs) when risk weighting sovereigns. ECA scores should be mapped to risk weights in accordance with the Technical Guidance (see item #4 of the National Discretion Checklist). At the discretion of national supervisors, banks may apply a lower risk-weight to exposures to their sovereign of incorporation denominated in domestic currency and funded in that currency (see Technical Guidance, paragraph 28).

9.10. There are two options for claims on banks. National supervisors will apply one option to all banks in their jurisdiction. No claim on an unrated bank may receive a risk weight less than that applied to claims on its sovereign of incorporation. The options are discussed in more detail in the Technical Guidance, beginning at paragraph 34.

(g) Corporate lending collateralised with commercial real estate

9.11. Corporate lending collateralised with commercial or residential real estate must be separately identified and included in the relevant category.

(h) Credit risk mitigation – collateral

9.12. These exposures should then be subdivided between three categories: (1) exposures without CRM; (2) collateralised exposures; and (3) exposures with credit protection. Treatment of credit risk mitigation and the inputs for categories (2) and (3) is explained below.

9.13. Adjustments for guarantees and credit derivatives should be made in the columns “credit protection” as described in section 3(c) above. Treatment of collateral is described below.

9.14. **Simple approach** – Under this approach a bank may alter the risk weight applied to an exposure according to collateral held. Where collateral is eligible the collateralised portion of the exposure is assigned the risk weight of the collateral. Banks should record collateralised exposures before taking account of the collateral held in the “pre collateral” column. In the “post collateral” column, banks should slot the portion of exposures covered by collateral according to the risk weighting of the collateral. Further details of how to determine the portions of exposures that are covered are provided in the Technical Guidance, beginning at paragraph 92. The remaining portion of the exposure which is not covered by collateral should be assigned the risk weight of the obligor.

9.15. **Comprehensive approach** – In the “pre collateral” column, banks should record the gross exposure (E). In the “post collateral” column, banks should record the net exposures (E*) after deduction of collateral amounts. In calculating E*, banks should adjust the value for the collateral held against each loan for haircuts (H_C). Where collateral is denominated in a currency that differs from that of the underlying exposure (i.e. there is a currency mismatch), an additional haircut reflecting the currency volatility (H_{FX}) is taken on the collateral (see the discussion on haircuts in the Technical Guidance beginning at paragraph 93). Banks should also reflect haircuts appropriate to the exposure (H_e).

9.16. The calculation of E* for repo-style transactions and OTC derivatives covered by master netting agreements should reflect the current exposure plus a measure for potential increases in that exposure. For repo-style transactions, the potential increase can be calculated using either haircuts or VaR-based models.

9.17. Collateral must be calculated on a loan-by-loan basis (except in the case of repo-style transactions covered by master netting agreements). If collateral held against a particular loan exceeds the exposure amount banks are **not** permitted to use this collateral against loans for other counterparties.

(i) Eligible on-balance sheet netting agreements

9.18. Banks should take account of eligible on-balance sheet netting agreements in assigning "post CRM" exposures to risk-weight buckets (see Technical Guidance, paragraph 102 – On-balance sheet netting). Banks using the simple approach should show the portion of gross exposures covered by the netting agreement in the 0% risk-weight bucket. The remaining unsecured portion (after netting) should be assigned to the risk-weight bucket of the counterparty. Banks on the comprehensive approach should reflect any eligible netting agreements in calculating E*.

10. Worksheets on IRB Approaches

(a) General

10.1. These instructions apply to both foundation and advanced IRB approaches. (Additional instructions for advanced IRB only are provided in section 11.)

10.2. For most portfolios, there are three different inputs required from banks to calculate risk weighted assets under the foundation IRB approach. These include information on the distribution of exposures between PD bands, the type of collateralisation for each portfolio, and the maturity distribution of exposures (if applicable – see below). Four separate panels are provided for banks to calculate risk weighted assets for drawn and off-balance sheet items, commitments, repo-style transactions and OTC derivatives. (Off-balance sheet exposures should be converted using the appropriate conversion factors and added to drawn exposures.)

10.3. Within the SME portfolio, exposures treated as corporate (i.e. using the corporate risk-weight curve for capital purposes) require an additional input – turnover of the firm – see section 10(k).

10.4. Inputs for the retail portfolios are also different from the general approach described immediately below. The section on retail (11(c)) details the inputs banks will need to make.

(b) Structure of worksheet

10.5. The worksheet is divided into four separate pages to capture these inputs. The first page (on the left-hand side of this worksheet) calculates risk weighted assets using information provided in grids to the right. It summarises the information (i.e. the maturity adjustments, weighted average LGDs) and calculates total risk weighted assets. The worksheet will also calculate any offsets for specific provisions. Banks do not need to enter any information into this grid.

10.6. Banks should input information in the second and third grids on these worksheets to provide a breakdown of exposures by PD and LGD and by PD and maturity. The fourth grid is a memo item capturing information on the relationship between PD, LGD and maturity (see section 10(m)).

10.7. In the foundation and advanced IRB approaches, banks can specify the number of PD, and maturity bands they wish to use. **But please take care to copy the appropriate formulae when adding rows or columns. It is important that new columns/rows are added within the yellow sections that already exist - this means banks must not add columns/rows at the beginning or end of the yellow tables.**

(c) Definition of default

10.8. The definition of default is given in the Technical Guidance, beginning at paragraph 399. Please discuss in the Notes worksheet any differences between the bank's definitions and that proposed by the Committee.

(d) Drawn and off-balance sheet exposures

10.9. Banks should apply the appropriate credit conversion factor for off-balance sheet exposures. Post conversion figures should be entered in the appropriate yellow box.

(e) Commitments – foundation IRB only

10.10. For all portfolios banks should input committed exposures **after** applying a credit conversion factor. For the IRB advanced approach, banks are also required to fill in an EAD grid.

(f) PD bands

10.11. Banks should use as detailed a distribution of PD bands as is currently used for internal purposes. Under the "PD Quality Bands" heading, banks should define their PD bands, expanding the number of rows as necessary.

10.12. Banks are required to enter the PD for each band in the "estimated PD" column – this should be the PD which most accurately reflects the group of exposures allocated to the band – this estimate will feed into the calculation of risk weighted assets. In addition to this, banks must enter the upper and lower boundary for each PD band. The estimated PD must lie between the lower and upper boundary. Where banks use an individual PD grade and do not specify an upper and lower bound, they must enter the single PD estimate as the top and bottom of the range (i.e. in all three cells). The "in default" PD band has been given an upper bound of 100% – do not change this.

10.13. Where banks have exposures that are not allocated internally to a 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 relevant information on the credit quality of the unrated portion, a distribution should be estimated. (In previous QIS exercises, some banks simply applied a conservative PD to any unallocated/rated exposures or made assumptions that went in the other direction – neither is the correct approach. The important thing is to try and reflect, as far as possible, the true risk.)

10.14. 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.

10.15. Banks should show the effects of credit protection in the columns provided as described in paragraph 3.16 above. 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 band of the obligor.

(g) LGD bands – Drawn, off-balance sheet items and commitments

10.16. Banks should allocate exposures (after the effects of credit protection) according to the type of collateral held against the exposure. Eight categories are shown in the worksheet:

1. Unsecured – subordinated debt
2. Unsecured – other debt
3. Other physical collateral
4. Collateralised by receivables
5. Collateralised by commercial real estate (CRE)
6. Collateralised by residential real estate (RRE)
7. Collateralised by gold
8. Collateralised by financial collateral (including cash, equities on a main index, government securities and 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 (2).

- If the exposure is collateralised by **financial collateral or gold**, then banks should enter the collateralised portion after adjustments for H (i.e. the greater of zero or E-E*) in the collateralised category (category 7 or 8). The uncollateralised portion (E*) should be slotted in category 2 (senior unsecured claims).

- 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 (5) or (6). 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 5 or 6:

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

  The remainder should be placed in the uncollateralised column (2).

- 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

(4). For exposures which are less well covered by collateral, the following proportion of the exposures should be placed in column 4:

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

The remainder should be placed in the uncollateralised column (2).

- For exposures collateralised by **other physical collateral** the LGD is reduced to 40% when the exposures are covered 140% by collateral. 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* (2).

10.17. For purposes of QIS 3, 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 5 and 65 into the unsecured category. If 35% was collateralised by commercial real estate but the degree of collateralisation was only 110% then 28 would be slotted into category 3 and the remainder into uncollateralised.

10.18. In calculating the extent of collateralisation banks should adjust the value of the collateral to reflect haircuts (where appropriate). Banks should also reflect haircuts on the exposure (H_e) in these calculations by adding H_e to the value of the collateral.

(h) Treatment of Repo and OTC derivatives

10.19. Repo-style transactions and OTC derivatives should be treated in a similar manner as under the standardised approach, however PD bands should be used instead of risk-weights. The adjusted exposure amount (E*) should be entered in the column for unsecured exposures. The portion of gross exposures covered by the netting agreement and collateral – i.e. the greater of zero or E minus E* – should be shown in the 0% LGD band headed "secured exposures". The other LGD columns have been left blank – banks do not need to input anything in these columns.

(i) Netting agreements

10.20. Banks should take account of eligible netting agreements in assigning exposures to LGD bands (see the Technical Guidance, beginning at paragraph 102). The portion of gross exposures covered by the netting agreement should be shown in the 0% LGD band. The remaining unsecured portion after netting should be assigned to the "unsecured" column (45% LGD band).

(j) Maturity

10.21. At the discretion of national supervisors, banks will be required to use an explicit maturity adjustment calculated in line with a mark-to-market methodology in the foundation IRB approach. Where an explicit maturity adjustment is required exposures should be entered in the maturity grid. Maturity should be calculated according to paragraph 281 of the Technical Guidance. The PD bands used must be the same as those used for grid showing PD by collateral type. The worksheet will automatically calculate the maturity adjustment. Exposures exempted from the explicit maturity option should be entered in the single column called “exposures exempted from explicit maturity adjustment”.

10.22. Banks can define their own maturity bands and effective maturity in the yellow cells. An exception to this is the band “less than three months to maturity” for exposures to which the one-year floor does not apply. This band has been defined by the Committee. Banks should allocate exposures to this band according to the guidance provided in paragraph 282 of the Technical Guidance and subject to the guidance of national supervisors.

10.23. For foreign exchange/derivative instruments under a netting agreement the longest residual maturity should be used.

(k) SME portfolio – size function

10.24. For SME exposures that are treated as corporate exposures (i.e. those which are on the corporate risk weight curve for capital purposes) banks will **also** need to provide information on the size of the firm. Consequently these exposures are reported on a separate SME worksheet and should be excluded from other worksheets dealing with the corporate portfolio. In the SME worksheets a fifth grid requests information on PD and firm size (using turnover). Four bands are provided (€0-5 million, €5-20 million, €20-35 million and €35-50 million). In the cells above the reported exposures banks should give the weighted-average turnover (sales) (weighted by exposure size) for the size category. This information will feed into the capital calculations for these exposures, providing reductions in capital requirements. The Committee accepts that banks may find it difficult to provide this data – banks may use a sampling approach if necessary to provide reasonable estimates.

10.25. As in the standardised approach, an extra memo item has been included in the SME retail panel which splits SME retail exposures by size of exposure. Four size bands have been provided – banks should enter the **percentage** of total exposures (including drawn, commitments, repo-style transactions and OTC derivatives) in each size band. National supervisors will indicate whether it is necessary for banks to fill in this table.

(l) Memo item – estimates of LGD under the advanced approach

10.26. Please note there is an extra LGD row – “Estimate of LGD under advanced approach for each collateral type”. If possible, banks should use this line to give their own estimate of LGD for each of the collateral types specified in the foundation IRB approach.

(m) Memo item – grid showing PD, LGD and Maturity

10.27. In addition to the above information, banks should also complete a separate grid showing the relationship between PD, LGD and maturity. Banks should show the weighted average LGD estimate for the exposures in each PD/maturity cell – i.e. show a matrix of LGD estimates for the PD and maturity bands set out in other areas of the worksheet.

10.28. The grid for this memo item is shown in green in the IRB worksheets. It is not used in the overall capital calculation but will provide the Committee with information about the relationship between PD, LGD and maturity. A check is provided at the end – the weighted-average LGD in this grid should be the same as that shown for the PD/LGD grid.

10.29. Banks not using the explicit maturity adjustment in the foundation IRB approach do not need to complete this memo item. Banks do not need to complete this memo item for repo-style transactions or OTC derivatives.

11. Advanced IRB Approach Worksheets

11.1. The inputs required for the advanced IRB approach are very similar to foundation IRB, with the following additions:

(a) EAD

11.2. For advanced IRB commitments should be entered into the worksheets **before** credit conversion. Banks are required to fill in an EAD grid using their own EAD bands. If possible, banks should assign relevant product types to these EAD estimates in the yellow cells. The PD distribution is that which is defined in the initial collateral type grid. Banks should then allocate exposures according to EAD and PD.

11.3. Banks do not need to provide EAD breakdowns for **drawn or off-balance sheet exposures**: off-balance sheet exposures should be stated after credit conversion in the tables for PD, LGD and maturity.

11.4. For repo-style transactions under the advanced approach it is assumed that EAD is incorporated in the calculation of E* - therefore it is not necessary to fill in an EAD matrix.

(b) LGD

11.5. Under the foundation IRB approach, banks are able to specify their own LGD bands. It would provide useful information to the Committee if banks were able to specify to which type of collateral the LGD bands relate. If possible, banks should provide this information as well.

11.6. The LGD for repo-style transactions should only reflect the LGD of an unsecured exposure and not any impact of collateral which has already been accounted for in the calculation of E*.

(c) Retail

11.7. There is no foundation IRB approach for retail – banks need only calculate risk weighted assets for the IRB approach once (using what essentially is an advanced IRB approach). There is no maturity adjustment for retail exposures, thus banks need only complete the grids showing PD by LGD, and PD by EAD. There will be three separate risk-weight functions for retail exposures: residential mortgage exposures, qualifying revolving exposures and other retail exposures. These are defined further in the Technical Guidance, beginning at paragraph 287.

(d) Maturity

11.8. In the IRB advanced approach, all banks will be required to use an explicit maturity adjustment. Therefore banks must fill in the maturity grid. Banks can define their own maturity bands and effective maturity in the yellow cells.

11.9. There are two exceptions to this. The first, like the foundation IRB approach, is for exposures to which the one-year floor does not apply ("less than three months to maturity"). This band has been defined by the Committee. Banks should allocate exposures to this band according to the guidance provided in the Technical Guidance, beginning at paragraph 282 and subject to the guidance of national supervisors.

11.10. The second, is for certain domestic borrowers in the corporate portfolio that can be exempted if the national supervisor chooses. Certain corporate exposures (and SMEs treated as corporate) will be exempted where the reported sales (i.e. turnover) **and** total assets for the consolidated group of which the firm is a part are less than €500 million. Exposures falling into this category should be recorded in the maturity/PD grid in the column headed "exposures exempted from explicit maturity adjustment".

11.11. Remaining exposures must then be allocated according to their PD and maturity. Maturity should be calculated according to paragraphs 281-284 of the Technical Guidance. The PD bands used must be the same as those used for the grid showing PD by collateral type. The worksheet will automatically calculate the maturity adjustment.

12. IRB Equity Worksheet

(a) Introduction

12.1. The IRB treatment to calculate risk weighted assets of equity exposures in the banking book will have two main approaches: the market-based approach and the PD/LGD approach. Within the market-based approach, there will be a simple risk-weight method and an internal models method. National supervisors will provide instructions on which approach to use in specific circumstances – (see items 31-39 of the National Discretion Checklist).

(b) Structure

12.2. There are two Equity worksheets: the first ("IRB Equity"), calculates the risk weighted assets according to the approach you expect to use for each equity holding.

12.3. The second sheet ("Equity - memo items") is designed to provide additional information to the Committee. It does not feed into the overall capital calculations but gives: 1) risk weighted assets for items excluded from the IRB approach; and 2) separate risk weighted assets using the alternative approach available to the banks (i.e. risk weighted assets for banks under the PD/LGD approach for those banks that use the market-based approach for regulatory capital purposes and vice versa).

(c) Materiality

12.4. For this exercise, banks should refer to supervisors to determine whether their equity exposures are material. If the banks exposures are not considered material then they do not need to enter any further information in the equity worksheets. If a bank's equity exposures are not material then they only need to complete the drop-down box on the IRB equity worksheet.

(d) Specific exclusions

12.5. For this exercise, some equity holdings are considered excluded from the IRB treatment and will be subject to the capital charges required under the standardised approach – banks should refer to national supervisors for guidance on eligible holdings. Banks should report excluded exposures (in panel 1) of the IRB equity worksheet.

12.6. For this exercise, exclude from the IRB calculations any equity exposures made under legislated programmes that provide significant subsidies for the investment to the bank and involve some form of government oversight and restrictions on the equity investments. National supervisors will provide instructions on those legislated programmes that qualify for this exclusion.

(e) Grandfathering

12.7. For this exercise, equities are to be considered as likely to be grandfathered if the national supervisor has so specified – see paragraphs 230 and 231 of the Technical Guidance.

(f) Treatment of excluded and non-excluded items

12.8. Risk weighted assets should be calculated for all equity holdings in your banking book. For **all material non-excluded equities**, fill in the questionnaire using the PD/LGD approach or market-based approach (simple or internal models), according to the approach indicated by your national supervisor. **Excluded equity holdings** should be entered separately in the panel provided in the worksheet (panel 1) and risk weighted at 100%.

(g) Equity exposure measures

12.9. Equity exposures should be measured according to the value presented in the financial statements. In the "notes" worksheet, please disclose national accounting and regulatory practices on valuation of equity holdings in the banking book and, separately, the treatment of unrealised and unrecognised revaluation gains.

12.10. Holdings in funds containing both equity investments in commercial entities and other non-equity types of investments can be treated either as a single investment based on the majority of the fund's holdings or, where possible, as separate and distinct investments in the fund's component holdings based on a look-through approach. The treatment used should be consistent with the bank's current practices.

(h) Categorisation of equity exposures

12.11. Banks should categorise their equity holdings as either "publicly traded" or "other equities" portfolios, including any short positions. A publicly traded equity holding is defined as any equity security traded on a recognised securities exchange.

12.12. In addition, banks using the PD/LGD approach should categorise their equity holdings into "non-capital gain" or "capital gain" portfolios. Equities will be understood to be in the non-capital gain portfolio for as long as the portfolio is run under the following manner:

- Public equities where the investment is part of a long-term customer relationship, and any capital gains are not expected to be realised in the short term and there is no anticipation of (above trend) capital gains in the long-term. It is expected that in almost all cases, the institution will have lending and/or general banking relationships with the portfolio company so that the estimated probability of default is readily available. In general, it is expected that the bank will hold the equity over the long term (at least five years).

- Private equities where the returns on the investment are based on regular and periodic cash flows not derived from capital gains and there is no expectation of future (above trend) capital gain or of realising any existing gain.

(i) Market-based approach

Simple risk weight method

12.13. Banks should split their holdings between equities that are publicly traded and all other equity holdings.

12.14. Short cash positions and derivative instruments held in the banking book can offset long positions in the same individual stocks provided that these instruments have been explicitly designated as hedges of equity holdings in specific companies and that they have remaining maturities of at least 1 year.

12.15. Other short positions are to be treated as if they are long positions with the relevant risk weight applied to the absolute value of each position.

12.16. In the context of maturity-mismatched positions, the methodology is that for corporate credit exposures.

Internal model method

12.17. The capital charge is equal to the potential loss on the institution's equity holdings as derived using internal value-at-risk models subject to the 99th percentile, one-tailed confidence interval of quarterly excess returns over an appropriate risk-free rate computed over a long-term sample period. No particular type of VaR model (e.g. variance-covariance, historical simulation, or Monte Carlo) is prescribed. Banks may also use modelling techniques such as historical scenario analysis to determine minimum capital requirements for banking book equity holdings. The use of such models depends on the institution demonstrating to its supervisor that the methodology and its output can be quantified in the form of the VaR loss percentile specified above.

12.18. Capital charges calculated under the internal model method may be no less than the capital charges that would be calculated under the simple risk weight method using a 200% risk weight for publicly traded equities holdings and a 300% risk weight for all other equity holdings. These minimum capital charges would be calculated separately using the methodology of the simple risk weight approach.

(j) PD/LGD approach

12.19. Banks should split their exposures into three categories: (1) equities not held for capital gain; (2) equities held for capital gain; and (3) net short positions. Within these categories, banks should divide exposures between publicly traded and other equity holdings.

The PD/LGD approach for equity exposures follows the foundation IRB approach methodology for corporate exposures subject to the following conditions:

- The bank's estimate of the PD of a corporate entity in which it holds an equity position must satisfy the same requirements as the bank's estimate of the PD of a corporate entity where the bank holds debt. If a bank does not hold debt of the company in whose equity it has invested, and does not have sufficient information on the position of that company to be able to use the applicable definition of default in practice but meets the other standards, a 1.5 scaling factor will be applied to the risk weights derived from the corporate curve, given the PD set by the bank. If, however, the bank's equity holdings are material and it is permitted to use a PD/LGD approach for regulatory purposes but the bank has not yet met the relevant standards, the simple risk weight method under the market-based approach will apply.

- LGD assumption for all IRB equities will be 90%.

- For this exercise, risk weights for equities are to include the five-year maturity adjustment. However, in countries that intend to use the domestic lending carve-out as specified in paragraph 236 of the Technical Guidance, the data is to be collected both with and without use of that carve-out.

12.20. A minimum 100% risk weight is applicable for non-capital gain equity exposures. For all other equity positions, capital charges calculated under the PD/LGD approach may be no less than the capital charges that would be calculated under a simple risk weight method using a 200% risk weight for publicly traded equity holdings and a 300% for all other equity holdings.

12.21. Hedging for PD/LGD equity exposures is as for corporate exposures subject to an LGD of 90% on the exposure to the provider of the hedge.

12.22. The absolute amount of net short positions in an individual equity holding will have risk weights of 200% for publicly traded equities and 300% for all other equities.

12.23. The simple risk weight method under the market-based approach will apply if the bank's equity holdings are material and it is allowed to use a PD/LGD approach by its national supervisor for regulatory purposes, but the bank has not yet met the relevant standards.

(k) Firm size adjustment

12.24. Some equity exposures for smaller companies will be eligible for a downward adjustment in risk-weight. Banks should complete the data on firm size. Tables in the Equity worksheets request information on firm size (using turnover). Four bands are provided (€0-5 million, €5-20 million, €20-35 million and €35-50 million). Banks should give the weighted-average turnover for the exposures included in each band. This information will feed into the capital calculations for these exposures, providing reductions in capital requirements. The Committee accepts that banks may find it difficult to provide this data – banks may use a sampling approach if necessary to provide reasonable estimates.

(l) Scaling factor

12.25. As discussed above a 1.5 scaling factor will be applied to the risk weights for some equity exposures (see paragraph 12.19). For each PD band, banks should split their exposures between those on which the scaling factor is necessary and those for which a scaling factor will not be applied.

(m) Memo items

12.26. If possible, banks **must** provide further information on their equity portfolios. Banks with grandfathered exposures should complete either the PD/LGD approach or market-based approach for these exposures. Banks that have used either the PD/LGD approach or market-based approach should, if possible, provide estimates of risk weighted assets using the alternative approach.

13. Foundation IRB Specialised Lending Worksheet

13.1. A separate worksheet for specialised lending has been provided to calculate risk-weights for certain exposures under the foundation IRB approach. In certain circumstances, however, banks will be permitted to include “other” SL exposures (as distinguished from high-volatility commercial real estate exposures) in their corporate portfolio. The guidance below details how banks should classify their exposures.

(a) High-volatility commercial real estate lending

13.2. All banks **must** separately identify the category of exposures meeting the definition “high-volatility commercial real estate lending” (see the Technical Guidance, beginning at paragraph 188). These should be included in the specialised lending portfolio in the “Data” worksheet and identified in the relevant places in the “IRB specialised lending worksheet”.

13.3. Banks must record these specialised lending exposures separately for the current and standardised approaches. In the current and standardised worksheets these exposures will be treated as corporate exposures since there are no specific treatments in the current and standardised approaches. They should, however, be entered in the separate specialised lending sections (panels 8a and 8b).

13.4. Exposures that are considered high-volatility commercial real estate exposures will be slotted into one of the five quality categories with a corresponding risk weight applied. No other foundation or advanced IRB treatment is available.

13.5. As a memo item banks are requested to report the percentage of total commercial real estate lending included in the HVCRE category.

(b) Other types of specialised lending (project finance, income-producing real estate, object finance and commodity finance)

13.6. Banks that estimate PD to the satisfaction of their supervisors do **not** need separately to identify these exposures. These banks should include such exposures in the corporate portfolio and follow the corporate foundation IRB treatment.

13.7. Banks that can estimate PD, LGD and EAD for these exposures also do **not** need separately to identify these exposures. These banks should also include such exposures in the corporate portfolio and follow the corporate IRB advanced treatment.

13.8. Banks that are **unable** to estimate PDs subject to the IRB minimum standards will use a simplified foundation methodology and will be required to map their internal ratings to risk-weight categories based upon a set of slotting criteria within four product lines (Project Finance, Income-Producing Real Estate, Object Finance, and Commodity Finance).

13.9. Banks following this **simplified foundation methodology** (i.e. risk-weight slotting) should use the cells provided in the IRB specialised lending sheet and follow the instructions set out below. They will be required to separately identify these exposures within the specialised lending portfolio and must also record specialised lending exposures separately for the current and standardised approaches (panels 8a and 8b).

13.10. Within the foundation IRB specialised lending tables two risk-weights have been shaded pink. The rows corresponding to these risk-weights may only be used at the national supervisors discretion when a bank meets the criteria which allow a favourable risk-weight to be applied (see Technical Guidance, paragraph 239).

(c) Simplified foundation methodology (risk-weight slotting) – other specialised lending

13.11. In order to fill out the IRB specialised lending worksheet for other specialised lending exposures a bank must first:

- *Determine which exposures in each of the four product lines mentioned above fall within the definition of specialised lending and which will be treated as regular corporate exposures.* Specialised lending exposures are loans which finance a physical asset or assets and which are structured in such a way that they depend for repayment primarily on the income generated by the asset(s) rather than on the credit quality of the borrower. Banks should consult the Technical Guidance, beginning at paragraph 180, for detailed definitions of specialised lending and the four product lines.

- *Evaluate, for each specialised lending product line, the pool of exposures that the bank has assigned to each of its internal rating grades to determine which supervisory rating category it will be assigned to.* In the foundation approach for specialised lending, the bank assigns exposures to its internal rating grades based on its own internal rating criteria. It must then map those internal rating grades to five supervisory rating categories, each of which is associated with a supervisory risk weight.[4] (Technical Guidance, Annex 4: Supervisory Slotting Criteria for Specialised Lending specifies the criteria that should guide this mapping.[5] It is not envisaged that every exposure in a given internal rating grade must satisfy every one of these supervisory criteria in order for that internal grade to be mapped to the corresponding supervisory grade. Rather, the supervisory criteria are the

[4] If the bank has more than five internal rating grades, two or more internal rating grades will be mapped to a single supervisory rating category.

[5] No mapping criteria are provided for default grades since these are all mapped to the “default” supervisory category.

characteristics supervisors would expect to find in a representative exposure in that internal grade. Any weakness on one element would need to be compensated by extra strength elsewhere.

(d) Exposures

13.12. Specialised lending exposures must be split by product line in the summary section and by supervisory rating category in the relevant section. Commitments must be entered **before** credit conversion in the summary section and **after** credit conversion when split by supervisory rating category. Banks must also enter the amount of specific provisions against defaulted exposures by product line in the relevant yellow cell. The worksheet will calculate risk weights using the supervisory risk weights.

(e) Collateral

13.13. Collateral is recognised within the supervisory rating therefore no further recognition of collateral is permitted.

(f) Other specialised lending exposures included within the corporate portfolio

13.14. Banks that include their other specialised lending exposures in the corporate portfolio for the IRB approaches should follow the guidance set out in sections 10 and 11 of these instructions. Note, however, that specialised lending exposures are not eligible for the size-adjusted corporate risk-weight curve. In addition, banks will not be able to exempt specialised lending exposures from the maturity adjustment where it is applied.

14. IRB Receivables Worksheet

(a) Introduction

14.1. The New Capital Accord will contain a customised treatment for highly granular pools of receivables – these are defined in paragraphs 201-205 of the Technical Guidance. If the supervisor grants a bank the right to do so, capital requirements on such pools will not have to be calculated bottom up (by assessing the risk associated with each individual receivable in the pool), but may be calculated top-down, using risk estimates for the pool, rather than the individual exposures.[6]

14.2. Banks must split out receivables for the current and standardised approaches, and fill in the relevant sections for comparison purposes.

[6] The idea behind the introduction of this top-down treatment is that is it too costly—if possible at all—to evaluate all receivables in the pool individually. Application of the top down approach will result in a capital requirement that is somewhat higher than what would have been obtained had the loans been rated individually.

(b) Inputs for QIS 3

Description of the pool

14.3. This description is not used for any further analysis. It is just a descriptive label. If pools are split into multiple segments (e.g. where multiple risk weight curves are applicable), the description field should be used to make clear which receivables come from the same pool.

Exposures

14.4. The exposure amount is the total amount of the receivables purchased by the bank, i.e. exposure is measured gross of provisions and purchase discounts.

Undrawn amounts

14.5. Enter the total undrawn amount of the facility **before** credit conversion.

Purchase discount

14.6. Enter the purchase discount as a percentage of the exposure amount. Purchase premiums, should be entered as a negative discount.

Specific provisions

14.7. Enter the amount of specific provisions.

Weighted average firm size

14.8. For pools containing SME exposures banks should use the corporate risk-weight curve – refer to the Technical Guidance, beginning at paragraph 321 and footnote 71. Banks must determine the weighted average sales figure for the pool and input this in the relevant column. If banks are unable to determine the average sales figure they must still use the corporate risk weight curve.

(c) Risk weight curve

14.9. The type of receivables determines the risk weight curve that should be used to determine capital requirements for the pool of receivables. To determine the appropriate curve banks should consult the Technical Guidance, beginning at paragraph 318.

(d) Expected loss estimates

Default risk

14.10. The bank should estimate the pool's one year forward looking expected loss for default risk, expressed as a percentage of the nominal receivables amount. This estimate must be calculated on a stand-alone basis i.e. without regard to any assumption of recourse or guarantees from the seller or other parties.

Dilution risk

14.11. The bank should estimate the pool's one year forward looking expected loss for dilution risk. Dilution refers to the possibility that the receivable amount is reduced through cash or non-cash credits to the receivable's obligor.[7] For both corporate and retail receivables, unless the bank can demonstrate to its supervisor that the dilution risk for the purchasing bank is immaterial, the treatment of dilution risk must be the following: at the level of either the pool as a whole (top-down approach) or the individual receivables making up the pool (bottom-up approach), the purchasing bank will estimate the one-year EL for dilution risk, also expressed in percentage of the nominal receivables amount. As with the treatments of default risk, this estimate must be computed on a stand-alone basis; that is, under the assumption of no recourse or other support from the seller or third-party guarantors. For the purpose of calculating risk weights for dilution risk, the corporate risk-weight function will be used with the following settings: the PD will be set equal to the estimated EL, and the LGD will be set at 100 %. This treatment will be applied regardless of whether the underlying receivables are corporate or retail exposures, and regardless of whether the risk weights for default risk are computed using the standard IRB treatments or, for corporate receivables, the top-down treatment described above.

(e) Loss given default

14.12. Loss given default should be calculated as an exposure weighted average LGD for the pool of receivables. For retail receivables an LGD estimate for the pool must be provided. Banks on the advanced IRB approach may provide an LGD estimate for corporate receivables. LGD estimates will be used to separate EL into PD and LGD components.

(f) Maturity

14.13. Under the advanced IRB approach maturity must be calculated for corporate receivables as the pools exposure weighted average effective maturity. For pools that do not have effective covenants, early amortisation triggers or other features that protect the purchasing bank against a significant deterioration in quality of future receivables, the final accord will use a higher maturity on the committed amounts. For purposes of QIS 3 this difference can be ignored.

15. Securitisation worksheets

(a) Structure

15.1. Two worksheets on securitisation are provided – one for investing banks and one for originating/sponsoring banks. Definitions of investing, originating and sponsor banks are given beginning at paragraph 492 of the Technical Guidance. Sponsors of ABCP programmes are treated as originators and should complete the originator worksheet for each conduit they sponsor. Similarly, banks should complete details for each master trust structure.

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[7] Examples include offsets or allowances arising from returns of goods sold, disputes regarding product quality, possible debts of the borrower to a receivable's obligor, and any payment or promotional discounts offered by the borrower (e.g. a credit for cash payments within 30 days).

15.2. Each bank should give details of all securitisation exposures/positions recorded in its banking book. Each bank should also record as a memo item all securitisation exposures/positions in its trading book. The trading book positions are recorded in the spreadsheet in aggregate and by external rating buckets.

15.3. Each worksheet is designed to calculate the risk weighted assets under the currrent Accord, the standardised approach and the IRB approach.[8] In calculating capital requirements under the current Accord banks should apply their current national rules relating to securitisations.

15.4. Note that the worksheets request information in a summary form – for example, the nominal amount of each position, the risk-weight applicable under each approach, the credit conversion factor (for liquidity facilities) and the effects of credit risk mitigation. Banks will need to do some preliminary calculations before inputting information into the worksheets. This particularly applies to the supervisory formula approach (SFA).

(b) Supervisory formula approach (SFA): calculator

15.5. Banks are required to calculate the capital charge arising from the SFA outside the main worksheet and input the capital charge (or equivalent risk-weight[9]) into the securitisation worksheets. To help banks calculate the SFA, a separate worksheet – the "SFAcalculator.xls" – has been provided. The calculator enables banks to compute the capital charge under the SFA for each transaction. Banks are then required to enter the results (i.e. the capital charge) and some of the basic inputs into the securitisation worksheets – separate boxes are provided to capture this information.

15.6. While the Committee is only requesting banks to report summary information on the SFA in the QIS 3 returns, it recognises that banks may wish to discuss the results in more detail with national supervisors. The Committee would encourage banks to provide national supervisors with the calculations of the SFA for each transaction. This will act as an important part of the validation process to ensure that the QIS 3 results are accurate and will also enable banks and supervisors to understand the results.

(c) Specific provisions

15.7. For QIS 3 purposes, originators should record securitisation exposures gross of specific provisions in the securitisation worksheets[10]. However, investors should record securitisation exposures net of specific provisions. In the data worksheets, all banks should record exposures both net and gross of specific provisions.

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[8] For QIS 3 purposes, deductions made in the context of securitisation are recorded in risk weighted assets by applying a 1250% risk weight to the exposure in question. However, in calculating the capital ratios (on the capital worksheet), exposures receiving a 1250% risk weight will be deducted from available regulatory capital.

[9] To calculate the risk-weight for the supervisory approach, banks will use the SFA calculator to provide the effective risk weight for each position.

[10] However, originators will record all specific provisions made in relation to a transaction as a separate memo item for that transaction.

(d) Worksheet for originators – structure

15.8. Banks are requested to provide information transaction by transaction. Note that the worksheet currently only provides for two transactions (labelled A and B). If a bank has originated more than 2 transactions, then it should generate the required tables to capture all these additional transactions (labelled C etc). For each new transaction, banks should copy the panel for transaction A (panel 5) outlined by the dotted red line. In such a case the bank must ensure that the summary information cells containing total risk weighted assets are appropriately linked to the summary table at the top of the worksheet, so that accurate aggregate results are generated by the embedded formulas. If a bank foresees any difficulty in recording all its originated transactions or in ensuring the appropriate links within the worksheet, then it should contact its supervisor for guidance.[11]

15.9. The bank should record the securitisation of each pool of assets through a master trust or ABCP conduit as a separate transaction (specifying the tranche structure and, in the IRB context, K_{IRB} and the SFA inputs, in relation to that pool). Banks should separately specify (in order of priority of repayment) any off-balance sheet exposures to the pool or to the conduit/programme (e.g. such as pool-specific credit enhancement and any programme-wide liquidity facility), as explained in section 15(g) below.

15.10. The Committee expects that banks provide detailed information on all their originated transactions. However, at national discretion, banks will be permitted to record detailed information on a subset of their originated transactions. Banks should consult their national supervisor about how to proceed. Where a bank does not record every transaction it has originated, it must give aggregate statistics on the unreported transactions in panel 3 – see section 15(i). In panel (1) banks should record the amount of securitisation exposures for which detailed information is provided and the amount for which only summary aggregate information is recorded.

15.11. Banks should identify each revolving credit securitisation and whether the credits are provided under a committed line or not. In addition, the bank must identify whether the credits are provided to retail customers. For transactions other than securitisations of an uncommitted revolving retail credit line, a “managed assets” capital charge is imposed at the start. This is the product of the underlying pool and the applicable credit conversion factor stipulated in the Technical Guidance (for QIS 3 purposes, 80% if the early amortisation is controlled, 100% if it is not). The credit conversion factor applicable to securitisations of an uncommitted revolving retail credit line depends on how closely the transaction has approached an early amortisation trigger (and whether the amortisation is controlled or not). In addition, banks are asked to supply details concerning the trigger for early amortisation (e.g. if the trigger is excess spread falling below a specified level, what is that level).

(e) Originators – general information

15.12. For each transaction, banks should record the total nominal amounts of facilities/exposures in the pool – i.e. the aggregate principal amount of the assets subject to the securitisation. Banks should also indicate the type of the underlying exposures in the pool (i.e. corporate, commercial mortgage, credit cards, residential mortgage, other retail, mixed

[11] For example, a bank might seek the permission of its supervisor to record less than all of its originated securitisations, if to record them all would be an undue burden.

etc).[12] Where the underlying pool consists of a mix of exposures (e.g. both corporate and retail exposures) banks should provide further details on the types of underlying exposures and the relative mix in the box provided.

15.13. In addition, banks should indicate whether the securitisation is traditional or synthetic. Characteristics of a synthetic securitisation are: the assets remain on balance sheet and the credit risk is tranched and transferred (at least in part) by way of credit derivative(s).[13] Banks should also record whether the transaction is for asset backed commercial paper issued via a conduit.

15.14. Banks should also record the capital charge on the underlying pool before securitisation under the standardised approach. Banks should also note the amount of specific provisions against exposures in each transaction.

15.15. Originators will also need to separately record information concerning any capitalised assets in respect of a transaction (such as future margin income capitalised as an I/O strip).

15.16. In addition, for each transaction, banks should record the inputs relating to the supervisory formula – i.e. K_{IRB}, the LGD, N and how K_{IRB} was calculated (i.e. whether through the "top down" approach permitted for receivables under the IRB approach or on a "bottom up" basis, individual exposure by individual exposure) as stipulated in paragraphs 573-587 of the Technical Guidance.[14] Banks should enter K_{IRB} as the **ratio** calculated by reference to the pool of securitised assets – see paragraph 501 of the Technical Guidance, If a bank is able to use the advanced IRB approach to calculate K_{IRB}, then it should do so. Otherwise, K_{IRB} is calculated under the foundation IRB approach.

15.17. Banks will note from paragraph 565 of the Technical Guidance that under the IRB approach the originator's maximum capital charge is capped at K_{IRB}. This cap is given effect by a formula embedded in the summary table at the top of the worksheet.

(f) Originators – tranches in each securitisation

15.18. Banks must provide details on all tranches in each originated securitisation (whether or not the bank has retained/repurchased, partially retained/repurchased a position or sold the tranche). The worksheet provides for a total of 15 tranches/positions for each transaction.[15] Banks should also provide details on any off-balance sheet exposures to each transaction (such as liquidity facilities).

15.19. For each transaction, banks should list the tranches, starting with the most senior. Banks should list all tranches whether or not the bank has sold, retained/repurchased, partially retained/repurchased a position in the tranche. For these purposes, any "over-collateralisation" (e.g. future margin income/excess spread treated as credit support or enhancement) should be recorded as the first (most junior) tranche. Tranches should be

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[12] Banks should also separately identify securitisations of non-credit assets (e.g. equities). The drop-down box in the spreadsheet allows for this.

[13] If in doubt, banks should discuss this classification with supervisors.

[14] N.B. most other inputs are in terms of risk weighted assets.

[15] If a securitisation has more than 15 tranches/positions, then the bank should contact its supervisor for guidance on recording the additional tranches/positions.

separated into those below K_{IRB} and those above K_{IRB}.[16] If only a portion of a tranche is below K_{IRB}, banks should record this as two positions by separating the tranche that is below K_{IRB} and the portion that is above K_{IRB}. The "SFA calculator" provides details for banks on how to split their positions below and above K_{IRB}.

15.20. For each tranche, the bank should record the external rating (if applicable) and the amount of each tranche it has retained or repurchased. If a bank has inferred a rating, it should also make this clear (using the drop-down box provided).

15.21. Although the regulatory capital requirement for the bank will relate solely to those positions the bank has repurchased or retained, banks are asked to calculate risk weighted assets for **all** tranches. For each tranche banks should record the risk weights applicable to the current Accord (i.e. current national rules), the standardised approach, and the IRB approach. For the IRB approach, banks are asked to show the risk weights under both the ratings-based approach and the supervisory formula approach. In calculating the risk weights for each tranche banks should follow the guidance set out in the Technical Guidance. For example, as set out in paragraph 570 of the Technical Guidance, AAA and AA rated tranches may have one of 3 risk weights, depending on factors such as the effective granularity (N) of the underlying pool. A single-A-rated tranche may have one of 2 risk weights. The bank should insert the appropriate risk weighted assets figure into the IRB table.

15.22. To calculate the risk-weight for the supervisory approach, banks will need to use the SFA calculator. This will provide banks with the effective risk weight and risk weighted assets figure for each tranche.

15.23. Banks are also requested to indicate the effects of credit risk mitigation for each tranche.[17] For the current Accord, which is a substitution approach, banks should indicate the risk-weights applicable to the tranche before and after adjusting for collateral held against the tranche. To show the effects of CRM for the standardised and IRB approach, banks should indicate the exposure amount (i.e. "E*") of each tranche after recognition of collateral. Details of credit risk mitigation under the standardised approach are given beginning at paragraph 71 of the Technical Guidance.

15.24. For synthetic securitisations, banks will need to record any capital consequences of a mismatch between the maturity of the underlying exposures and that of the credit derivative effecting the securitisation on a tranche by tranche basis. Banks must also comply with the CRM rules on mismatches between the maturity of the CRM and the position/exposure to which it relates.

15.25. Where banks have used the "look-through" treatment for the most senior unrated positions under the standardised approach, they should record this in the box provided.

[16] The table provides for a maximum of 5 tranches/positions below K_{IRB}. If a transaction has more than 5 tranches/positions below K_{IRB}, then the bank should contact its supervisor about recording data for the additional tranches.

[17] Note that if the bank holds credit protection (e.g. a guarantee) against a securitisation exposure (e.g. from another bank or corporate), the exposure will be included in the portfolio of the protection provider. For securitisations, therefore, the effects of credit risk mitigation relate only to collateral held against exposures.

(g) Originators – off-balance sheet exposures (e.g. liquidity facilities)

15.26. Banks should record all of their off-balance sheet exposures to a securitisation. These will receive a credit conversion factor according to their nature (see Technical Guidance, beginning at paragraph 527). A typical off-balance sheet exposure to be recorded is the undrawn amount of any liquidity facility provided for each transaction. If a bank has more than one off-balance sheet exposure to a transaction, each exposure should be recorded separately and in descending order of seniority (i.e. position in the waterfall of payments).

15.27. If the exposure is to a master trust or conduit, banks should indicate whether the exposure is programme wide or pool specific in the drop-down box provided.[18] If the exposure is not to a master trust or conduit, enter "N/A". If there are more than one pool-specific and programme-wide credit enhancements and liquidity facilities provided to the one master trust or conduit, the bank should follow the guidance given to investor banks in paragraph 15.46 below, particularly if these enhancements and facilities "overlap" (i.e. could potentially cover the same loss).

15.28. Banks should input the risk-weight and the risk weighted assets under the current Accord for the exposure. Under the standardised and IRB approaches, banks should record the credit conversion factor and risk weight applicable to the exposure. For the IRB approach, banks should also indicate how the risk-weight was derived (e.g. whether it was calculated using the supervisory formula approach) using the drop down menu provided.

(h) Originators – transactions approaching an early amortisation trigger

15.29. If a bank has originated the securitisation of uncommitted revolving retail credits, then the transaction may be subject to early amortisation in the event of deterioration of those credits. Where a transaction is approaching an early amortisation trigger, banks should calculate the applicable capital charge according to the level of excess spread.[19] Banks should record the investors' interest and whether the amortisation is controlled or uncontrolled. If the transaction does not feature an early amortisation trigger, banks should leave this section blank.

15.30. If under current national rules, banks receive a capital charge for transactions approaching an early amortisation trigger, they should input the risk weighted asset amount in the box provided. (If banks do not currently have capital requirements for early amortisations, please enter zero in the box for the current Accord.) Under the standardised and IRB approaches, banks should record the credit conversion factor and applicable risk weight. Under the standardised approach, banks will observe that when a bank is subject to the early amortisation treatment, its total capital charge for all of its positions will be subject to a maximum capital charge (i.e. a "cap") equal to the greater of (i) that required for the retained securitisation exposures, or (ii) the capital requirement that would apply had the exposures not been securitised. Deduction of any capitalised assets (e.g. future margin income), if any, will be treated outside this maximum limit.

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[18] This will be relevant to ensuring that banks do not receive an excessive capital charge for both programme wide and pool specific facilities provided to the same structure.

[19] If the transaction has already commenced early amortisation (e.g. where the trigger relates to the amount of excess spread, the excess spread has already fallen to zero), then the bank should obtain the guidance of its supervisor.

(i) Originators – Summary aggregate information for transactions not recorded below (i.e where detailed information is not given)

15.31. If an originator has received permission from its national supervisor not to record every transaction it has originated (e.g. not to separately record the securitisation of each outstanding pool of receivables through an ABCP conduit), then it must give certain aggregate statistics concerning all transactions not individually reported (panel 3). These data are reported as memo items and include aggregate risk weighted asset figures under the current Accord and the standardised and IRB approaches. This is to ensure the integrity of the QIS 3 results and their comparability over different banks in different jurisdictions.

(j) Originators – memo item

15.32. Banks should indicate the amounts of securitisation exposures that are currently held within the trading book and which, for the purposes of QIS 3, will have been treated as trading book exposures (panel 4). Please provide a breakdown of trading book securitisation investments by rating, and indicate the current and prospective – i.e. under the standardised, IRB foundation and IRB advanced approaches – capital charges these would receive (under the trading book rules – i.e. the specific risk capital charges).

(k) Worksheet for investors – structure

15.33. The worksheet for investments in securitisation calculates risk weighted assets separately for investments with long-term ratings (e.g. AAA, BBB), investments with short-term ratings (e.g. A1, P1) and unrated investments. Panel 4 calculates risk weighted assets for investments with long-term ratings and unrated investments together; panel 5 calculates risk weighted assets for investments with short-term ratings. Within each of these, risk weighted assets are calculated under the current Accord (panel a), the standardised approach (panel b) and the IRB approach (panel c). The structure of the worksheets is similar for long-term and short-term exposures/investments.

15.34. For most items, data does not need to be input on a transaction by transaction basis and should be recorded in aggregate. However, where banks have used the supervisory formula approach for unrated positions, they are required to provide information transaction by transaction (labelled I, II, III etc).

15.35. Banks that have off-balance sheet exposures to a third party securitisation (e.g. liquidity facilities) are also required to record the information transaction by transaction (panel 6 banks). Panel 7 captures information on the details of the supervisory formula approach for each unrated and sub-investment grade positions.

(l) Investors – summary information

15.36. Banks should split their securitisation investments into those with short-term ratings, those with long-term ratings and unrated investments. These figures should be shown **net** of provisions in panel 1.

15.37. The Committee also requests that banks provide further information on the nature of their investments by completing the four memo items in panel 2. First, banks should indicate the proportion of **total** exposures/investments that are to/in synthetic securitisations. Second, banks should show the amounts of total exposures/investments by the type of underlying asset (i.e. corporate, credit cards, residential mortgage, other retail etc).

15.38. Third, banks should indicate the amounts of securitisation investments on which protection has been provided by another counterparty. (Note that for the purposes of the QIS 3 exercise, these exposures will have been included in the portfolio of the protection provider (see paragraph 3.14 above).[20]

15.39. Finally, as in the originators worksheet, banks should indicate the amounts of securitisation exposures that are currently held within the trading book and which, for the purposes of QIS 3, will have been treated as trading book exposures. Banks should similarly provide a breakdown of trading book securitisation investments by rating, and indicate the current and prospective – i.e. under the standardised, IRB foundation and IRB advanced approaches – capital charges these would receive (under the trading book rules).

(m) Investors – calculation of risk weighted assets

15.40. For investments with long-term and short-term ratings, banks should split their exposures by rating, indicating the exposure/nominal amount in the boxes provided. Risk-weight buckets applicable to the ratings are given for the standardised and IRB approaches. Banks should slot their exposures into the appropriate risk weight bucket for the current Accord according to their national rules.

15.41. In calculating the risk weights for each tranche banks should follow the guidance set out in the Technical Guidance. For example, as set out in paragraph 570 of the Technical Guidance, AAA and AA rated tranches may have one of 3 risk weights, depending on the effective granularity (N) of the underlying pool. A single A rated tranche may have one of 2 risk weights.

15.42. Where a bank have used the "look-through" treatment for the most senior unrated position under the standardised approach, it should record the average risk weight calculated under this treatment under the nearest higher standardised risk weight.

15.43. Under the IRB approach, banks must follow a hierarchy of treatments for <u>unrated</u> exposures. Where banks can infer a rating for an unrated exposure, they should record these in the boxes provided. If banks are unable to infer a rating they should calculate the capital charge using the supervisory formula using the "calculator" provided. Banks should record the SFA capital charges for the unrated positions for each transaction in panel 7 (see section 15(p) below). Where banks are unable to apply the supervisory formula approach, the position will be deducted – banks should record these positions in the box provided.

15.44. If a bank believes that it has an aggregate capital charge on all of its investments in any one securitisation exceeding K_{IRB} for that securitisation, then it should consult its supervisor[21].

[20] Credit protection other than collateral (e.g. a guarantee) provided by a securitisation special purpose vehicle to a securitisation exposure is not eligible for CRM treatment and should not be recorded in the portfolio of the protection provider. However, if the guarantee is collateralised by eligible government bonds, the effects of such collateralisation must be recorded in the securitisation worksheet.

[21] This cap will only apply if the bank is able to calculate K_{IRB} for the securitisation concerned.

(n) Investors – credit risk mitigation

15.45. The structure of the sections on credit risk mitigation for the current Accord and Standardised approach mirror those for the other portfolios in the Current and Standardised worksheets. Banks should follow the guidance set out in sections 8 and 9 of these instructions.

(o) Investors – off-balance sheet exposures (e.g. liquidity facilities)

15.46. Panel 6 requires banks to provide information on off-balance sheet exposures to a third party securitisation. Where banks are able to calculate the supervisory formula approach, they should provide detailed information in panel 6(b). The structure of this section is exactly the same as for originators' off-balance sheet exposures – banks should follow the instructions set out in section 15(g) above. The worksheet allows a bank to record up to 3 off-balance sheet exposures to any one securitisation[22] and to record off-balance sheet exposures to up to 10 securitisation transactions. If a bank is able to calculate the SFA for more than 10 transactions, then it should generate the required cells to capture all these additional transactions (labelled XI, XII etc). In such a case the bank must ensure that the cells containing total risk weighted assets are appropriately linked to the summary table, so that accurate aggregate results are generated by the embedded formulas. If a bank foresees any difficulty in recording all of its off-balance sheet exposures or in ensuring the appropriate links within the worksheet, then it should contact its supervisor for guidance.[23]

15.47. One or more banks may provide both pool-specific and programme-wide credit enhancements and liquidity facilities to the one ABCP conduit or master trust. The applicable capital charge for each bank in such transactions will depend on the "waterfall" (the priority of the various facilities and enhancements). It will also depend on the degree of "overlap" between the various facilities and enhancements. For example, a bank may provide a pool-specific liquidity facility to exposure pools in ABCP conduits, which is in the economic second loss position. The facility should be subject to the SFA prior to any programme-wide facilities (after taking into consideration any seller-provided credit enhancement, e.g. cash reserves or overcollateralization). If, on a particular exposure pool, a pool-specific liquidity facility provides coverage on the entire pool, then capital will not be assessed against more senior programme-wide facilities as capital is already assessed against the pool. However, if a bank does not provide a pool-specific liquidity facility, but does provide programme-wide credit enhancements and liquidity facilities, that bank should assign a proportional share of the facilities to each exposure pool in the ABCP conduit in order of loss priority. For example, for an exposure pool, a proportional amount of the programme-wide credit enhancement would generally first be subject to the SFA. Next, the SFA would be applied to the proportional amount of the programme-wide liquidity facility for that pool[24].

15.48. Where banks are unable to calculate the SFA for off-balance sheet exposures to a third party securitisations, they do not need to record information transaction by transaction and should record the risk-weighted assets for these exposures in aggregate. This

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[22] If a bank has provided more than 5 liquidity facilities to any one securitisation, then it should consult its supervisor for guidance.

[23] For example, a bank might seek the permission of its supervisor to record less than all of its liquidity facilities, if to record them all would be an undue burden.

[24] Banks should seek the guidance of their national supervisor if they are in doubt as to the correct capital charge where there are "overlapping" pool-specific and programme-wide credit enhancements and liquidity facilities (e.g. where there is more than one programme-wide liquidity facility).

information should be recorded in panel 6(a). Banks should record the aggregate risk weighted assets and aggregate deductions for these exposures under each approach – the Current Accord, the Standardised approach and the IRB approach – in the boxes provided.

(p) Details on supervisory formula approach

15.49. In addition, where possible, banks should separately provide information on the supervisory formula approach for unrated positions and positions below investment grade. Banks should indicate the number of unrated and sub-investment grade investments they hold and the number of these for which they have been able to calculate the supervisory formula approach.

15.50. Note that the calculations of capital charges using the SFA for unrated positions will feed directly into the overall capital requirements for QIS 3. The worksheet allows a bank to record up to 10 unrated positions provided to any one securitisation.[25]

15.51. Calculations of the SFA for sub-investment grade positions will not feed into the capital calculations but are requested to help the Committee with further analysis.

16. Operational Risk Worksheet

(a) Introduction

16.1. There are three methods for calculating operational risk capital charges: 1) the Basic Indicator Approach (BI); 2) the Standardised Approach (TSA); and 3) Advanced Measurement Approach (AMA).

16.2. For the purposes of this exercise, all banks are asked to provide data to calculate an operational risk charge under both the Basic Indicator and Standardised Approaches.

16.3. Banks have an option whether to provide information on capital generated under the AMA. Banks should consult with their national supervisors for further guidance on how to incorporate the results from those banks that participated in a June 2002 exercise that focussed on the AMA.

(b) Basis for calculating capital charge

16.4. Gross income is the basis for calculating a capital charge for both the Basic Indicator and Standardised Approaches. Gross income is defined as net interest income plus net non-interest income (comprising: fees and commissions receivable less fees and commissions payable; the net result on financial operations; and other income). It is intended that this measure (i) should be gross of any provisions (e.g. for unpaid interest); (ii) exclude realised

[25] If a bank has more than 10 unrated positions for any one securitisation, then it should consult its supervisor for guidance.

and unrealised profits/losses from the sale of securities in the banking book;[26] and (iii) exclude extraordinary or irregular items as well as income derived from insurance.

16.5. Banks that would like further detail on how the definition of gross income relates to regulatory returns in their jurisdiction should contact their national supervisor.

(c) Reference period

16.6. For the purposes of the QIS 3 exercise, banks are asked to provide annual gross income data for 1999, 2000 and 2001. This reflects the fact that the operational risk charge for both the BIA and TSA is likely to be based on a three-year average in order to reduce volatility caused by possible short-term fluctuations in gross income. Banks are asked to provide data on a calendar year basis if possible. However, if a bank would prefer to use its financial year data then it may do so, provided it indicates which financial year has been used in Table A.

(d) Missing data

16.7. If your bank does not have activity in a given business line then please enter "NA" (i.e. not applicable) in the corresponding cell. If your bank does have activity in a given business line but you are unable to estimate it, enter "NI" (i.e. no information) in the corresponding cell.

(e) Current Accord

16.8. In Table B, Banks should report their minimum required capital according to the 1988 Basel Accord[27], including the minimum required credit risk capital and required market risk pursuant to the 1996 market risk amendment. Banks should also show their eligible Tier 1, Tier 2 and Tier 3 capital, and supervisory deductions under the current Accord.

(f) The Basic Indicator Approach

16.9. Under the Basic Indicator Approach, banks must hold capital for operational risk equal to a fixed percentage of average annual gross income over the past three years.

16.10. In Table C a bank should report its total gross income for 1999, 2000 and 2001.

16.11. In Table D, the worksheet will automatically calculate a simple three-year average of its total gross income as recorded in Table C. If a bank is unable to provide gross income data for all of the three previous years then, for the purposes of QIS 3, the capital charge will be based on an average of the latest years for which data are available.

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[26] Realised and unrealised profit/losses from securities classified as "held to maturity" and "available for sale", which typically constitute items of the banking book (e.g. under US or IASB accounting standards), are also excluded from the definition of gross income.

[27] Based on the local implementation of 1988 Basel Capital Accord by the national supervisor.

(g) The Standardised Approach

16.12. Under the Standardised Approach, banks' activities are divided into eight business lines: corporate finance, trading and sales, retail banking, commercial banking, payment and settlement, agency services, asset management, and retail brokerage. A methodology for attributing business lines, as well as greater detail on the definition of the business lines is given in section 16(i) below.

16.13. A capital charge for each business line is calculated by multiplying the gross income generated by that business line by a factor (denoted beta) assigned to that business line. Beta is set by the Committee and serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line.

16.14. The total capital charge is the summation of the regulatory capital charges across each of the eight business lines, averaged over the previous three years. A bank should record its total gross income for 1999, 2000 and 2001 for each of the eight business lines in Table E.

16.15. The sum of gross income for the eight business lines under the Standardised Approach should equal total gross income under the Basic Indicator Approach.

16.16. In Table F, the worksheet will automatically calculate a simple three-year average of gross income for each of the eight business lines. If a bank is unable to provide gross income data for all of the three previous years then, for the purposes of QIS 3, the capital charge will be based on an average of the latest years for which data are available.

(h) Advanced Measurement Approaches

16.17. Under the Advanced Measurement Approaches, the regulatory capital requirement for operational risk is based on an estimate of operational risk derived from a bank's internal risk measurement system.

16.18. A bank will be required to meet a series of qualitative and quantitative criteria set out by the Committee before it will be permitted to use an AMA for operational risk capital. Given the continuing evolution of analytical approaches for operational risk, the Committee is not specifying the approach or distributional assumptions used to generate the operational risk measure for regulatory capital purposes. However, a bank must be able to demonstrate that its approach captures potentially severe "tail" loss events. This does not include catastrophic events that lie beyond the scope of any regulatory capital regime. Whatever approach is used, a bank must demonstrate that its operational risk measure meets a soundness standard comparable to that of the internal ratings based approach for credit risk, (i.e. comparable to, a one year holding period and a 99.9 percent confidence interval).

16.19 Due to its early development, the Committee does not envisage many banks being ready to report a capital level under the AMA for QIS3. Nevertheless, those banks that have developed or are developing an AMA should work with their national supervisory in order to record their proposed AMA capital level in Table G. In a case where a bank can calculate AMA capital charge only for some business lines, the AMA capital charge that should be reported in Table G should be the total of 1) AMA capital charge for those business units in which the bank uses AMA, and 2) Standardised Approach capital charge for those business units in which the bank uses the Standardised Approach.

(i) Business line mapping

16.20. When mapping business lines under the Standardised approach, all banking and banking-related activities must be mapped into the eight level 1 business lines in a mutually exclusive and jointly exhaustive manner. Level 1 business lines dominate level 2 business lines.

16.21. Any banking or banking-related activity which cannot be readily mapped into the proposed business line framework, but which represents an ancillary function to an activity included in the framework, must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, an objective mapping criteria must be used (e.g. proportional allocation of the indicators).

16.22. If an activity cannot be mapped into a particular business line then the business line yielding the highest charge must be used. The same beta equally applies to any associated ancillary activity.

16.23. The mapping of activities into business lines for operational risk capital purposes should be consistent with the definitions of business lines used for regulatory capital calculations in other risk categories, i.e. credit and market risk.

Mapping of Business Lines

Level 1	Level 2	Activity Groups
Corporate Finance	Corporate Finance	Mergers and Acquisitions, Underwriting, Privatisations, Securitisation, Research, Debt (Government, High Yield), Equity, Syndications, IPO, Secondary Private Placements
	Municipal/Government Finance	
	Merchant Banking	
	Advisory Services	
Trading & Sales	Sales	Fixed Income, equity, foreign exchanges, commodities, credit, funding, own position securities, lending and repos, brokerage, debt, prime brokerage
	Market Making	
	Proprietary Positions	
	Treasury	
Retail Banking	Retail Banking	Retail lending and deposits, banking services, trust and estates
	Private Banking	Private lending and deposits, banking services, trust and estates, investment advice
	Card Services	Merchant/Commercial/Corporate cards, private labels and retail
Commercial Banking	Commercial Banking	Project finance, real estate, export finance, trade finance, factoring, leasing, lends, guarantees, bills of exchange
Payment and Settlement[28]	External Clients	Payments and collections, funds transfer, clearing and settlement
Agency Services	Custody	Escrow, Depository Receipts, Securities lending (Customers) Corporate actions
	Corporate Agency	Issuer and paying agents
	Corporate Trust	
Asset Management	Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open, private equity

[28] Payment and settlement losses related to a bank's own activities would be incorporated in the loss experience of the affected business line.

	Non-Discretionary Fund Management	Pooled, segregated, retail, institutional, closed, open
Retail Brokerage	Retail Brokerage	Execution and full service

Annex 1: Mapping of Ratings

To assist banks participating in the Committee's Quantitative Impact Study, the following tables match credit ratings of Standard & Poor's with comparable ratings of Moody's and Fitch IBCA. For further information regarding the mapping of external credit ratings to risk weightings, please see the Technical Guidance, beginning at paragraph 24.

Agency	Ratings						
Standard & Poor's	AAA	AA+	AA	AA-	A+	A	A-
Moody's	Aaa	Aa1	Aa2	Aa3	A1	A2	A3
Fitch IBCA	AAA	AA+	AA	AA-	A+	A	A-

Agency	Ratings								
Standard & Poor's	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-
Moody's	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3
Fitch IBCA	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-

Agency	Ratings					
Standard & Poor's	CCC+	CCC	CCC-	CC	C	D
Moody's	Caa1	Caa2	Caa3	Ca	C	
Fitch IBCA	CCC+	CCC	CCC-	CC	C	D