

12 August 2008

Range of practices on some Basel II implementation issues

1. Introduction

1. In the last year CEBS has been significantly involved, through the Group de Contact's Subgroup on Operation Networks (SON), in collecting and analysing the Basel II implementation issues that cross-border groups and their supervisors believe to be the most challenging from a cross-border perspective. Some of the issues have been raised directly by the Industry Platform on Operational Networks; the others have been raised by supervisors within SON building on the experience gained so far.

2. The issues have been categorized and analysed, mainly by collecting the approaches that each supervisory authority has taken in addressing them.

3. This document covers the most important issues analysed so far. Two main approaches are reported:

- i) where a specific question has been asked by the Industry Platform on Operational Networks (issues n. 3, 4, 5, 11, 12), an answer has been provided which refers to the SON banking groups, although in principle its application to other cross-border groups is possible;
- ii) for each of the other issues a catalogue of pragmatic approaches is presented which, on the basis of the current experience of both supervisors and banking groups, appear broadly consistent.

Where different approaches have been followed, this has been largely driven by the organization of the banking group or by the particular features of the portfolios. (This is true especially for technical issues where the CRD and the CEBS guidelines do not provide specific answers). However, where the differences in the practices are not fully justified by factors related to the group's organization or its risk profile, CEBS is committed to working towards further convergence.

4. The issues are classified into three groups: A) supervisory process for model validation; B) Pillar 1 technical issues; and C) Pillar 2 issues.

5. It is important to highlight that the approaches reported in this document are real life examples of specific applications of the CRD and CEBS guidelines to the banking groups represented in SON. Therefore, they should not be taken to be generalized solutions nor be read by institutions as a limitation on their ability to identify approaches which may be better suited to their specific needs.

6. CEBS will continue to address issues of the implementation of the EU banking legislation and CEBS Guidelines in a cross-border setting in order to refine the analysis undertaken so far and propose pragmatic solutions to other issues raised by cross-border groups and their supervisory colleges. In areas where the work done has not yet been successful in reaching the desired level of convergence, CEBS is committed to further work in this direction, including using a structured query mechanism. This bottom-up approach will progressively bring about convergence of supervisory practices, where necessary and appropriate, and so reduce the compliance burden on cross-border groups.

List of issues

<i>A) Issues related to model validation</i>	4
1. Delegation/division of tasks between home & host supervisors	4
2. Local and central models.....	5
3. Portfolio classification	6
4. Use test for new models.....	6
5. Supervisory assessment of group-wide models.....	7
6. Language of IRB/AMA application.	9
<i>B) Pillar 1 technical issues</i>	9
7. Definition of default	9
8. Downturn LGD.....	11
9. Estimation and validation of risk parameters in “low-default-portfolios”.....	13
10. Project finance.....	15
<i>C) Pillar 2 issues</i>	16
11. Scope of application of ICAAP	16
12. Requirements imposed for ICAAP	17

A) Issues related to model validation

1. Delegation/division of tasks between home & host supervisors

Issue: Has delegation/division of tasks between supervisors been applied in practice? Which are the most relevant tasks to be delegated/allocated to home and host supervisors?

Introduction

As indicated by CEBS GL10, delegation can be extremely useful to the extent that it can be used efficiently to exploit the greater knowledge that host supervisors have of local subsidiaries and markets. Delegation can be in both directions: from home to host, and from host to home, supervisors.

Approaches

Current practice shows that there is a division of tasks between home and host supervisory authorities, especially in the context of Basel II implementation. The conduct of joint supervisory work and joint on-site visits has proved an effective way of avoiding duplication of requests and reinforcing the flexibility of cooperation mechanisms. As contemplated by the "Template for a multilateral cooperation and coordination agreement on the supervision of XY group" published by CEBS in December 2007, delegation of tasks will be developed further by home and host supervisors of cross-border groups.

The supervisory practices observed are the following:

In general, each supervisor performs the tasks for which it is best placed.

The home supervisor is responsible for the review of the internal governance of model validation (rating process, control environment, stress testing, world wide model implementation, internal audit etc.), including the review of a sample of centrally developed models, and the examination of the adequacy of the related IT environment.

In the case of centrally developed models that are applied across the banking group (group-wide models), the home supervisor leads the approval work. Where models applied across the banking group are developed/managed/enhanced at a subsidiary banking entity, the home and host supervisors jointly carry out the approval work. A joint team of supervisors, can also be responsible for off-site examination of the group's application. Host supervisors are responsible for the assessment of specific local requirements.

Notwithstanding that host supervisors can always perform on-site visits to undertakings within their jurisdiction, home supervisors can delegate the on-site review of subsidiaries to host supervisors in the context of group-wide model approval.

Host supervisors are generally responsible for the examination/assessment of the implementation of the rating systems developed by the local subsidiary. This comprises in particular: a) the assessment of the quality of the data delivered by the local subsidiary to the data warehouse of the parent credit institution; b) the assessment of relevance regarding country-specific calibrations, including the parameter estimates for the local subsidiary (especially the LGD estimates); c) the assessment of the local rating

governance (control environment, internal audit); d): local use test; and e) the regional IT infrastructure up to the interface with the parent's IT infrastructure.

Where a model is applied in several countries, the host supervisors of the subsidiaries where the main developmental work has been performed are responsible in consultation with the home supervisor. This includes the process of drafting the joint decision, especially with respect to possible terms and conditions.

To avoid duplication of work, host supervisors are supposed to make use of the model reviews performed by the home supervisor. In this respect, the effective exchange of information between home and host supervisors is crucial. Generally speaking, home supervisors should inform hosts of centrally performed model reviews, and hosts are responsible for the supervision of local model implementation issues.

2. Local and central models

Issue: How are local and central models defined? Are differences driven by specificities and/or organizational arrangements of banking groups?

Introduction

The distinction between local and central models drives, among other factors, the allocation of tasks within colleges of supervisors. However, the practical interpretation of this distinction varies between countries and/or banking groups. CEBS guidelines on validation (GL10) give some indications on that, but do not provide detailed suggestions.

Approaches

The definition of local and central IRB models varies across the SON banking groups and can be based on different criteria. However, two main approaches are prevalent on the basis of the experience gained so far.

1) The first one uses geographical specificities as the driver for separation and examines whether a particular rating system requires any local aspects to be taken into account. If this is the case, the model is defined as local; if local aspects do not have a role, the model is considered to be central.

2) The second approach focuses on the division of tasks within the banking group. Models developed, tested and validated by a central unit and used on a group-wide basis are defined as central models while models developed, tested and validated locally, and used in one or more entities, are considered to be local models.

3. Portfolio classification

Issue: Is it possible for banks to adopt the IRB classification for exposures subject to the Standardised approach on a temporary (roll-out) and/or permanent (permanent partial use) basis?

Introduction

The Industry Platform on Operational Networks has raised an issue concerning differences between the portfolio classification in the IRB system vis-à-vis that valid for the standardised method: "The CRD defines a different classification of credit asset classes for the STA approach and for the IRB approaches and requires IRB banks to apply both; IRB banks should be allowed to keep one single classification, i.e. IRB and to apply the IRB classification to the temporary or permanent exemptions in STA".

Approaches

This issue may occur for IRB banks adopting the roll-out and/or the permanent partial use provisions contained in the CRD. In particular, the differences in the classification between the Standardised and the IRB approaches may be relevant particularly in the retail and corporate portfolios (e.g. definition of SMEs), whereas in the other asset classes the criteria for portfolio classification are quite closely aligned between the two methods.

CRDTG has recently provided specific answers to this question (see answers to questions 288 and 296, published on 8 February 2008):

- *a single definition of exposures (say, retail) cannot be applied for permanent partial use or during a roll-out period;*
- *however, supervisors may accept the application of the IRB classification (i.e. the target approach of the bank) to the entire portfolio, including the portfolios which are rolled-out or permanently exempted, for reporting purposes only.*

4. Use test for new models

Issue: How can the use test requirement be applied practically for new models?

Introduction

The Industry Platform on Operational Networks has raised the following issue: "Banks which are under the advanced approach and which replace an existing model by a more performing one are currently being penalized because they can only make use of the new model after the outcome of the regulatory use testing period – which can take considerable time".

Approaches

In most national regulations the replacement of old models with new ones is not explicitly addressed; little experience is available so far..

Supervisors have to assess the nature and significance of the changes to an existing model; a new model is generally (though not always) the result of

experience with an old one. For example, it may be that improvements in the data used, the calibration of the parameters or the underlying assumptions are implemented. In some countries the regulation states that when a bank improves or replaces a model with a new one, the supervisory authority must be informed so that it can decide how to proceed with the assessment (i.e., asking for a new authorisation or not); this decision is taken in the light of the type and magnitude of the changes proposed to the old model. In other countries, a new authorisation is not required.

On the basis of the distinction between an experience requirement and a use test made in the GL10, a common understanding with respect to the SON banking groups has been reached. As regards the experience requirement, articles 84(3) and 84(4) of the CRD require at least three years of prior use of rating systems that are broadly in line with the minimum requirements before regulatory use is authorised. This requirement has to be met at the time of the application. In this way, supervisors aim to be sure that the institution is familiar (in its day-to-day management) with the measures of risk it applies for. In this context, the experience requirement does not concern the use of individual risk models but rather the overall IRB system of the bank.

In the case of a bank that has already been authorised to use the IRB system for prudential purposes, the experience requirement has already been satisfied; as regards improvements to models, the Basel Accord, in para. 445, states that "improvements to a bank's rating system will not render a bank non-compliant with the three-year requirement".

On the other hand, the use test has to be fulfilled at the time of the application as well as in an on-going situation. Therefore, a new model has to play an essential role in the management of the bank, i.e. there should be a strong relationship between the data/parameters used in calculating capital requirements and the data used for credit management, in order to ensure that the new model will not be rejected internally by its end-users.

5. Supervisory assessment of central models

Issue: What is the role of home and host supervisors in the validation of central models?

Introduction

In the context of the allocation of tasks among supervisors for the assessment of IRB models, it is important that all interested supervisors are fully aware of the analytical framework of the model; on the other hand, the overall validation procedure needs to be efficient in order to minimise the burden on the bank.

The Industry Platform on Operational Networks has raised the following issue: "The models which banks have developed on a centralized basis for all or several jurisdictions are validated internally in accordance with centralized procedures. The external validation is done by the consolidating entity and its college in conformity with Article 129. As a result, host supervisors should not be authorized to ask a subsidiary to go through another validation procedure on the basis of local data."

Approaches

Consistently with the CRD framework, CEBS GL10 highlights the role of the consolidating supervisor as the coordinator of the pre-approval and approval processes. However, given the heterogeneity of cross-border groups, a different allocation of tasks can be decided on a case-by-case basis in order to optimise the value added by each supervisor:

“Responsibility for organising and coordinating these pre-application tasks, and more generally for the overall approval process, shall reside with the consolidating supervisor. This responsibility cannot be delegated to another supervisor, although certain tasks – including practical coordinating aspects – may be allocated to other supervisors involved. Thus, for example, while it is expected that the consolidating supervisor will lead the assessment of centrally developed models and the assessment of the group's governance and centralised risk management functions, host supervisors could lead the assessment of locally developed models and local implementation of centrally developed models. The effective coordination of practical work on specific models (e.g. for certain business lines) can, under the responsibility of the consolidating supervisor, be entrusted to the supervisor best placed to ensure the efficient running of the process. This can also apply to centrally developed aspects of the models”. (para 44 GL10)

Centrally-developed models are normally validated by the home supervisor, whereas their local implementation is verified by host authorities. In line with the overall validation framework, the tasks of each authority in the model assessment process can be determined according to the specific circumstances. For example, if a model has been developed with the significant contribution made by one of the foreign subsidiaries (i.e. because of a higher expertise in the business) which is included among the entities to be validated together with the parent company according to the roll-out plan, then the corresponding host supervisor will presumably have a central role in the assessment of the analytical framework of the model.

On the other hand, the supervisor of a subsidiary which is scheduled to use the advanced models at a later stage will focus more on the assessment of the models' local calibration and implementation rather than on their methodological features. Obviously, it is essential that all host supervisors which are not involved in the “first stage” of model validation have the opportunity to understand the methodology (e.g., predictive power, data inputs, monitoring process) in order to convey their general feedback to the home supervisor and to prepare better for their assessment of its implementation. Therefore, a prompt and adequate information flow to all host supervisors is to be put in place.

A practical issue may relate to the representativeness of the data used. As requested by CEBS GL10 (paras 363 and 364), comparability and representativeness of the data used for risk parameter estimation are essential for ensuring the overall soundness of the model. Therefore, if these requirements are not fully complied with in respect of the portfolio of a foreign subsidiary of the group, a discussion between the home supervisor and the relevant host supervisor has to start as soon as possible so as to plan what actions have to be taken in order to make the model implementation compliant

at the subsidiary level. This phase should avoid the re-assessment of the analytical framework of the model which has already been reviewed and validated by the home supervisor at an earlier stage.

6. Language of IRB/AMA application

Issue: In which language do banks have to submit the application to use internal models to the home supervisor? Is the approach consistent across banking groups?

Introduction

CEBS GL10 states that the letter accompanying the application should be written in the language of the consolidating supervisor, while the other documentation related to group-wide IRB systems and centralised functions (internal control, risk management, IT) as well as the core information related to local models should be drafted in a language agreed between the applicant and the consolidating and host supervisors (para 71).

Approaches

Analysis of the application packages submitted by the SON banking groups suggests that the framework described above has been implemented - English is the most used language; in one case the application has been submitted in the home supervisor's language together with an additional copy in English. In many cases the detailed material, mainly related to local models, has been submitted in the local language.

B) Pillar 1 technical issues

7. Definition of default

Issue: Which definition of default (DoD) is applied in practice across a cross-border banking group? How is the default of individual entities related to the default of groups?

Introduction

The definition of default is an essential element in the calculation of capital requirements under the IRB framework. Therefore, SON has gathered information on the practical implementation in the EU of the definition of default provided by the CRD (Annex VII, Part. 4, paras 44-48).

Approaches

Full discussion of the issue within colleges is essential from the first stage of the (pre)validation process. It is up to each college to decide how to implement the DoD across the banking group, including at the solo level. Under art. 129, in case of disagreement, the home supervisor takes the final decision.

The practices observed so far with reference to the 10 SON banking groups highlight that some groups use a different DoD for the consolidated

calculation, whereas others use a single DoD across all the group's entities. However, the first approach is not perceived to be a major problem.

As regards the linkages between defaults of individual entities and default of the group to which they belong, CEBS GL10 deals with this matter in para 242: "As a general rule, the rating assignment process and the definition of default adopted should be consistent. Contagion of default between linked parties should be carefully assessed. For example, if a rating is assigned to the entire group to which the individual borrowing entity belongs (e.g., if it is based on the consolidated balance sheet, and the 'rated entity' is thus the group), then the default status should be triggered accordingly (i.e., for the whole group as a single rating object), unless the institution can demonstrate that default at the subsidiary level does not have material consequences for the stability of the group as a whole. In these cases, however, supervisors might question whether a group rating was appropriate."

Most domestic regulations have incorporated this principle, the rationale being that each entity has specific features and behaviour, even though it belongs to a group. In some other cases there are no specific provisions, leaving the analysis to a case-by-case approach.

Accordingly, from the experience gained so far from the SON banking groups the main criterion is to treat each entity on an individual basis and to address in a practical way the nature and strength of the links between each entity and the group it belongs to (e.g. dummy variables, notching approach).

The practical examples provided below from the SON banking groups appear to be largely consistent with the spirit of the Directive and of CEBS GL10.

Example 1

Ratings are assigned on an individual basis; therefore, rating models take into account borrower-specific variables while addressing the subsidiary status of obligors in another way, for example through dummy variables. The "group approach" (i.e. the default of any entity in a group spreads to all its components) can be applied only where, on the basis of formal legal obligations, the holding company is explicitly committed to supporting its entities in case of default.

Example 2

Examination is carried out on a case by case basis. According to the Validation Manual: "If one member of the group defaults, this is not automatically extended to the group – cross default does not necessarily occur – but the relationship of connected enterprises must be examined carefully." Aspects of examination shall be incorporated in the internal rules and the decision shall be justified in written form. An important consideration is that if the default of one member of a group is automatically extended to the group as a whole, recovery may be very high on a group-wide basis which may result in zero or close-to-zero LGD on the exposures to this particular group.

Example 3

Even though ratings are assigned on an individual basis in special cases the group's rating affects the rating of the subsidiary. If this is the case, supervisors need to consider the influence of the credit worthiness of a group's components on the group's performance. Example: Subsidiary B conducts core business of group A and contributes 75% to the group's revenues, while subsidiary C although conducting core business is less relevant to the group's result. Both subsidiaries might get a rating dependant on the group's rating; however default of subsidiary C will not trigger the default of other members of the group, while default of subsidiary B will do.

Example 4

Detailed regulation on this issue has been introduced, including the description of the situations where interconnections between entities must be assessed. The correct application of this rule is carefully checked by the on-site examination teams, who are especially demanding that the documentation of the rating process provides detailed and operational guidance, especially on two points: definition of a "single beneficiary" (i.e. which are the criteria in force inside the bank) and what are the rules regarding the influence of the rating of one entity on the rating of another entity in the same financial group.

8. Downturn LGD

Issue: What are the banks' methodologies to estimate the "downturn LGD", as requested by the CRD? What is the supervisory approach?

Introduction

CEBS GL10 indicate the operational steps that banks should follow for estimating the downturn LGD:

- (i) identifying appropriate downturn conditions for each supervisory exposure class within each jurisdiction;*
- (ii) identifying adverse dependencies, if any, between default rates and recovery rates; and*
- (iii) incorporating any adverse dependencies that have been identified between default rates and recovery rates in order to generate LGD parameters for the institution's exposures that are consistent with identified downturn conditions.*

Approaches

CEBS GL10 (para 287) acknowledges that "producing such estimates presents challenges; given the limited data that institutions are likely to have available". Accordingly, most supervisors have requested banks to demonstrate the soundness of their estimates.

Example 1

The UK Financial Services Authority has published a paper in which the results of an empirical exercise on downturn LGD estimates are presented¹; data were gathered from 12 firms. The main outcome at this early stage is that the degree of variation of the two key downturn parameters (i.e. reduction in property value and probability of possession given default) is quite large. Therefore, some "reference values" for these variables are provided (-40% and 35% respectively), which could be used by each bank for discussion with supervisors. As soon as firms improve their estimation techniques, and the available data increase, FSA expects the thinking on this topic to evolve.

Example 2

The Bank of Spain has published a paper² in which the requirements for downturn LGD for residential mortgages are presented. The document defines the following concepts: realised, long-run average and downturn LGD; it also requires a minimum segmentation in the estimation process based on risk drivers; and finally, it identifies the estimation procedures accepted.

Example 3

In domestic models for LGD, the downturn effect has been calculated by estimating the correlation between the Operating Profit and recoveries across 14 years of data. For the group-wide bank model, haircuts have been computed taking into account the downturn effect.

Example 4

A banking group has a group-wide policy on downturn LGD. The cure rate is lowered by a fixed percentage which is set as follows: how LGDs respond in downturn condition has been investigated; the gross effect has then been translated into a cure rate shock; finally, for each model it is determined whether a downturn LGD is applicable. For instance, the sovereign model does not include a downturn LGD as sovereigns are expected only to default in downturn conditions. In some cases, the haircuts on collateral are adjusted in a conservative way compared to the regular hair cut.

Example 5

In the case of mortgages, expected LGD (i.e. without downturn) is estimated using 5 possible outcomes of a default (1. the real estate is auctioned, 2. the exposure is sold to a factoring company, 3. the claim is collected in a work-out process, 4. the claim is collected outside a work-out process, for example by

¹ "Residential mortgage downturn LGDs – recent work", September 2006, www.fsa.gov.uk).

² "Validation Document 1: Loss given default estimates under downturn conditions in mortgage loan portfolios in Spain" http://www.bde.es/regulacion/funciones/notas_acte.htm

forced restructuring, etc. and, 5. the client recovers). LGDs have been estimated for each possible outcome and the bank's experience is that the highest LGD resulted from outcome 3 – the claim is collected in a workout process – and the main factor was the LTV. The expected LGD has been defined as the average of the five LGDs. In order to establish a downturn LGD, a crisis in the real estate market has been assumed: the LTV has been assumed to be lower by 20% and the probability of outcome 3 has been assumed to be higher by 20%.

9. Estimation and validation of risk parameters in “low-default-portfolios”

Issue: What are the approaches followed by banks to estimate and validate risk parameters for “low default portfolios”? What is the supervisory approach?

Introduction

Currently, the knowledge of supervisors and banks on the estimation and validation of risk parameters in “low-default-portfolios” is not as advanced as for other portfolios. In principle, the possible approaches can range from the use of purely judgemental techniques to reliance on vendor models. Best practices have yet to emerge in this area.

In CEBS GL10 Low-Default-Portfolios (LDP) are classified as follows: i) long-term, due to high quality borrowers or a small number of borrowers, versus short-term (e.g., new entrants into a market); or ii) systemic (data unavailable for all institutions), versus institution-specific (data unavailable for the institution in question, perhaps due to insufficient effort to enhance its database with suitable external data).

Some principles are defined, mainly aimed at systemic LDP:

- Exposures in LDP should not necessarily be excluded from the IRB approach simply because of the absence of sufficient data to validate PD, LGD and CF estimates on a statistical basis. Institutions will be required to use appropriate conservatism in risk parameter estimation.

- The institution's process for estimating PD, LGD, and CF in LDP should be supported by appropriate methodologies. Even in the absence of defaults, additional information (ratings, prices, etc.) may be available that can be used in the estimation process. Wherever possible, institutions should take such information into account. The validation process for LDP should not be completely different from the validation process for non LDP, and institutions should ensure compliance with the minimum requirements of the regulation.

- Institutions should pay particular attention to implementation and use.

- Institutions should reinforce qualitative validation of LDP, relative to non LDP. The design of rating models, the quality of the data used in developing and deploying the model, and the internal use of the rating system should be key areas of the validation process for LDP.

The majority of regulations adopted in EU countries for LDP generally request the same set of requirements as for non LDP. They also underline that, as far as probabilities of default are concerned, the CRD already contains provisions

for dealing with most forms of LDP: use of rating agency data, statistical default models, pooled data, other external data. In some cases alternative estimation methodologies and/or qualitative validation tools are explicitly mentioned.

Approaches

The experience with SON banking groups shows that LDP are mainly represented by exposures to sovereigns and banks. Different estimation methodologies are currently being tested, the most important being "mapping" to external ratings. As regards validation, benchmarking is considered at the moment to be the most reliable technique.

Example 1

Exposures to Banks and Sovereigns:

a) *Estimation.* Both models have been estimated according to a shadow rating approach and share a common structure. Each model consists of two components: a quantitative module that takes into account financial ratios from balance sheet data and a qualitative module that uses information obtained from answers to a questionnaire filled in by credit analysts. The two scores are then integrated to maximize the discriminatory power of the final score. The target variable used in the estimation phase (the variable that the model tries to replicate) is derived as an average of long-run default rates as published by rating agencies (S&P, Moody's and Fitch).

b) *Validation.* Validation activities include an out-of-sample benchmarking analysis between external ratings and model estimates.

Example 2

Use of Credit Default Swaps:

Using CDS, the methodology tries to infer from market data (prices, volatilities, etc.) parameters on default probabilities for a portfolio with Low Default experience:

- *CDS prices ("spreads") include "risk premiums" to compensate a risk-neutral investor;*

- *CDS are preferred to bonds because they are more liquid and the markets more active and deep. Moreover, bonds include in their prices "compensation" for risks other than credit risk.*

Example 3

Quantitative validation of LDP is commonly based on benchmarking to external ratings and to external historical default rates, possibly amended by other methods like estimation of confidence intervals, analysis of outliers etc. However, expert judgement does play an important role in this context. The bank uses expert judgements in LDP as well. The PD-calibration, however, is based on historical default rates of external ratings. In addition, the crucial point for LDPs is validation. Some supervisors are also in the process of testing

some proposals deriving from academic/supervisory research (among others, the statistical methodology proposed by Tasche-Pluto to derive non-zero PDs).

10. Project finance

Issue: What are the banks' methodologies for estimating risk parameters for Project Finance? What is the supervisory approach?

Introduction

In most cross-border banking groups Project Finance exposures constitute a material portfolio. However, the development of an appropriate rating system for these exposures is in some cases still in progress.

This portfolio (as well as the other Specialised Lending exposures) has special features as regards available data and risk profile. On the one hand, it can be broadly assimilated to a Low Default Portfolio, because the number of defaults does not usually allow the estimation of relevant risk parameters with ordinary statistical tools; on the other hand, the role of human judgment is essential, given the difficulty of capturing all relevant risk drivers in a quantitative model. However, a pure expert-based approach is seldom accepted by supervisors.

Approaches

Example 1

The rating system for project finance exposures has been developed according to a judgmental approach. The model consists of a scorecard that takes into account almost 30 risk factors, broken down into 5 risk groups (namely, shareholder risk, completion risk, operation risk, special risk and cash flow analysis). The list of risk factors and the relative weights have been decided according to the evaluation and experience of a team of experts.

The risk associated with each factor is assessed by the rating analyst on a five-grade scale. The partial assessments are weighted, and then combined to give an overall score. In exceptional cases, which are to be justified in detail and agreed upon with the credit office, the weightings can be changed in order to meet any special conditions of a project that "deviate from the norm".

The final score is converted into a PD – and hence to a rating grade – using a calibration function that has been estimated on a sample of exposures for which a PD from other sources was available.

Example 2

The project finance experience is limited to commercial property related exposures. Some institutions are attempting to derive PD and LGD estimates from Monte Carlo simulations of projected cash flows; some others are using expert judgement approaches. Others have decided they cannot meet the IRB requirements, and are instead pursuing a "slotting criteria" approach, as suggested by the Basel II Framework.

In principle, supervisors are prepared to accept any of the above-mentioned approaches, provided they can be validated. For the time being, institutions seem to struggle to make the Monte Carlo approach work in practice. The

challenge for expert judgement approaches tends to be the low quantity of data which results in the usual challenges associated with LDP exposures.

Example 3

Purely expert-based models are considered to be a complement to statistically-based models; therefore, hybrid models would be the most valuable alternative. However, statistical models always have to form the basis for rating assignment methodologies because CRD does not permit the use of estimates based solely on expert-based models. Preferably, expert-based models are used to refine and support statistical models.

Thus, expert-based models should only be used when it is impossible to develop reliable statistical models and where certain conditions are met. These conditions could be designed to ensure, for example, that the rating assignment methodology is unbiased and accurately reflects the risk characteristics of the underlying transactions.

C) Pillar 2 issues

11. Scope of application of ICAAP

Issue: What is the scope of application of ICAAP?

Introduction

The Industry Platform on Operational Networks has asked for clarifications about the scope of application of ICAAP, requesting that the analysis be conducted only at the consolidated level. "Although it should be recognized that a subsidiary's local management must have knowledge how the group conducts the ICAAP, have an understanding of the allocated figures and accept them, host supervisors should, in principle, refrain from requiring a subsidiary to make additional calculations. They should, however, permit an allocation of the consolidated ICAAP (including diversification effects) on the local levels of calculation."

Approaches

On the basis of the provisions contained in the CRD, the scope of application of Pillar 2 is not only on a consolidated basis, but also at solo/sub-consolidated level. A stock-take conducted among CEBS members has highlighted the following elements:

- all EU countries require an ICAAP for the banks operating in their jurisdiction on a consolidated basis as well as on a sub-consolidated basis for domestic groups;*
- in many cases an ICAAP is required for all individual institutions irrespective of whether they belong to groups (waivers are often introduced for domestic subsidiaries);*
- in most cases an ICAAP is required on a solo/sub-consolidated level for subsidiaries belonging to third country cross-border banking groups.*

The scope of application of a SREP follows that of an ICAAP, since the SREP is also based on the assessment of capital adequacy made by institutions themselves³. The allocation of responsibilities between home and host supervisory authorities in the CRD assigns the latter the responsibility for SREP on a solo/sub-consolidated basis.

In line with art. 129.1 of the CRD, which requires planning and coordination of supervisory action for cross-border groups, and with the 'Template for a multilateral cooperation and coordination agreement on the supervision of XY group' published by CEBS in December 2007, the assessments of ICAAP made at consolidated and local level have to be coordinated, in order to reduce the supervisory burden on banking groups. The Group de Contact's Sub-group on Operation Networks is working intensively to foster coordination among supervisors of ICAAP-SREP processes for cross-border groups, while the Groupe de Contact's Pillar 2 Convergence Network is working on all the other aspects related to Pillar 2 implementation. In addition, CEBS has promoted an assessment of the Economic Capital Models developed by some SON cross-border groups by joint teams of home and host supervisors.

12. Requirements imposed for ICAAP

Issue: What are the requirements that banks have to follow for ICAAP?

Introduction

The Industry Platform on Operational Networks has requested the application of single quantitative and qualitative requirements for the ICAAP across Europe.

Approaches

The ICAAP process falls fully within the responsibility of banks. Therefore, it is up to them to define the most appropriate processes and methodologies to assess their capital adequacy.

Most EU supervisors have provided the banks operating in their jurisdiction with some indications (with different degrees of flexibility) in order to enable broad comparability across institutions. In many cases the authorities have indicated in their regulations/guidance the need for banks to submit a formal report, which generally includes both the quantitative and qualitative aspects of the ICAAP; in some cases, the document is part of the periodic report that banks already have to submit on internal audit & risk measurement; in one case, external auditors are asked to provide the report to supervisors.

³ CEBS GL03, SREP 5: "The supervisor will assess the institution's ICAAP as part of its SREP. This should include a consideration of the assumptions, components, methodology, coverage and outcome of the institution's ICAAP. This review should cover both the institution's risk management processes and its assessment of adequate capital. Supervisors should review the controls in place to mitigate risk, as well as the adequacy and composition of capital held against those risks".

In many of the cases where a report is requested, a list of topics to be addressed is proposed; it is also specified that in cases where other internal documents already cover specific issues, a simple reference to those documents can be given.

The authorities which do not require any specific ICAAP report base their assessment on the information that they believe is necessary to allow a thorough assessment of banks' risk profiles and their internal capital adequacy. One authority specifies that a first supervisory assessment is based on the banks' annual report; additional information is then collected on an individual basis.

Many authorities have also implemented the proportionality principle by requesting ICAAP reports with different depths in line with the size and the complexity of individual institutions or categories of bank.

Where ICAAP reports are requested by supervisory authorities, the following list of issues has to be covered in most cases:

- a) risk identification and capital adequacy;*
- b) governance structure;*
- c) systems and controls;*
- d) risk measurement methodologies, including diversification;*
- e) stress testing;*
- f) definition of internal capital used for covering risks;*
- g) capital allocation; and*
- h) contingency plan.*

In the countries where ICAAP reporting is requested, the first ICAAP reports for all the major banking groups are to be submitted in the course of 2008, while a few have already been submitted in 2007. Therefore, an assessment of the consistency of their content across jurisdictions will be possible from end-2008 onwards.