3 October 2006

Technical aspects of the management of interest rate risk arising from non-trading activities under the supervisory review process

Executive Summary

1. CEBS refers in its guidelines on the Application of the Supervisory Review Process under Pillar 2 issued in January 2006 (GL03) to a structured dialogue between supervisors and institutions that should embrace four types of risks (i) Pillar 1 risks, (ii) risks not fully captured under Pillar 1, (iii) risks covered by Pillar 2 and (iv) external factors not already considered in the previous cases[1].

2. In particular, institutions should develop and maintain an ICAAP that identifies risks they are or might be exposed to and allocate adequate financial resources against those risks.

3. This paper sets out technical guidelines applicable to one of those risks: "interest rate risk arising from non-trading activities" (here, "interest rate risk in the banking book" or "IRRBB"), as a follow-up to CEBS GL03.

4. The document puts the emphasis on high-level guidance, some of which is addressed to institutions (both credit institutions and investment firms) and some to supervisors. It is not meant to provide detailed guidance on whether and how quantitative tools and models should be used or developed. The responsibility for this must rest with the institutions, though supervisors will expect to see institutions develop their own systems and stress tests which are commensurate with their risk profile and risk management policies.

5. It sets out general considerations including current international thinking, a definition of what the IRRBB should cover, the relevant legal requirements of the Directive 2006/48/EC, and a summary of current market practices. This, together with the supervisory considerations, explains the context that has led to the guidelines. It is recognised that market practices and supervisory approaches may evolve over time, and therefore there is a need to ensure that such a technical paper is kept under review and, to the extent necessary, adapted to reflect any such developments.

6. The concept of proportionality, as laid down in the provisions of the Directive 2006/48/EC related to Pillar 2 and underlined in the introductory

[1] See Chapter 4: the SREP-ICAAP interaction and prudential measures. Dialogue 2. page 34.

statements of CEBS' guidelines on the application of the supervisory review process, applies also to IRRBB measurement and management, the complexity of which will be expected to be related to the size of the institutions as well as to the sophistication and diversification of their activities.

7. The paper then sets out:

   a. guidance on what the supervisors should expect to see in the ICAAP[2], under which it is the institution's own responsibility to manage adequately (i.e. identify, measure, monitor and control) these risks and allocate internal capital, where considered necessary, in support of the interest rate risk in a structured manner,

   b. the corresponding guidance to supervisors in conducting the Supervisory Review and Evaluation Process (SREP) in relation to the ICAAP. Supervisors will require institutions to show that their internal capital, where considered necessary, is commensurate with the level of the interest rate risk in the banking book. In doing so, and in accordance with CEBS guidelines on the application of the supervisory review process under Pillar 2, the supervisory authorities will adapt their approach to ensure it is proportionate to the nature, scale and complexity of the activities of an institution. Similarly, the depth, frequency and intensity of the supervisory evaluation will be determined by the risks posed to the supervisor's statutory objective of ensuring the soundness of the banking sector.

8. In relation to non-trading activities, the Directive 2006/48/EC requires under Article 124(5) that measures shall be taken by supervisory authorities in cases where an institution's economic value declines by more than 20% of own funds as a result of a standard shock. As the Directive 2006/48/EC does not define what that 'standard shock' should be, CEBS proposes a common definition. This is intended to achieve a common standard which supervisors can apply consistently across the EU., thereby delivering a level playing field.

9. This would enable banking groups operating on a cross border basis to calculate the standard shock required by the Directive 2006/48/EC in a comparable way. If necessary, national supervisors can set a shock of a different magnitude than the one derived by the calculation method of IRRBB 5. In the context of the CEBS guidelines on supervisory cooperation for cross-border banking and investment firm groups (GL09), Coordination and dialogue under the aegis of the consolidating supervisor through operational networking will be crucial to ensure that commonality over time.

10. CEBS nevertheless acknowledges the 'broad brush' nature of a standard shock and recognises that , as part of their dialogue with individual institutions, supervisors may require their institutions to apply routinely

[2] ICAAP stands for Internal Capital Adequacy

shocks of a different order of magnitude, both in amount and time, reflecting the nature, size and complexity of those institutions.

11. The draft guidelines went through a three-month public consultation as the first part of the 11th Consultation paper of CEBS (CP11).

12. Overall, although respondents welcomed the CEBS efforts to provide guidelines in these aspects, they raised concerns on the level of details and prescriptiveness of the guidelines. CEBS has addressed these comments by clarifying the proposed guidelines and readjusting the level of prescriptiveness.

13. Attached to this paper is a feedback table which contains a summary of the key points arising from the consultation and the responses made to address them. It includes an annex reflecting CEBS' views on the detailed comments received.

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GENERAL CONSIDERATIONS

1. The measurement of interest rate risk in the banking book in a non-mark-to-market world poses a number of major practical difficulties. Most of these difficulties are dealt with by institutions making certain assumptions which may differ between institutions and which may be modified over time even within one institution. Hence interest rate risk in the banking book is part of Pillar 2 where a tailored approach is possible.

2. Some issues, such as the consequences of IFRS for the reporting and management of interest rate risk, have not been captured in the present document but may be the subject of further work by CEBS in due course.

3. Under the IFRS framework, the fair value option in IAS 39 will allow institutions to fair-value banking book items. Although the effect of the change is still not clear, it is likely that institutions will increase the use of fair value – rather than historical cost – for the measurement of a number of financial assets (including derivatives) held in the banking book, and eventually some of their liabilities. IFRS additionally asks institutions to perform and disclose a sensitivity analysis for each of the market risks to which they are exposed, including the interest rate risk on financial instruments. The disclosure could take a number of forms such as a maturity-repricing schedule. Financial risk management policies and objectives must also be disclosed. There will clearly be some differences with the regulatory framework for interest rate risk in the banking book, because the objectives of prudential regulation and IFRS, and some of the definitions used, will not be the same in all cases.

International context

4. Interest rate risk in the banking book forms part of the Basel Committee on Banking Supervision's revised framework on "International Convergence of Capital Measurement and Capital Standards (June 2004) ('the Basel text'). In particular Section III, paragraphs 761-764, which were complemented by a Supporting Document to the Capital Adequacy Framework, deal with interest rate risk (in both the banking and the trading book) ("Principles for the Management and Supervision of Interest Rate Risk", July 2004). These documents have been used as a sound basis for this paper. Guidance on qualitative aspects of the management and measurement of risks has been set out in the CEBS guidelines on the application of the supervisory review process under Pillar 2, (Chapter 2.1. Guidelines on Internal Governance). These guidelines apply naturally to the IRRBB risk. Overall, it has been ensured that this paper is consistent with current international thinking.

Definition

5. For the purpose of this paper, interest rate risk is taken to be the current or prospective risk to both the earnings and capital of institutions arising from adverse movements in interest rates. In the context of Pillar 2, this is

in respect of the banking book only, given that_interest rate risk in the trading book is already covered under the Pillar 1 market risk regulations.

6. Consideration of interest rate risk from the perspectives of both short-term earnings and economic value is important. Volatility of earnings is an important focal point for interest rate analysis because significantly reduced earnings can pose a threat to capital adequacy. However, measurement of the impact on economic value (the present value of the bank's expected net cash flows) provides a more comprehensive view of the potential long-term effects on an institution's overall exposures. Therefore, the supervisory focus will primarily be on measuring interest rate risk in relation to economic value. However, and subject to proportionality considerations, institutions are also expected to consider interest rate risk in relation to earnings as a supplementary measure.

Legal Basis

7. In the Directive 2006/48/EC, interest rate risk in the non-trading book is treated under the ICAAP/SREP framework. Similar to other Pillar 2 risks, the Directive 2006/48/EC requires that:

   - an institution shall implement systems to evaluate and manage the risk arising from potential changes in interest rates as they affect a credit institution's non-trading activities (Annex V. para. 10)[3],

   - credit institution shall have in place sound, effective and complete strategies and processes to assess and maintain on an on-going basis the amounts, types and distribution of internal capital that they consider adequate to cover the nature and level of the risks to which they are or might be exposed (Article 123), and

   - competent authorities have to review risk management processes and capital adequacy (Article 124).

8. In contrast to other Pillar 2 risks however, Article 124(5) places on the supervisor the specific obligation to take action in cases where the economic value of an institution declines by more than 20% of own funds as a result of applying a supervisory standard shock to its interest rate risk in the non-trading book.

Current market practices

(i) Identification of IRRBB

9. There are numerous ways that financial institutions currently identify and measure IRRBB. Their methods reflect the specific form of the risk in

[3] Article 22 deals with governance arrangements. Annex V sets out technical criteria on organisation and treatment of risks under the heading "Interest rate risk arising from non-trading activities".

question and the nature, scale and complexity of their activities. IRRBB encompasses:

a. risks related to the timing mismatch in the maturity and repricing of assets and liabilities and off balance sheet short and long term positions (repricing risk),

b. risk arising from changes in the slope and the shape of the yield curve (yield curve risk),

c. risks arising from hedging exposure to one interest rate with exposure to a rate which reprices under slightly different conditions (basis risk),and

d. risks arising from options, including embedded options, e.g consumers redeeming fixed rate products when market rates change (i.e. option risk)

(ii) Monitoring and management of IRRBB

10. A wide range of tools may be used by institutions to measure and monitor IRRBB. The choice of monitoring system and management technique used is determined by the banks' management to be most appropriate depending on the nature, scale and complexity of their business. Institutions are usually using:

    a. systems which track the progress of transactions, based on which institutions estimate the pipeline risks[4],

    b. gap analysis showing the assets and liabilities at the different repricing dates, and the sensitivity of the present value of these buckets to different scenarios in interest rates, and

    c. simulation techniques using scenarios that calculate the impact of changes in market conditions, e.g. the different repricing instruments, simulation of interest rate paths, customer behaviours etc.

11. Furthermore, stress testing can also performed, in order to measure financial institutions' vulnerability under stressed market conditions like abrupt changes in the level and slope of the term structure of interest rates, changes in the relationships among key market rates, etc.[5]

12. When using gap analysis and/or simulation techniques, institutions measure the IRRBB under different shifts of the term structure of interest rate (parallel shifts and yield curve twists).

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[4] A pipeline risk would occur for instance when a tranche of fixed-rate mortgages still to be sold where the corresponding interest swap has already been executed

[5] Further guidance on this issue is provided in the CEBS Consultation paper on stress testing (CP12). www.c-ebs.org

13. Based on these various tools, institutions use different types of hedges to mitigate the risks, or use limits – usually on earnings and/or economic value. Some institutions set aside capital buffers.

14. The management body sets out the IRRBB policy. Although the specific organisation established to put into effect the IRRBB policy may vary, in large or more complex institutions, measuring, monitoring and controlling IRRBB is usually vested in a "Asset and Liability Management" (ALM) function. It is usually assigned to an independent risk control unit. Some institutions also have a committee with powers delegated by the board, usually called "Asset and Liability Committee (ALCO)", responsible for major interest rate risk hedging and new asset and liability decisions.

15. Supervisors recognise that there are various levels of centralisation of ALM within institutions, e.g. in cross border groups some may have a centralised management and assessment function for IRRBB while others do not.

(iii) Variables monitored in the IRRBB process

16. Institutions usually consider two different, but complementary, perspectives in their process of assessing IRRBB.

17. The earnings perspective focuses on the sensitivity of earnings in the short-term to interest rate movements. Institutions usually adopt this perspective due to two main reasons: (i) this is the variable through which an interest rate change has an immediate impact on reported earnings; and (ii) the assessment of interest rate risk from an economic value perspective is difficult because it is mainly based on assumptions about the behaviour of long-term instruments, such as stable demand deposits or other non-interest bearing balance sheet items and those with embedded options.

18. The economic value perspective focuses on the sensitivity of the economic values of the banking book items to interest rate changes. Some institutions may use this approach as the shorter term earnings perspective will not completely capture the impact of interest rate movement on the market value of long term positions.

Supervisory considerations

19. A number of considerations arise from the above

- risk assessment should be done within the scope of the SRP process, be it at a consolidated, sub-consolidated or solo level. When it comes to cross-border groups, the cooperation between home and host supervisors will take into consideration the level and the manner in which the IRR management is performed by the institutions.

- As it has not been standard practice to require additional own funds (regulatory capital) for interest rate risk in the banking book,

supervisors will need to develop their approaches to the use of this prudential measure, where considered necessary,

- incentives must be in place, as appropriate, for the development and application of advanced models and techniques,

- the level playing field should be disturbed as little as possible in terms of maintaining a consistent and fair approach,

- the administrative burden should not be excessive,

- the supervisory policy on interest rate risk and any information obtained under that policy should be complementary to aggregate financial stability analyses across institutions, and

- because the non-trading books of investment firms are usually (relatively) small, IRRBB guidelines are primarily relevant for the credit institutions. Consideration should be given to the absolute or relative size of the non-trading activities, in a way comparable to the Pillar 1 market risk regulation for interest rate risk in the trading book, with a view to implement these guidelines in a proportionate manner.

20. The concept of proportionality, as laid down in the provisions of the Directive 2006/48/EC related to Pillar 2 and underlined in the introductory statements of CEBS' guidelines on the application of the supervisory review process, applies also to IRRBB measurement and management, the complexity of which will be expected to be related to the size of the institutions as well as to the sophistication and diversification of their activities.

21. There are arguments both for and against standardised reporting of interest rate risk in the banking book, as well as for and against the possible middle ground of standardised reporting applied to less complex institutions and non-standardised reporting applied to complex institutions. This paper expresses no preferences in this respect.

22. Nonetheless, and in the context of Articles 123 and 124(5), institutions should at least be able to compute and report the effects of the standard shock described in IRRBB 2 and 5 on economic value as well as the amount of internal capital set aside, where considered necessary, for interest rate risk in the banking book. As noted in paragraph 6, and subject to proportionality considerations, institutions are also expected to consider interest rate risk against earnings, and should therefore consider the effect of instantaneous or gradual interest rate changes on short-term earnings. The results of such analysis may be requested, as additional information, by national supervisors.

23. Whichever approach to reporting is employed, supervisors should collect sufficient information about internal methodologies and underlying assumptions of institutions (e.g. yield curves used, internal measurement of positions without contractual maturity, treatment of optionality etc) for them to evaluate the reported information and to make their own

assessment of the adequacy of the results of interest rate risk measurement.

24. As it is currently the case, off-site supervision can take place on the basis of institutions' internal reports and/or following some standardised, supervisory format. Supervisors can also undertake on-site inspections.

GUIDANCE FOR INSTITUTIONS

IRRBB1

Institutions should be able to demonstrate that their internal capital is commensurate with the level of the interest rate risk in their banking book. In that respect, institutions should be able to calculate the:

- **potential changes in their economic value resulting from changes in the levels of interest rates**. It is the responsibility of the institutions to develop and use their own methodologies in accordance with their risk profile and risk management policies. Supervisors may however reserve the right to require institutions to apply an additional standardised methodology, when for example the institution's internal methodology is inadequate or does not exist. An example of such a methodology is provided by the standardised framework of Annex 4 of the supporting Basel document "Principles for the management and supervision of interest rate risk"- See Annex II, and

- **the overall interest rate risk in the banking book** at various levels of consolidation, sub-consolidation and solo entity if required to do so by supervisors.

IRRBB 2

Institutions must be able to compute and report to their supervisory authority the change in their economic value as a result of applying a standard shock prescribed by the authority in the context of Article 124(5) (see IRRBB 5 below).

If as a result of this standard shock an institution's economic value were to decline by more than 20% of own funds it should be prepared to discuss with the supervisory authority measures which might need to be taken to mitigate such a potential decline.

IRRBB 3

Besides the standard shock, institutions should be able to measure their exposure, if material, and sensitivity to changes in the shape of the yield curve, changes between different market rates (i.e. basis risk) and changes to assumptions, for example those about customer behaviour.

Institutions should also consider whether a purely static analysis of the impact on their current portfolio of a given shock or shocks should be supplemented by a more dynamic simulation approach. Larger and/or more complex institutions should also take into account scenarios where different interest rate paths are computed and where some of the assumptions (e.g. about behaviour, contribution to risk and balance sheet size and composition) are themselves functions of interest rate levels.

IRRBB 4

Institutions should have a well reasoned, robust and documented policy to address all issues that are important to their individual circumstances.

Without prejudice to the principle of proportionality, examples of such issues include :

- The internal definition and boundary between "banking book" / "trading activities".
- The definition of economic value and its consistency with the method used to value assets and liabilities (for example based on the discounted value of future cash flows, on the discounted value of future earnings).
- The size and the form of the different shocks to be used for internal calculations.
- The use of a dynamic and / or static approach in the application of interest rate shocks.
- The treatment of commonly called "pipeline transactions" (including any related hedging).
- The aggregation of multicurrency interest rate exposures.
- The treatment of basis risk resulting from different interest rate indexes
- The inclusion (or not) of non-interest bearing assets and liabilities of the banking book (including capital and reserves)
- The treatment of current and savings accounts (i.e. the maturity attached to exposures without a contractual maturity).
- The appropriate consideration of embedded options in assets or liabilities.
- The extent to which sensitivities to small shocks can be scaled up linearly without material loss of accuracy (i.e. covering both convexity generally and the non-linearity of pay-off associated with explicit option products).

- The degree of granularity employed (e.g. offsets within a time bucket)

- Whether all future cash flows or only principal balances are included.

GUIDANCE FOR SUPERVISORS

IRRBB 5

Supervisory authorities will set a comparable standard shock as referred to in Article 124(5) of the Directive 2006/48/EC and applicable to the non-trading book of all their relevant institutions. Supervisors may decide to set different standard shocks for different currencies. The following guidelines will be put in place:

- A standard shock could, for example, be set so that it will be broadly equivalent to the 1st and 99th percentile of observed interest rate changes (five years of observed one day movements scaled up to a 240 day year), This would currently equate approximately to a parallel 200 basis points shock for major currencies - as suggested by the Basel Committee (See Annex II below).

- National supervisors will be expected to use this as their starting point when considering at what level to set the shock, but they will also need to take into account factors such as the general level of interest rates, the shape of the yield curve and any relevant national characteristics in their financial systems

- National supervisors will periodically review the size of the shocks in the light of changing circumstances, in particular the general level of interest rates (for instance periods of very low interest rates) and their volatility. Institutions' internal systems should therefore be flexible enough to compute their sensitivity to any standardised shock that is prescribed. Supervisors will not, however, make frequent or minor amendments for the purpose of spurious statistical accuracy.

- National competent authorities commit to discuss periodically the relevance of the 200 basis points as a starting point when considering at what level to set the shock and keep it under review in light of implementation.

- If the required shock (e.g. a 200 basis point shock) would imply negative interest rates or if such a shock would otherwise be considered inappropriate, the national supervisor will adjust the requirements accordingly, and

- Where an institution is a subsidiary of an institution which is authorised in another EU member state, the respective supervisors

will, in accordance with the CEBS guidelines on supervisory cooperation for cross-border banking and investment firm groups, seek to coordinate their approaches on the standard shocks to be applied.

IRRBB 6

The supervisory review should encompass both the qualitative and organisational aspects of interest rate risk management, an evaluation of the institution's quantification of interest rate risk and an assessment of the adequacy of the relationship between interest rate risk and internal capital.

This approach will be tailored to an institution's specific risk profile, drawing on the Basel Supporting Document "Principles for the Management and Supervision of Interest Rate Risk"-See Annex I below-.

IRRBB 7

The scope of application of the supervisors' assessment of interest rate risk is that used for the Supervisory Review Process(SRP)[6].

Where necessary for the fulfilment of their statutory objectives, for instance where there are obstacles to cash movements among subsidiaries or separate management processes among subsidiaries, supervisors will have the discretion to apply assessments at the level of individual entities.

IRRBB 8

Supervisors should understand the institutions' internal method for calculating the IRR in the banking book, including underlying assumptions (e.g. yield curves used, treatment of optionality).

This will include allowing for supervisors to have an in-depth analysis and assessments of institutions' internal methods (including institutions' assumptions underlying the issues raised in IRRBB 4 above). This could form the basis for peer group analysis and/or (model) benchmarking, and offer the supervisor a handle for discussions with the institution. Institutions may be requested to calculate the effects of specific, ad hoc interest rate scenarios.

IRRBB 9

Prompt prudential measures, including both qualitative and quantitative elements tailored to an institution's specific circumstances, may be required from either the overall supervisory assessment or, as stated in Article 124(5), in response to an institution reporting that its economic value may decline by

[6] The Scope of application of the SRP is set out on page 9 of the CEBS guidelines on the Application of the Supervisory review Process under Pillar 2 – January 2006

more than 20% of own funds as a result of applying the supervisory standard shock.

Supervisors should take into account not only the decline on the economic value but also the current level of the economic value.

The range of possible supervisory measures could be but are not limited to:

- improvement of risk management arrangements,
- variations to internal limits,
- reduction of the risk profile, and
- increase in the amount of required regulatory capital.

The measure(s) used in response to the application of the standard shock will depend, inter alia, on the complexity of the calculation method used and the appropriateness of the standard shock and the level of the economic value.

If the reduction in economic value is determined by a relatively straightforward or standard method of calculation, the initial supervisory reaction might be to request additional, possibly internal, information. If, however, the reduction is based on the outcome of a more complex model about which the supervisors have greater information, they might reach an assessment of the appropriate measure(s) more quickly.

In the latter case, the choice of the measure can take into account elements such as:

- the absolute and relative size of the exposure,
- the effects of other shifts or twists in the yield curve (other than the standardised),
- the treatment of multi-currency aggregation,
- the treatment of optionality and behavioural maturity, for example of current and savings accounts,
- the expected impact on earnings and the timing thereof,
- the quality of risk management, the internal systems and methodologies and the internal control system,
- the market segments in which the institution is active,
- the link with other risk exposures of the institution, for example credit risk,
- peer group comparison (and benchmarking where the methodologies are similar),

- the composition of the institution's own funds, and
- the relationship between the quantity of the institution's internal capital and regulatory own funds and the quantity of its actual surplus of regulatory own funds.

Appendix I

Basel Supporting Document on Interest Rate Risk

The 15 principles given in the Basel Supporting Document - Principles for the Management and Supervision of Interest Rate Risk, July 2004, are listed below.

Board and senior management oversight of interest rate risk

Principle 1: In order to carry out its responsibilities, the board of directors in a bank should approve strategies and policies with respect to interest rate risk management and ensure that senior management takes the steps necessary to monitor and control these risks consistent with the approved strategies and policies. The board of directors should be informed regularly of the interest rate risk exposure of the bank in order to assess the monitoring and controlling of such risk against the board's guidance on the levels of risk that are acceptable to the bank.

Principle 2: Senior management must ensure that the structure of the bank's business and the level of interest rate risk it assumes are effectively managed, that appropriate policies and procedures are established to control and limit these risks, and that resources are available for evaluating and controlling interest rate risk.

Principle 3: Banks should clearly define the individuals and/or committees responsible for managing interest rate risk and should ensure that there is adequate separation of duties in key elements of the risk management process to avoid potential conflicts of interest. Banks should have risk measurement, monitoring and control functions with clearly defined duties that are sufficiently independent from position-taking functions of the bank and which report risk exposures directly to senior management and the board of directors. Larger or more complex banks should have a designated independent unit responsible for the design and administration of the bank's interest rate risk measurement, monitoring, and control functions.

Adequate risk management policies and procedures

Principle 4: It is essential that banks' interest rate risk policies and procedures are clearly defined and consistent with the nature and complexity of their activities. These policies should be applied on a consolidated basis and, as appropriate, at the level of individual affiliates, especially when recognizing legal distinctions and possible obstacles to cash movements among affiliates.

Principle 5: It is important that banks identify the risks inherent in new products and activities and ensure these are subject to adequate procedures and controls before being introduced or undertaken. Major hedging or risk management initiatives should be approved in advance by the board or its appropriate delegated committee.

Risk measurement, monitoring, and control functions

Principle 6: It is essential that banks have interest rate risk measurement systems that capture all material sources of interest rate risk and that assess

the effect of interest rate changes in ways that are consistent with the scope of their activities. The assumptions underlying the system should be clearly understood by risk managers and bank management.

Principle 7: Banks must establish and enforce operating limits and other practices that maintain exposures within levels consistent with their internal policies.

Principle 8: Banks should measure their vulnerability to loss under stressful market conditions - including the breakdown of key assumptions - and consider those results when establishing and reviewing their policies and limits for interest rate risk.

Principle 9: Banks must have adequate information systems for measuring, monitoring, controlling and reporting interest rate exposures. Reports must be provided on a timely basis to the bank's board of directors, senior management and, where appropriate, individual business line managers.

Internal controls

Principle 10: Banks must have an adequate system of internal controls over their interest rate risk management process. A fundamental component of the internal control system involves regular independent reviews and evaluations of the effectiveness of the system and, where necessary, ensuring that appropriate revisions or enhancements to internal controls are made. The results of such reviews should be available to the relevant supervisory authorities.

Information for supervisory authorities

Principle 11: Supervisory authorities should obtain from banks sufficient and timely information with which to evaluate their level of interest rate risk. This information should take appropriate account of the range of maturities and currencies in each bank's portfolio, including off-balance sheet items, as well as other relevant factors, such as the distinction between trading and non-trading activities.

Capital adequacy

Principle 12: Banks must hold capital commensurate with the level of interest rate risk they undertake.

Disclosure of interest rate risk

Principle 13: Banks should release to the public information on the level of interest rate risk and their policies for its management.

Supervisory treatment of interest rate risk in the banking book

Principle 14: Supervisory authorities must assess whether the internal measurement systems of banks adequately capture the interest rate risk in their banking book. If a bank's internal measurement system does not adequately capture the interest rate risk, banks must bring the system to the

required standard. To facilitate supervisors' monitoring of interest rate risk exposures across institutions, banks must provide the results of their internal measurement systems, expressed in terms of the threat to economic value, using a standardized interest rate shock.

Principle 15: If supervisors determine that a bank is not holding capital commensurate with the level of interest rate risk in the banking book, they should consider remedial action, requiring the bank either to reduce its risk, to hold a specific additional amount of capital, or a combination of both.

Appendix II

Basel Committee on Banking Supervision-

Principles for the management and supervision of interest rate risk- July 2004

Annex 4 - An example of a standardized framework

1. This annex contains an example setting out the methodology and calculation process in one version of a standardized framework. Other methodologies and calculation processes could be equally applicable in this context, depending on the circumstances of the bank concerned. Such a framework is intended for supervisory reporting purposes only, and is not intended to represent an adequate framework for internal risk management purposes.

A. Methodology

2. Positions on the bank's balance sheet would be slotted into the maturity approach according to the following principles:

(a) All assets and liabilities belonging to the banking book and all OBS items belonging to the banking book which are sensitive to changes in interest rates (including all interest rate derivatives) are slotted into a maturity ladder comprising a number of time bands large enough to capture the nature of interest rate risk in a national banking market. Annex 2 discusses issues relating to the selection of appropriate time bands. Separate maturity ladders are to be used for each currency accounting for more than 5% of either banking book assets or liabilities.

(b) On-balance-sheet items are treated at book value.

(c) Fixed-rate instruments are allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next repricing date.

(d) Exposures which create practical processing problems because of their large number and relatively small individual amount (e.g. installment or mortgage loans) may be allocated on the basis of statistically supported assessment methods.

(e) Core deposits are slotted according to an assumed maturity of no longer than five years.

(f) National supervisors will provide guidance on how other items with a behavioural maturity or repricing that differ from contractual maturity or repricing are to be slotted into the time band structure.

(g) Derivatives are converted into positions in the relevant underlying. The amounts considered are the principal amount of the underlying or of the notional underlying.

(h) Futures and forward contracts, including forward rate agreements (FRA), are treated as a combination of a long and a short position. The maturity of a future or a FRA will be the period until delivery or exercise of the contract, plus - where applicable - the life of the underlying instrument. For example, a long position in a June three month interest rate future (taken in April) is to be reported as a long position with a maturity of five months and a short position with a maturity of two months.

(i) Swaps are treated as two notional positions with relevant maturities. For example, an interest rate swap under which a bank is receiving floating-rate interest and paying fixed-rate interest will be treated as a long floating-rate position of maturity equivalent to the period until the next interest fixing and a short fixed-rate position of maturity equivalent to the residual life of the swap. The separate legs of cross currency swaps are to be treated in the relevant maturity ladders for the currencies concerned.

(j) Options are considered according to the delta equivalent amount of the underlying or of the notional underlying.

B. Calculation process

3. The calculation process consists of five steps.

(a) The first step is to offset the longs and shorts in each time band, resulting in a single short or long position in each time band.

(b) The second step is to weight these resulting short and long positions by a factor that is designed to reflect the sensitivity of the positions in the different time bands to an assumed change in interest rates. The set of weighting factors for each time band is set out in Table 1 below. These factors are based on an assumed parallel shift of 200 basis points throughout the time spectrum, and on a proxy of modified duration of positions situated at the middle of each time band and yielding 5%.

(c) The third step is to sum these resulting weighted positions, offsetting longs and shorts, leading to the net short- or long-weighted position of the banking book in the given currency.

(d) The fourth step is to calculate the weighted position of the whole banking book by summing the net short- and long-weighted positions calculated for different currencies.

(e) The fifth step is to relate the weighted position of the whole banking book to capital.

Table 1 is provided in the Basel document itself