## Deloitte.

# 2-a Fala zapytań CEIOPS'u

# Solvency II Poziom 2 Akty Wykonawcze

2 grudnia 2009 roku



# CP 45

Uproszczone metody i techniki do kalkulacji najlepszego oszacowania

## Dyrektywa (poziom 1) - Uproszczone metody i techniki do kalkulacji najlepszego oszacowania

Article 81 – Data quality and application of approximations, including case-by-case approaches, for technical provisions

"[...] Where, in specific circumstances, insurance and reinsurance undertakings have insufficient data of appropriate quality to apply a reliable actuarial method to a set or subset of their insurance and reinsurance obligations, or amounts recoverable from reinsurance contracts and special purpose vehicles, appropriate approximations, including case-by-case approaches, may be used in the calculation of the

best estimate."

# Dyrektywa (poziom 1) - Uproszczone metody i techniki do kalkulacji najlepszego oszacowania

Recital 30 of the Level 1 text states that

(30) [...] The principles and actuarial and statistical methodologies underlying the calculation of those technical provisions should be harmonised throughout the Community in order to achieve better comparability and transparency.

#### Recitals 11 and 33 stipulate that

(11) [...] Harmonisation should be increased by providing specific rules for the valuation of assets and liabilities, including technical provisions. (33) [...] The use of effective and harmonised actuarial methodologies should be required.

## Paragraf 3.132 Typy progów materialności

Table 1: Types of thresholds for the valuation of technical provisions

Thresholds	Relating to scale of risk	Relating to model error
Applying broadly	Type 1	Type 2
Applying to individual methods	Type 3	Type 4

#### Paragraf 3.139

[...], it may be contemplated to implement external thresholds on basis of an assessment of the scale of risks, so that an (re)insurance undertaking would be allowed to use simplified methods in case the threshold is not exceeded. However, such an approach could lead to a number of problems:

- relying on a threshold based on the scale of risks may not be sufficient. It is important to also consider the nature and complexity of the risks to which an undertaking is exposed;
- ultimately, it is not the scale of risk which is the deciding factor in a proportionality assessment, but whether the chosen method is proportionate to the risks and whether the degree of model error in the calculation is material. This aspect may not be sufficiently addressed in this type of threshold.

#### Paragraf 3.132 Przykłady materialności

An example of a quantitative "Type 1" threshold (expressed in relative as well as absolute terms) is given by the (indicative) materiality threshold specified by CEIOPS for the use of simplified methods for the valuation of technical provisions in QIS4. The intention of this threshold was to indicate when the liability that is valued would not be material in absolute terms or relative to the overall size of the total best estimate. It was

- to be applied broadly to the set of all simplified methods; and
- based on simple volume measures (size of the best estimate of technical provisions) related to the scale of the underlying risks.

An example of a (qualitative) "Type 2" threshold is given by Step 2 of the proportionality assessment process outlined in section 3.1. Here, it was set out that a valuation technique (simplified or not) would be considered proportionate if it could be expected that the degree of model error inherent in an application of the method would not be material. In this context, "materiality" was expressed in qualitative terms, considering the degree to which the decision-making or judgment of the intended user of the information could be influenced. This establishes a general materiality threshold which

- applies to all valuation methods which the (re)insurance undertaking may consider for calculating its technical provisions; and
- is directly related to the degree of model error inherent in the application of the method.

### Article 75 – General provisions

- 2. The value of technical provisions shall correspond to the current amount insurance and reinsurance undertakings would have to pay if they were to transfer their insurance and reinsurance obligations immediately to another insurance or reinsurance undertaking.
- 3. The calculation of technical provisions shall make use of and be consistent with information provided by the financial markets and generally available data on underwriting risks (market consistency).
- 4. Technical provisions shall be calculated in a prudent, reliable and objective manner.

#### Article 76

- 1. The value of technical provisions shall be equal to the sum of a best estimate and a risk margin as set out in paragraphs 2 and 3.
- (2) Calculation of the technical provisions The best estimate shall correspond to the probability-weighted average of future cash-flows, taking account of the time value of money (expected present value of future cash-flows), using the relevant risk-free interest rate term structure. The calculation of the best estimate shall be based upon up-to-date and credible information and realistic assumptions and be performed using adequate, applicable and relevant actuarial and statistical methods. The cash-flow projection used in the calculation of the best estimate shall take account of all the cash in- and out-flows required to settle the insurance and reinsurance obligations over the lifetime thereof.

The best estimate shall be calculated gross, without deduction of the amounts recoverable from reinsurance contracts and special purpose vehicles. Those amounts shall be calculated separately, in accordance with Article 80.

3. The risk margin shall be such as to ensure that the value of the technical provisions is equivalent to the amount insurance and reinsurance undertakings would be expected to require in order to take over and meet the insurance and reinsurance obligations.

#### Article 77

Other elements to be taken into account in the calculation of technical provisions In addition to Article 76, when calculating technical provisions, insurance and reinsurance undertakings shall take account of the following:

- (1) all expenses that will be incurred in servicing insurance and reinsurance obligations;
- (2) inflation, including expenses and claims inflation;
- (3) all payments to policyholders and beneficiaries, including future discretionary bonuses, which insurance and reinsurance undertakings expect to make, whether or not these payments are contractually guaranteed, unless those payments fall under Article 90.

Article 78 – Valuation of financial guarantees and contractual options included in insurance and reinsurance contracts

[...] Any assumptions made by insurance and reinsurance undertakings with respect to the likelihood that policyholders will exercise contractual options, including lapses and surrenders, shall be realistic and based on current and credible information. The assumptions shall take account, either explicitly or implicitly, of the impact that future changes in financial and non-financial conditions may have on the exercise of those options.

#### Article 79 - Segmentation

Insurance and reinsurance undertakings shall segment their insurance and reinsurance obligations into homogeneous risk groups, and as a minimum by lines of business, when calculating their technical provisions.

Article 80 - Recoverables from reinsurance contracts and special purpose vehicles.

The calculation by insurance and reinsurance undertakings of amounts recoverable from reinsurance contracts and special purpose vehicles shall comply with Articles 75 to 79. When calculating amounts recoverable from reinsurance contracts and special purpose vehicles, insurance and reinsurance undertakings shall take account of the time difference between recoveries and direct payments.

The result from that calculation shall be adjusted to take account of expected losses due to default of the counterparty. That adjustment shall be based on an assessment of the probability of default of the counterparty and the average loss resulting therefrom (loss-givendefault).

#### CP 45 - Paragraf 3.190 i 3.191

## Provisions for claims outstanding

3.190 With respect to the provisions for claims outstanding, separate Gross-to-Net techniques should be stipulated for each accident year not finally developed (for a given line of business (or homogenous risk group)).

3.191 With respect to the types of Gross-to-Net approaches described in annex A.1, type no. (2), (3) and (5) can be applied to stipulate techniques proxies for the individual accident years (for a given line of business), cf. also the description of the most advanced Gross-to-Net technique tested in QIS4.

#### **CP 45 – Annex A: Report on Proxies**

"Gross-to-net proxies are used to convert best estimates of claims or premium provisions into best estimates net of reinsurance, in cases where there is not enough (technically feasible) data to directly derive net estimates."

The report on proxies contains a list of 10-12 Gross-to-Net proxies that have been considered by the national proxy expert groups. A majority of the considered Gross-to-Net proxies is based on accounting data (in a broad sense), including:

- (1) Historic accounting figures.
- (2) Gross and net cumulated cash-flows (paid claims) per accident (or underwriting) year.
- (3) Gross and net provisions for reported but not settled (RBNS) claims (also referred to as case reserves) per accident (or underwriting) year.

#### **CP 45 – Annex A: Report on Proxies (cont.)**

And also two proxies that go beyond the application of accounting data:

- (4) The first of these alternative proxies applies the premium model for the line of business in question (based on e.g. separate estimation of claim frequencies and claim severities) in order to derive the percentage of the expected claims costs being reinsured and uses this information as a basis for stipulating the Gross-to-Net proxy.
- (5) The other alternative proxy is using available market data (per line of business) regarding the (empirical) distribution of single claim amounts to establish ratios between:
- i. the expected value of a (random) single claim net of reinsurance and ii. the expected value of a (random) single claim gross of reinsurance for a prescribed set of excess points of a simplified (pure) excessof-loss treaty.

These ratios are then used in combination with e.g. suitable interpolation-techniques to stipulate Gross-to-Net proxies for the following cases:

- i. excess-of-loss covers only,
- ii. combinations of proportional reinsurance covers and excessof-loss covers.

#### CP 45 – QIS4: Use of proxies (1)

A.9 With respect to QIS4, the report on proxies proposed to test only two different designs of the Gross-to-Net proxies, both of them based on accounting data (in a broad sense):

- one based on the provisions for RBNS claims ("case reserves") and
- one based on cumulated cash flows (i.e. cumulated claims payments).

These testing proposals were incorporated into the Technical Specifications (TS) without further changes.

A.15 With respect to the properties of this proxy [case reserves] the QIS4 TS state that "ceded reinsurance varies with the size, the financial soundness and the risk aversion of a company, so that particular care is required when applying a ratio of net over gross from another benchmark portfolio. Such an approach should therefore only be used in cases where the benchmark portfolio is known to have a very similar nature as the own portfolio. Even if this is the case, however, the cession percentage for non-proportional reinsurance will heavily depend on the actual occurrence of large losses, and therefore be very volatile."

16

#### CP 45 – QIS4: Use of proxies (2)

A.17

With respect to the rationale for using this proxy [cumulative cash flows], it is noticed that for past accident years the reinsurance structure for an individual year is known and will (likely) not change retroactively. Accordingly, a comparison of net over gross cumulated cash flows per line of business in the past - differentiated by accident year - may be used to derive an estimate of the impact of proportional and non-proportional reinsurance for the individual accident year (i.e. a Gross-to-Net proxy for the individual accident year).

#### CP 45 – QIS4: Results on proxies (1)

"Concerning reinsurance, only few undertakings were able to determine amounts relating to reinsurance recoverables (or net figures) by applying actuarial reserving techniques based on reinsured or net triangular claims data. Instead, many participants used triangle analysis techniques only for the calculation of best estimates gross of reinsurance, and derived the reinsurer's part of gross provisions by applying one of the two Gross-to-Net proxies. The wide use of Gross-to-Net proxies underlines that it is difficult for the undertakings to get data net of reinsurance.

However, some undertakings remarked that an application of this proxy may lead to poor results in the case of excess loss covers, where the risk mitigating effect of the reinsurance cover would be underestimated. It was also remarked that the use of both types of Gross-to-Net proxies described in the specifications on the same portfolio sometimes resulted in materially different valuations.

#### CP 45 – QIS4: Results on proxies (2)

"The gross-to-net proxy was used by some undertakings as net claims data triangles are unsuitable for immediate application of actuarial reserving techniques since they often contain irregularities. Undertakings within one country commented that it is difficult to use actuarial techniques to calculate the best estimate reinsurance provision taking into account all contractual details.

. . .

More guidance should be developed concerning the valuation of reinsurer's shares in technical provisions. To avoid over-reliance on very simple techniques such as the Gross-to-Net Proxy, guidance on other more sophisticated actuarial techniques which would be better aligned with the true risk mitigating effect of reinsurance covers should be sought."

#### **CP 45 – Paragraf 3.192**

- 3.192 However, some refinements of these methods may be considered in order to make the Gross-to-Net techniques more sophisticated:
- a) stipulation of separate Gross-to-Net techniques for individual development years or a suitable grouping of the development years (for a given accident year);
- b) stipulation of separate Gross-to-Net techniques for RBNS-claims and IBNR-claims;
- c) stipulation of separate Gross-to-Net techniques for "large" claims and "small" claims ("frequency" claims) given some suitable thresholds for the separation of "large" and "small" claims; and
- d) stipulation of separate Gross-to-Net techniques for proportional and non-proportional reinsurance programs.

#### **CP 45 – Paragraf 3.207**

3.207 Such general principles and criteria could include the following:

- In general, the risk margin calculations and accordingly the projections of future SCRs should be as accurate as possible. If the undertaking is able to carry out a full projection of all future SCRs for all or some lines of business it would be expected to do so.
- A simplification may be used when there is reasonable evidence that an application of a simpler method would not lead to materially different results. Where the undertaking applies simplified methods, it should be able to justify their use and to assess the potential impact on the accuracy of the calculations of using the actual simplified method.
- Where simplified methods are applied, they should be used in a flexible manner meaning that the undertaking should consider e.g. to what extent the relevant data and other information required in order to make accurate SCR-projections are available (including the time and effort (costs) needed to obtain this information).

#### **CP 45 – Paragraf 3.207 (cd.)**

- When an undertaking considers whether or not it would be appropriate to apply a (simplified) valuation technique for the risk margin, it should carry out separate assessments for each risk module in each line of business. This means that a decision to use simplifications in one risk module and/or in one line of business should have no (definitive) impact on the decisions made for other risks or lines of business. As an integral part of this assessment, the undertaking should consider what kind of simplified methods would be most appropriate for the given line of business. The chosen method should be proportionate to the nature, scale and complexity of the risks in the line of business in question.
- When the undertaking has decided to use a simplified method for a given line of business, it should consider whether the method should be used for the projections of the overall SCR (for the given line of business) or only for certain (sub-)risks relevant for such projections. In this context, the undertaking should also consider whether it should carry out the simplified projections of future SCRs individually for each future year or calculate all future SCRs in one step (simultaneously) but still for a given line of business.

## 3.227

To assist (re)insurance undertakings in deciding which simplified methods would be appropriate to determine the risk margin, each step in this hierarchy should be accompanied with appropriate eligibility criteria based on quality and materiality considerations.

#### CP 45 paragraf 3.68

For the best estimate, [...] a given valuation technique should be seen as proportionate if the resulting estimate is not expected to diverge materially from the "true" best estimate which is given by the mean of the underlying risk distribution, i.e. if the model error implied by the measurement is immaterial. More generally, a given valuation technique for the technical provision should be regarded as proportionate if the resulting estimate is not expected to diverge materially from the current transfer value specified in the Level 1 text.

# CP 52

Techniki ograniczania ryzyka

#### CP 52 paragraf 3.44

When a reinsurance risk mitigation technique includes basis risk, there shall be no allowance of the mitigation instrument in the calculation of the SCR unless the undertaking can demonstrate that the basis risk is not material compared to the mitigation effect. If allowance of the reinsurance risk mitigation technique in the calculation of the SCR is made, the calculation shall account for the basis risk in line with the 99.5% confidence level of the SCR.

Allowance is given to reinsurance risk mitigation provided by entities which are subject to the Level 1 text and are not in breach of the SCR. In respect of SPV's these shall meet the requirements of the Level 1 text. For all other entities, if they are rated, the rating shall be at least BBB, and if the entities are not rated they shall demonstrate that they meet at least the standard of a BBB rated company.

"To the extent that the effectiveness or ongoing enforceability cannot be verified or the mitigation technique is not documented, the benefits of the mitigation technique shall not be recognised in the SCR calculation, but the calculation shall recognise any additional risks in accordance with the formula."

# **CP 56**

Testy oraz Standardy Akceptacji Modelu Wewnętrznego

#### Para. 3.49: Areas of use Use of the internal model

**System of governance**: Reconciliation between internal model and technical provisions, Reconciliation between internal model outputs and internal and external financial reporting, Reconciliation between internal model and the technical implementation of management actions, e.g. for with-profit business, Reconciliation between internal model and the responsibility for parameterisation.

**Risk-management system**: Measurement of material risks, Asset / liability management, External risk reporting, Internal risk monitoring (through MI), Reinsurance programme design, Other risk mitigation, Development of risk strategies, Risk balancing (efficient use of capital), Exposure management and limit setting, Product development / Pricing, Development and monitoring of risk appetite

**Decision-making:** Investment decisions e.g. strategic, tactical and operational decisions, Reinsurance decisions e.g. strategic, tactical and operational decisions, Setting return on capital targets and remuneration, Product development / Pricing, Business planning / strategy, Asset / liability management, Reinsurance strategy and development of reinsurance programme, Underwriting policies, Assessing customer benefits, for example, bonus setting, Risk Mitigation, Capital Management

**Economic capital assessment:** ORSA, Capital Management, Regulatory capital (SCR for solo and for groups),

Economic capital allocation: By entities, lines of business, risks, major business units

**Solvency capital allocation:** By entities, lines of business, risks, possibly in the form of a reasonableness check

30

#### Para. 3.50: Areas of use Use of the internal model

In addition, that an undertaking uses the internal model for the uses set out below would be an indication that the internal model is used well in an undertaking, but would not necessarily be an indicator of compliance with the Use test.

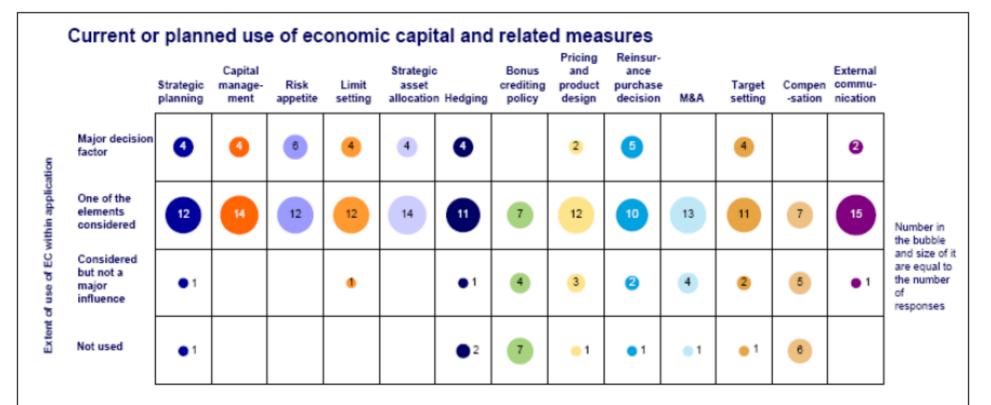
**System of governance:** Reporting on technical provisions, Reporting on business performance, Reporting on performance including return on capital, Reporting on MCEV / EV, Producing MI, Financial Reporting - internal model provides market valuations for IFRS

Risk-management system: Adequate pricing

**Decision-making**: Incentive / target setting, Setting profit targets, Portfolio transfer pricing, M&A

**Economic capital assessment**: Efficient use of capital

#### Para. 3.52: Current and planned use of economic capital



- Companies are using or intending to use across a wide range of business decision-making processes
  - [61%] of respondents are using/intending to use EC across all the management processes specified in the question –
    mostly as "one of the elements considered"
- Answers are in line to 2006 survey results suggesting that the overall level of EC use has not changed markedly between the two surveys – and also that companies have no immediate plans to change the level of use significantly)<sup>1</sup>

Excluding new participants in 2008 from the analysis of 2008 use vs. 2006 does not change the result (note 2006 question asked about actual use in last 6-12 months, 2008 asked about current and planned use of EC

#### SII Directive, Art. 119: Statistical Quality Standards

- 1. The internal model, and in particular the calculation of the probability distribution forecast underlying it, shall comply with the criteria set out in paragraphs 2 to 9.
- 2. The methods used to calculate the probability distribution forecast shall be based on adequate, applicable and relevant actuarial and statistical techniques and shall be consistent with the methods used to calculate technical provisions.

The methods used to calculate the probability distribution forecast shall be based upon current and credible information and realistic assumptions.

Insurance and reinsurance undertakings shall be able to justify the assumptions underlying their internal model to the supervisory authorities.

- 3. Data used for the internal model shall be accurate, complete and appropriate. Insurance and reinsurance undertakings shall update the data sets used in the calculation of the probability distribution forecast at least once a year.
- 4. No particular method for the calculation of the probability distribution forecast shall be prescribed.

Regardless of the method of calculation chosen, the ability of the internal model to rank risk shall be sufficient to ensure that it is widely used in and plays an important role in the system of governance of insurance and reinsurance undertakings, in particular their risk-management system and decision-making processes, and capital allocation in accordance with Article 118.

The internal model shall cover all of the material risks to which insurance and reinsurance undertakings are exposed. As a minimum, internal models shall cover the risks set out in Article 101(4).

33

#### SII Directive, Art. 119: Statistical Quality Standards (cntd)

- 5. As regards diversification effects, insurance and reinsurance undertakings may take account in their internal model of dependencies within risk categories, as well as across risk categories, provided that supervisory authorities are satisfied that the system used for measuring those diversification effects is adequate.
- 6. Insurance and reinsurance undertakings may take full account of the effect of risk mitigation techniques in their internal model, as long as credit risk and other risks arising from the use of risk mitigation techniques are properly reflected in the internal model.
- 7. Insurance and reinsurance undertakings shall accurately assess the particular risks associated with financial guarantees and any contractual options in their internal model, where material. They shall also assess the risks associated with both policyholder options and contractual options for insurance and reinsurance undertakings. For this purpose, they shall take account of the impact that future changes in financial and non-financial conditions may have on the exercise of those options.
- 8. In their internal model, insurance and reinsurance undertakings may take account of future management actions that they would reasonably expect to carry out in specific circumstances.
- In the case set out in the first subparagraph, the undertaking concerned shall make allowance for the time necessary to implement such actions.
- 9. In their internal model, insurance and reinsurance undertakings shall take account of all payments to policy holders and beneficiaries which they expect to make, whether or not these payments are contractually guaranteed.

34

#### Para. 5.101, Adequate actuarial and statistical techniques

The undertaking shall provide evidence that the actuarial and statistical methods used are adequate. The demonstration of methodological adequacy shall be based on a set of defined criteria that may include the following:

- Applicable;
- Relevant;
- Appropriate;
- Transparent;
- Up to date;
- Detailed and parsimonious; and
- Robust and sensitive.

#### **CP 56 paragraf 5.167**

Expert judgement may be subject to biases or other shortcomings. These limitations must be acknowledged and solutions be implemented to reduce their detrimental effects, taking into account the materiality and significance of the expert judgement used. The requirements of Article 119(2) also apply to expert judgement (cf. Section 5.3.3.5) where suitable. In addition, expert judgement is only admissible if it was derived using a **scientific method** and meets the following three requirements:

a. Empirical testing: Expert judgement must be falsifiable, refutable and testable.

b. Validation and documentation: Expert judgement must be validated and documented (cp. Chapter 8 and 9).

c. Error rate: Expert judgement must have a known or potential error rate, and standards concerning the operation of its methodology must exist and be maintained.

#### CP 56 paragraf 5.196 i 5.197: Risk Ranking

5.196 CEIOPS envisages a principles-based approach to assess the risk ranking ability of the internal model. The overall requirement is the suitability of the risk-ranking with regard to Article 118 (Use test). In particular, this means:

- **Coverage**: The risk-ranking ability should exist for all material risks covered by the internal model.
- **Resolution**: The differentiation between the various risks and risk drivers has to be sufficiently precise to allow management to take appropriate decisions.
- **Congruence:** The structure of different kinds of risk-ranking reflects the structure of risks or risk categories and the risk management system.
- **Consistency**: Risks of a similar nature are ranked consistently throughout the undertaking and over time. The overall risk-ranking is in line with the capital allocation.

5.197. The undertaking defines its own individual methodology for risk-ranking according to the risk categories and requirements of risk management and governance. The risk-ranking has to comply with the principles (coverage, resolution, congruence, consistency) defined above.

#### Para. 5.252 & 5.253: Diversification effects

#### Adequate system for measuring diversification effects

5.252. Supervisory authorities shall be satisfied that the system for measuring and recognising diversification effects is adequate if, as a minimum, the undertaking:

- identifies the key variables driving dependencies;
- provides support for the existence of diversification effects;
- fully justifies the assumptions underlying the modelling of dependencies;
- takes into particular consideration extreme scenarios and tail dependence;
- has in place a regular cycle of testing model robustness with regard to diversification effects, including sensitivity analyses and stress tests;
- takes diversification effects actively into account in business decisions.

5.253. For group internal models, groups shall demonstrate that the system for measuring diversification effects realized at group level is adequate and fulfils the requirements above. As there may be some risks which specifically arise as a consequence of the group activity and which are to be quantified, groups shall take any reduction in diversification benefits due to these risks into account.

38

#### CP 56 paragraf 5.147 – Data quality control/monitoring

As part of the Impact Assessment of Level implementing measures CEIOPS has identified four policy options with varying degrees of involvement of supervisory authorities and independent third parties, respectively (cf. Impact Assessment, Annex C).

In Option 1 undertakings agree the use of data (and expert judgement in relation to data) with the supervisory authorities on a case-by-case basis.

In Option 2 undertakings and supervisory authorities agree on a common basis for data quality assessment: a comprehensive policy on data quality established by the undertaking and approved by the supervisory authorities.

In Option 3 and Option 4 data (and the use of expert judgement) is subject to review by an independent third party.

#### CP 56 Annex C – Option 1

Undertakings shall check the quality of all data used in the internal model as well as expert judgement used in relation to data. Undertakings shall agree the use of internal and external data and expert judgement with the supervisory authority on a case-by-case basis.

Initially during model approval and each time the undertaking intends to make a change in the data used in the internal model or to apply expert judgement it will approach the supervisory authorities and seek approval for the specific use of data or expert judgement under consideration in that case. The supervisory authorities may approve or decline the undertaking's request, or they may impose restrictions or conditions that the undertaking has to observe in using the respective data or expert judgement.

In this option supervisory authorities would exercise a very tight control function as they take decisions on the quality of data and expert judgement on an individual basis.

#### CP 56 Annex C – Option 2

Undertakings establish their own policy on data quality. The policy specifies the data quality criteria, the respective data sources (internal, external) and use of expert judgements, as well as the methods used and the responsibilities for validating the data and expert judgements. Furthermore, the interrelation between data and expert judgement must be addressed. The policy, as well as major changes to it, are subject to supervisory approval.

Undertakings are required to put the use of data and expert judgement on a undertaking footing by establishing their own policy on data quality. With the aim to ensure the quality of data and expert judgement used in the internal model the policy provides a common basis for both the undertaking and the supervisory authority, as it is subject to supervisory approval.

As a minimum, the undertakings specify in the policy their understanding and implementation of the three data quality criteria "accurateness", "completeness" and "appropriateness", all data sources irrespective of being internal or external sources, their use of expert judgements as well as the methodology applied and the responsibilities for validating the data and expert judgement.

In the assessment of the adequateness of data and expert judgement both parties may refer to the policy. Thereby, the interaction between undertaking and supervisory authority is well-structured as happening according to the policy and specific case-by-case decisions requiring intensive communication are reduced to the necessary amount.

The fact that any major changes to the data policy are subject to supervisory approval contributes to the continuous appropriateness of the undertaking's data quality standards.

#### CP 56 Annex C – Option 3

Internal as well as external data and the use of expert judgement must be reviewed by an independent third party. Expert judgement may be used in all areas. The use of expert judgement must be well-justified, explained and documented. In particular, when data is available, expert judgement must be reconciled with the data.

All data irrespective of being internal or external data as well as expert judgement must be subject to review by an independent third party. Thus, always a third party besides the undertaking itself and its supervisory authority is highly involved in the assessment of data quality. Nonetheless, the undertaking remains ultimately responsible for the quality of data and expert judgement in use.

In the exercise of its control function where data quality is concerned the supervisory authority strongly relies on the judgement made by these third parties.

While undertakings are allowed to make use of expert judgement related to data in all areas (e.g. for every risk category or modelling purpose), in the case that data is available, expert judgement must be reconciled with that data.

In this option the requirement to justify, explain and document the use of expert judgement is set out explicitly in order to increase transparency given that supervisory authorities are mostly acting on the findings of third parties.

#### CP 56 Annex C - Option 4

Internal as well as external data and the use of expert judgement must be reviewed by an independent third party. **The use of expert judgement should be kept to a minimum** and is only allowed when data is unavailable. It must be well-justified, explained and documented.

Option 4 is the same as Option 3 except for the scope of expert judgement that is restricted. According to the belief that expert judgement in relation to data is often unobjective, non-transparent and difficult to validate, undertakings are expected to keep the use of expert judgement to a minimum. Thus, the application of expert judgement is allowed only if relevant data is unavailable.

[...] CEIOPS recommends that undertakings should always:

- document all instances in which data quality may be compromised;
- fully justify, explain and validate the use of expert judgement when related to data;
   and
- document the inputs and assumptions on which expert judgement is based, as well as the methodology applied in the generation, use and validation of expert judgement.

In terms of the second point above (cp. also Chapter 8), undertakings may consider using some or all of the following approaches:

- a. Where possible, any decision made using expert judgement is compared to external information.
- b. Industry groups may also be used to validate expert judgements. These can be particularly useful for smaller undertakings, although care must be taken to avoid systematic risks or herd behaviour whereby each undertaking follows the expert judgement of another.
- c. Where expert judgement is used within an undertaking, this expert judgement is challenged and validated by an 'expert panel'. This might consist of a mixture of skills of people such as underwriters, modellers, risk experts, economists etc.
- d. Expert judgement may also be compared to the emerging experience for the risk that it was used to model. The expert judgements may then be revised using the additional experience gained.
- e. Sensitivity analysis may be carried out on each of the parameters derived by expert judgement to highlight significant sensitivity to a single parameter.

[...] we would add further possible aspects that undertakings may consider when using expert judgment [to para 5.167]:

d. Take account of all available knowledge, facts, data and other information, including solutions to similar problems previously used.

e. Experts should apply reasoning specific to their area of competence and present corroborating evidence.

Expert judgement may be subject to biases or other shortcomings. These limitations must be acknowledged and solutions be implemented to reduce their detrimental effects, taking into account the materiality and significance of the expert judgement used. The requirements of Article 119(2) also apply to expert judgement (cf. Section 5.3.3.5) where suitable. In addition, expert judgement is only admissible if it was derived using a **scientific method** and meets the following three requirements:

a. Empirical testing: Expert judgement must be falsifiable, refutable and testable.

b. Validation and documentation: Expert judgement must be validated and documented (cp. Chapter 8 and 9).

c. Error rate: Expert judgement must have a known or potential error rate, and standards concerning the operation of its methodology must exist and be maintained.

The approach outlined [in para 5.167] ties in with the views expressed by the Groupe Consultatif about characteristics of personal judgement where they state that:

• "In general, a professional applies rigorous analysis to arrive at judgements. In whatever area of activity, she will consider all available knowledge, facts, data and other available information. This includes that she also considers solutions her profession has chosen in the past in comparable situations. To arrive at conclusions she applies reasoning specific to her area of competence and presents corroborating evidence of the points in question. In reality often seemingly contradicting views, opinions and theories exist. The professional weighs the various diverging parts and balances the pros and cons, before coming up with her own judgement. Most importantly by documenting and sharing all methodology, assumptions and data she makes her findings available for scrutiny by other professionals. There are also approaches to commonly occurring insurance issues and problems which are worth to describe."

### **CP 58**

Sprawozdawczość do nadzoru oraz publiczna

# **Executive Summary Business and Performance (Article 50(1)(a))**

- A.1 Business and external environment
- A.2 Performance from underwriting activities
- A.3 Performance from investment activities
- A.4 Operating/other expenses
- A.5 Any other disclosures

#### System of Governance (Article 50(1)(b))

- B.1 General governance arrangements
- B.2 Fit and proper
- B.3 Risk management system
- **B.4 ORSA**
- **B.5 Internal control**
- B.6 Internal audit function
- **B.7** Actuarial function
- **B.8 Outsourcing**
- B.9 Any other disclosures
- B.10 Reporting at group level

#### Risk Management (Article 50(1)(c))

- C.1 Underwriting risk
- C.2 Market risk
- C.3 Credit risk
- C.4 Liquidity risk
- C.5 ALM risk
- C.6 Operational risk
- C.7 Other material risks
- C.8 The nature of material risk exposures
- C.9 The nature of material risk concentrations
- C.10 Risk mitigation practices
- C.11 Risk sensitivities
- C.12 Any other disclosures

#### **Regulatory Balance Sheet (Article 50(1)(d))**

- D.1 Assets
- D.2 Technical provisions
- D.3 Other liabilities
- D.4 Any other disclosures

#### **Capital Management (Article 50(1)(e))**

- E.1 Own funds
- E.2 Minimum capital requirement and solvency capital requirement
- E.3 The option set out in Article 305b used for the calculation of its Solvency Capital Requirement
- E.4 Differences between the standard formula and any internal models used
- E.5 Non-compliance with the minimum capital requirement and significant non-compliance with the solvency capital requirement
- E.6 Any other disclosures

Undertakings with an approved internal model (Qualitative & Quantitative)

Annex- Quantitative reporting templates

**Executive Summary** 

**Business and Performance** 

- A.1 Business and external environment
- A.1A Objectives and strategies
- A.2 Performance from underwriting activities
- A.3 Performance from investment activities
- A.4 Operating / other expenses
- A.5 Any other disclosures

#### **System of Governance**

- B.1 General governance arrangements
- B.2 Fit and proper processes and procedures
- B.3 Risk management system
- **B.4 ORSA**
- **B.5 Internal control**
- B.6 Internal audit function
- **B.7** Actuarial function
- B.8 Outsourcing (excluding what is covered elsewhere)
- B.9 Any other disclosures

#### **Risk Management**

- C.1 Underwriting risk exposure, concentration, mitigation and sensitivity
- C.2 Market risk
- C.3 Credit risk
- C.4 Liquidity risk
- C.5 ALM risk
- C.6 Operational risk
- C.7 Other material risks
- C.8 Material risk exposures
- C.9 Material risk concentrations
- C.10 Risk mitigation practices
- C.11 Risk sensitivities
- C.12 Any other disclosures

#### **Regulatory Balance Sheet**

- D.1 Assets
- D.2 Technical provisions
- D.3 Other liabilities
- D.4 Any other disclosures

#### **Capital Management**

- E.1 Own funds
- E.2 MCR and SCR
- E3. The option set out in Article 305b used for the calculation of its SCR
- E.4 Differences between the standard formula and any internal models used
- E.5 Non-compliance with the MCR and significant non-compliance with the SCR
- E.6 Any other disclosures

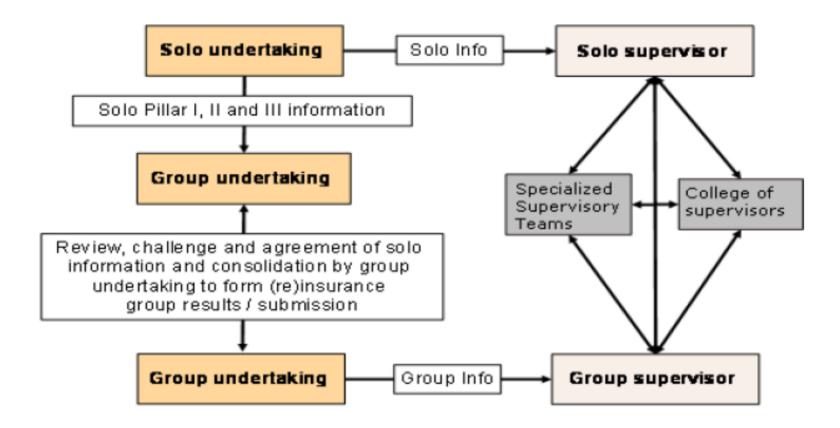
Undertakings with an approved internal model (Qualitative & Quantitative)

Annex- Quantitative reporting templates

## CP 62

Współpraca i Kolegium Organów Nadzoru

#### **College of Supervisors**



59

#### 3.16 College of Supervisors

The solo undertaking would be required to submit to the solo supervisor all information needed to discharge their duties in accordance with the Directive (i.e. for the solo supervisor to undertake the solo supervisory review process).

The solo supervisor would feed their views on the solo undertaking's information upwards to the group supervisor which would then be shared within the reduced number of supervisory authorities that will carry out some activities and with the whole college.

The group supervisor would also have the responsibility of disseminating the relevant group information across the college/supervisory teams for their consideration.

#### 3.58 & 3.60 Participation in the College of Supervisors

3.58 CEIOPS considers that the participation of supervisory authorities of significant branches, related undertakings, third countries and competent authorities of other financial sectors should be foreseen in the College meetings where issues specific to that undertaking are discussed or where their participation is relevant in terms of risks for the group or its systematic relevance to local markets.

3.60 The branch supervisor's participation should be based on the judgment of the group supervisor following the consultation with the other supervisory authorities within the College. This judgment should be supported on quantitative and/or qualitative criteria related to the significance of the entity within the group and/or in their local market, as for example:

- 2% threshold: if the market share exceeds 2% in the members state or if its gross written premium volume exceeds 2% of the gross written premium volume of the all group;
- Importance of the branch given the global risk profile of the group (e.g. where the potential contribution of the branch to the group SCR is above a material level);
- Supervisory authorities of newly entered branches in the groups having in mind how will ultimately effect the group's overall operations;
- Supervisors that bring insight into the specific nature of local governance cultures, that may have an impact both locally and/or the group as a whole.

## Deloitte.

Deloitte refers to one or more of Deloitte Touche Tohmatsu, a Swiss Verein, and its network of member firms, each of which is a legally separate and independent entity. Please see <a href="http://www.deloitte.com/dtt/cda/doc/content/ce\_about\_deloitte\_VI08.pdf">http://www.deloitte.com/dtt/cda/doc/content/ce\_about\_deloitte\_VI08.pdf</a> for a detailed description of the legal structure of Deloitte Touche Tohmatsu and its member firms.

Member of Deloitte Touche Tohmatsu

© 2009 Deloitte Central Europe