Summary of Comments on CEIOPS-CP-48/09 **Consultation Paper on the Draft L2 Advice on SCR Standard Formula - Non-Life underwriting risk**	**CEIOPS-SEC-111-09**

CEIOPS would like to thank AAS BALTA, AB Lietuvos draudimas, AMICE, Association of British Insurers, Belgian Coordination Group Solvency II (Assuralia/, CEA,

ECO-SLV-09-443, CRO Forum, Danish Insurance Association, DENMARK: Codan Forsikring A/S (10529638), DIMA (Dublin International Insurance & Management , Dutch Actuarial Society – Actuarieel Genootschap (, ECIROA, European Union member firms of Deloitte Touche To, FERMA (Federation of European Risk Management Asso, FFSA, German Insurance Association – Gesamtverband der D, GROUPAMA, Groupe Consultatif, Institut des Actuaires (France), INTERNATIONAL GROUP OF P&I CLUBS, International Underwriting Association of London, KPMG ELLP, Legal & General Group, Link4 Towarzystwo Ubezpieczeń SA, Lloyd\39s, Milliman, Munich RE, NORWAY: Codan Forsikring (Branch Norway) (991 502 , Pearl Group Limited, PricewaterhouseCoopers LLP, RBS Insurance, ROAM , RSA Insurance Group PLC, RSA Insurance Ireland Ltd, RSA\32\45\32Sun Insurance Office Ltd., SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799), UNESPA- Association of Spanish Insurers and Reinsu, Uni Oldenburg, UNIQA, and XL Capital Ltd

The numbering of the paragraphs refers to Consultation Paper No. 48 (CEIOPS-CP-48/09)

No.	Name	Reference	Comment	Resolution
1.	AAS BALTA	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been	Noted. Noted. Noted.

			in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	Noted. Noted.
2.	AB Lietuvos draudimas	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the	Noted. See response to comment 1.

			underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
3.	AMICE	General Comment	These are AMICE´s views at the current stage of the project. As our work develops, these views may evolve depending, in particular, on the other elements of the framework which are not yet fixed. 1. The comments outlined below constitute AMICE´s primary areas of concern: Generally, entity specific parameters should be allowed for the SCR calculation. Removing this ability would prevent the recognition of the specificities of the undertaking's business. There should be allowance for parameters such as "business volume" when assessing volatilities; These parameters should be defined by the supervisor as part of the Level 3 guidance in order to take into account national specificities (e.g Social Security in France). We suggest recognizing geographical diversification as was done during QIS 4. Geographical diversification should be recognised using a blending formula for business underwritten or commitments existing in different geographical areas.	Noted. We partially agree. This may be true but we have not received any alternative constructive suggestions. The standard formula cannot cope with every possible variation. Entity specific parameters are covered by other advice. We partially agree. Whilst CEIOPS recognises that this would be an improvement and more risk sensitive, it is seen as introducing unnecessary complexity at solo level, in view of the materiality of the reduction in capital requirement they could obtain

				from the calculation. CEIOPS will consider including an average level of geographical diversification implicitly in the calibration.
			Non-proportional reinsurance should be appropriately recognized in the standard formula. Not recognizing this possibility is not consistent with the spirit of the Level 1 text, since Non-Proportional reinsurance is a common mitigation technique widely applied among insurers.	Partially agree. For the purpose of implementing measure (d) of Article 105 of the level 1 Directive, CEIOPS has allowed for risk mitigation within this module as follows: • Allowance for proportional risk mitigation reinsurance is fully reflected through the use of net volume measures, via the design of the non life premium and reserve risk formula. • An average level of risk mitigating effect of non proportional reinsurance is implicitly allowed for in the calibration of the non life premium and reserve risk module. A more accurate recognition is not possible with the current design of the non life premium and reserve risk formula. This assumption may underestimate or overestimate. It

				will be conservative, in particular for risk excess protections where we would expect the protection to reduce the net deterioration for the higher percentiles. CEIOPS has consulted extensively on this issue and welcomes specific proposals that can be easily incorporated into the standard formula and these may be further considered as part of implementing measure Article 109 (d). CEIOPS would encourage undertakings with complex risk mitigation arrangements to use partial internal models or undertaking specific parameters. • Allowance for reinsurance risk mitigation is fully reflected via the design of the non life cat sub module.
4.	Association of British Insurers	General Comment	We are concerned that in aggregate this proposal may result in an excessively conservative calibration, especially if the requirements are mapped to internal models. In particular we believe there is a strong case for recognising geographical diversification. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence. We believe that entity-specific parameters for calculating premium and reserve risks are important, since standard scenarios often fail to capture proper risks.	We partially agree. See corresponding response to comment 3. Noted. See corresponding response to comment 3.

			We would also be concerned that the calibration of non-life parameters, now postponed to the 3rd wave, will introduce significantly more conservative calibration and so further layers of prudence. We would also note that CP 48 proposes a significant number of simplifications and their cumulative effect should be usefully combined. This may produce significantly different results from those obtained by firms using internal models.	Noted. Noted.
5.			Confidential comment deleted	
6.	CEA, ECO-SLV-09-443	General Comment	The CEA welcomes the opportunity to comment on the Consultation Paper (CP) No. 48 on SCR standard formula – Non Life Underwriting Risk. It should be noted that the comments in this document should be considered in the context of other publications by the CEA. Also, the comments in this document should be considered as a whole, i.e. they constitute a coherent package and as such, the rejection of elements of our positions may affect the remainder of our comments. These are CEA's views at the current stage of the project. As our work develops, these views may evolve depending in particular, on other elements of the framework which are not yet fixed. Compared to QIS4 there seems to be a movement to simpler but also more prudent calculations. Geographical diversification effects need to be taken into in the standard formula. The introduction of geographical diversification into QIS4 was a valuable improvement to the SCR formula. Failing to recognise it would be a serious departure from the Framework Directive and lead to substantial additional prudence.	Noted. See corresponding response to comment 3.

			The CEA strongly recommends allowing the use of entity specific parameters for the purpose of determining the SCR for Non-Life as mentioned in recital (14b) or article 104 (7) of the Framework Directive. We take it to be of the utmost importance to allow the use of own data in the calculation of the Non-Life SCR as the types of risks borne by Non-Life insurance contracts differ greatly within Europe due to different legal frameworks, products offered and the way individual companies manage these. We recommend finding a workable solution for an improved recognition on non prop transactions under the standard formula. The industry looks forward to assisting Ceiops to implement an appropriate solution under QIS5. As stated in our answer to CP50 on the design of health UW risk, accident should be treated under non life module.	See corresponding response to comment 3. See corresponding response to comment 3. We do not agree. It is CEIOPS view that accident will remain in the health module.
7.	CRO Forum	General Comment	48.A Non-life risk module is departing from being risk sensitive (priority: very high) For non-life insurers, the non-life risk module is (with the market risk module) the main component of the SCR (see also page 174 CEIOPS report on its fourth Quantitative Impact Study for Solvency II). For this reason the design of the non-life risk module is crucial for non-life insurers. We believe the risk module is departing from being risk sensitive and is becoming less sophisticated, mainly due to the following changes: • No allowance for geographic diversification (3.3).. It is only captured implicitly by using consolidated data, if companies are allowed to consider own data to calibrate certain factors in the standard formula.	See corresponding response to comment 3.

			• However, the CP advices not to allow undertaking specific parameters (USP), in contrast to QIS4 and also in contrast with the Directive.	See corresponding response to comment 3.
			48.B The calibration should ensure a one-year time-period for solvency purposes (priority: high) Following the general principles of Solvency II set forth in the framework directive; required capital shall be measured on a one-year time horizon and based on market-consistent valuation techniques. When calibrating the reserving and premium risk parameters, this should be taken into account.	See corresponding response to comment 5.
			48.C Not allowing for the underwriting cycle gives the wrong incentives (priority: high) At this stage the advice does not allow for future profit or for the position in the underwriting cycle. In addition a tariff increase leads to a higher SCR. We believe that these shortcomings can be avoided by allowing for expected profits (or losses), which can have a major impact (both ways).	See corresponding response to comment 5. See corresponding response to comment 5.
			48.D Not allowing for personalized CAT scenarios is in contrast with QIS4 (priority: high) The CRO Forum believes that CAT Risks can in many cases be measured more appropriately using personalized CAT scenarios (as option 3 in QIS4).	Noted. CEIOPS recognises that personalised scenarios is a sophisticated way of estimating the cat charge and is appropriate but does not meet the requirement of the standard formula as it is seen as introducing unnecessary complexity, is not harmonized nor standard across member states. CEIOPS believes the work carried

				out with the industry regarding standardized scenarios will provide an adequate and robust framework for this sub-module. Furthermore should undertakings wish to carry a more sophisticated approach they can use Partial internal models.
			48.E Segmentation should be more product-oriented (priority: high) Segmentation requirement still risk-oriented and not product-oriented, which may be disconnected with the way companies monitor their business (especially for some bundled products such as a health component that should be separated as stated in this CP).	See corresponding response to comment 5.
			48.F Calibration of stresses required to quantify impact on capital requirements (priority: high) Calibration of the stresses will be considered in further consultation papers due to be released in October 2009, and until then it is not clear what impact the P&C risk module will have on capital requirements. Please refer to our paper publish in May on Calibration.	Noted.
			48.G Further detail on Non-proportional reinsurance required (priority: high) 17. It is important to test available approaches and methods for the standard formula in QIS5 even if the standard formula will not be able to reflect the impact of non-proportional reinsurance like an internal model. In particular with respect to suggested usage of	See corresponding response to comment 5.

			market wide standard deviation in 3.5 and the fact that own estimates of standard deviation, the effect of "per risk non-proportional reinsurance" is not existent in the standard formula. Given that this form of reinsurance is a traditional and standard form of risk mitigation especially for smaller insurance companies, we think that this feature of the standard formula will lead to wrong incentives and delegating this significant point to the "partial internal models" as suggested in 3.6 is disappointing. 18. 48.H Early engagement of industry in QIS5 with respect to calibration is required (priority: high)	Noted.
8.	Danish Insurance Association	General Comment		No comment available.
9.	DENMARK: Codan Forsikring A/S (10529638)	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place	See corresponding response to comment 1.

			☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
10.	DIMA (Dublin International Insurance & Management	General Comment	DIMA welcomes the opportunity to comment on this paper. Comments on this paper may not necessarily have been made in conjunction with other consultation papers issued by CEIOPS. The Standard Formula needs to be sufficiently complex to capture the main underlying risks without becoming overly complex and burdensome for small undertakings. CP48 greatly simplifies the non-life underwriting risk module relative to QIS4 Technical Specification. Whilst a simpler calculation is welcome, this key risk module as defined by CP48 may not by sufficiently risk sensitive to achieve the fundamental aims of Solvency II. It is unsatisfactory to diminish the risk sensitivity requirement of the Standard Formula by requiring undertakings to create a partial internal model. Many undertakings will not have the resources to meet the burdensome requirements of internal models. A third way, similar to the “personalised scenarios” approach for catastrophe risk used in QIS4 may be preferable. CEIOPS believes that the mechanical estimation of the standard deviation from loss ratios as used in QIS4 to quantify underwriting risk is not adequate. Furthermore, CEIOPS is recommending that the Standard Formula take no account of an undertakings historic premium and reserve risk. Rather, factors appropriate for the	Noted. The SCR cannot take into account every eventuality. Firms who find the standard formula is unsuitable should use an IM. What we can do is limited by availability of data.

			"average" entity are applied to every Undertaking. This greatly simplifies the calculation but has two major disadvantages: 1. there is no allowance for risk mitigation arrangements whose impact is not detectable in historic data e.g. high attachment point non-proportional reinsurance. This is particularly relevant for sophisticated firms with significant risk mitigation arrangements; 2. undertakings with activity in niche lines of business (e.g. in the 'miscellaneous' line of business) may find the calibration inadequate to their particular risk profile. Standardised scenarios ensure better harmonisation rather than country-specific ones. However, method 3 (internal model) should be able to be used as an alternative to standardised scenarios. Simplified procedures for approval of this sub-model compared to all tests necessary for internal model.	See corresponding response to comment 3. See corresponding response to comment 5. See corresponding response to comment 7.
11.	Dutch Actuarial Society – Actuarieel Genootschap (	General Comment	For smaller companies, we think the standard formula for non-life risk is rather useful. We look forward to see the revised calibration including background information of the standard deviations, because the current standard deviations seem very high. For the larger companies, the standard formula in this CP is a step back in time, particularly due to the exclusion of the use of undertaking-specific data and estimates. We advise to reconsider this aspect and advise to let the actuarial function opine on the usefulness and appropriateness of the data of that particular undertaking. We think this will encourage better risk management and it will give a better understanding of the differences between the standard and the internal model. In particular, we would like to remark that the inclusion of the element Clobpp in the volume measure of the premium risk is not in line with the one year time horizon for capital requirements as stated in Framework Directive article 104-4. We will elaborate on	Noted. See corresponding response to comment 3. We do not agree. This is a volume measure and so it is right to include C(pp,lob). We disagree that the addition of the CC element to the volume measure

			this in our comments to 3.19.	as defined is incorrect. We agree the approach is crude. However: • There is no double counting. The exposures contained in PCO (lob) and C(pp,lob) are distinct and do not overlap. There is no double counting if written premium exceed earned premium. The exposure in C(pp,lob) does not relate to the exposure relating to premiums that will be written in the year. The exposure only increases in respect of contracts whose duration exceeds one year. • The C(pp,lob) term relates purely to part of the premium provision brought forward, whereas the other term is a proxy for premiums to be written or premiums to be earned, noting that the risks relating to these are rather different and only partly overlap. • The formula is as intended. The QIS4 specification did not allow for the entire exposure for multi-year contracts. It is not intended to cover

			Further detailed comments are given at the specific paragraphs.	random events after the year but changes in provisions on claims after the year as a result of new information.
12.	ECIROA	General Comment	The premium risk for captives is significantly less volatile than that for larger commercial undertakings. Captives normally underwrite a limited number of policies with premiums fixed at inception for, in most cases, annual policies. ECIROA suggests that the formula should be calibrated to recognise that captives have a lower combined ratio than 100% (as assumed in the standard formula). Captive Insurance Companies are exposed to CAT risk but on a much smaller scale than other larger undertakings. They manage these risks by the inclusion of annual aggregate limits on policies and by the purchase of stop loss reinsurance. These risk management techniques should be recognised in the calculation. Captives should be permitted to use their own catastrophe scenarios which can be documented and demonstrated to Supervisors. Please note that where a comment has not been made on a particular paragraph, this does not indicate that we agree with the paragraph.	Noted. See captive advice.
13.	European Union member firms of Deloitte Touche To	General Comment	Preliminary comment European Union member firms of Deloitte Touche Tohmatsu are currently involved in the Level 2 Impact Assessment of Solvency II conducted by the European Commission. Some elements of the “Non Life Underwriting Risk” are part of the policy issues and options dealt with by this impact assessment. As a consequence,	Noted.

			we have restricted our comments to those areas where there is no overlap with the issues addressed in the Impact Assessment. Overall comments I. We note that with this CP CEIOPS makes some key suggestions, as compared to QIS 4 methodology: a. Not to apply geographical diversification for non-life business across the globe, as it is seen as introducing unnecessary complexity at solo level. b. To take into account an additional risk: the risk relating to the change in the premium provisions that are set up for multi-year contracts. c. Not to retain the approach that the standard deviation for premium risk for each line of business is derived as a credibility mix of an undertaking-specific estimate and a market-wide estimate. This is because CEIOPS believes that the mechanical estimation of the standard deviation from loss ratios is not a sufficiently robust and reliable method unless the credibility factors are very low. (Market-wide estimations of the standard deviation for premium risk and reserve risk for each LOB will be provided by CEIOPS, as well as the correlation matrix between LOB's.) d. Not further to complicate the standard formula to cope in a better way with risk mitigation arrangements, such as non proportional reinsurance but encourage undertakings with complex risk mitigation arrangements to use partial internal models. e. The standard formula catastrophe risk sub-module shall be estimated through application of standardized scenarios (including definition of risks captured), reflecting the risk for all regions within or outside the EU, taking into account potential for multiple	Noted. See corresponding response to comment 3. Noted. Noted. Noted. See corresponding response to comment 3. Noted. See corresponding response to comment 7.

			catastrophe events, sufficient extreme events and combination of events with guidance regarding aggregation between events and countries (including yearly review). Under defined criteria capital is set according to highest result from the standard approach and a required prescribed alternative risk sensitive factor-based approach. For specific LOB's (such as Miscellaneous LOB) CEIOPS recommends the factor-based option2 approach.	
			II Throughout CP 48 there are various comments referring to simplifying the SCR. Whilst this is welcomed in principle it might result in the Standard Formula becoming less risk sensitive and therefore less appropriate for many insurers. This will increase the pressure on them to apply for either partial or full internal model approval to avoid inappropriate standard model factors where the standard formula does not fit their circumstances. Any increase in the use by firms of either partial or full internal models will result in an increase to the cost of implementing Solvency II. Similarly there will be an increase in the disclosures required as well as the level of interaction with their regulators. Hence, the costs to industry of more use of partial internal models should be weighted against the alternative cost of a less simplified standard formula.	Noted. Firms will use an IM if the SCR standard formula is not suitable for their risk profile.
			III We note that the presentation of revised calibration of parameters by CEIOPS later on could influence the results and therefore the need for a final re-evaluation of the standard formula of the Non-Life Underwriting Risk.	
			IV Although it is not mentioned in this CP, we note that the standard formula tested in QIS2 made allowance for expected profits or losses from non-life business written. This was however dropped from QIS3 and QIS4. However we believe that from an economic assessment perspective, this element should be included in the capital requirements produced by the standard formula. In particular, if business is expected to make a loss in the forthcoming	See corresponding response to comment 5.

			year, then this loss should be allowed for in the capital requirement, It seems intuitively reasonable that profitable business should need less capital than loss making business, yet the current proposed approach is purely volume based and would produce the same requirement. We note that capital requirements produced via internal models may well make (implicit) allowance for this element, and that excluding it from the standard formula potentially significantly disadvantages those firms relying on the standard formula. V We note that numerous new formula and terms are given in this CP (and others). There is not always enough detailed guidance included to insure that they are applied consistently throughout the industry. VI The comments on this CP are drawn up in isolation from the other CPs, but we have flagged some issues in the time available. We recommend reference to the other CPs.	Noted. See revised explanatory text. Noted.
14.	FERMA (Federation of European Risk Management Asso	General Comment	Ferma welcomes this opportunity to provide comments on this Consultation paper. The main purpose of our comments is to outline specificities of captive insurance and reinsurance undertakings as defined in Art 13-1a of the Directive.	Noted.
15.	FFSA	General Comment	FFSA has identified the following issues regarding non-life underwriting risk as described in the CP: ☐ Geographical diversification for non-life business (3.77): CEIOPS is proposing, as also stated in paragraph 3.3, not to apply geographical diversification for non-life business. FFSA disagrees with this short-cut and believes that geographical diversification	See corresponding response to comment 3.

			should be taken into account. FFSA suggests using a correlation matrix as for other risk aggregation. Moreover, CEIOPS states that volatility parameters are already based on historical diversified Loss ratio. That was not the case in QIS 4, so FFSA expects that it will be done for QIS 5 parameters. ☐ Calculation of premium risk: FFSA disagrees with the inclusion of CppLob to capture claims and expenses in the volume measure for premium risk (3.83, 3.84) and would like this to be removed. ☐ Regarding the non-life catastrophe risk sub-module, CEIOPS states that for a (re)insurance undertaking that operates in more than one member state, standardized scenarios from all Member States would need to be considered to the exposure in such countries (3.101). To ensure consistency across Europe, and to facilitate coordination of undertakings within a group, FFSA recommends CEIOPS to publish one single document with all scenarios applying to all the countries. In addition, this document will have also to give scenarios for countries outside Europe (for example if a European country has a branch in Japan). Also, FFSA believes that the alternative method: the simple factor-based approach (described in 3.106) should be available to all undertakings in line with proportionality principle. ☐ FFSA highly recommends the recognition of non proportional reinsurance under the standard formula.	See corresponding response to comment 11. Noted. CEIOPS is collaborating closely with the industry in order to define region wide standardised scenarios, to be published in the third set of advices. See corresponding response to comment 3.
16.	German Insurance Association – Gesamtverb and der D	General Comment	GDV appreciates CEIOPS' effort regarding the implementing measures and likes to comment on this consultation paper. In general, GDV supports the detailed comment of CEA. Nevertheless, the GDV highlights the most important issues for the German market based on CEIOPS' advice in the blue boxes. It should be noted that our comments might change as our work	Noted.

			develops. Our views may evolve depending in particular, on other elements of the framework which are not yet fixed – e.g. specific issues that will be discussed not until the third wave is disclosed. Diversification effects should be considered appropriately in the standard formula. There is a strong case for recognising geographical diversification. GDV strongly recommends the use of entity specific parameters. Finally we suggest finding a workable solution for an improved recognition on non prop transactions under the standard formula. As stated in our answer to CP50 on the design of health UW risk, accident should be treated under non life module.	Noted. See corresponding response to comment 3. See corresponding response to comment 3 See corresponding response to comment 3. . We do not agree. See corresponding response to comment 6.
17.	GROUPAMA	General Comment	Groupama has the following majors points regarding this CP: - Entity specific parameters should be allowed for SCR calculation. Avoiding it would lead to specificities of the undertaking's business not being recognised. Parameters such as volume of business should be taken into account when assessing volatilities. National parameters on Level 3 should at least be allowed to take into account national specificities (such as Social Security in France for instance). (3.85) - Non-proportional reinsurance should be taken into account even in the standard formula. Avoiding it is not consistent with the reality of the insurance business as NP reinsurance is a very widely used mitigation technique. (3.84) - The correlation coefficient of 0.5 between premium and reserve risk seems to be already fixed. Will CEIOPS carry out a	See corresponding response to comment 3. See corresponding response to comment 3. Work is still being carried out on correlations.

			revised calibration by the end of the year? This correlation coefficient is the same for all lobs at the moment. But the correlation we could potentially have between reserve and premium risks is extremely different for all lobs. For short tail business, such an assumption is definitely too high. (3.32) - We suggest recognizing geographical diversification as it was done during QIS 4. Being geographically well-diversified is an important element which reduces risk exposure. (3.77)	We do not agree. See corresponding response to comment 3.
18.	Groupe Consultatif	General Comment	We have a general concern that the direction of change associated with this paper is counter to the directive objective of a risk-sensitive standard with incentives to improve risk management in practice. I. We note that with this CP CEIOPS makes some key suggestions, as compared to QIS 4 methodology: a. Not to apply geographical diversification for non-life business across the globe, as it is seen as introducing unnecessary complexity at solo level. b. To take into account an additional risk: the risk relating to the change in the premium provisions that are set up for multi-year contracts. c. Not to retain the approach that the standard deviation for premium risk for each line of business is derived as a credibility mix of an undertaking-specific estimate and a market-wide estimate. This is because CEIOPS believes that the mechanical estimation of the standard deviation from loss ratios is not a sufficiently robust and reliable method unless the credibility factors are very low. (Market-wide estimations of the standard deviation for premium risk and reserve risk for each LOB will be provided by CEIOPS, as well as the correlation matrix between LOB's.)	See corresponding response to comment 13.

			d. Not further to complicate the standard formula to cope in a better way with risk mitigation arrangements, such as non proportional reinsurance but encourage undertakings with complex risk mitigation arrangements to use partial internal models. e. The standard formula catastrophe risk sub-module shall be estimated through application of standardized scenarios (including definition of risks captured), reflecting the risk for all regions within or outside the EU, taking into account potential for multiple catastrophe events, sufficient extreme events and combination of events with guidance regarding aggregation between events and countries (including yearly review). Under defined criteria capital is set according to highest result from the standard approach and a required prescribed alternative risk sensitive factor-based approach. For specific LOB's (such as Miscellaneous LOB) CEIOPS recommends the factor-based option2 approach. II Throughout CP 48 there are various comments referring to simplifying the SCR. Whilst this is welcomed in principle it might result in the Standard Formula becoming less risk sensitive and therefore less appropriate for many insurers. This will increase the pressure on them to apply for either partial or full internal model approval to avoid inappropriate standard model factors where the standard formula does not fit their circumstances. Any increase in the use by firms of either partial or full internal models will result in an increase to the cost of implementing Solvency II. Similarly there will be an increase in the disclosures required as well as the level of interaction with their regulators. Hence, the costs to industry of more use of partial internal models should be weighted against the alternative cost of a less simplified standard formula. III We note that the presentation of revised calibration of parameters by CEIOPS later on could influence the results and	

			therefore the need for a final re-evaluation of the standard formula of the Non-Life Underwriting Risk. IV We note that numerous new formula and terms are given in this CP (and others). There is not always enough detailed guidance included to ensure that they are applied consistently throughout the industry. V The comments on this CP are drawn up in isolation from the other CP's, but we have flagged some issues in the time available. We recommend reference to the other CP's.	
19.	KPMG ELLP	General Comment	(a) Overall we feel that the draft advice as detailed in this CP over-simplifies the calculation of the non-life underwriting risk capital charge and is likely to affect some (re)insurance undertakings that use the standard formula unfairly by overestimating the capital requirement. Having said that, we appreciate the difficulty in arriving at a one size fits all calibration when attempting to design a risk sensitive harmonized solvency standard formula that is not overly complex and agree that the option available to use partial internal models (or full) provides (re)insurance undertakings with an alternative where the standard formula does not adequately capture the risks faced by the (re)insurance undertakings. (b) The areas of most concern are the removal of geographical diversification and the removal of personalised scenarios in catastrophe risk. We feel that the flexibility that was present in the QIS4 exercise to use personalized catastrophe scenarios to calculate the non-life catastrophe risk capital charge should remain. The proposed method to use standardized scenarios defined by CEIOPS as the general rule will not be relevant for all (re)insurance undertakings or types of risk exposure and the alternative of using a factor based approach in prescribed circumstances may still not capture the risk correctly.	Noted. Firms will use an IM if the SCR standard formula is not suitable for their risk profile. See corresponding response to comment 3 and to comment 7.

			I We welcome the proposed approach to setting standardised scenarios for catastrophe risk which will add consistency. However, calibration of a formula approach will be extremely challenging and its use by (re)insurance undertakings should be minimised. This means that the subsequent removal of personalised scenarios is unacceptable due to the shortcomings of any proposed formula approach which is only suitable for a small number of cases. By doing so a significant proportion of the EU non-life industry catastrophe risk would be calculated on an uneconomic, and possibly even incorrect, basis. (d) On balance we also agree with the removal of any impact in the standard parameters of an undertakings own experience. (e) We agree that incorporating allowance for the very important non-proportional reinsurance covers is difficult. This does not stop a solution being worked upon and suggest that by reinstating personalised scenarios for non-life catastrophe risk this would resolve most of this issue as well. (f) The calculation of premium risk still does not allow for the expected outcome of the business which is an important feature in setting non-life capital. Profit making business should require less capital than loss making business and yet both would have the same capital requirements, which are solely based on volumes under the proposed formula. This is an uneconomical. The expected losses or profits from prospective business should be included in the formula. (g) There are important elements of the paper that are yet to be calibrated. It is important that the basis and derivation are made available to assist further commentary and understanding by the industry.	In general, the whole CAT risk section is currently under review by CEIOPS, taking into account the work of the aforementioned CAT risk task force. Noted. Noted. See corresponding response to comment 3. See corresponding response to comment 5. Noted.

			(h) Geographical Diversification Our comments on geographical diversification are contained in Annex C. We disagree with the proposal to exclude geographical diversification for the reasons explained in 3.3 below.	See corresponding response to comment 3.
			(i) Non-Life Catastrophe Risk We disagree that personalised scenarios are not considered in the proposals. Non-life catastrophe risk is one element of the standard approach where complete standardisation is impossible. A significant proportion of the EU non-life catastrophe risk resides outside the EEA. It is therefore unrealistic to assume EU standard scenarios or a formula calibrated on EU catastrophe experience/expectations will ever represent a significant portion of the risk is designed for. It should be recognised that, in the same way standard scenarios methodologies are being proposed, then standard approaches to personalised scenario methodologies should be included. We do not believe it is suitable to assume that where the standard formula is unsuitable then a firm will apply (and obtain) a partial internal model. We propose that, like QIS4, personal scenarios are included in the standard formula but under strict guidance to their construction. The steps to non-life catastrophe risk would be; a. use standard EU based scenarios b. if standard scenarios are inappropriate or disproportionate then use a formula c. if the standard formula is also demonstrably	In general, the whole CAT risk section is currently under review by CEIOPS, taking into account the work of the aforementioned CAT risk task force. Also see corresponding response to comment 7.

			unrepresentative of the (re)insurance undertaking's non-life cat risk (due to location of risks etc) then apply personalised scenarios which are produced under guidelines/disclosures provided by CEIOPS Neither the proposed options (standardised scenarios or a formula) sufficiently capture risk in an appropriate manner for a large enough proportion of (re)insurance undertakings to make them the only options available. For non-life catastrophe risk, the only way to lead to a sufficiently risk based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a residual number of (re)insurance undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of (re)insurance undertakings requiring personalised scenarios. The use of personalised scenarios would improve allowance for non-proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will act more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most "non-working" non-proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. This is another known issue with the non-life element of the SCR. Personalised scenarios would therefore go towards solving two issues simultaneously.	
20.	Link4 Towarzystwo	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses	See corresponding response to comment 1.

	Ubezpieczeń SA		are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
21.	Lloyd's	General Comment	We strongly disagree with a number of the proposals in this consultation paper. The non-life underwriting risk will be the dominant element of all non-life insurers/reinsurers capital requirements and as such should be calibrated correctly and in an economic fashion. The current proposals actively discriminate against a significant portion of the non-life industry in Europe, namely large, multi-national or	We disagree. The standard formula cannot possibly cater for every existing risk profile in the world.

			reinsurance undertakings and result in uneconomic assessments. The main supporting argument for such an approach is to assume such entities will probably use internal models. This assumption is absolutely unsuitable when setting the standard approach which should be targeted to be fair to all.	
			The areas of most concern are the removal of geographical diversification and the removal of personalised scenarios in catastrophe risk. Both of these issues can be addressed by workable, proportional solutions that result in economic assessments.	See corresponding response to comment 3.
			We welcome the proposed approach to setting standardised scenarios for catastrophe risk which will add consistency to the process. However, calibration of a formula approach will be extremely challenging and its use by entities should be minimised. This means that the subsequent removal of personalised scenarios is unacceptable due to the shortcomings of any proposed formulaic approach which is only suitable for a small number of cases. By doing so, a significant proportion of the EU non-life industry catastrophe risk would be calculated on an uneconomic and even incorrect basis. It is therefore critical that use of personalised scenarios is allowed.	In general, the whole CAT risk section is currently under review by CEIOPS, taking into account the work of the aforementioned CAT risk task force. Also see corresponding response to comment 7.
			On balance we also agree with the proposed removal of any impact in the standard parameters for premium and reserving risk of an undertaking's own experience.	Noted.
			We agree that incorporating allowance for non-proportional reinsurance covers is difficult. This does not stop a solution being worked upon and we suggest that reinstating personalised scenarios for non-life catastrophe risk would resolve most of this issue as well.	See corresponding response to comment 3.
			The calculation of premium risk still does not allow for the expected	See corresponding response to comment 5.

			outcome of the business, which is an important feature in setting non-life capital. Profit-making business should require less capital than loss making business and, yet, both would have the same capital requirements under the proposed formula, which is solely based on volumes. This is uneconomical. Expected losses or profits from prospective business should be included in the formula.	
			There are important elements of the paper that are yet to be calibrated. Given this, it is important that the basis and derivation of parameters are made available to assist further commentary and understanding by the industry.	Noted.
			Geographical Diversification Our detailed comments on geographical diversification are set out under C.2. to C.34. A summary of these is as follows. We absolutely disagree with the proposal to exclude geographical diversification as it: - goes against theory (as stated in para C.29) - goes against the principles of Solvency II (an economic assessment) - goes against the views of various respected international associations such as the IAIS and IAA - Actively discriminates against a significant portion of the EU insurance/reinsurance market. That is the large, cross border or reinsurance undertakings - Implies that certain undertakings will get internal (or partial internal) model approval or will use undertaking specific parameters. This is an inappropriate assumption when forming the standard formula parameters and approaches	See corresponding response to comment 3.

			- Incorrectly states the alternatives are complex or impractical. There are alternatives that are completely aligned with the principle of proportionality (in that only those for whom the simplified approach produces material inaccuracies have to do any significant extra work) - Proposes implicitly allowances that will be inadequate if not calibrated correctly (CEIOPS Needs to confirm that calibration methods) - Proposes implicit allowances that will knowingly (and avoidably) understate the capital requirements for a large number of undertakings - Ignores realistic improvements to the QIS4 approach (rather than the alternative suggested). The introduction of geographical diversification in QIS4 was widely welcomed Non-Life Catastrophe Risk We strongly disagree with the proposal that personalised scenarios are not permitted in the standard formula. Non-life catastrophe risk is one element of the standard approach where complete standardisation is impossible. A significant proportion of non-life catastrophe risk facing EU insurers resides outside Europe. It is therefore unrealistic to assume that EU standard scenarios or a formula calibrated on EU catastrophe experience/expectations alone will ever cover a significant enough portion of the risk it is intended to assess. In the same way that standard scenario methodologies are proposed, then standard approaches to personalised scenario methodologies should be included. We do not believe it is appropriate to assume that where the standard formula is	In general, the whole CAT risk section is currently under review by CEIOPS, taking into account the work of the aforementioned CAT risk task force. Also see corresponding response to comment 7.

			unsuitable then an undertaking will apply (and obtain regulatory approval for) a partial internal model, this defeats the object of a standard formula. We propose that personal scenarios be included in the standard formula but under strict guidance to their construction, as occurred under QIS4. The steps to assessment of non-life catastrophe risk would be: - use standard EU based scenarios - if standard scenarios are inappropriate or disproportionate then use a formula - if the standard formula is also demonstrably unrepresentative of an undertaking's non-life cat risk (due to location of risks, etc.), then apply personalised scenarios produced in accordance with CEIOPS guidelines/disclosures. Neither of the proposed options (standardised scenarios or a formula) sufficiently capture risk in an appropriate manner for a large enough proportion of undertakings to make them the only options available. For non-life catastrophe risk the only way to produce a sufficiently risk-based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios. The use of personalised scenarios would improve allowance for non-proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will acts more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most "non-working" non-	See corresponding response to comment 7.

			proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. This is another known issue with the non-life element of the SCR. Personalised scenarios would therefore go towards solving two issues simultaneously.	
22.	Munich RE	General Comment	We fully support all of the GDV statements and would like to add the following points: It is understood that there are three structural changes compared to the QIS4 setup: (1) Removal of the method based on the Herfindahl-index to explicitly assess the impact of geographical diversification. (2) Removal of the credibility approach for premium risk. (3) Within the catastrophe sub-module change from an event-based approach to a total-loss-based approach. Due to the fact that no calibration was provided it is hard to provide specific feedback as the impact of the nonlife risk module cannot be determined. Thus, the comments in this document may have to be qualified once the calibration has been laid down. However, it seems that the non-life risk module is departing from being risk sensitive and less sophisticated. Notwithstanding this fact, we want to point out the following important principles: ☐ Following the general principles of Solvency II set forth in the framework directive; required capital shall be measured on a one-year time horizon and based on market-consistent valuation	Noted. See corresponding response to comment 16. Noted. Noted. Noted. Noted.

			techniques. ☐ Reserving risk on a one-year time horizon is reflected in the volatility of the claim development (or runoff) result – the actuarial revaluation of claim reserves given that one additional year of information is available. The forthcoming calibration methods should be checked against this principle. ☐ Similar to our point for reserving risk above, we also would like to point out the relevance of the one-year time horizon for premium risk. The fundamental question addresses the change of the profitability estimates over a one-year time horizon starting at the date the business is written (prior to the first estimate for claims reserves). We recall that calibration should be based on the first estimate of the loss ratios LR1,…,LRn for the individual accident years 1…n. This implies that each loss ratio occurs on a different valuation date, as this loss ratio represents the first year (following the potential occurrence of a claim) loss ratio estimate. The forthcoming calibration methods should be checked against this principle. With respect to (2) above it is important to note that it is not clear at present how the own data of the undertakings can be used within the standard formula as required by section (14b) of the Framework Directive. Once the calibration has been provided this topic will be of particular importance. The non-life approach still lacks an appropriate consideration of non-proportional reinsurance. We would encourage CEIOPS to consider our suggestion (respective documents available on request) which we developed in a working group consisting of representatives from Munich Re, Swiss Re and Hannover Re. These ideas have been discussed with the European Commission (Financial Institutions, Insurance and Pensions), CEIOPS (FinReq-	See corresponding response to comment 3.

			EG, SCR subgroup), CEA and AMICE. In all cases we received agreement on the problem and the general approach towards a solution. In some cases further detailed analysis towards a possible implementation were prepared and will be submitted to CEIOPS. We are happy to further contribute to an enhancement of the standard formula regarding non-proportional reinsurance. A meaningful QIS5 is vital given the divergence of views with respect to the calibration of the standard formula. We would urge CEIOPS to engage with the industry at an early stage to discuss the respective specification and calibration.	Noted.
23.	NORWAY: Codan Forsikring (Branch Norway) (991 502	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of	See corresponding response to comment 1.

			premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
24.	Pearl Group Limited	General Comment	We are concerned that in aggregate this proposal may result in an excessively conservative calibration. In particular we believe there is a strong case for recognising geographical diversification. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence. We would also be concerned that the calibration of non-life parameters, now postponed to the 3rd waive, will introduce significantly more conservative calibration and so further layer of prudence. As a result we are unable to assess impact fully until the proposed factors are published later this year. How these factors fit in with the proposed methodology may mean that we have further comments on this CP.	See corresponding response to comment 4. Noted.
25.	Pricewaterhouse Coopers LLP	General Comment	Overall we are in support of many of the proposed changes to the non-life risk module. In particular we support CEIOPS' view that the formula is already fairly complex and introducing additional complexity is unlikely to be welcomed. We further support that firms should consider the internal model route (partial or full) where their own risk profile is not appropriately considered within the standard formula. However, we also believe that for some firms the internal model route will be onerous and costly. As such we believe that these firms should have the opportunity to adapt the assumptions within the standard formula as part of their ORSA to fit their risk profile	Noted. Noted. Noted.

			better.	
26.	RBS Insurance	General Comment	We agree with the changes to the premium and reserve risk calculations to allow for multi-year policies. For catastrophe risk we believe that geographical diversification should be allowed for. We also believe that an entity-specific approach, as was allowable under QIS4, is the best approach for catastrophe risk, and would be suitable under the standard formula SCR rather than requiring a partial internal model. We feel that CEIOPS may be setting itself a hard task in delivering and keeping updated catastrophe events for all of Europe. If market events are required we believe an individual undertaking's share should be calculated with regards to its actual geographical exposure rather than through a proportion of market premiums (which is risk insensitive) We believe the revised calibrations of premium and reserve risk factors, and correlation matrices should be published as soon as possible. We are now getting close to solvency II implementation, and it is late for these factors still to be undecided.	Noted. See resolution to comment 3. See resolution to comment 3. Noted. Noted. Noted.
27.	ROAM	General Comment	1. Generally, entity specific parameters should be allowed for SCR calculation. Removing this ability would prevent the recognition of the specificities of the undertaking's business. There should be allowance for parameters such as "business volume" when assessing volatilities; These parameters should be defined by the supervisor as part of the Level 3 guidance in order to take into account national specificities. 2. Non-proportional reinsurance should be appropriately recognized in the standard formula. Not recognizing this possibility	See resolution to comment 3. See resolution to comment 3.

			is not consistent with the spirit of the Level 1 text, since Non-Proportional reinsurance is a common mitigation technique widely applied among insurers.	
			3. We suggest recognizing geographical diversification as it was done during QIS 4. Geographical diversification should be recognised using a blending formula for business underwritten or commitments existing in different geographical areas. An important argument is an argument of level playing field. Recognizing geographical diversification on solo level is necessary to allow companies with foreign branches to be treated on diversification level equivalent to companies with subsidiaries who file group SCRs etc…	See resolution to comment 3.
			CEIOPS considers that the capital requirement for health catastrophe risk should fall under the non-life catastrophe risk category. We do not agree with this categorisation.	Not agreed. See resolution to comment 6.As stated in health advice, SLT health cat risk and non SLT cat risk shall be derived *by the same methodologies* as described in CP48. Health CAT risk is captured in the Health module.
28.	RSA Insurance Group PLC	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular:	See resolution to comment 1.

			☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
29.	RSA Insurance Ireland Ltd	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the	See resolution to comment 1.

			Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
30.	RSA - Sun Insurance Office Ltd.	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of	See resolution to comment 1.

			business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
31.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	General Comment	CEIOPS propose that the standard formula is kept simple and that complexities arising from issues such as geographical diversification, non-proportional reinsurance and catastrophe losses are dealt with in (partial) internal models. We do not agree with this approach as there is no certainty that internal models will be approved and overly conservative standard formula is not a suitable substitute. At this point detail on the calibration of the parameters is missing which inhibits quantitative comment on CP 48. We think that it is essential that CEIOPS calibrate the parameters using appropriate data. In particular: ☐ For reserving risk adjustment to historic data must be made to allow for the fact that the underlying principles for calculating technical provisions (best estimate plus risk margin) have not been in place hitherto. In particular the discipline imposed by the Actuarial Function overview of the calculation of technical provisions on a line by line basis has not been in place ☐ Historic premium risk is dampened by the impact of the underwriting cycle. In other words the loss ratios between years of business are not independent but dependent on the cycle of premium rates charged. As we noted in QIS4 the QIS4 calibrations for the parameters resulted in higher capital requirements than those calculated by our	See resolution to comment 1.

			internal model. We would be very concerned if the further CEIOPS calibration work led to yet higher calibrations of the parameters.	
32.	UNESPA-Association of Spanish Insurers and Reinsu	General Comment	UNESPA (Association of Spanish Insurers and Reinsurers) appreciates the opportunity to analyze and comment on Consultation Paper 48 about SCR Standard Formula – Non-Life underwriting risk UNESPA is the representative body of more than 250 private insurers and reinsurers that stand for approximately the 96% of Spanish insurance market. Spanish Insurers and reinsurers generate premium income of more than € 55 bn, directly employ 60.000 people and invest more than € 400 bn in the economy. The comments expresed in this response represent the UNESPA´s views at this stage of the project. As our develops, these views may evolve depending in particular, on other elements of the framework which are not yet fixed. As this is a general formula, the standard formula should not be overly complex, but its oversimplification can cause loss of accuracy in defining the risk profile of each business. We are not sure they can properly assess a methodology without determining yet final factors and correlations proposed by CEIOPS (have to wait the 3rd set of advice) because without them, we can not adequately assess the impact of each of the options. Calibration can be technically adequate (or not), but surely no one can fail to consider the eventual impact on economic terms. The lognormal distribution is not always the distribution that better fits to historical data of all lines of businnes For this reason there should be allowance for using an undertaking	Noted. Noted. Noted. Noted. Noted. We partially agree. This may be true but we have not received any alternative constructive

			specific parameters in the standard formula that consider different statistical distribution (even in the same line of business) because of claims do not fit necessarily neither the same parameters nor the same distribution. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	suggestions. The standard formula cannot cope with every possible variation.
			The use of entity specific parameters is strongly recommended	Entity specific parameters are covered by other advice. While in principle it would be right to allow different statistical distributions, in practice this could not be done within the constraints appropriate to entity specific parameters. Firms can use an IM if they can demonstrate that another distribution is more suitable.
			Possible double counting between non-life underwriting risk and non-life catastrophe risk modules is a concern. The calibration of the standard approach implicitly include catastrophes in the calculation of premium and reserve risk charges since the historic data used for these risk modules cannot be adjusted to exclude catastrophic events. In order to avoid this situation, CEIOPS should consider a more pragmatic calibration for the undertaking specific option allowing undertakings to estimate which parts of catastrophe risks are already included in the calculations of premium and reserve risk and then exclude these from those taken into account in the catastrophe risk module.	Noted. See resolution to comment 7. The issue of double counting between premium and reserve risk and cat risk is addressed in the advice.
			Diversification effects should be considered appropriately in the standard formula	Noted. See resolution to comment 3.

			There is a strong case for recognising geographical diversification. The introduction of geographical diversification into QIS4 was a valuable improvement to the SCR formula. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence.	
33.	XL Capital Ltd	General Comment	The three issues which concern us the most in CP 48 are: ☐ The removal of geographical diversification is disappointing and goes against the interests of firms writing large volumes of global risks and global programs. Omitting recognition of geographical diversification would be a serious departure from the Directive and lead to substantial additional prudence. ☐ Under section 3.107, undertakings with exposures outside the EU are forced to use the higher capital charge for those exposures ☐ Under section 3.107, undertakings writing non-proportional reinsurance are forced to use the higher capital charge for those exposures.	Noted. See resolution to comment 3. Noted. The SCR cannot take into account every eventuality. Firms who find the standard formula is unsuitable should use an IM. Noted. See resolution to comment 3.
34.	KPMG ELLP	1)	The recognition of diversification is a fundamental concept of insurance/reinsurance. A diversified (re)insurance undertaking will face reduced risk and under the economic principle that underlie solvency II should be required to hold less capital	Noted.
35.	KPMG ELLP	1.4.	We note that this paper does not deal with calibration, non-life premium risk and reserve risk market standard deviations, catastrophe parameters/scenarios, undertaking specific parameters, correlations and simplification issues. We look forward to receiving this guidance in CEIOPS' third set of advice.	Noted.
36.	ROAM	1.4.	4. Calibration: we note that this issue will be dealt with in the	Noted.

			third set of advice.	
37.	KPMG ELLP	10)	We disagree with this comment. The capital required under Solvency II is meant to be appropriate, it is not designed to force (re)insurance undertakings to hold excessive capital to protect policyholders. The measure of a 99.5% VaR has been chosen and the standard formula should not be deliberately targeting a higher level to offer additional comfort to policyholders. Also this is a narrow statement that is incorrect. For example, higher capital requirements could force (re)insurance undertakings to withdraw products which would not benefit policyholder protection at all.	We do not agree. The SCR cannot take into account every eventuality. Firms who find the standard formula is unsuitable should use an IM. Noted.
38.	KPMG ELLP	11)	The recognition of diversification is a fundamental concept of insurance/reinsurance. A diversified (re)insurance undertaking will face reduced risk and under the economic principle that underlie solvency II should be required to hold less capital. We see no reason to deliberately ignore a fundamental risk mitigation technique. We disagree with this reason. This in fact should be a strong reason not to choose option 1.	Noted. See resolution to comment 3.
39.	KPMG ELLP	12)	We disagree with the use of implicit allowance for geographical diversification for the following reasons: a) we understand the calibration of premium and reserving risk factors will be based more on small and medium sized entities which, as stated in this paper, will not benefit as much from geographical diversification as large or reinsurance undertakings. Therefore under this approach the allowance will be significantly understated. b) there will be a large number of (re)insurance undertakings who will have too low a risk charge. That is, they will be credited	Noted. See resolution to comment 3.

			with implicit geographical diversification when they in fact they have none.	
40.	KPMG ELLP	13)	We agree to some extent but it is widely accepted that most classes of business do benefit from geographical diversification. Also an improved split of diversification areas, as we have proposed, would improve the position.	Noted. See resolution to comment 3.
41.	KPMG ELLP	14)	This argument applies to any module of the SCR and we believe it is irrelevant. We disagree with the argument that given the module can be calculated using entity specific parameters or an internal model under certain condition this substitutes the need to calculate the parameters accurately. We strongly believe it should be assumed all entities use a standard formula and the formula should be calibrated to the level required under the framework directive.	We do not agree. The SCR cannot take into account every eventuality. Firms who find the standard formula is unsuitable should use an IM.
42.	KPMG ELLP	15)	We disagree. We understand the calibration of premium and reserving risk factors will be more based on small and medium sized entities which may not contain characteristics of large or reinsurance entities. CEIOPS needs to clarify the approach to calibration on premium and reserving before relying on the factors.	Noted. See resolution to comment 13. Noted.
43.	KPMG ELLP	16)	This may only be correct depending on the calculation of undertaking specific parameters. If undertaking specific parameters exclude catastrophic losses to avoid double counting, this statement is not correct.	The issue of double counting between premium and reserve risk and cat risk is addressed in the advice.
44.	KPMG ELLP	17)	We disagree and believe this statement makes assumptions about calibrations that are incorrect.	CEIOPS cannot respond as it is not clear which statement is being referred to here.
45.	KPMG ELLP	18)	We disagree. This makes assumptions about calibrations that are	Noted. See resolution to comment

			incorrect and will in fact lead to an understatement of capital requirements for a large number of (re)insurance undertakings who would gain implicit allowance for geographical diversification when in reality they had none. We also disagree with the introduction of an option that specifically discriminates against a significant proportion of (re)insurance undertakings (large and reinsurance entities) on the ground that this group "will probably have an internal model". We do not think such assumptions are suitable for a standard formula.	13. Noted. The SCR cannot take into account every eventuality. Firms who find the standard formula is unsuitable should use an IM.
46.	KPMG ELLP	19)	We agree that geographical diversification will not impact all entities.	Noted.
47.	KPMG ELLP	20)	We disagree. An improvement would be to segment most areas/continents into broad regions, for example The USA could be 4 regions as could Europe etc. This would lead to FEWER splits than QIS4 but the overall impact would be a significant improvement. We strongly recommend that this option is tested under QIS5.	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in the advice.
48.	KPMG ELLP	28)	We agree that geographical diversification is justified as it translates to economic realities. We also agree that it would apply to larger multinational organisations but note this group represents a very significant proportion of the EU insurance/reinsurance industry. We disagree with the statement that this will introduce undue complexity. The requirement to split premiums and outstanding claims into broad geographical regions should not daunt any insurance undertaking and is not too cumbersome. In particular, a small, single country insurance undertaking could see a split that would all fall naturally into one area and hence they would have to	Noted. Noted. The SCR cannot take into account every eventuality. The segmentation may be more difficult for some businesses.

			do very little or probably no extra work. We believe geographical diversification is completely aligned with the principle of proportionality in that those (re)insurance undertakings it effects are expected to do extra work (and should have the capabilities given it does effect them) and would hardly impact those is does not effect.	Noted.
49.	European Union member firms of Deloitte Touche To	3.1.		No comment available.
50.	Groupe Consultatif	3.1.		No comment available.
51.	Munich RE	3.1.	Geographical diversification should be recognised also in the standard formula as this is one of the main principles of insurance. Companies should not be forced to use partial internal model in order to recognise this positive feature of a balanced portfolio.	Noted. See resolution to comment 3.
52.	AMICE	3.2.	CEIOPS points out that a "number of supervisors and undertakings outlined the difficulties in encompassing the potentially non-linear effects of these risk mitigating instruments in the standard approach". AMICE has developed, in its paper "Proposal on Reinsurance and Non-Life Calibration for the QIS5", three options for recognising this type of reinsurance within the standard formula. CEIOPS should take into consideration the results of its working group on non proportional reinsurance, either in its advice on non life underwriting risk, or in the course of its examination of remaining issues.	Noted.

53.	Association of British Insurers	3.2.	No mention is made of how to allow for new business expected to be written in the following 12 months as per Article 101 (3) Some feedback from QIS4 has still not been considered: ☐ Premium increase leads to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure ☐ No allowance for future profit or for position in underwriting circle. The following provides some suggestions on how the issues above could be dealt with: ☐ The easiest way in which to take into account the issue regarding the increased premium leading to a higher capital charge would be to allow for an adjustment to the capital required. This adjustment should equal the expected profit on the premium to be written in the next period. This would partly take into account the position within the underwriting cycle. ☐ Another approach would be to allow companies to use an adjustment factor to the premium volume measure. This factor would reflect any rate changes that have been made in excess of claims inflation. It should also take into account the expected difference in loss ratios between the entity and the market as a whole. ☐ Instead of using premium as a volume measure, the formula could be more exposure based, i.e. based on number of policies or sum insured. A final option would be to base the volume measure on expected claims and expenses by line of business. The standard deviation would need to be adjusted so as to get to the same level of capital	Noted. Article 105(2) of the Level 1 text makes clear that the non-life underwriting risk module should take into account "uncertainty in the results of insurance and reinsurance undertakings related to the existing insurance and reinsurance obligations as well as to the new business expected to be written over the forthcoming twelve months", and would therefore by definition not cover expected profits and losses. We do not agree. While using expected claims increases the

			as is currently being held. The expected claims and expenses could be based on the entity's business plan (subject to approval by the supervisory authorities). The factor would be applied to the expected cost of claims and expenses, the premiums would then need to be deducted to get the capital charge.	reliance on the assessment of the profitability of current premium rates, CEIOPS considers it does so only marginally. The slightly higher reliance on accuracy of expected claims would also increase the need for supervisors to monitor the accuracy of undertakings' provisions.
54.	CEA, ECO-SLV-09-443	3.2.	No mention is made of how to allow for new business expected to be written in the following 12 months as per Article 101 (3). In this respect, our feedback from QIS4 has still not been considered: ☐ Tariff increases lead to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure. ☐ There is no allowance for future profit or for position in underwriting circle. The following provides some suggestions on how the issues above could be dealt with: ☐ The easiest way in which to take into account the issue regarding the increased premium leading to a higher capital charge would be to allow for an adjustment to the capital required. This adjustment should equal the expected profit on the premium to be written in the next period. This would partly take into account the position within the underwriting cycle. ☐ Another approach would be to allow companies to use an adjustment factor to the premium volume measure. This factor would reflect any rate changes that have been made in excess of	See response to comment 53.

			claims inflation. It should also take into account the expected difference in loss ratios between the entity and the market as a whole. ☐ Instead of using premium as a volume measure, the formula could be more exposure based, i.e. based on number of policies or sum insured. ☐ A final option would be to base the volume measure on expected claims and expenses by line of business. The standard deviation would need to be adjusted so as to get to the same level of capital as is currently being held. The expected claims and expenses could be based on the entity's business plan (subject to approval by the supervisory authorities). The factor would be applied to the expected cost of claims and expenses, the premiums would then need to be deducted to get the capital charge.	
55.	Dutch Actuarial Society – Actuarieel Genootschap (	3.2.	Feedback on QIS4: As can be concluded from the general considerations (see 3.3 – 3.7) some of the feedback issues have been taken into account setting up this CP. Those issues are the ones concerning the catastrophe risk, the geographical diversification, the credibility weighted averages for standard deviations for premium and reserve risk and the non-proportional reinsurance. Besides that CEIOPS considers a new risk (not yet recognized in QIS4): the change in premium provision which is set up for multi-year contracts. There are some issues that have been previously identified but that have not yet been addressed and that will (certainly) still rise when this CP comes into effect in a new QIS-study. These are: * Tariff increase leads to higher SCR (even if aim was to improve profitability), due to the choice of Premium as Volume measure * No allowance for future profit or for position in underwriting	Noted. See response to comment 53.

			circle. In our opinion allowance for future profit should be allowed for until the end of the contract term. The feedback on the tariff adjustment is summarised as it could induce behaviour toward smoothing in stead of better risk management. But also is true that better risk management is not encouraged, because the desired effect of reduction of SCR is only going to happen after all the old reference years disappeared. More weight on recent years could encourage better risk management. In method 2 for NL catastrophe risk sub module it is identified that consistency of scenarios between Member States should be ensured. We agree on that and we want to add that the scenarios should correspond to the risk within a State.	See response to comment 53. Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in the advice.
56.	European Union member firms of Deloitte Touche To	3.2.	Feedback on QIS4: As can be concluded from the general considerations (see 3.3 – 3.7) some of the feedback issues have been taken into account setting up this CP. Those issues are the ones concerning the catastrophe risk, the geographical diversification, the credibility weighted averages for standard deviations for premium and reserve risk and the non-proportional reinsurance. Besides that CEIOPS considers a new risk (not yet recognized in QIS4): the change in premium provision which is set up for multi-year contracts. There are some issues that have been previously identified but that have not yet been addressed and that will (certainly) still rise when this CP comes into effect in a new QIS-study. These are: • Rate increases leading to higher SCR (even if aim was to improve profitability), due to the choice of Premium as Volume measure • No allowance for future profit or for position in underwriting cycle	Noted. See response to comment 53.

			• No recognition of the multiple lines of (independent) business written in the London Market and Lloyd's that will all be treated within single lines of business within the Standard Formula, leading to higher SCR	Noted. The SCR cannot take into account every eventuality. Segmentation is more difficult for some undertakings.
57.	Groupe Consultatif	3.2.	Feedback on QIS4: As can be concluded from the general considerations (see 3.3 – 3.7) some of the feedback issues have been taken into account setting up this CP. Those issues are the ones concerning the catastrophe risk, the geographical diversification, the credibility weighted averages for standard deviations for premium and reserve risk and the non-proportional reinsurance. Besides that CEIOPS considers a new risk (not yet recognized in QIS4): the change in premium provision which is set up for multi-year contracts. There are some issues that have been previously identified but that have not yet been addressed and that will (certainly) still arise when this CP comes into effect in a new QIS-study. These are: • Rate increases leading to higher SCR (even if aim was to improve profitability), due to the choice of Premium as Volume measure • No allowance for future profit or for position in underwriting cycle • No recognition of the multiple lines of (independent) business written in the London Market and Lloyd's that will all be treated within single lines of business within the Standard Formula, leading to higher SCR	See response to comment 56.
58.	ROAM	3.2.	5. Some feedback from QIS4 has still not been considered: 6. Tariff increase leads to higher SCR (even if aim was to	See response to comment 53.

			improve profitability), due to the choice of premium as volume measure 7. No allowance for future profit or for position in underwriting circle.	
59.	AAS BALTA	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
60.	AB Lietuvos draudimas	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
61.	ACA – ASSOCIATION DES COMPAGNIES D'ASSURANCES DU	3.3.	We believe that this decision is in line with the proportionality rule, and we appreciate this decision.	Noted.
62.	Association of British Insurers	3.3.	We strongly disagree with CEIOPS. There is a strong case for recognising geographical diversification. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence.	See response to comment 3.
63.			Confidential comment deleted	
64.	Belgian Coordination Group Solvency II (Assuralia/	3.3.	No allowance for geographical diversification for non-life business will be applied. This will decrease as well the incentive to spread risks over different geographies. CEIOPS should review the decision to exclude geographical diversification. If the standard model does not take into account the internal volatility parameters any more, as it was for the premium risk in	See response to comment 3.

			QIS4, a geographical diversification must be applied. The QIS4 proposal for geographical diversification needs to be reviewed according to a more scientific analysis. If the undertaking may use internal parameters and if those parameters are determined by including all countries, then the geographical diversification is implicitly applied in the parameters calculation and therefore the geographical diversification as applied in QIS4 can be suppressed.	
65.	CEA, ECO-SLV-09-443	3.3.	No allowance for geographical diversification for non-life business will be applied. All diversification effects need to be considered appropriately in the standard formula. The introduction of geographical diversification in QIS4 was a valuable improvement to the SCR formula. Failing to recognise it would decrease the incentive undertakings have to spread risks across different geographies. Ceiops should review the decision to exclude geographical diversification and should reward sound risk management.	Noted. See response to comment 3.
66.	CRO Forum	3.3.	Not allowing for geographic diversification is not recognising one of the key principles of insurance, which is giving credits for well diversified portfolios. Simplicity should not be the reason not to recognise this in the standard approach. One way to resolve the complexity, is not to capture the geographic diversification element in the solo spreadsheet (as was done in QIS4) but to develop an additional helper tab. This allows groups, with geographically spread portfolios, to calculate potential benefits, without increasing complexity in the solo spreadsheet. In addition it does not give the right incentives to the (re)insurance industry and will result in a misrepresentation of the risk in an	See response to comment 3.

			undertaking.	
67.	Danish Insurance Association	3.3.	The decision to not apply geographical diversification for non-life business across the globe as proposed in the QIS 4 exercise should be reconsidered. We agree that some geographical diversification benefits will be reflected in the estimated volatilities when calibrated on European historical data, however, excluding the possibility for company specific geographical diversification is not in line the level 1 directive and the economic risk-based approach to solvency.	See response to comment 3.
68.	DENMARK: Codan Forsikring A/S (10529638)	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
69.	DIMA (Dublin International Insurance & Management	3.3.	Geographical diversification is needed at group level. Premium risk must be assessed to ensure claims and costs don't exceed estimated related premium expected for the tenure of the business.	See response to comment 3.
70.	Dutch Actuarial Society – Actuarieel Genootschap (	3.3.	Not taking into account geographical diversification will overestimate the capital requirement and will decrease the incentive for companies to spread their risks well over different geographies. However, in our opinion geographical diversification should be implicitly included when using company's own data and/or company specific parameters. Therefore we support the exclusion of the artificial method that was in the QIS4 study for geographical diversification, but would expect the possibility to use own data and parameters in the standard model.	See response to comment 3.

71.	European Union member firms of Deloitte Touche To	3.3.	1.	No comment available.
72.			Confidential comment deleted	
73.			Confidential comment deleted	
74.	German Insurance Association – Gesamtverb and der D	3.3.	As long as we know no details concerning the use of entity specific parameters, we strongly disagree with CEIOPS not to apply geographical diversification.	Noted. See response to comment 3.
75.	Groupe Consultatif	3.3.	1. We agree with the analysis of the benefits and drawbacks of the options as discussed in annex C and – given the significant drawbacks of option 2 and 3 - the recommendation for option 1 as stated above, recognising that reinsurers and cross-border groups for which geographical diversification might be material for some classes of business will be encouraged to develop and use an appropriate partial internal model. However, although removal of the diversification benefit might well simplify the application of the SCR but, at the same time, it could increase the SCR for some insurers by amounts that might be material. (We refer to general comment II.) Do not agree that this should be left to internal models. Small companies and captives may write significant amounts of business across borders (e.g. in Ireland many companies write north & south of the border). Not allowing for geographical diversification will	See response to comment 3. Captives are covered in separate advice.

			push up their capital requirement and put them at a disadvantage.	
76.	International Underwriting Association of London	3.3.	We are disappointed that geographical diversification is not adequately allowed for in this module. Our members write a significant amount of global risks, and whilst some will opt for an internal model, it might not be practical for all companies to opt for an internal model. We believe that it is important for the economic realities of risks written are recognised in the standard formula, especially if some companies rely on the standard formula whilst gaining internal model approval. We do recognise that the QIS 4 method for Geographical Diversification was not without fault, and the standard SCR should remain relatively simple to calculate. However, geographical diversification is something which does exist and we believe should be recognised in the standard formula. We do not believe the complexity issue is a relevant one; for example the proportionality principle could be applied, insofar as geographical diversification should be included in the Non-Life Underwriting Risk Module, with a permissible simplification allowing it to be excluded where it might be considered too onerous to exclude. We agree that Geographical diversification is crucial for reinsurers and cross border groups. However, it should also be noted that business written in the non-life commercial insurance market, such as in the London Market, often covers risks situated in many countries across the world. We would suggest that geographical diversification is important for most commercial insurers, and not solely reinsurers and cross-border groups. Furthermore, as Solvency II is supposed to be risk-based and offer incentives for good risk-management, it seems counterintuitive to not offer any allowance for the geographical diversification of risks in the standard formula.	See response to comment 3.
77.	KPMG ELLP	3.3.	We disagree with the proposal to exclude geographical	See response to comment 3.

			diversification as it: a. goes against theory b. goes against the principles of Solvency II (an economic assessment) c. goes against the views of various respected international associations such as the IAIS and IAA d. actively discriminates against a significant portion of the EU insurance/reinsurance market. That is the large, cross border or reinsurance undertakings e. implies that certain firms will get internal (or partial internal) model approval or will use undertaking specific parameters. This is an inappropriate assumption when forming the standard formula parameters and approaches f. incorrectly states the alternatives are complex or impractical. There are alternative that are completely aligned with the principle of proportionality (in that only those who will benefit have to do any significant extra work) g. proposes implicitly allowances that will be inadequate if not calibrated correctly (CEIOPS needs to confirm calibration methods) h. proposes implicit allowances that will knowingly (and avoidably) understate the capital requirements for a large number of (re)insurance undertakings i. ignores realistic improvements to the QIS4 approach (rather than the alternative suggested). The introduction of geographical diversification in QIS4 was widely welcomed	
78.	Legal & General	3.3.	We strongly disagree. We believe that geographical diversification should be allowed, and is under the level 1 directive	See response to comment 3.

	Group			
79.	Link4 Towarzystwo Ubezpieczeń SA	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
80.	Lloyd's	3.3.	Our detailed comments on geographical diversification are set out against paragraphs C.2 to C. 34. A summary of these is as follows. We absolutely disagree with the proposal to exclude geographical diversification as it: - goes against theory (as stated in para C.29) - goes against the principles of Solvency II (an economic assessment) - goes against the views of various respected international associations such as the IAIS and IAA - Actively discriminates against a significant portion of the EU insurance/reinsurance market. That is the large, cross border or reinsurance undertakings - Implies that certain undertakings will get internal (or partial internal) model approval or will use undertaking specific parameters. This is an inappropriate assumption when forming the standard formula parameters and approaches - Incorrectly states the alternatives are complex or impractical. There are alternatives that are completely aligned with the principle of proportionality (in that only those for whom the simplified approach produces material inaccuracies have to do any significant extra work)	See response to comment 3.

			- Proposes implicitly allowances that will be inadequate if not calibrated correctly (CEIOPS Needs to confirm that calibration methods) - Proposes implicit allowances that will knowingly (and avoidably) understate the capital requirements for a large number of undertakings - Ignores realistic improvements to the QIS4 approach (rather than the alternative suggested). The introduction of geographical diversification in QIS4 was widely welcomed	
81.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
82.	Pearl Group Limited	3.3.	We strongly disagree with CEIOPS. There is a strong case for recognising geographical diversification. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence.	See response to comment 3.
83.	RBS Insurance	3.3.	Whilst not currently material for us, we believe that allowing geographical diversion for catastrophe risk is important, and in keeping with solvency II principles. We believe policyholders will be better protected when their insurers (and in particular the catastrophe reinsurers of the insurers) have a geographically diversified portfolio.	Noted. See resolution to comment 3.
84.	RSA Insurance Group PLC	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.

85.	RSA Insurance Ireland Ltd	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
86.	RSA - Sun Insurance Office Ltd.	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
87.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.3.	We do not agree with the conclusion to drop geographical diversification. Further detail is given in the Comments to Appendix C below.	See response to comment 3.
88.	UNESPA-Association of Spanish Insurers and Reinsu	3.3.	Need to consider the benefits of geographical diversification According to CEIOPS, the benefits of application of geographical diversification do not outweigh the inclusion of a greater complexity in the calculation of SCR. Regardless of the greater or lesser degree of complexity of the inclusion of an element of risk mitigation such as its geographical diversification, its benefits are clearly demonstrated, especially in certain businesses of insurance. If no allowance for geographical diversification for non-life business will be applied, this will decrease to incentive to spread risk as well over different geographies. Therefore, it is necessary to include geographical diversification in the calculation of the SCR to see its benefits. The geographical diversification, as a tool of risk mitigation, evolves depending on the legal changes and judicial interpretations, and of the claims development, for each region. Furthermore, its benefits can be produced at more or less long term. Therefore, the introduction of geographical diversification in the calculation of the SCR does not incur duplication since the historical volatility does	See response to comment 3.

			not fully reflect these changes. By not considering the geographical diversification, it results imposing the assumption that the past development of claims is sufficiently homogeneous to be able to explain the development of future claims, regardless of geographical diversification, which do not accurately represent current and future risk borne by the entity. Option to implement the geographical diversification While for some entities the benefits of geographical diversification may not be too significant, for others it may have a significant impact, so are those entities should outweigh between the level of difficulty and the benefits obtained by applying it. The solution to reduce the complexity of calibration should not happen in any case by the removal of geographical diversification.	
89.	XL Capital Ltd	3.3.	The removal of geographical diversification is very disappointing and goes against the interests of firms writing large volumes of global risks and global programs. We do not believe that "complexity" is a valid ground for its exclusion, particularly given the level of complexity noted elsewhere in the standards formula. We would welcome more detail on CEIOPS' rationale for removing this feature from the standard formula SCR calculation. The wording of paragraph 3.3 is too vague.	See response to comment 3.
90.	AAS BALTA	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	See response to comment 11.
91.	AB Lietuvos draudimas	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the	We do not agree. See response to comment 90.

			issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	
92.	Association of British Insurers	3.4.	The proposed allowance for multi-year contracts is too complex and firms should be able to adopt a simplified method based on principle of proportionality.	We do not agree. CEIOPS view is that it is important to allow for multi year contracts.
93.	CEA, ECO-SLV-09-443	3.4.	We note the addition of recognition of multi-year contracts within the module structure. We understand that CP30 would give guidance on the assumptions that should be made regarding what premium to recognise / value in respect of cover beyond time (t+1). To this CP, the CEA has made its comments in a separate document[1]. In the case of policies with guaranteed renewal terms, further guidance on the assumptions to be made regarding the proportion of policyholders making use of the guaranteed terms would be useful. 1 http://www.ceiops.eu/media/files/consultations/consultationpapers/CP30/Comments-received-from-CEA-on-Consultation-Paper-30-09.pdf	See response to comment 92.
94.	DENMARK: Codan Forsikring A/S (10529638)	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
95.	Dutch Actuarial Society –	3.4.	We agree with the addition of recognising multi-year contracts within the QIS4 structure.	Noted.

	Actuarieel Genootscha p (		We would welcome further clarification on the assumptions that should be made regarding what premium to recognise / value in respect of cover beyond time (t+1). In the case of policies with guaranteed renewal terms, further guidance on the assumptions to be made regarding the proportion of policyholders making use of the guaranteed terms would be useful. When SCR is calculated on the presumption that the undertaking will carry on its business as a going concern, renewals have to be taken into account.	Noted. Noted.
96.	European Union member firms of Deloitte Touche To	3.4.	We note the addition of recognising multi-year contracts within the QIS4 structure. We would welcome further clarification on the assumptions that should be made regarding what premium to recognise / value in respect of cover beyond time (t+1). In the case of policies with guaranteed renewal terms, further guidance on the assumptions to be made regarding the proportion of policyholders making use of the guaranteed terms would be useful. Reference is made to general remark V	See response to comment 95.
97.	Groupe Consultatif	3.4.	We note the addition of recognising multi-year contracts within the QIS4 structure. We would welcome further clarification on the assumptions that should be made regarding what premium to recognise / value in respect of cover beyond time (t+1). In the case of policies with guaranteed renewal terms, further guidance on the assumptions to be made regarding the proportion of policyholders making use of the guaranteed terms would be useful.	See response to comment 95.

			Reference is made to general remark IV	
98.	Institut des Actuaires (France)	3.4.		No comment available.
99.	KPMG ELLP	3.4.	We agree that the risk relating to the change in the premium provisions which is set up for multi-year contracts has been missed under the QIS4 approach. We agree that this risk is not captured by the premium risk nor reserve risk part of the module. (Also see reference 3.27)	Noted.
100.	Legal & General Group	3.4.	It is unclear whether MPPI products will be treated as multi year contracts following discussions with FSA. There needs to be clear guidance as to what is included within the calibration of parameters for multi-year contracts.	Noted. See Non-life calibration paper.
101.	Link4 Towarzystwo Ubezpieczeń SA	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
102.	Lloyd's	3.4.	We agree that premium to be written in the next year should be included within the premium risk element. However, this should already be included in premium to be written next year and hence would be covered under QIS4. "Written premium" is an estimate of the ultimate premiums to be received from contract that incept within a given period, irrespective of when the premium is expected. If there are multiple meanings for the term then a definition should be provided by CEIOPS.	Noted. Such clarifications would be useful.

103.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
104.	ROAM	3.4.	Multi-year contracts: if contracts are revisable each year, we should have $C_{lob}^{pp} = 0$. Actually, ☐ each year, written premiums and premium provision are related to only one year ☐ we have only to measure the loss due to the change in the evaluation of the premium provision during the forthcoming year ☐ the risk exists only if there is no possibility to re-price the contracts during its life	Noted. See revised advice.
105.	RSA Insurance Group PLC	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
106.	RSA Insurance Ireland Ltd	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
107.	RSA - Sun Insurance	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most	We do not agree. See response to comment 11.

	Office Ltd.		obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	
108.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.4.	For non-life business contracts with significant exposure after the following year are confined to relatively few examples, the most obvious being extended warranty products. We understand the issue CEIOPS refer to in this paragraph. However the solution, adding the CC element to the volume measure outlined in Paragraph 3.27, does not seem correct.	We do not agree. See response to comment 11.
109.	UNESPA-Association of Spanish Insurers and Reinsu	3.4.	Clarification on the assumptions about what premiums to recognize in certain Non-Life contracts According to CEIOPS, there is a case that was not considered in the QIS 4 approach. This is the risk of inadequate premiums in multi-year contracts. Using the current calibration of the Non-Life underwriting risk in the standard approach has an impact in terms of capital requirement because of would increase the Volume measure for premium and not recognize the profits and losses over the premium in one year. It would be relevant to design a more suitable calculation for certain multi-year contracts in the Non Life underwriting risk, where this consideration may have greater impact.	Noted. For firms writing multi-year business, the previous formula omitted part of the risk. See response to comment 53.
110.	AAS BALTA	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
111.	AB Lietuvos draudimas	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be	See response to comment 3.

			helpful.	
112.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.5.	We are very surprised by this decision, the reason why it won't be admitted anymore to make reference to the undertaking-specific estimates is not clear to us. With a large number of years taken into account, the estimation should be robust enough, and we enjoyed the most credibility, leading to a decrease of the SCR without using an internal model (complex and very expensive). And there is no evidence why the CEIOPS estimates would better reflect the situation of an undertaking. The principle of proportionality is not respected here, since small companies that lack there sources (human and financial) to develop an internal model will assign a higher SCR.	See response to comment 3.
113.	AMICE	3.5.	We would like to emphasize the need to allow for the entity specific parameter option, in order to take into account the reality of the undertaking's business. We suggest keeping the QIS 4 approach. CEIOPS will not retain the approach of credibility mix for the standard deviation for premium risk. AMICE agrees to abandon the formulae proposed in QIS4 because it was not sufficiently robust.	We do not agree. See response to comment 3. Yes. Noted.
114.	Association of British Insurers	3.5.	Undertakings should be able to use entity specific parameters in the premium and reserve risk capital calculations. Allowing undertakings to use their own experience in calibrating the standard deviation for premium risk was viewed as an improvement of QIS4 over QIS3. Using entities' own data would also entitle geographic diversification to be recognised and rewarded.	We do not agree. See response to comment 3.
115.			Confidential comment deleted	
116.	Belgian Coordination	3.5.	As stated in this paragraph, historical loss ratios may indeed be influenced by several factors, like a change in the reinsurance	Noted.

	Group Solvency II (Assuralia/		programme. Moreover, the result may overly be influenced by the occurrence of large claims in the period, especially for small undertakings. We believe that one should work on gross loss ratios instead of net loss ratios, but that historical large claims should be eliminated above a defined threshold. This threshold should ideally depend on the size of the portfolio. In this case, more weight could be given to the undertaking-specific estimates. The standard deviation of large claims would then be estimated separately, based on market-wide values only, ideally dependent on the portfolio size.	We do not agree. See response to comment 3.
117.	CEA, ECO-SLV-09-443	3.5.	Entity specific parameters should be allowed for the premium and reserve risk capital calculations. Allowing undertakings to use their own experience in calibrating the standard deviation for premium risk was viewed as an improvement of QIS4 over QIS3. Using entities own data would also imply that geographic diversification is being recognised and rewarded. Ceiops does not allow any longer the use of credibility weighted standard deviations to be used in the premium risk. Such an allowance would follow up on the section 14b of the Directive, would recognize the major differences between the types of products sold throughout Europe and the very specific nature of mono-liners. Given that CEOIPS was not fully comfortable with the methodology used by the industry in calculating the standard deviation, we recommend Ceiops to provide further guidance on how to calibrate entity specific standard deviation. We are also very interested in the considerations and research performed by Ceiops which lead to their conclusion that credibility factors should be very low.	We do not agree. See response to comment 3. Noted.

			Credibility theory is a well-known and broadly applied technique. In general for an entity, credibility estimators are more predictive than general market-wide estimates.	
118.	CRO Forum	3.5.	Not allowing for company specific parameters (credibility weighted) is disappointing. Companies have already started to collect data, CEIOPS argues that the mechanic estimation of the standard deviation from loss ratios is not sufficiently robust and reliable. We believe that this can be overcome by allowing for more judgement in the selections of the parameters (as is also required when calculating the best estimate of the technical provisions). Also not allowing for undertaking specific parameters is not consistent with the Directive (Article 104 paragraph 7).	Noted. See response to comment 3.
119.	DENMARK: Codan Forsikring A/S (10529638)	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
120.	Dutch Actuarial Society – Actuarieel Genootschap (	3.5.	The industry welcomed the inclusion in QIS 4 of the possibility to use more appropriate undertaking-specific estimates, taken the view that such an approach could be better aligned with the risk profile of the undertaking and it would encourage better risk management. Using entities' own data would also imply that geographic diversification is being recognised and rewarded. But CEIOPS argues the reliability and appropriateness of this approach in certain situations and circumstances, moreover recognising that generally the depth of the historic data necessary was not available. However, we would like to draw your attention to CP 43 on data quality and the actuarial function to opine on the appropriateness of the own entity-specific data. And we would like to stress that companies are now investing money into their	See response to comment 3.

			systems to be able to get historic data. They became aware of the necessity of this data also due to QIS studies. Within a couple of years the historic data is available and useful. So we want to plead that the use of historic data should be available and that the actuarial function should opine on the quality of the used data. We are very interested in the considerations and research performed by CEIOPS which lead to their conclusion that credibility factors should be very low. Credibility theory is a well-known and broadly applied technique. In general for an entity, credibility estimators are more predictive than general market-wide estimates. Last but not least, the lack of the possibility to use own data will make the reconciliation between standard and internal model more complicated and less meaningful.	See response to comment 117.
121.	European Union member firms of Deloitte Touche To	3.5.	The industry welcomed the inclusion in QIS 4 of the possibility to use more appropriate undertaking-specific estimates, taken the view that such an approach could be better aligned with the risk profile of the undertaking. By using entities' own data it would also imply that geographic diversification is being recognised and rewarded. But CEIOPS argues the reliability and appropriateness of this approach in certain situations and circumstances, moreover recognising that generally the depth of the historic data necessary was not available. However, we would like to draw your attention to CP 43 on data quality and the actuarial function to opine on the appropriateness of the own entity-specific data. 2. To cope with these drawbacks the standard formula could be revised, although that might make it overly complicated. Therefore the approach has not been retained. In our view this is a relevant topic that deserves more study in near future, but in the present	See response to comment 120. Noted.

			situation we agree with the decision. We refer to general comment II. 3. However we note that the removal of this option may to some extent be mitigated by the possibility of using undertaking specific parameters	See response to comment 3.
122.	FFSA	3.5.	☐ CEIOPS will not retain the approach of credibility mix for the standard deviation for premium risk. ☐ FFSA agrees to abandon the formulae proposed in QIS4 because it was not sufficiently robust. ☐ FFSA thinks that CEIOPS should write that use of partial internal models would be encouraged.	Yes. Noted. Firms will use an IM if the standard formula is inappropriate for their risk profile.
123.			Confidential comment deleted	
124.	German Insurance Association – Gesamtverb and der D	3.5.	The possibility for undertakings to be able to use entity specific parameters in the premium and reserve risk capital calculations is essential and is interrelated to geographical diversification.	See response to comment 3.
125.	GROUPAMA	3.5.	Groupama would like to emphasize the necessity to have the ability to use entity specific parameters, taking into account the reality of the undertaking's business. We suggest stay with the QIS 4 approach.	We do not agree. See response to comment 3.
126.	Groupe Consultatif	3.5.	The industry welcomed the inclusion in QIS 4 of the possibility to use more appropriate undertaking-specific estimates, taken the view that such an approach could be better aligned with the risk profile of the undertaking. By using entities own data would also imply that geographic diversification is being recognised and rewarded.	See response to comment 121.

			But CEIOPS argues the reliability and appropriateness of this approach in certain situations and circumstances, moreover recognising that generally the depth of the historic data necessary was not available. However, we would like to draw your attention to CP 43 on data quality and the actuarial function to opine on the appropriateness of the own entity-specific data. 2. To cope with these drawbacks the standard formula could be revised, although that might make it overly complicated. Therefore the approach has not been retained. In our view this is a relevant topic that deserves more study in near future, but in the present situation we agree with the decision. We refer to general comment II. 3. However we note that the removal of this option may to some extent be mitigated by the possibility of using undertaking specific parameters. Being difficult to calculate is not a good reason to remove the option (refer to C.22) 4. C.15 & C.16 envisage a business unti aggregating results across different territories, this would involve adding – different currencies, different interest rate structures, different inflation rates, different claims environments etc.	
127.	KPMG ELLP	3.5.	We concur that it is appropriate not to retain the use of a credibility mix of an undertaking-specific estimate and a market-wide estimate to derive the standard deviation for premium risk for each line of business. We agree that the loss ratios used in the estimation of the standard deviation may not be appropriate for the reasons stated (portfolio changes, product changes, etc.).	Noted.
128.	Legal & General	3.5.	Firms should be allowed to use entity specific parameters, where justified, for premium and reserve risk capital calculations.	See response to comment 3.

	Group			
129.	Link4 Towarzystwo Ubezpieczeń SA	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
130.	Lloyd’s	3.5.	The proposal to ignore an undertaking’s own experience in setting premium (and reserving) risk has positives and negatives. The negative is making the standard approach less risk sensitive. The positives are: - making the approach less complicated and reliant on old data. - removing an anomaly, in that, under some circumstances, a new undertaking would be deemed less risky than an established player who had seen volatile results (i.e. over the last 15 years). - removing a potential double count of catastrophe risk, where historic catastrophes increase premium risk even though catastrophe risk was evaluated separately. On balance we agree with removing an undertaking’s own experience from the standard formula for premium and reserving risk.	See response to comment 3. The SCR standard formula cannot possibly cater for every undertakings risk profile. If the formula is unsuitable for a given undertaking, it should use an IM. The issue of double counting is covered in the advice. Noted.
131.	Milliman	3.5.	We agree with CEIOPS to drop the credibility mix approach for the reasons provided. We are hopeful that the upcoming CP on calibration might shed some light on the potential use of entity-specific parameters in the standard model. We would favour the possibility for an undertaking to use entity-specific parameters where possible (re CP43 on data quality). In particular, the use of market-wide parameters may not be satisfactory for lines such as	Noted. Entity specific parameters are covered elsewhere.

			Miscellaneous.	
132.	Munich RE	3.5.	Whilst we agree that the determination of the undertaking-specific parameters (used within the credibility-approach) may be difficult for some companies we nevertheless want to draw attention to the fact that it is unclear to us how the own data of an undertaking will be used for the purpose of determining the SCR for nonlife as required by section (14b) of the Framework Directive. We take it to be of utmost importance to incorporate own data in the calculation of the nonlife SCR as the types of risks borne by nonlife insurance contracts differ greatly within Europe due to differing legal frameworks, products offered and the way individual companies manage these.	See response to comment 3.
133.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
134.	RBS Insurance	3.5.	The CEA asks for the possibility for undertakings to be able to use entity specific parameters in the premium and reserve risk capital calculations. Allowing undertakings to use their own experience in calibrating the standard deviation for premium risk was viewed as an improvement of QIS4 over QIS3. Using entities own data would also imply that geographic diversification is being recognised and rewarded. CEIOPS does not allow any longer the use of credibility weighted standard deviations to be used in the premium risk. Such an allowance would follow up on the section 14b of the Directive, would recognize the major differences between the types of products sold throughout Europe and the very specific nature of	See response to comment 3.

			mono-liners. Given that CEOIPS was not fully comfortable with the methodology used by the industry in calculating the standard deviation, we recommend CEIOPS to provide further guidance on how to calibrate entity specific standard deviation. We are also very interested in the considerations and research performed by CEIOPS which lead to their conclusion that credibility factors should be very low. Credibility theory is a well-known and broadly applied technique. In general for an entity, credibility estimators are more predictive than general market-wide estimates.	See response to comment 117.
135.	ROAM	3.5.	CEIOPS will not retain the approach of credibility mix for the standard deviation for premium risk. ROAM agrees to abandon the formulae proposed in QIS4 because it was not sufficiently robust. We would like to emphasize the need to allow for the entity specific parameter option, in order to take into account the reality of the undertaking's business. We suggest keeping the QIS 4 approach.	Yes. Noted. See response to comment 3.
136.	RSA Insurance Group PLC	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
137.	RSA Insurance Ireland Ltd	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
138.	RSA - Sun Insurance Office Ltd.	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.

139.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.5.	This paragraph seems to outlaw the use of undertaking specific parameters which would be against the text of the Directive and we understand is not CEIOPS intention. Clearer wording would be helpful.	See response to comment 3.
140.	UNESPA-Association of Spanish Insurers and Reinsu	3.5.	The inclusion of historical information of the Company defines how it manages the risk borne CEIOPS suggests the elimination of the element of credibility or weight related to the experience of each entity in determining the standard deviation in the non life premium risk, basing its decision on lack of robustness and reliability while obtaining such deviation from Loss Ratios (LR). Nevertheless it has to be considered the benefits of including information of each entity in order to "customize" and enrich the information from the market, in order to achieve a standard deviation more adequate with the proper risk borne by each entity. The benefits of considering the information of the company are greater than disadvantages while considering some extreme cases such as those proposed by CEIOPS. The distribution function proposed by CEIOPS does not fit properly for all lines of business CEIOPS also continues to use a single distribution function for all lines of business in determining the non life underwriting risk, which provides greater rigidity. It would be appropriate to have the option of choosing different curves, or even certain proposals taking into account the empirical evidence of the company. Additionally, there are many specificities to each line of business that make it difficult to assume that all behave in a unique pattern of distribution: accumulation points in certain values, resulting from the existence of conventions, agreements, etc., reopening of claims	Noted. See response to comment 3. See response to comment 5. See response to comment 5. See response to comment 5.

			in certain values, etc…	
141.	AAS BALTA	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
142.	AB Lietuvos draudimas	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
143.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.6.	This decision will lead the development of partial internal model in most undertakings, difficult to validate, difficult to verify. This calls in question the objectives of transparency of SII…	The SCR standard formula cannot possibly cater for every undertakings risk profile. If the formula is unsuitable for a given undertaking, it should use an IM.
144.	AMICE	3.6.	CEIOPS considers that the standard formula is already complex and introducing additional complexity by taking into account non-proportional reinsurance may not be welcome. AMICE is in favour of a better consideration of non-proportional reinsurance under the standard formula because the risk mitigating effects of non-proportional treaties can be important for some undertakings. These undertakings should not be obliged to use internal models to take these treaties into account.	See response to comment 3.
145.	Association of British Insurers	3.6.	We agree that (partial) internal models should provide recognition of the full range of risk mitigating techniques in the calculation of SCR. We accept that the standard formula will be capable of recognising only some of the more simple techniques. However, we agree that the scope for the standard formula to reflect risk mitigation from standard instruments such as non-proportional reinsurance should be explained.	Noted. See response to comment 3.

146.	Belgian Coordination Group Solvency II (Assuralia/	3.6.	While we agree that the only way to correctly reflect the impact of non-proportional reinsurance structures on the required capital is through the development of a (partial) internal model, we find it unfortunate, especially for small or medium sized undertakings that the standard formula does not allow to take any profit of the risk mitigation effect of non-proportional reinsurance. In the comment of paragraphs 3.29 and 3.85, we suggest a possible approach to better reflect the impact of non-proportional reinsurance in the standard formula.	See response to comment 3.
147.	CEA, ECO-SLV-09-443	3.6.	The CEA asks for risk mitigation techniques to be allowed under the standard formula and acknowledges that further work needs to be done in this area. Generally, the standard formula should allow for risk mitigation from all instruments, including securitization and - following the “substance over form” principle underlying the Solvency II framework- treat those in an equivalent manner by concentrating on the economic effects of the risk mitigation instrument and not on its legal form. The standard formula should be changed in order to better capture the effects of risk mitigation strategies, especially in the case of non-proportional reinsurance. The recognition of the non proportional reinsurance in the standard formula would remove a potential heavy burden away from small and medium undertakings, implied by the development of a partial model. For a more sophisticated recognition especially of the non-proportional reinsurance in the standard formula, we refer to a paper developed by Munich Re, Swiss Re and Hannover re “Improving the Solvency II standard approach – toward a better recognition of the risk mitigation effect of non-proportional reinsurance within the standard approach”. Two ideas are	See response to comment 3. See response to comment 3. Refer to the risk mitigation advice.

			presented: ☐ Factor adjustment: This approach adjusts the original QIS4 volatility parameters for premium and reserve risk. The adjustment is calculated based on the current retro structure. ☐ Frequency-severity approach: This approach adds a large loss module to the current module structure, using a frequency-severity approach. Furthermore we refer to the running QIS4b in Germany under the administration of the GDV where a recognition of non-proportional and proportional reinsurance for man-made and NatCat-risks is tested. The two approaches are examples which should be considered when improving the standard formaule to appropriately allow for the recognition of non-proportional reinsurance. Finally, the statement in CP52 that "no allowance shall be made for finite reinsurance or comparable SPV constructions of the non life premium and reserve sub-module in the standard formula" goes against our request for economic recognition of risk mitigation techniques.	
148.	CRO Forum	3.6.	Generally, the standard formula should allow for risk mitigation from all instruments, including securitization and - following the "substance over form" principle underlying the Solvency II framework - treat those in an equivalent manner by concentrating on the economics of the risk mitigation instrument and not on its legal form. The standard formula should be changed in order to better capture the effects of risk mitigation strategies, especially in the case of non-proportional reinsurance. Methods to this end have been developed and can be integrated into the standard formula. We	See response to comment 3.

			think that an implicit requirement to develop a (partial) internal model in case of e.g. a non-proportional reinsurance programme – which is an efficient and well-established risk mitigation tool – may put a too heavy burden in particular on small and medium sized companies.	
149.	DENMARK: Codan Forsikring A/S (10529638)	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
150.	Dutch Actuarial Society – Actuarieel Genootschap (	3.6.	We appreciate CEIOPS conclusion that this is an area that deserves further analysis as part of the implementing measure of Article 109 (e).	Noted.
151.	European Union member firms of Deloitte Touche To	3.6.	4. We appreciate CEIOPS conclusion that this is an area that deserves further analysis as part of the implementing measure of Article 109 (e), but agree with CEIOPS that for the moment this topic should not give rise to further complexity of the standard formula. We refer again to general comment II.	Noted.
152.	FFSA	3.6.	☐ CEIOPS encourages the use of internal model to take into account complex risk mitigation arrangements. ☐ FFSA would like to reinforce that recognition of risk transfer for capital relief should apply to all forms of risk mitigation. FFSA is concerned by a specific paragraph from CP 52 (Allowance of risk mitigation techniques): the wording may lead to bad interpretation on recognition of risk transfer for SPV and Finite ("no allowance shall be made for finite reinsurance or comparable SPV	Yes.

			constructions of the non life premium and reserve sub module in the standard formula").	
153.			Confidential comment deleted	
154.	German Insurance Association – Gesamtverb and der D	3.6.	Risk mitigation techniques should be allowed under the standard formula and we acknowledge that further work needs to be done in this area. The recognition of the non proportional reinsurance in the standard formula would remove a potential heavy burden away from small and medium undertakings, implied by the development of a partial model. For a more sophisticated recognition esp. of the non-proportional reinsurance in the standard formula, we refer to a paper developed by Munich Re, Swiss Re and Hannover re "Improving the Solvency II standard approach – toward a better recognition of the risk mitigation effect of non-proportional reinsurance within the standard approach". Furthermore we refer to the running QIS4b in Germany under the administration of the GDV where a recognition of non-proportional and proportional reinsurance for man-made and NatCat-risks is tested. The two approaches are just examples but having regard to both proposals could give a clear hint how to improve the standard approach regarding undertaking specific recognition of reinsurance structure.	Noted. See response to comment 3. Refer to risk mitigation advice. Noted.
155.	Groupe Consultatif	3.6.	5. We appreciate CEIOPS conclusion that this is an area that deserves further analysis as part of the implementing measure of Article 109 (e), but agree with CEIOPS that for the moment this topic should not give rise to further complexity of the standard formula. We refer again to general comment II.	Noted.

156.	KPMG ELLP	3.6.	Non-proportional reinsurance is an important risk mitigation tool and in most cases specifically designed to cover extreme or exceptional events. It should be treated as accurately as possible in the calculation as its impact is most noted under extreme losses, such as 1 in 200 year events. The use of personalised scenarios in the non-life catastrophe calculation would significantly improve allowance for non-proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will act more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most “non-working” non-proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. Personalised scenarios would therefore go towards solving two issues simultaneously.	See response to comment 3. Refer to risk mitigation advice. Not agreed. See resolutions to comment 7 above.
157.	Link4 Towarzystwo Ubezpieczeń SA	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
158.	Lloyd’s	3.6.	Non-proportional reinsurance is an important risk mitigation tool and, in most cases, specifically designed to cover extreme or exceptional events. It should be treated as accurately as possible in the calculation, as its impact is most material under extreme losses such as 1 in 200 year events. The use of personalised scenarios in the non-life catastrophe calculation would significantly improve allowance for non-	See response to comment 156.

			proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will acts more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most "non-working" non-proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. Personalised scenarios would therefore go towards solving two issues simultaneously.	
159.	Milliman	3.6.	We agree and add that undertakings with complex risk mitigation arrangements should be encouraged to use a partial internal model to avoid bringing any further complexity into the standard formula.	Noted.
160.	Munich RE	3.6.	Generally, the standard formula should allow for risk mitigation from all instruments, including securitization and – following the "substance over form" principle underlying the Solvency II framework – treat those in an equivalent manner by concentrating on the economics of the risk mitigation instrument and not on its legal form. We agree that the standard formula does not acknowledge the full risk mitigation effect of non-proportional reinsurance arrangements. We also believe the current standard formula sets wrong incentives unbeneficial for non-proportional reinsurance and an effective risk management. We do not agree that non-proportional reinsurance should be dealt with by (partial) internal models, only. Non-proportional reinsurance is a standard risk mitigation instrument, also for smaller companies, and should be adequately captured by the standard formula.	See response to comment 3. Refer to risk mitigation advice.

			We appreciate that CEIOPS is considering this area as one of further improvement. We believe there are ways to capture the risk mitigation of non-proportional reinsurance without a significant increase of the complexity of the standard formula. We would encourage CEIOPS to consider our suggestion (respective documents available on request) which we developed in a working group consisting of representatives from Munich Re, Swiss Re and Hannover Re. These ideas have been discussed with the European Commission (Financial Institutions, Insurance and Pensions), CEIOPS (FinReq-EG, SCR subgroup), CEA, AMICE and Goupama. In all cases we received agreement on the problem and the general approach towards a solution. In some cases further detailed analysis towards a possible implementation were prepared and will be submitted to CEIOPS. We are happy to further contribute to an enhancement of the standard formula regarding non-proportional reinsurance.	Noted. Refer to risk mitigation advice.
161.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
162.	PricewaterhouseCoopers LLP	3.6.	We agree that the allowance of certain risk mitigation contracts e.g. non-proportional reinsurance is would introduce unnecessary complexity within the standard formula. As such we support that firms consider partial models to allow for their specific risk mitigation contracts appropriately. However, as mentioned above in the general comments investing in internal model development and approval would be disproportionately costly. As such, we believe that firms should also have the opportunity to adapt the	Noted. See revised advice.

			assumptions within the standard formula as part of their ORSA to fit their risk profile better.	
163.	RSA Insurance Group PLC	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
164.	RSA Insurance Ireland Ltd	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
165.	RSA – Sun Insurance Office Ltd.	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
166.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.6.	We disagree with the conclusion that non-proportional reinsurance should be left out of the standard formula. See our General Comments above.	See response to comment 3.
167.	UNESPA- Association of Spanish Insurers and Reinsu	3.6.	The non-proportional reinsurance should be calibrated in the standard formula The non-proportional reinsurance is an important tool used by companies in several areas of its activities, either as an element of risk mitigation, strategic element in the determination of prices, etc, and therefore should not be only relegated to an internal model, but should be properly calibrated in the standard formula. So, if it is not considered in the calculation of the solvency capital requirement, this would not pick the real risk borne by the entity, in addition can influence the decision of insurance entities on the level of reinsurance programs depending on the final figure of required capital.	See response to comment 3. Refer to risk mitigation advice.

168.			Confidential comment deleted	
169.	AAS BALTA	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
170.	AB Lietuvos draudimas	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
171.	AMICE	3.7.	This paragraph states the importance of making a clear distinction of Catastrophe Risk. CEIOPS believes that the assumptions underlying the estimation of the premium risk capital charge, implicitly allow for double counting, however no solution is provided.	Noted. The issue of double counting is dealt with in the advice.
172.	Association of British Insurers	3.7.	It is unclear how the proposed assumption of a Lognormal distribution implicitly excludes double counting between premium and reserve risk and catastrophe risk. To ensure that there is no double counting, the calibration of the standard parameters needs to be based on data where catastrophe losses have been removed.	Noted. See annex relating to data collection of CP on calibration of the non life underwriting risk module.
173.			empty	
174.	DENMARK: Codan Forsikring A/S (10529638)	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
175.	International Underwriting Association	3.7.	Our members have indicated to us that they feel it is undesirable to have double counting of risk due to the way premium, reserve and catastrophe risk is calculated, and implicitly allowing for it should	Noted. The issue of double counting is dealt with in the advice.

	of London		not be a substitute for structuring the standard formula so that there is no such double counting.	
176.	KPMG ELLP	3.7.	We agree. When calibrating premium and reserving risk we encourage CEIOPS to show the calculations transparently to ensure no double counting exits.	Noted.
177.	Legal & General Group	3.7.	It is unclear how the proposed assumption of a LogNormal distribution implicitly excludes double counting between premium and reserve risk and catastrophe risk. To ensure that there is no double counting, the calibration of the standard parameters need to be based on data where catastrophe losses have been removed.	Noted. See annex relating to data collection of CP on calibration of the non life underwriting risk module.
178.	Link4 Towarzystwo Ubezpieczeń SA	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
179.	Lloyd's	3.7.	We agree. Not including an undertaking's own experience in deriving the premium and reserving risk already removes one element of potential double count. When calibrating premium and reserving risk we encourage CEIOPS to show the calculations transparently, to ensure that no double counting exits.	Noted. Noted. Noted.
180.	NORWAY: Codan Forsikring (Branch Norway)	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.

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181.	PricewaterhouseCoopers LLP	3.7.	We believe that a more suitable approach would be for the catastrophe related and non-catastrophe related premiums and claims amounts to be split up and treated separately.	See response to comment 11. The issue of double counting is dealt with in the advice.
182.	RBS Insurance	3.7.	We do not see how this avoids the double counting of cat risks. We believe removal of the double counting is achieved by excluding catastrophe claims from the underwriting loss ratios.	Noted. See annex relating to data collection of CP on calibration of the non life underwriting risk module.
183.	ROAM	3.7.	This paragraph states the importance of making a clear distinction of Catastrophe Risk. However CEIOPS believes that the assumptions underlying the estimation of the premium risk capital charge, implicitly allow for double counting but not solution is provided.	Noted. The issue of double counting is dealt with in the advice.
184.	RSA Insurance Group PLC	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
185.	RSA Insurance Ireland Ltd	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
186.	RSA - Sun Insurance Office Ltd.	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.
187.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-	3.7.	We agree that double counting should be avoided. Since the calibration process for the estimation of the premium risk capital charge is unclear to us we are unable to comment on the assertion that the assumptions implicitly allow for double counting.	Noted.

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188.	UNESPA-Association of Spanish Insurers and Reinsu	3.7.	As currently designed the non-life underwriting module, it may incur duplication of capital requirements by sharing risks in premium / reserve and catastrophic By considering only one default distribution function for all lines of business, can not pick the specific claims evolution of the various Lob. The Lognormal distribution function is a long-tailed distribution, so at very high percentiles (99.5% according Solvency II), it could provide extreme values of claims which therefore could be considered as extreme events or CAT. This could suggest the existence of a duplication of capital requirement between the two sub-modules that are part of the SCR for non-life underwriting risk.	Noted. See revised advice regarding double counting between premium and reserve risk and CAT risk. See response to comment 11.
189.	ROAM	3.9.	We want to precise that we don't have to count in PCOlob l the claims from the future underwriting years (cf. one year horizon)	No. PCOlob is the best estimate for the LoB please refer to the best estimate advice in the directive.
190.	CEA, ECO-SLV-09-443	3.10.	The CEA asks for clarification if unemployment risk covered by creditor insurance may be treated in the non life module since its risk driver is a non-life risk driver but, in some markets, its structure is identical to that of a disability product.	Noted. We appreciate that Miscellaneous is a broad category, but there are limits on the degree of segmentation that CEIOPS can do. The advice does not make any suggestion that ASU is included in credit and suretyship. AS is included in the health module and U under the non life module miscellaneous. ASU is often called creditor insurance because it protects the creditor; it is not credit insurance, which protects the lender. See also

			How NLpr, NLcat and NLr andNLc correspond to each other should be made clearer.	response to comment 271. Noted.
191.	CRO Forum	3.10.	In the formula NL_c should be NL_{CAT}. And NL_r should be NL_{pr}	Noted.
192.	European Union member firms of Deloitte Touche To	3.10.	The formulae contained within this section appear to be in line with QIS4, other than for specific changes mentioned below, together with recognition of multi-year contract risks.	Noted.
193.	Groupe Consultatif	3.10.	The formulae contained within this section appear to be in line with QIS4, other than for specific changes mentioned below, together with recognition of multi-year contract risks.	Noted.
194.	KPMG ELLP	3.10.	We agree.	Noted.
195.	Lloyd's	3.10.	We agree.	Noted.
196.	Uni Oldenburg	3.10.	The used symbolism is inconsistent in the reference. We can't find e.g. NL_CAT in the formula.	Agreed. The formula will be made clearer.
197.	CEA, ECO-SLV-09-443	3.11.	More work may be needed on the correlation matrix.	Noted. Further work is being done on this.
198.	ECIROA	3.11.	QIS4 outputs and feedback on captives indicate that on average, underwriting risk contributes for 75% to the SCR calculation mostly due to the catastrophe risk calculation. ECIROA believes that the impact is too high and do not reflect the real risk exposure of captives insurance portfolios. In particular, these portfolios are generally protected by Aggregate	See separate advice for captives.

			limits and/or Stop loss. These protections are not sufficiently taken into account in the calculations.	
199.	FERMA (Federation of European Risk Management Asso	3.11.	QIS4 outputs and feedback on captives indicate that on average, underwriting risk contributes for 75% to the SCR calculation mostly due to the catastrophe risk calculation. Ferma believes that the impact is too high and do not reflect the real risk exposure of captives insurance portfolios. In particular, These portfolios are generally protected by Aggregate limits and/or Stop loss. These protections are not sufficiently taken into account in the calculations.	See resolution to comment 198.
200.	KPMG ELLP	3.11.	We agree.	Noted.
201.	Lloyd's	3.11.	We agree.	Noted.
202.	Uni Oldenburg	3.11.	The used parameter in the correlation matrix should be proved.	Further work is being done on the correlation matrix.
203.	CEA, ECO-SLV-09-443	3.12.	We agree with the definition of premium risk and suggest Ceiops works further on implementing also the pieces of feedback from QIS4 which have not been considered yet. ☐ Tariff increase leads to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure. ☐ No allowance for future profit or for position in underwriting circle.	We do not agree. Article 105(2) of the Level 1 text makes clear that the non-life underwriting risk module should take into account "uncertainty in the results of insurance and reinsurance undertakings related to the existing insurance and reinsurance obligations as well as to the new business expected to be written over the forthcoming twelve months", and would therefore by definition not cover expected profits and losses.
204.	Uni	3.12.	Premium risk is understood to relate to future claims arising during	Noted. The definition of premium

	Oldenburg		and after the period until the time horizon for the solvency assessment. The risk is that expenses plus the volume of losses (incurred and to be incurred) for these claims (comprising both amounts paid during the period and provisions made at its end) is higher than the premiums received (or if allowance is made elsewhere for the expected profits or losses on the business, that the profitability will be less than expected). “incurred” relates to “amounts paid”, “to be incurred” relates to “provisions made at its end”; does the latter refer to the complete loss development scheme or only the part for the period under consideration? Compare TS.XIII.B.12. If we read the reference 3.14 then we would say the premium risk should be calculated for a time horizon of one year. We think it’s better to integrate this information directly in the formulation of reference 3.12.	risk could be clarified.
205.	UNIQA	3.12.	The current approach doesn’t take into account the level of premium sufficiency (or current level of loss ratio). The consequence is, that every insurer within Europe needs the same risk capital for 1 unit currency. The approach should allow to integrate the expected profit.	We do not agree. See response to comment 203.
206.	CEA, ECO-SLV-09-443	3.13.	The CEA asks for more clarification: ☐ On the sentence “Premium risk is present ….., before any insured events occur”. This could mean if a policy is issued and at least one loss already occurring under that policy that there is no premium risk remaining, although the outstanding period if the contract might be 2 years, premiums will still be received, and (more) losses will occur during and after the beginning of the time horizon for the solvency assessment. This would not be in line with the point mentioned in 3.12, where it is stated that the “premium risk is understood to relate to future claims arising during and after	Noted. See response to comment 204.

			the period until and after the time horizon for the solvency assessment”. ☐ On the sentence “Premium risk also arises because of uncertainties prior to issue of policies during the time horizon” and how it is linked to the position of an undertaking in the underwriting cycle.	
207.	CRO Forum	3.13.	We do not understand the sentence “Premium risk also arises because of uncertainties prior to issue of policies during the time horizon”. Although there may be a general uncertainty about the items mentioned, they are only quantifiable and relevant as policies are issued. Therefore we propose not to consider these generic uncertainties within the SCR calculation and not to consider the sentence indicated for future purposes. In our view CEIOPS is referring to stale pricing risk here, which is the result of the inability to continuously update prices and the time lag between an offer to a client and the acceptation of the offer by the client. This should be valued. We suggest that companies manage this risk instead of price for it, however the remaining risk should be priced.	We disagree. While it is true that sound management can reduce such risks (and this could be reflected in an IM), these risks cannot be eliminated and need some capital.
208.	ECIROA	3.13.	ECIROA believes that Captives are less subject to Premium and reserve risks than other insurance and insurance undertakings. Premiums are not subject to competitive pressures and because of a “captive” customer base, premiums can be adjusted over time to spread the cost of risk over a longer period. Also Return on Investment expectations of stake holders are much less for captives than for commercial insurers.	Noted. See CEIOPS-CP-79-09.
209.	FERMA (Federation	3.13.	Ferma believes that Captives are less subject to Premium and reserve risks than other insurance and insurance undertakings.	Noted. See response to comment 208.

	of European Risk Management Asso		Premiums are not subject to competitive pressures and are internally calculated to have a combined ratio of about 100% over a medium to long period of time. Because of a "captive" customer base, premiums can be adjusted over time to spread the cost of risk over a longer period. Also Return on Investment expectations of stakeholders are much less for captives than for commercial insurers.	
210.	KPMG ELLP	3.13.	We agree	Noted.
211.	Lloyd's	3.13.	We agree	Noted.
212.	Munich RE	3.13.	We do not understand the sentence "Premium risk also arises because of uncertainties prior to issue of policies during the time horizon". Although there may be a general uncertainty about the items mentioned they are only quantifiable and relevant as policies are issued. Therefore we propose not to consider these generic uncertainties within the SCR calculation and not to consider the sentence indicated for future purposes.	We disagree. See response to comment 207.
213.	ECIROA	3.14.	Reserve risks are also considered lower for captives because of the intimate knowledge of the insured business and the transparency and rapid flow of information within subsidiaries belonging to a same group. Therefore calculations methods should take these comments into account in the volume measures and standard deviations per LoB	Noted. See response to comment 208.
214.	European Union member firms of Deloitte Touche To	3.14.	We agree with the analysis of the risks to be covered by Premium Risk. Flowing directly from this definition, we would suggest that the volume measure might more simply stated based on premium provision at the start of the year (suitably loaded for expenses – see 3.19 / 3.27) and written premium expected in the following year (subject to minimum levels as per the existing approach).	We disagree. This would require us to change the approach to calibration that will be described in our forthcoming consultation.
215.	FERMA	3.14.	Reserve risks are also considered lower for captives because of the	Noted. See response to comment

	(Federation of European Risk Management Asso		intimate knowledge of the insured business and the transparency and rapid flow of information within subsidiaries belonging to a same group. Therefore calculations methods should take these comments into account in the volume measures and standard deviations per LoB	208.
216.	Groupe Consultatif	3.14.	We agree with the analysis of the risks to be covered by Premium Risk. Flowing directly from this definition, we would suggest that the volume measure might more simply stated based on premium provision at the start of the year (suitably loaded for expenses – see 3.19 / 3.27) and written premium expected in the following year (subject to minimum levels as per the existing approach).	We disagree. This would require us to change the approach to calibration that will be described in our forthcoming consultation.
217.	KPMG ELLP	3.14.	We agree	Noted.
218.	Lloyd's	3.14.	We agree	Noted.
219.	Dutch Actuarial Society – Actuarieel Genootschap (	3.15.	The three types of loss are not completely clear. What is 'exposure after the end of the year' and about what kind of year are we talking here, underwriting year, accounting year?	Noted. See response to comment 204.
220.	ECIROA	3.15.	In relation to catastrophe risks, specificities of captives include that captives usually underwrite very different types of CAT risks on limited but global portfolios and also that Captives are generally protected by Aggregate limits, Stop loss and other types of covers whose purpose is to limit their exposure to any catastrophe risk in any policy year. Market loadings, regional scenarios and market share approaches will not be accurate for captives. Catastrophe risk protections used by the captives have to be considered and calculations of Cat risk and Premium risk should therefore be linked.	Agreed. CEIOPS is considering taking into account aggregate limits / stop loss protections in the NL_CAT formula. The final formula will take into account aggregation issues arising from the inclusion of aggregate limits / stop loss protections.

221.	European Union member firms of Deloitte Touche To	3.15.	The risk on unexpired business is not covered in the three risks listed.	Noted. This risk is indeed intended to be covered by the words used.
222.	FERMA (Federation of European Risk Management Asso	3.15.	In relation to catastrophe risks, specificities of captives include that captives usually underwrite very different types of CAT risks on limited but global portfolios and also that Captives are generally protected by Aggregate limits, Stop loss and other types of covers whose purpose is to limit their exposure to any catastrophe risk in any policy year. Market loadings, regional scenarios and market share approaches will not be accurate for captives. Catastrophe risk protections used by the captives have to be considered and calculations of Cat risk and Premium risk should therefore be linked.	Agreed. See resolutions to comment 220 above.
223.	KPMG ELLP	3.15.	We agree	Noted.
224.	Lloyd’s	3.15.	We agree	Noted.
225.	CEA, ECO-SLV-09-443	3.16.	We agree with the inclusion of unexpired risks. The CEA asks for more clarity about renewals referred to in this paragraph – it is the renewals as defined in CP 30?	We do not agree. No change is required. Practice in the member states differs and this is intended to cover both automatic renewals and renewals where the insured has to take positive action to renew.
226.	CRO Forum	3.16.	We understand that “unexpired risks on existing contracts” relates to the premium provision.	We do not agree. See response to comment 225.

			Regarding the wording of the paragraph (Premium risk relates to policies to be written (including renewals), Could it be confirmed that this includes renewals of the policy that are not cancelled before this date and automatically prolonged at the reporting date for another period (like in CP 30) ?	
227.	Dutch Actuarial Society – Actuarieel Genootschap (	3.16.	Agreed with the inclusion of unexpired risks.	Noted.
228.	KPMG ELLP	3.16.	We agree	Noted.
229.	Lloyd's	3.16.	We agree	Noted.
230.	Munich RE	3.16.	We understand that "unexpired risks on existing contracts" relates to the premium provision.	Yes.
231.	ROAM	3.16.	We strongly disagree with the inclusion of risks on renewals.	We disagree. CEIOPS sees no reason to exclude risks relating to renewals.
232.	Association of British Insurers	3.17.	Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account, which are related to claims. But during the QIS 4 exercise in PCO_{lob} the change in the provision for claims handling costs were incorporated. Whilst we agree that premium risk should allow for the volatility of expense payments, further clarification is required, e.g. if the	We agree. A little more explanation regarding the costs is required. Respondents can refer to the calibration paper for an explanation of the approximations made when allowing for expense variability.

			calibration will be based on data of historic combined ratios rather than loss ratios.	
233.	CEA, ECO-SLV-09-443	3.17.	Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account, which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated.	We agree. See response to comment 232.
234.	CRO Forum	3.17.	Is the expense risk meant only for claims handling costs, or also for other costs (e.g. maintenance costs, acquisition costs, …)? Especially for premium risk this must be specified more clearly.	We agree. See response to comment 232.
235.	Dutch Actuarial Society – Actuarieel Genootschap (	3.17.	As mentioned, volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc. ?).	We agree. See response to comment 232.
236.	European Union member firms of Deloitte Touche To	3.17.	As mentioned, volatility in costs should be part of the premium risk. Specifying exactly which costs are taken into account would be useful; all costs or only the claims handling costs? Presumably the text refers to all costs, but there could be some confusion. In the ClobPP t the only expenses which are taken into account are those related to claims. We refer to general comment V.	We agree. See response to comment 232.
237.	Groupe Consultatif	3.17.	As mentioned, volatility in costs should be part of the premium risk. Specifying exactly which costs are taken into account would be useful; all costs or only the claims handling costs? Presumably the	We agree. See response to comment 232.

			text refers to all costs, but there could be some confusion. In the $C_{lob}^{PP\ t}$ t the only expenses which are taken into account are those related to claims. We refer to general comment IV.	
238.	KPMG ELLP	3.17.	We agree	Noted.
239.	Legal & General Group	3.17.	We agree that premium risk should allow for the volatility of expense payments. Will this be calibrated based on data of historic combined ratios rather than loss ratios? Also relevant to 3.73	Please see paper on non-life calibration which will be published in November 2009 (CEIOPS-71-09)
240.	Lloyd's	3.17.	We agree	Noted.
241.	UNESPA-Association of Spanish Insurers and Reinsu	3.17.	Clarification about the definition of costs Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account, which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated.	We agree. See response to comment 232.
242.	CEA, ECO-SLV-09-443	3.18.	The splitting up in a systematic and a random error is difficult practically. In many cases it is the sum that is observable. It is of importance that for these cases that the companies are allowed to use their own run-off statistics.	We agree that the splitting up in a systematic and a random error is difficult practically. The split is conceptual rather than practical.
243.	Dutch Actuarial Society – Actuarieel Genootscha	3.18.	Also here the volatility of expense payments such as claims handling costs should be mentioned, related to all incurred claims. In a run off situation you could have claims handling costs, without having a premium risk.	Noted. This would be a useful clarification.

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244.	European Union member firms of Deloitte Touche To	3.18.	We also note that reserve risk could also stem from latent claims or even legislative changes which have retrospective effect.	Noted. This point could be usefully incorporated as it points to higher risk charges.
245.	Groupe Consultatif	3.18.	We also note that reserve risk could also stem from latent claims or even legislative changes which have retrospective effect.	Noted. See response to comment 244.
246.	KPMG ELLP	3.18.	We agree	Noted.
247.	Lloyd's	3.18.	We agree	Noted.
248.	Association of British Insurers	3.19.	Volume measures do not include allowance for future profits as it is based on net written/earned premiums. This still appears to be overly conservative e.g. an increase in rates would lead to an increase in capital requirements, which appears to be counter-intuitive. Net earned and written premium estimates for forthcoming year that are used in the calculation of the volume measure are uncertain, and there may be a risk that firms over/under estimate these.	We do not agree. See response to comment 203.
249.	CRO Forum	3.19.	PCO_{lob} should be the *discounted* best estimate for claims outstanding as this is the value carried on the economic balance sheet which is at risk. According to our understanding C_{lob}^{PP} is defined as an economic equivalent of the premium provision.	We do not agree. The best estimate is already discounted. Please refer to advice on technical provisions. C_{lob}^{PP} corresponds to part of premium provision.

250.	Dutch Actuarial Society – Actuarieel Genootschap (	3.19.	The element C_{lob}^{pp} is assumed to relate to the risk (newly introduces in this CP) of the change in premium provision set up for multi-year contracts. Although we can understand the thoughts we think it is not in line with the one year time horizon for capital requirements as stated in Framework Directive article 104-4. Even though it seems reasonable to consider the risks covered within the contract (it will be done for the Best Estimate valuations as specified in CP30) it is arguable whether including this volume after t+1 is in line with the Framework Directive (article 104-4) as principally the capital charge should be based on a one year time horizon. By combining both the earned or written premium over a full one year time horizon (independently if the contracts are already in place) and adding up an additional component of exposure after the one year time horizon for unexpired risks at t+1, one does not seem to follow the principles as laid out in the Framework Directive and ultimately charge capital for more than a 1 year exposure measure. One may consider to include a charge for the 'rereserving risk', that is the risk that the reserves at the end of the 1st year need to be adjusted due to events occurring during the 1st year, This is however of a different order than the currently proposed inclusion of the element Clobpp in the volume measure for premium risk.	We disagree. This may be correct, but we have no data.
251.	European Union member firms of Deloitte Touche To	3.19.	The element C_{lob}^{pp} is assumed to relate to the risk (newly introduced in this CP) of the change in premium provision set up for multi-year contracts. This seems to be a reasonable volume measure, although it is a new measure that would need to be derived by most firms, and may be open to some degree of judgement. However as defined it only relates to claims and	We disagree. There is considerable uncertainty about the ratio of new business expenses to premiums over the coming year as well as about the premium rates that will be

			related expense payments, whereas premiums written and earned also include acquisition and administrative expenses. As both the Premium terms and C^{PP} term are combined in the volume measure (3.27 and 3.28) to which a factor is applied to get the premium risk charge, they should ideally both contain the same (or equivalent) level of loadings for expenses. Otherwise the end result may not be appropriate, as the factor has been calibrated based on premiums). Premiums contain amounts in respect of acquisition and administrative expenses (and profit) as well as claims payments and claims related expenses, and thus the C^{PP} term should, in addition to claims and claims related expense amounts, also include loadings to allow for the same level of acquisition expenses that applied when the business was originally written. Further guidance will be needed covering the derivation of appropriate expense loadings.	achieved. These factors together outweigh the fact that the exposure measure C(lob,PP) excludes the allowance for expenses (and profits) in the premium.
252.	Groupe Consultatif	3.19.	The element C_{lob}^{pp} is assumed to relate to the risk (newly introduces in this CP) of the change in premium provision set up for multi-year contracts. This seems to be a reasonable volume measure , although it is a new measure that would need to be derived by most firms, and may be open to some degree of judgement. However as defined it only relates to claims and related expense payments, whereas premiums written and earned also include acquisition and administrative expenses. Ideally, the additional term added would be loaded to allow for these other expenses, for consistency with the capital charge factor which is applied to get NLpr Further guidance will be needed covering the derivation of appropriate expense loadings. The element C_{lob}^{pp} is assumed to relate to the risk (newly introduces in this CP) of the change in premium provision set up for multi-year contracts. Although we can understand the thoughts we believe it may not be in line with the one year time horizon for	We disagree. This may be correct, but we have no data.

			capital requirements as stated in Framework Directive article 104-4. Even though it seems reasonable to consider the risks covered within the contract (it will be done for the Best Estimate valuations as specified in CP30) it is arguable whether including this volume after t+1 is in line with the Framework Directive (article 104-4) as principally the capital charge should be based on a one year time horizon. By combining both the earned or written premium over a full one year time horizon (independently if the contracts are already in place) and adding up an additional component of exposure after the one year time horizon for unexpired risks at t+1, one does not seem to follow the principles as layed out in the Framework Directive and ultimately charge capital for more than a 1 year exposure measure.	
253.	KPMG ELLP	3.19.	We agree.	Noted.
254.	Legal & General Group	3.19.	Volume measures do not include allowance for future profits as it is based on net written/earned premiums. This still appears to be overly conservative e.g. an increase in rates would lead to an increase in capital requirements (whatever the reason for the increase), which appears to be counter-intuitive. Net earned and written premium estimates for forthcoming year that are used in the calculation of the volume measure are uncertain, and there may be a risk that firms over/under estimate these. Also relevant to 3.73	We do not agree. See response to comment 203.
255.	Lloyd's	3.19.	We agree. The term "net written premium" should be net of reinsurance. This would be a helpful clarification.	We agree that this would be a useful clarification.
256.	Munich RE	3.19.	PCOlob should be the discounted best estimate for claims outstanding as this is the value carried on the economic balance	We do not agree. See response to comment 249.

			sheet which is at risk. According to our understanding ☐ is defined as an economic equivalent of the premium provision.	C_{lob}^{PP} corresponds to part of premium provision.
257.	Uni Oldenburg	3.19.	The definition of $PCO_{j,\ lob}$ is not clear. It's better to use the following definition: best estimate for net reserve risk in geographical area j in each of the LoBs Is the consideration of C^{PP}_{lob} correct in the calculation of premium and reserve risk if we know that solvency II is used in a one year time horizon?	We do not agree. The reserve risk is part of what we are trying to evaluate. It is right to consider C(lob,PP) because this estimate may change over the year.
258.	KPMG ELLP	3.20.	We agree	Noted.
259.	Lloyd's	3.20.	We agree	Noted.
260.	KPMG ELLP	3.21.	The calculation of premium risk still does not allow for the expected outcome of the business which is an important feature in setting non-life capital. Profit making business should require less capital than loss making business and yet both would have the same capital requirements, which are solely based on volumes under the proposed formula. This is an uneconomical. The expected losses or profits from prospective business should be included in the formula.	We do not agree. See response to comment 203.
261.	Lloyd's	3.21.	The calculation of premium risk still does not allow for the expected outcome of the business, which is an important feature in setting non-life capital. Profit-making business should require less capital than loss-making business and, yet, both would have the same capital requirements under the proposed formula, if solely based on volumes. This is uneconomical. Expected losses or profits from prospective business should be included in the formula.	We do not agree. See response to comment 203.
262.	Uni	3.21.	The definition of rho(sigma) is not clear. It's better to use the	Noted. This would be a marginal

	Oldenburg		following definition: A function of the combined standard deviation	improvement.
263.	Uni Oldenburg	3.22.	Problem: The used notation for the parameters is not statistical standard. It is convenient to say that a risk *X* is log-normally distributed with parameters *mu* and *sigma^2* if the logarithmic risk *ln(X)* is normally distributed with these parameters *mu* (= mean) and *sigma^2* (= variance). The notation used here actually refers to the parameters *mu_X = E(X)* (= mean) and *sigma^2 = Var(X)* (= variance) of the non-transformed (original) risk. The parameters in standard statistical notation, *mu* and *sigma^2*, are here given by *mu = ln (mu_X / root (1 + [sigma^2_X / mu^2_X]))* and *sigma^2 = ln (1 + [sigma^2_X / mu^2_X]*. A further implicit assumption in the above formula is that *mu_X = 1* which corresponds to the fact that the average loss ratio is 100%. This assumes that premiums are calculated on the basis of mere loss expectations, without any safety loadings or gains which in reality are not true. Problems: • A company with *mu_X < 1* in reality (which hence **de**creases its ruin probability) gets a higher SCR in return by the above formula (thus a kind of punishment). In turn, a company with *mu_X > 1* in reality (which hence **in**creases its ruin probability) gets a higher SCR. • The empirical variance is computed with the true mean of the loss ratios, but applied to a distribution of loss ratios with mean 1. This produces mathematical inconsistencies. • The SCR for the aggregated premium und reserve risk can lead to a smaller SCR than just for the premium risk. We can provide	Noted. The notation is non-standard and the underlying assumptions are possibly not strictly valid. However most business is profit-making most of the time so that this introduces a margin which helps ensure that when premiums are inadequate the SCR is not as inadequate as it would otherwise be.

			a simple example on the basis of the sheet TS.XIII in QIS 4. The assumption "lognormal distribution for premium risk and reserve risk each" does in general not lead to a lognormally distributed quantity by aggregation.	
264.			Confidential comment deleted	
265.	CEA, ECO-SLV-09-443	3.23.	There should be allowance for using entity specific parameters: in the same line of business, claims do not fit necessarily the same parameters. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	Noted. Entity specific parameters are covered by other advice. While in principle it would be right to allow different statistical distributions, in practice this could not be done within the constraints appropriate to entity specific parameters. Firms can use an IM if they can demonstrate that another distribution is more suitable.
266.	CRO Forum	3.23.	The multiplier used to calculate the 99.5%ile assumes a lognormal distribution. This is not always appropriate, for example latent claims, XoL reinsurance. Latent claims, especially asbestos, should be considered separately.	Noted. See response to comment 264.
267.	UNESPA-Association of Spanish Insurers and Reinsu	3.23.	The lognormal distribution is not always the distribution that better fits to historical data of all lines of businnes For this reason there should be allowance for using an undertaking specific parameters option that considers different statistical distribution (even in the same line of business) because of claims do not fit necessarily neither the same parameters nor the same distribution. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	Noted. See response to 265.

268.	Association of British Insurers	3.25.	The generalisation of "other risks" into the Miscellaneous LoB may not be appropriate, especially when the nature of risks can vary widely. In QIS4, accident, sickness and unemployment (ASU) products were split between AS (health module) and U (non-life module). Para 3.25 suggests that ASU policies may be included as a single individual LoB (number 6). This should be clarified.	Noted. We appreciate that Miscellaneous is a broad category, but there are limits on the degree of segmentation that CEIOPS can do. 3.25 does not make any suggestion that ASU is included in credit and suretyship. AS is included in the health module and U under the non life module miscellaneous. ASU is often called creditor insurance because it protects the creditor; it is not credit insurance, which protects the lender. See also response to 271.
269.			Confidential comment deleted	
270.	Belgian Coordination Group Solvency II (Assuralia/	3.25.	We note that Third Party Liability risk is still considered as one LOB, however, we believe that the Professional Liability risk is trully different in terms of volatility and in terms of payment pattern. Therefore a split between the Professional liability and the others is justified.	Noted. There are limits on the degree of segmentation that CEIOPS can do. And what we can do is limited by the available data.
271.	CEA, ECO-SLV-09-443	3.25.	The CEA understands to use proportionality and materiality principles in segmenting according to the table proposed in this paragraph. Additionally, the CEA thinks accident is part of non-life, so it should be included in the table.	Noted as the principle of proportionality is established.
272.	Dutch Actuarial Society –	3.25.	We note that property risk is still all categorised together, both personal lines and commercial lines, when the underlying risks faced by these businesses are different.	Noted. See response to comment 270.

	Actuarieel Genootschap (		This may force any writers of such business to have to use at least partial Internal Models.	
273.	European Union member firms of Deloitte Touche To	3.25.	We note that property risk is still all categorised together, both personal lines and commercial lines, when the underlying risks faced by these businesses are very different. We note that many risks written in distinctly separate lines of business within the London Market and Lloyd's are treated here as being within single lines of business. As such they will not benefit from the diversification benefits that do exist. This may force any writers of such business to have to use at least partial Internal Models. We refer to general comment II and earlier comments made by CEA on segmentation.	Noted. See response to comment 270.
274.	FERMA (Federation of European Risk Management Asso	3.25.	See comments in 3.14	Noted.
275.	Groupe Consultatif	3.25.	We note that property risk is still all categorised together, both personal lines and commercial lines, when the underlying risks faced by these businesses are very different. We note that many risks written in distinctly separate lines of business within the London Market and Lloyd's are treated here as being within single lines of business. As such they will not benefit from the diversification benefits that do exist. This may force any writers of such business to have to use at least partial Internal Models. We refer to general comment II and earlier comments made by CEA on segmentation.	Noted. See response to comment 270.

276.	Legal & General Group	3.25.	The generalisation of "other risks" into the Miscellaneous LoB may not be appropriate, especially when the nature of risks can vary widely. Also relevant to 3.81	Noted. See response to comment 270.
277.	Lloyd's	3.25.	It is proposed to have consistency between SCR, MCR and TP segmentations. We agree with the concept but do not believe the segmentations provided are suitable for all cases, especially the SCR where insufficient diversification is allowed. For example there is genuine diversification between Marine, Aviation and Transport classes but this is lost if calculations are undertaken at the proposed level.	Noted. See response to comment 270.
278.	Milliman	3.25.	More granularity would have been welcomed within LoB#5 and LoB#9.	Noted. See response to comment 270.
279.	PricewaterhouseCoopers LLP	3.25.	1. In CP 27, CEIOPS mentioned that the classes of business should be split into homogenous groups, however the segmentation provided in 3.25 does not reflect homogenous groupings in two particular areas: 2. - Marine, Aviation, Transport - This category is very broad and the risk characteristics between each of the components differ. 3. - Third party liability - Financial liability (e.g. Professional Indemnity) classes are also included within this class however the claims characteristics between General Liability and Professional Indemnity for example are very different.	Noted. See response to comment 270.
280.	Uni Oldenburg	3.25.	What does the abbreviation TP mean? Technical provision?	Noted. This could be spelt out in full.
281.	European Union member firms of	3.26.	It is unclear whether the standard deviations mentioned here relate to the market standard deviations later in the CP, or whether they could be based on company specific experience. If the latter, then there is no discussion of what the implementing measures are to	Noted. Entity specific parameters are covered in other advice to be published in October.

	Deloitte Touche To		include them within the standard formula SCR calculation.	
282.	FERMA (Federation of European Risk Management Asso	3.26.	See comments in 3.14	Noted.
283.	AAS BALTA	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
284.	AB Lietuvos draudimas	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
285.	ACA – ASSOCIATION DES COMPAGNIES D'ASSURANCES DU	3.27.	A tariff increase will always lead to a higher SCR also in the case when the incentive for this increase is to gain in profitability.	We disagree. See response to comment 203.
286.	Association of British Insurers	3.27.	We ask CEIOPS on further clarification on C^{PP}_{lob} and how it relates to PCO_{lob}. In the formula for $V_{(prem,\ lob)}$ C^{PP}_{lob} should be included or only ΔC^{PP}_{lob}, which denotes the change of C^{PP}_{lob} from year t to year (t+1)? If the written premium is higher than the earned premium for year t, is there double counting of unexpired risks under max (...) and C^{PP}_{lob} (which is an economic equivalent of the premium provision)?	We do not agree. The formula is as intended. The exposures contained in $PCO_{(lob)}$ and $C_{(pp,lob)}$ are distinct and do not overlap. There is no double counting if written premium exceed earned premium. The exposure in $C_{(pp,lob)}$ does not relate to the exposure relating to premiums that will be written in the year.

287.			Confidential comment deleted	
288.	Belgian Coordination Group Solvency II (Assuralia/	3.27.	The definition of CPP is not clear: ☐ Can you confirm that the CPP is only calculated in case of a multi-year contract? ☐ With "claims incurred after the following year". Does this mean claims incurred in T+2, T+3,… but not in T+1? ☐ With the term "existing contracts", is it at the valuation date? What about the new business underwritten in T+1? ☐ How do you calculate the Premium Volume when, for a multi-year contract, the written premium in T covers all the years?	Noted. The answers to the questions are: (1) Yes. (2) CEIOPS assumes that T+1 is intended to refer to the following year. With this understanding, yes. However, in the specification, t refers to the following year. (3) Yes. For new business this is covered by written premiums. (4) It is intended that written premium covers all the exposure of the contracts written in the year, since provisions set up at the year end are unlikely to equal unearned premiums.
289.	CRO Forum	3.27.	In our view the formula for $V_{(prem,\ lob)}$ is not correct if our understanding of C^{PP}_{lob} is correct (cf. comment to 3.19) as the formula does not capture the risk of change in economic premium provision as indicated in 3.14. Thus, the formula should be changed to $V_{(prem,lob)} = \max(P^{t,written}_{lob}; P^{t,earned}_{lob}; P^{t-1written}_{lob}) + \Delta C^{PP}_{lob}$ where ΔC^{PP}_{lob} denotes the change of C^{PP}_{lob} from year t to year (t+1).	This is a volume measure and so it is right to include C(pp,lob) and not delta.
290.	DENMARK:	3.27.	We are unconvinced that the addition of the CC element to the	We disagree.

	Codan Forsikring A/S (10529638)		volume measure as defined is correct.	
291.	Dutch Actuarial Society – Actuarieel Genootschap (	3.27.	This approach seems rather crude: more prudent rates seem to be punished. In our view the formula should be based on $P^{t,earned}$ in all cases: last year's written premium is not driving current year's premium volume and if the written premium is higher than the earned premium there is an increased unexpired risk, See also our remarks on C^{pp} in 3.19.	We agree the approach is crude. See response to comment 203. Last year's written premium is used as a proxy.
292.	European Union member firms of Deloitte Touche To	3.27.	With the additional element of reserve risk added in 3.4, the volume measure might now be more logically and simply assessed as unearned premiums at the valuation date plus written premiums expected in the following year – as this represents more clearly what the exposure taken on by the insurer actually is. This would be consistent with the definition in 3.14, whereas the proposal omits some of the risk on the unexpired business (as noted in 3.15 above). The unearned premium could be based on the actual premium reserves, but with a loading to allow for acquisition / administrative expenses (to bring it to an equivalent level to premiums). The issue would be how to determine what this loading should be – but this could be subject to approval by the actuarial function (perhaps as part of the underwriting review?). The written premium expected next year might also be subject to a minimum of the previous year value as contained in the current proposal. There would be no need to also have a minimum of the earned premium in the year, as this would be covered by the unearned premium element. The volume measure would then be = max($Plob^{t,written}$; $Plob^{t-}$	We disagree. An expense loading as suggested would be inappropriate (see response to comment 251).

			^{1,written}) + Clob Where Clob is the premium provision (at the valuation date) for the lob, loaded for acquisition / admin expenses	
293.	FERMA (Federation of European Risk Management Asso	3.27.	See comments in 3.14	Noted.
294.	Groupe Consultatif	3.27.	With the additional element of reserve risk added in 3.4, the volume measure might now be more logically and simply assessed as unearned premiums at the valuation date plus written premiums expected in the following year – as this represents more clearly what the exposure taken on by the insurer actually is. The unearned premium could be based on the actual premium reserves, but with a loading to allow for acquisition / administrative expenses (to bring it to an equivalent level to premiums). The issue would be how to determine what this loading should be – but this could be subject to approval by the actuarial function (perhaps as part of the underwriting review?). The written premium expected next year might also be subject to a minimum of the previous year value as contained in the current proposal. There would be no need to also have a minimum of the earned premium in the year, as this would be covered by the unearned premium element. The volume measure would then be = max(Plob ^{t,written} ; Plob $^{t-1,written}$) + Clob Where Clob is the premium provision (at the valuation date) for the lob, loaded for acquisition / admin expenses	We disagree. See response to comment 292.

			This approach seems rather crude: more prudent rates seem to be punished. In our view the formula should be based on $P^{t,earned}$ in all cases: last year's written premium is not driving current year's premium volume and if the written premium is higher than the earned premium there is an increased unexpired risk, See also our remarks on C^{pp} in 3.19.	
295.	KPMG ELLP	3.27.	We do not agree with this formula unless the term "written premium" has multiple meanings which are different to our understanding of the term. "Written premiums" is an accounting term and relates to the ultimate premiums to be received from contracts irrespective of when they are expected – it would include the expected premiums from multiyear contracts. Including the term "C" introduces double counting in the volume measure.	We do not agree. They are wrong to assume that there is double counting. The C(pp,lob) term relates purely to part of the premium provision brought forward, whereas the other term is a proxy for premiums to be written or premiums to be earned, noting that the risks relating to these are rather different and only partly overlap.
296.	Link4 Towarzystwo Ubezpieczeń SA	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
297.	Lloyd's	3.27.	We do not agree with this formula unless the term "written premium" has multiple meanings which are different to our understanding of the term. "Written premiums" is an accounting term and relates to the ultimate premiums to be received from contracts irrespective of when they are expected – it would include the expected premiums from multiyear contracts. By including the term "C" introduces double counting in the volume measure.	We disagree. See response to comment 295.

			Below are the definitions extracted from the UK ABI SORP on accounting for insurance business: Earned Premium In the case of general insurance business, earned premium is the proportion of written premiums (including where relevant those of prior accounting periods) attributable to the risks borne by the insurer during the accounting period. Written Premiums - General Business Premiums, which an insurer is contractually entitled to receive from the insured in relation to contracts of insurance. These are premiums on contracts entered into during the accounting period and adjustments arising in the accounting period to premiums receivable in respect of contracts entered into in prior accounting periods.	
298.	Milliman	3.27.	There is an inconstancy within the volume formula in that Cpp only relates to future claims and related expense payments, whereas premiums written and earned also include expenses and profit loads. Moreover, there is still no consideration of the premium rate level relative to the exposure, hence no consideration of the underwriting cycle. Given the current CEIOPS treatment, an increase in premium rates will lead to a higher SCR, although (all things being equal) an increase in rates should lead to a lower risk level. We suggest that the use of a concept such as Cpp (loss portion of premium), when appropriately defined, could alleviate this concern.	Noted. See also comments/responses 250/252. Cpp is slightly different in nature from the other element of the volume measure. See comment and response 203 in relation to premium cycle. Historic premium is used as a proxy for premium to be earned/written - in the specific example this gives too high a

			Finally, the current formula includes a double counting of exposure AND an inconsistency of volume measure, which we show in the example below: EXAMPLE:Let's assume an undertaking writes a 3-year contract on 12/1/2008, effective 1/1/09 with a premium of 300 assumed to be earned uniformly over time. Let's assume for simplicity, that this undertaking does not write any contracts before or after this contract. Finally, let assume that claims and LAE represent 80% of the premiums written. With respect to the volume measure for their solvency assessment as of a 12/31/2008: $P_{t,written}$ = 0, $P_{t,earned}$=100 and $P_{t-1,written}$=300 therefore V=MAX($P_{t,written}$, $P_{t,earned}$, $P_{t-1,written}$) + Cpp =300 + 80%*200=460. In this case, we are double counting the loss portion of the unexpired part of the 3-year contract which is already included in the 300 ($P_{t-1,written}$). Further, the assessment as to the profitability of the business impacts only two of the three future exposure periods. With respect to the volume measure for their solvency assessment as of a 12/31/2009: $P_{t+1,written}$ = 0, $P_{t+1,earned}$=100 and $P_{t,written}$=0 therefore V=MAX($P_{t+1,written}$, $P_{t+1,earned}$, $P_{t,written}$) + Cpp =100 + 80%*100=180. In this case, the assessment as to the profitability of the business impacts only one of the two future exposure periods. With respect to the volume measure for their solvency assessment	result @31/12/08, but undertakings could take advantage of the option in 3.28 to avoid this.

			as of a 12/31/2010: $P_{t+2,written}$ = 0, $P_{t+2,earned}$=100 and $P_{t+1,written}$=0 therefore V=MAX($P_{t+1,written}$, $P_{t+1,earned}$, $P_{t,written}$) + Cpp =100 + 80%*0=100. In this case, the assessment as to the profitability of the business impacts only one of the future exposure periods.	
299.	Munich RE	3.27.	In our view the formula for $V_{(prem,\ lob)}$ is not correct if our understanding of C^{PP}_{lob} is correct (cf. comment to 3.19) as the formula does not capture the risk of change in economic premium provision as indicated in 3.14. Thus, the formula should be changed to $V_{(prem,lob)} = \max(P^{t,written}_{lob}; P^{t,earned}_{lob}; P^{t-1written}_{lob}) + \Delta C^{PP}_{lob}$ where ΔC^{PP}_{lob} denotes the change of C^{PP}_{lob} from year t to year (t+1).	This is a volume measure and so it is right to include C(pp,lob) and not delta.
300.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
301.	RSA Insurance Group PLC	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
302.	RSA Insurance Ireland Ltd	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
303.	RSA - Sun	3.27.	We are unconvinced that the addition of the CC element to the	We disagree.

	Insurance Office Ltd.		volume measure as defined is correct.	
304.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.27.	We are unconvinced that the addition of the CC element to the volume measure as defined is correct.	We disagree.
305.	UNESPA-Association of Spanish Insurers and Reinsu	3.27.	In order to calculate the premium risk, it has been introduced a new parameter, and we think the introduction of this new concept is harmed to the calculation of those loB of long term, and we think this concept should be eliminate.	We do not agree. For firms writing multi-year business, the previous formula omitted part of the risk.
306.	Dutch Actuarial Society – Actuarieel Genootschap (	3.28.	See also 3.27. How can an insurer commit to its regulator that its actual premiums will not exceed its estimated volumes? We suggest to eliminate this article.	Noted. There should be no difficulty in an insurer telling its regulator that it will manage its business so as to restrict business volumes. If it cannot so manage its business, then there is a serious management issue at the undertaking. If the undertaking changes its plans it should inform the regulator and recalculate its SCR to reflect this changed risk profile, and explain how the business volumes in the period until the notification were consistent with its original commitment.
307.	FERMA (Federation	3.28.	See comments in 3.14	Noted.

	of European Risk Management Asso			
308.	KPMG ELLP	3.28.	We agree. In this case the inclusion of the term "C" is appropriate.	Noted.
309.	Lloyd's	3.28.	We agree. In this case the inclusion of the term "C" is appropriate.	Noted.
310.	Association of British Insurers	3.29.	The standard deviation does not appear to be correct in section 3.29 and 3.31. The SCR seems to over penalise firms for writing creditor compared to property policies and motor would appear to be the least risky.	See revised advice.
311.			Confidential comment deleted	
312.	Belgian Coordination Group Solvency II (Assuralia/	3.29.	See also comments on paragraphs 3.5. and 3.6. CEIOPS suggests to only use one market-wide estimate of the standard deviation for premium risk for each line of business. These values do not depend on the size of the portfolio or the risk mitigation arrangements. As an undertaking-specific estimate is not used, it also does not depend on the undertaking's own experience. We have also the impression that the QIS4 (and previous QIS3) SCR percentages seem high compared to the results of actuarial methods applied on the loss development triangles but especially for large and medium sized insurance companies. Furthermore, as the internal model is based on historical data with 10-15 years to estimate a risk happening on a "1 on 200 years" basis, a model risk really exists and this is not reflected in the standard deviation parameters. For example, an inflation observation based on only 15 years does not necessarily include a worst case scenario. We suggest an alternative approach, which we believe is suited at	See corresponding resolutions. See corresponding response to comment 3. See corresponding response to comment 7.

			least for lines of business like motor third party liability, or workmen compensation. A study has been done, based on the MTPL line of business in Belgium. Some results are available if needed. The study shows that it is essential to take the portfolio size into account in order to reflect the impact of excess-of-loss reinsurance on the SCR. However, assessing the impact of the portfolio size on the standard deviation of the total losses is not obvious. In addition, the company-specific historical volatility will also be very sensitive to the presence of large claims in the history. It is clear that we cannot let the reinsurance impact depend on portfolio size without doing the same for the volatility of the total losses. The impact of large claims on the volatility of the total losses, and the impact of excess-of-loss reinsurance can only be correctly assessed using a market large claims model. This model can easily be resized to any portfolio. At least in the case of the MTPL line of business, we therefore propose the following approach for the calculation of the SCR non-life (premium risk only): 1. Define a large claims threshold specific to the company. This threshold could for example be expressed as a percentage of the premium volume. 2. Eliminate the large claims from the historic loss data of the company. 3. The standard formula will be based on the company-specific standard deviation for attritional losses. For the market losses reference, we recommend that the standard deviation should only be based on attritional losses. 4. For the large claims, national market volatility should be used.	See revised advice.

			This volatility depends on the portfolio size and the level of the priority of the reinsurance program. 5. A global volatility parameter is calculated, based on a correlation assumption between attritional and large losses. 6. This volatility parameter is then used as in QIS4 (LogNormal assumption). Alternatively, a single threshold could be used for all companies, with a single standard deviation parameter, assuming that, below this threshold, the standard deviation is not impacted by the portfolio size. The large claims volatility parameters can be determined. In order to do so, a large claims market model (recommended by the control authority) has to be designed. This can be done using historical individual claims data from a market-wide sample of companies. Note that a better alternative for the treatment of large claims would be to directly use this market large claims model for the calculation of the SCR, instead of using the LogNormal assumption. This is only a first proposal, not taking other characteristics of the reinsurance program into account, like limits, reinstatements, ... Supposing that the reinsurance conditions are not borderline, meaning that they offer a sufficient risks transfer to justify the implementation of the gross to net formula. It is also limited to Motor Third Party Liability, where the homogeneity between portfolios is higher than in other lines of business, like in property business, but should be applicable to any other mass risk. This comment also applies to paragraph 3.85.	
313.	CEA,	3.29.	In the table, Σ should be changed for σ.	Noted.

	ECO-SLV-09-443		The values listed are high, following the experience of QIS4. We recommend that the standard deviations be reviewed in light of the entity specific and internal model results obtained from QIS4. The CEA thinks that the credibility method can better reflect the risk profile of entities. Failing to allow entity specific parameters in the standard formula may result in inappropriate capital requirements for some undertakings.	See revised advice and refer to NL Calibration paper. See corresponding response to comment 3.
314.	Dutch Actuarial Society – Actuarieel Genootschap (	3.29.	We refer to previous comments on the results of the QIS 4 exercise. The parameters are considered high compared to company specific standard deviations and overall outcomes. The impact will be even higher when the credibility approach is taken out of the standard model. And there is no distinction between business that is profitable and not-profitable. The SCR should be higher for not profitable business than for profitable ones. Undertakers that make profitable business are not rewarded for that.	See corresponding response to comments 3 and 5.
315.	European Union member firms of Deloitte Touche To	3.29.	A number of comments have been made around the suitability of the factors, particularly relating to commercial lines business. These will not be repeated here.	Noted. See corresponding responses.
316.	FERMA (Federation of European Risk Management Asso	3.29.	See comments in 3.14	See corresponding resolution.

317.	KPMG ELLP	3.29.	We agree.	Noted.
318.	Lloyd's	3.29.	We agree. Any recalibration should be transparent and detailed.	Noted.
319.	RBS Insurance	3.29.	We believe some of these calibrations are high, especially for larger, well diversified companies.	Noted.
320.	FERMA (Federation of European Risk Management Asso	3.30.	See comments in 3.14	See corresponding resolution.
321.	KPMG ELLP	3.30.	We agree.	Noted.
322.	Lloyd's	3.30.	We agree.	Noted.
323.	Uni Oldenburg	3.30.	In the formula two commas are too much.	Noted.
324.	Association of British Insurers	3.31.	We believe there should be scope for companies to use their own data. See comments to 3.29.	Noted. See corresponding resolution.
325.			Confidential comment deleted	
326.	CEA, ECO-SLV-09-443	3.31.	Some of the standard deviations appear to be quite high although we understand that these may be reviewed in November 2009. We recommend that the standard deviations be reviewed in light of the entity specific and/or internal model results obtained from QIS4. The CEA advocates for the possibility of companies to use their own data.	Noted. See corresponding response to comment 3.
327.	Dutch Actuarial	3.31.	See 3.29. We would welcome the use of company specific parameters here as well.	See corresponding resolution.

	Society – Actuarieel Genootschap (			
328.	European Union member firms of Deloitte Touche To	3.31.	See 3.29	See corresponding resolution.
329.	FERMA (Federation of European Risk Management Asso	3.31.	See comments in 3.14	See corresponding resolution.
330.	INTERNATIONAL GROUP OF P&I CLUBS	3.31.	The IG notes that the standard industry factors set out in 3.31 are the same as those used for QIS 4. The IG has previously proposed that a greater number of lines of business should be used in order to ensure that that the volume measures and standard deviations reflect properly the underlying risks. This comment also applies to 3.87.	Noted. See corresponding resolutions.
331.	KPMG ELLP	3.31.	We agree.	Noted.
332.	Lloyd's	3.31.	We agree. Any recalibration should be transparent and detailed.	Noted.
333.	RBS Insurance	3.31.	We believe some of these calibrations are high, especially for larger, well diversified companies.	Noted.
334.	AMICE	3.32.	The correlation coefficient of 0.5 between premium and reserve risk seems to be already fixed. More advice should be provided on	Noted. Further work is being carried out on the correlation

			whether CEIOPS envisages a revised calibration to be carried out by the year-end. The value of this correlation coefficient is the same for all lobs at the moment. However, the correlation between reserve and premium risk is extremely varied among different lines of business. This assumption is presumably too high for short-tail risks.	matrix.
335.	Association of British Insurers	3.32.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high, especially for short tail business. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extent the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	Noted. Further work is being carried out on the correlation matrix. Noted. Noted. Refer to NL Calibration paper.
336.			Confidential comment deleted	
337.	CEA, ECO-SLV-09-443	3.32.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same	See response to comment 335.

			type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extent the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	
338.	CRO Forum	3.32.	We recognise that the calibration is for illustrative purposes only, but still most factors seem too low. A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More	Noted. Refer to the NL Calibration advice. See corresponding response to comment 335.

			work is required to calibrate the standard model in this respect. This assumes a correlation of 50% between prior year reserves and future UW. This could and should vary by line of business.	
339.	FERMA (Federation of European Risk Management Asso	3.32.	See comments in 3.14	See corresponding resolution.
340.	GROUPAMA	3.32.	The correlation coefficient of 0.5 between premium and reserve risk seems to be already fixed. Will CEIOPS carry out a revised calibration by the end of the year? This correlation coefficient is the same for all lobs at the moment. But the correlation we could potentially have between reserve and premium risks is extremely different for all lobs. For short tail business, such an assumption is definitely too high.	Further work is being carried out on the correlation matrix.
341.	International Underwriting Association of London	3.32.	The correlation between premium and reserve risk factor of 0.5, seems arbitrary an overly high, particularly for some short-tail business such as property insurance. We would anticipate short tail business will be reported sooner, and therefore allowing for better informed reserves (and thus lower risk of holding incorrect reserves). We feel this factor would benefit from better calibration.	Further work is being carried out on the correlation matrix.
342.	KPMG ELLP	3.32.	We agree.	Noted.
343.	Legal & General Group	3.32.	The generic correlation coefficient of 0.5 between premium and reserve for all lines of business seems high, especially for shorter tail businesses. Also relevant to 3.88.	See corresponding response to comment 335.
344.	Lloyd's	3.32.	We agree.	Noted.
345.	Munich RE	3.32.	A generic correlation between premium and reserve risk of 0.5 for	See corresponding response to

			all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	comment 335.
346.	UNESPA-Association of Spanish Insurers and Reinsu	3.32.	Correlation between premium and reserve risk between the lines of business A generic correlation between premium and reserve risk of 0.5 should not fit to all LoB. More work is required to calibrate the standard model in this respect.	See corresponding response to comment 335. Also refer to the NL Calibration paper.
347.	FERMA (Federation of European Risk Management Asso	3.33.	See comments in 3.14	See corresponding resolution.
348.	KPMG ELLP	3.33.	We agree.	Noted.
349.	Lloyd’s	3.33.	We agree.	Noted.

350.	Lloyd's	3.34.	The calculation of premium risk still does not allow for the expected outcome of the business which is an important feature in setting non-life capital. Profit making business should require less capital than loss making business and yet both would have the same capital requirements, if they are solely based on volumes, as under the proposed formula. This is uneconomical. Expected losses or profits from prospective business should be included in the formula.	See corresponding response to comment 5.
351.	Uni Oldenburg	3.34.	The used symbolism is mathematically meaningless and misleading, and it is inconsistent with the previous symbolism in the calculation of premium and reserve risk.	See revised advice.
352.	CEA, ECO-SLV-09-443	3.35.	The correlation matrix is essential in order to allow for a proper level of diversification. Both the method and the results should be disclosed.	Noted. See revised advice and also refer to NL Calibration paper.
353.	European Union member firms of Deloitte Touche To	3.35.	See 3.29	See corresponding resolution.
354.	FERMA (Federation of European Risk Management Asso	3.35.	See comments in 3.15	See corresponding resolution.
355.	Lloyd's	3.35.	The revised factors when presented should include transparent and detailed derivations. They should adequately be supported by experience.	Noted.

356.			Confidential comment deleted	
357.	CEA, ECO-SLV-09-443	3.36.	We agree in principle, but the way diversification is treated the effect of the catastrophe risk is rather limited.	Noted. The Cat Task force is currently carrying out work to deal with Cat risks.
358.	CRO Forum	3.36.	This needs further clarification. It is unfortunate that more detail has not been provided at this stage as this is a very important aspect of the calculation.	Noted.
359.	FERMA (Federation of European Risk Management Asso	3.36.	See comments in 3.15	See corresponding resolution.
360.	KPMG ELLP	3.36.	We agree	Noted.
361.	Lloyd's	3.36.	We strongly agree.	Noted.
362.	PricewaterhouseCoopers LLP	3.36.	We support the creation of standardised catastrophe scenarios with input from the industry. However, developing standardised scenarios that are applicable across Europe will be challenging and we strongly believe that testing of these scenarios during QIS5 is very important.	Noted.
363.	FERMA (Federation of European Risk Management Asso	3.37.	See comments in 3.15	See corresponding resolution to comment.
364.	AAS BALTA	3.38.	We believe that the problem of producing a standard formula	Not agreed. Some companies are

			capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	not able to develop partial or full internal models due to the lack of human or financial resources.
365.	AB Lietuvos draudimas	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
366.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.38.	We are also in favour of the application of standardised scenarios otherwise this can lead to very different results from an undertaking to another and the loss of the benchmark objective. However for special lines of business or undertakings who work in niches, it should be obligatory to determine undertaking-specific scenarios.	Partially agreed. Undertaking specific scenarios have not been kept by CEIOPS for reasons stated in resolutions to comment 7.
367.	Association of British Insurers	3.38.	We would not expect firms using an internal model to be limited to using standard scenarios prescribed by the regulator, which may not appropriately capture the risks.	Noted. The scenarios that will be developed are designed to be integrated into the standard formula, not an internal model.

368.			Confidential comment deleted	
369.	CRO Forum	3.38.	Not allowing for personalised CAT scenarios and only relying on standardized scenarios, will result into the same problems as was experienced in QIS2. We strongly embrace the initiatives of CEIOPS to develop a catastrophe risk task force with the industry (3.42), but we believe that it will remain difficult for companies to determine the market share (3.59) due to risk concentrations. Method 1 from QIS4 is replaced by the proposed standard scenarios (= method 2 QIS4). In some cases an alternative method can be calculated (= Method 1 QIS4). It appears that the personalized scenarios from QIS4, method 3, have been eliminated. This possibility to use own scenarios in the standard model should be provided too. See also general remarks.	Not agreed. Undertaking specific scenarios have not been kept by CEIOPS for reasons stated in resolutions to comment 7.
370.	DENMARK: Codan Forsikring A/S (10529638)	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 365.
371.	Dutch Actuarial Society – Actuarieel Genootscha	3.38.	This approach may also introduce differences in interpretation of the scenarios between entities and also a mismatch between the standard scenario and the real catastrophe exposure an entity runs. We note the removal of the third option from the QIS4 model and that this will potentially simplify the standard formula model.	Noted. Undertaking specific scenarios have not been kept by CEIOPS for reasons stated in resolutions to comment 7. Stakeholders can comment on the

	p (		However, we argue that this QIS 4 option 3 using an own scenario in the standard model should be possible and preferred for all firms exposed to catastrophe risk. The factor formula, but only if made more risk sensitive (QIS 4 option 1), could be an alternative solution. We do see the added value of scenarios, but remark that costs of development and maintenance of these scenarios will be high. We rather see companies explain in the ORSA which scenarios they have considered when forming their opinion on the cat risk.	alternative approach factors in the consultation of the third set of advice.
372.	European Union member firms of Deloitte Touche To	3.38.	We note the removal of the third option from the QIS4 model and that this will potentially simplify the standard formula model. Country specific scenarios will ensure that local business and cover they write will be represented and should help promote consistency. However, we would welcome thought on who will provide scenarios for countries where cat. Exposure exists that are outside the EU, for instance exposure in North America and Japan The resource required to specify these scenarios will be considerable and the most experienced and knowledgeable practitioners are likely to work for entities that have their own internal catastrophe models that they would probably use within a partial Internal Model. Additionally they may have a conflict of interest in that they may also be looking to sell reinsurance protection to cover these risks. Will these resources be available regularly to fulfil industry objectives rather than company specific objectives? We expect that companies with material cat. Exposures will end up using partial internal models – ie effectively the QIS4 3rd option and refer to general comment II	Noted. CEIOPS has set up a special CAT risk task force, developing scenarios within the EU. In 3.41 of CP48, it is stated that 'The standardised scenarios shall be reviewed annually'. This updating will be provided by CEIOPS as Level 3 guidance, so no extra cost for supervised entities to update themselves the scenarios.
373.	FERMA	3.38.	See comments in 3.15	See resolutions to corresponding

	(Federation of European Risk Management Asso			comment.
374.	Groupe Consultatif	3.38.	We note the removal of the third option from the QIS4 model and that this will potentially simplify the standard formula model. Country specific scenarios will ensure that local business and cover they write will be represented and should help promote consistency. However, we would welcome thought on who will provide scenarios for countries where cat. Exposure exists that are outside the EU, for instance exposure in North America and Japan The resource required to specify these scenarios will be considerable and the most experienced and knowledgeable practitioners are likely to work for entities that have their own internal catastrophe models that they would probably use within a partial Internal Model. Additionally they may have a conflict of interest in that they may also be looking to sell reinsurance protection to cover these risks. Will these resources be available regularly to fulfil industry objectives rather than company specific objectives? We expect that companies with material cat. Exposures will end up using partial internal models - ie effectively the QIS4 3rd option and refer to general comment II	Noted. See resolutions to comment 372.
375.	International Underwriting Association of London	3.38.	We welcome the standardised scenarios to ensure harmonisation and create a level playing field. Such scenarios will obviously need to be realistic, feasible, and consider different geographical features and hazards.	Noted. See resolutions to comment 19 on geographical diversification.
376.	KPMG ELLP	3.38.	We disagree with only using standardised scenarios. We do agree	Not agreed. Personalised

			with the proposals for how to derive standard scenarios – this is a very important consideration. Neither standard scenarios nor the proposed factor method sufficiently capture risk in an appropriate manner for enough (re)insurance undertakings to make them the sole options available. For non-life catastrophe risk the only way to lead to a sufficiently risk based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a number of (re)insurance undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.	scenarios have been rejected for reasons stated in resolutions to comment 7.
377.	Legal & General Group	3.38.	Firms using an internal model should not be limited by the regulator in the scenarios used to capture risks, and especially tail risks.	See resolutions to comment 367.
378.	Link4 Towarzystwo Ubezpieczeń SA	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
379.	Lloyd's	3.38.	We disagree with the proposal that the standard formula should be based on standardised scenarios (with a formulaic approach for a small number of undertakings). We do agree with the proposals for how to derive standardised scenarios – this is a very important step forward in gaining consistency in standard scenarios.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolutions to comment 7.

			Neither standardised scenarios nor the proposed factor method sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available. For non-life catastrophe risk the only way to produce a sufficiently risk-based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.	
380.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
381.	RSA Insurance Group PLC	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
382.	RSA	3.38.	We believe that the problem of producing a standard formula	Not agreed. Some companies are

	Insurance Ireland Ltd		capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	not able to develop partial or full internal models due to the lack of human or financial resources.
383.	RSA - Sun Insurance Office Ltd.	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
384.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.38.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies are not able to develop partial or full internal models due to the lack of human or financial resources.
385.	Association of British	3.39.	We agree that the scenarios underlying catastrophe risk should include the potential for multiple events in a year.	Noted.

	Insurers			
386.	CEA, ECO-SLV-09-443	3.39.	We understand that the catastrophe sub-module shall be based on the total loss distribution taking into account losses arising from a series of events from the same peril as well as the risk of losses arising from different perils (e.g. windstorm and earthquake). Whilst we agree with the principle (total loss instead of event, multiple events from one or more perils) care should be taken in the setup in order not to make the catastrophe sub-module overly complex and burdensome. We would welcome further feedback on who will provide scenarios for exposures outside the EU and how. The resources required to specify these scenarios will be considerable and the most experienced and knowledgeable practitioners are likely to work for entities that have their own internal catastrophe models that they would probably use within a (partial) internal model. Will these resources be available regularly to fulfil industry objectives rather than company specific objectives? Personalised scenarios (Method 3 from QIS4) are preferable to the currently proposed alternative method, since undertakings know best where the true risk of the business lies. Such personalised scenarios should not be viewed as partial internal models but have the same status as in QIS4.	Noted. CEIOPS has set up a special CAT risk task force, developing scenarios within the EU. In 3.41 of CP48, it is stated that 'The standardised scenarios shall be reviewed annually'. This updating will be provided by CEIOPS as Level 3 guidance, so no extra cost for supervised entities to update themselves the scenarios
387.	CRO Forum	3.39.	See general remarks. We agree that standardized scenarios might provide false confidence. We believe that CAT risk can only be appropriately modelled with personalised scenarios (option 3 in QIS4) due to different risk profiles and risk concentrations of insurers. Also, this is the most appropriate way to address risk mitigation (see also 3.6).	Noted. As stated in 3.39 of CP48, scenarios will be developed within the EU. The QIS4 Method 1 will be recalibrated and submitted for consultation in the third set of advices. The use of personalised scenarios has been rejected for reasons indicated in resolutions to

			We understand that the catastrophe sub-module shall be based on the total loss distribution taking into account losses arising from a series of events from the same peril as well as the risk of losses arising from different perils (e.g. windstorm and earthquake). Whilst we agree to the principle (total loss instead of event, multiple events from one or more perils) care should be taken in the setup in order not to make the catastrophe sub-module overly complex and burdensome. • 1st bullet: "the scenarios shall reflect the risk of catastrophic events for all regions within or outside of the EU" Does this mean that specific cat events will be available for all countries in the world? • Last bullet: "the standard scenarios might provide false confidence that all the relevant risks are captured, whereas they might not sufficiently reflect the risks attached to each insurer's business. (…)". This sentence applies to all modules of the Standard module, since the standard module must be usable for all (re)insurers! It is not specific for CAT risk. " (…) Therefore CEIOPS supports in such circumstances that alternative methods are used (…)". The alternative method referred to is the Method 1 from QIS4. The feedback from the industry on this method that, although it was simple to use for all participants, it does not reflect the true CAT risk of the business (see 3.2). Therefore it is surprising that this method is proposed as an alternative method. Personalised scenarios (Method 3 from QIS4) are preferable above the proposed	comments 7.

			alternative method, since a participant knows best where the true risk of the business lies. Of course a participant can use partial internal models (3.58), but it would be easier for this risk to include it already in the standard model.	
388.	Dutch Actuarial Society – Actuarieel Genootschap (	3.39.	* Last bullet: "the standard scenarios might provide false confidence that all the relevant risks are captured, whereas they might not sufficiently reflect the risks attached to each insurer's business. (…)". This sentence applies to all modules of the standard module, since the standard module must be usable for all (re)insurers! It is not specific for CAT risk. " (…) Therefore CEIOPS supports in such circumstances that alternative methods are used (…)". The alternative method referred to is the Method 1 from QIS4. The feedback from the industry on this method that, although it was simple to use for all participants, it does not reflect the true CAT risk of the business (see 3.2). Therefore it is surprising that this method is proposed as an alternative method. Personalised scenarios (Method 3 from QIS4) are preferable above the proposed alternative method, since a participant knows best where the true risk of the business lies. Of course a participant can use partial internal models (3.58), but it would be easier for this risk to include it already in the standard model.	Not agreed. The use of personalised scenarios has been rejected for reasons indicated in resolutions to comment 7.
389.	FERMA (Federation of European	3.39.	See comments in 3.15	See resolutions to corresponding comment.

	Risk Management Asso			
390.	Legal & General Group	3.39.	We agree that the scenarios underlying catastrophe risk should consider the potential for multiple events in a year. In the case of Health – SLT (as defined in CP 50) we are doubtful within a 1 in 200 year event scenario that multiple catastrophe events are relevant. Also relevant to 3.91	Noted. The standard formula reflects a mean European company, and may thus not capture exactly all the features of monoliners for instance.
391.	Lloyd's	3.39.	The first bullet states that scenarios will reflect the risk of catastrophes "…for all regions within or outside of the EU." However, elsewhere (e.g. 3.42; 3.56) the paper implies that the scenarios are not designed to cover catastrophic events outside Europe. This has a major impact on our assessment of these proposals. Clarification on whether the scenarios will include catastrophes outside the EU is therefore essential. We strongly agree with the need for harmonisation and a level playing field in the construction of standard scenarios. We also agree that standard scenarios will not result in suitable estimates for all undertakings.	Noted.
392.	Munich RE	3.39.	We understand that the catastrophe sub-module shall be based on the total loss distribution taking into account losses arising from a series of events from the same peril as well as the risk of losses arising from different perils (e.g. windstorm and earthquake). Whilst we agree to the principle (total loss instead of event, multiple events from one or more perils) care should be taken in the setup in order not to make the catastrophe sub-module overly complex and burdensome.	Agreed.
393.	Uni Oldenburg	3.39.	Point 4: section 3.1.5.2 does not exist. It should be written instead 3.1.5.B.	Agreed. 3.1.5.2 will be replaced by 3.1.5 B.

394.	Association of British Insurers	3.40.	We agree that it is unreasonable to assume that all scenarios would impact an undertaking simultaneously and appropriate aggregation approaches should be considered allowing for the impacts of seasonality (for natural catastrophes), changes in exposure throughout the year, changes in level of reinsurance (retention, limits etc), reinsurance reinstatements etc.	Noted.
395.	CEA, ECO-SLV-09-443	3.40.	We welcome the idea of standardized scenarios in order to create a level playing field. It is however important to recognize the need for geographical differences especially in connection with natural hazards which would require the use of undertaking specific scenarios.	Noted. Taking into account geographical diversification for CAT risks will be analysed by the CAT risk task force.
396.	European Union member firms of Deloitte Touche To	3.40.		No comment available.
397.	FERMA (Federation of European Risk Management Asso	3.40.	See comments in 3.15	See resolutions to corresponding comment.
398.	German Insurance Association – Gesamtverband der D	3.40.	We welcome the idea of standardized scenarios in order to create a level playing field. It is however important to recognize the need for geographical differences especially in connection with natural hazards which would ask for undertaking specific scenarios.	Noted. Taking into account geographical diversification for CAT risks will be analysed by the CAT risk task force.

399.	Groupe Consultatif	3.40.		No comment available.
400.	KPMG ELLP	3.40.	We welcome future guidance on how to apply standardized scenarios to (re)insurance undertakings' exposure profiles.	Noted. The application of the scenarios will be part of the corresponding advice in the third set.
401.	Legal & General Group	3.40.	We agree that it is unreasonable to assume that all scenarios would impact an undertaking simultaneously and appropriate aggregation approaches should be considered allowing for the impacts of seasonality (for natural catastrophes), changes in exposure throughout the year, changes in level of reinsurance (retention, limits etc), reinsurance reinstatements etc.	Noted.
402.	Uni Oldenburg	3.40.	Point 2: The idea to ask the (re)insurance undertakings are good, but it should be guaranteed that all undertakings are asked and not only the global players.	Noted. However, global players have the biggest knowledge on managing catastrophic risks.
403.	AAS BALTA	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
404.	AB Lietuvos draudimas	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
405.	Association of British	3.41.	We appreciate the need for ongoing review of the standardised scenarios. However, we believe there will be practical difficulties if	Noted. In 3.41, it is only stated that the review takes place

	Insurers		standardised scenarios are changed too frequently. Changes over time could also give rise to volatile results depending on the extent of any changes and sensitivity of a firms losses to a scenario e.g. in extreme cases, a scenario may be applicable in one year but not in another and vice versa purely due to changes in the database of scenarios. This pushes firms towards the (partial) internal model route to remove exposure from such changes.	annually. This does not mean that the scenario will actually change each year. The outcome of the review can for instance imply that no change is necessary.
406.			Confidential comment deleted	
407.	CEA, ECO-SLV-09-443	3.41.	Standard catastrophe scenarios will be provided. We understand that Ceiops, with the help of a task force from the industry, will develop standard catastrophe scenarios for calculating the catastrophe risk. We see this as an improvement to the previous system and we would very much like to be part of the task force which is being set up. We further stress that the standardized scenarios should reflect the different situations in the member states. Where such scenarios don not reflect appropriately the risk profile of undertakings, undertaking specific scenarios, subject to supervisory approval, should be available as an alternative option in the standard formula. The criteria for the development of undertaking specific scenarios should be provided by Ceiops and foster the harmonisation of such scenarios across member states.	Not agreed. The cat risk task force will deliver work which will be subject to consultation, in order to take all stakeholders' views into account. Personalised CAT scenarios have been rejected for the reasons stated in resolutions to comments 7.
408.	CRO Forum	3.41.	1st bullet: See general comment and see 3.28. 2nd bullet: Even though the standardized scenarios to be developed with the help of the industry is a great improvement over Method 2 in QIS4, we believe that CAT risk can still not be modelled in a sophisticated way, especially if risk concentrations within portfolios are not standard.	1st bullet: See corresponding resolutions. 2nd bullet: Noted. These are shortcomings of a standard formula, designed for an average European insurance company.

			For example: a small insurer (with a market share of 1%) writing household insurance mainly close to the Seine/Thames may be more exposed to flood risk than a large insurer (10% market share) mainly writing household insurance further away from the Seine/Thames. 5th bullet: At this stage it is very difficult to comment on the impact of CP48, without understanding the main components which drive the SCR such as calibration, correlations, undertaking specific parameters, catastrophe scenarios (1.4). We understand that standardized scenarios for CAT risk will most likely be developed for QIS5 (June 2010). Hence understanding the impact of this advice is delayed by almost 1 year. Especially, when such a large number of changes are proposed, compared to QIS4, we believe it is crucial to get understanding of these components as early as possible. We believe it is more effective to allow for personalised scenarios.	5th bullet point: Personalised scenarios have been rejected for the reasons indicated in resolutions to comment 7.
409.	DENMARK: Codan Forsikring A/S (10529638)	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
410.	Dutch Actuarial Society – Actuarieel Genootscha p (	3.41.	On one hand, CEIOPS is trying to reduce the complexity in the non-cat modules by leaving out the credibility approach (which was favoured by the industry given QIS 4 comments) and on the other hand, it is introducing more detailed and comprehensive standardized scenarios which inevitably lead to a higher burden for the industry and less insight than the company specific scenarios.	Not agreed. QIS4 Method one lead to unrealistic results, whilst method 3 was considered to be too subjective. Personalised scenarios have been rejected for reasons stated in resolutions to comment 7.
411.	European Union member	3.41.	We agree that the use of pre-specified scenarios is helpful within the implementing measures, although, as noted, care will have to be taken to ensure they are appropriate for the entirety of the	Noted.

	firms of Deloitte Touche To		business written across Europe. In particular, there are a number of countries that will write US and other worldwide business, and the scenarios should reflect these as well. We appreciate the analysis as presented in annex D of the various options for the assessment of the catastrophe risk. However, as discussed in the CP a lot of work still has to be done to develop adequate catastrophe scenarios that meets the requirements as presented in this CP. We await the final proposals resulting from the work of CEIOPS in cooperation with the intended Task Force before a final evaluation can be made. We note that the annual update of these scenarios, and the work required to ensure consistency in interpretation across all regions within and outside of the EU, will require considerable resource.	
412.	Groupe Consultatif	3.41.	We appreciate the analysis as presented in annex D of the various options for the assessment of the catastrophe risk. However, as discussed in the CP a lot of work still has to be done to develop adequate catastrophe scenarios that meets the requirements as presented in this CP. We will have to wait for the final proposals resulting from the work of CEIOPS in cooperation with the intended Task Force before a final evaluation can be made. 7. We note that the annual update of these scenarios, and the work required to ensure consistency in interpretation across all regions within and outside of the EU, will require considerable resource.	See resolutions to comment 411.
413.	Institut des Actuaires (France)	3.41.	The Institut des Actuaires welcomes CEIOPS' proposal to develop standardised scenarios for the standard formula catastrophe risk module with the help of industry. The Groupe Consultatif Actuariel Européen and/or representatives of national actuarial associations should be involved in the annual	Noted. Scenarios will be delivered for QIS5.

			review of the standardised scenarios, notably in the update of prospective data used for the scenarios. The Institut des Actuaires underlines the importance of having available standardised scenarios for the QIS 5 exercise to be performed in 2010 in order to assess their calibration.	
414.	KPMG ELLP	3.41.	We reiterate the comment made in our general comments above that we feel that the flexibility that was present in the QIS4 exercise to use personalized catastrophe scenarios to calculate the standard formula catastrophe risk capital charge should remain. The proposed method to use standardized scenarios defined by CEIOPS will not be relevant for all (re)insurance undertakings or types of risk exposure. We believe that the timescale set for developing these scenarios is ambitious and that there is a considerable amount of work remaining to be done in developing this module, including the aggregation requirements between events and countries so that it captures the catastrophe component of an (re)insurance undertaking's underwriting risk adequately.	Not agreed. Personalised scenarios have been rejected for the reasons stated in resolutions to comment 7, together with a method to aggregate the risks.
415.	Legal & General Group	3.41.	We appreciate the need for ongoing review of the standardised scenarios. However, we believe there will be practical difficulties if standardised scenarios are changed too frequently. Changes over time could also give rise to volatile results depending on the extent of any changes and sensitivity of a firms losses to a scenario e.g. in extreme cases, a scenario may be applicable in one year but not in another and vice versa purely due to changes in the database of scenarios. This pushes firms towards the (partial) internal model route to remove exposure from such changes.	Noted. In 3.41, it is only stated that the review takes place annually. This does not mean that the scenario will actually change each year. The outcome of the review can for instance imply that no change is necessary.
416.	Link4 Towarzystw o	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable

	Ubezpieczeń SA			proposals from all interested parties to the extend possible.
417.	Lloyd’s	3.41.	We strongly agree.	Noted.
418.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry’s time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
419.	RBS Insurance	3.41.	Also applies to 3.91 We believe that undertaking specific scenarios will provide the best measure of catastrophe risk, and that this is appropriate under the Standard Formula. We think the construction of reference catastrophe scenarios for all territories is an ambitious plan for CEIOPS given local regulators found this a difficult exercise. It will be important for the industry that the scenarios are ready in time for QIS5, as this is a material part of many undertakings’ risk. To reduce costs and ensure best practice we believe that CEIOPS should build on research already in the market (ie- use inputs from established software packages, and industry experts rather than start from scratch) However we believe that using established tools will still involve substantial resource, as a full validation of this data is necessary before it can be used with confidence. We believe it will be helpful to the industry for CEIOPS to publish the validation performed.	Not agreed. Personalised scenarios have been rejected by CEIOPS for reasons stated in resolutions to comment 7. Scenarios will be ready for QIS5, as indicated in 3.41 or CP48. The cat risk task force set up by CEIOPS includes industry experts, which are also experienced in established software packages. CEIOPS will consult on the developed scenarios.
420.	RSA	3.41.	We think the task of producing the scenarios will be very complex	Not agreed. CEIOPS has always

	Insurance Group PLC		and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
421.	RSA Insurance Ireland Ltd	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
422.	RSA - Sun Insurance Office Ltd.	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
423.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.41.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	Not agreed. CEIOPS has always experienced good industry contacts and considers valuable proposals from all interested parties to the extend possible.
424.	XL Capital Ltd	3.41.	We have noted CEIOPS' intention to develop a set of standardised scenarios for Catastrophe Risk and welcome further guidance (either Level 3 or through the 2010 QIS 5 exercise) on the matter.	Noted.
425.	CEA, ECO-SLV-09-443	3.42.	We welcome the proposal from Ceiops of creating a task force and we are in favour of the harmonisation of the scenarios for all members. Databases of CAT losses should be built for countries outside the EU.	Noted.
426.	CRO Forum	3.42.	Last bullet:	Noted. Data will not be provided by countries but with help from

			" Build a database of historic catastrophic losses. (…)" Of course this is necessary to be able to calibrate risk factors in the future. However, if CAT scenarios are also used for countries outside the EU (see 3.39), these countries should also provide updated data for calibration purposes.	the industry.
427.	Dutch Actuarial Society – Actuarieel Genootschap (	3.42.	We would like to know who will review the list of natural perils and man-made events. We suggest to do a users test on this list.	Noted. CEIOPS will annually review the scenarios with the help of the industry and assess the need for updating them. The second sentence is unclear.
428.	Groupe Consultatif	3.42.	Representatives of national actuarial associations and/or the Groupe Consultatif Actuariel Européen should be part of the task force CEIOPS wants to create to construct the required scenarios.	Not agreed. The task force has already started it's work and it would not be productive to include more members at this stage.
429.	Institut des Actuaires (France)	3.42.	The Groupe Consultatif Actuariel Européen and/or representatives of national actuarial associations should be part of the task force CEIOPS wants to create to construct the required scenarios.	Not agreed. The task force has already started it's work and it would not be productive to include more members at this stage.
430.	Lloyd's	3.42.	We strongly agree.	Noted.
431.	RBS Insurance	3.42.	Also applies to 3.92 No mention is made about use of established software packages. The fourth bullet, CEIOPS building a historic database, could prove expensive to develop. It is important that costs are controlled as they are eventually passed back to policyholders.	Not agreed. CEIOPS closely cooperates on this issue with the industry, which will benefit from expertise of stakeholders most experienced in this matter.
432.	Uni	3.42.	Point 1 disagrees with reference 3.40, point 2. Now we have the	Not agreed. The cat risk task

	Oldenburg		situation of cherry picking.	force will develop scenarios. The applicability criteria of these will remain in CEIOPS hands.
433.			Confidential comment deleted	
434.	Dutch Actuarial Society – Actuarieel Genootschap (	3.43.	The term 1 in 200 year loss level is not correct. This should be 1:200 (no reference to "year")	Agreed. Advice will be updated.
435.	International Underwriting Association of London	3.43.	We note that the 1-in-200 year loss will be set "at the industry level"; for clarity, will this be set at the European Industry level or national industry level? For example a 1-in-200 year loss in a member state, may not necessarily translate into a 1-in-200 year loss to the European industry at large.	Noted. It will be a 1-in-200 regional industry loss. It is stated in 3.43 that CEIOPS will work in a best effort objective in this field.
436.	KPMG ELLP	3.43.	We agree and note that this still leaves the possibility of the standard losses not representing a 1 in 200 year event for some (re)insurance undertakings.	Noted. These are the shortcomings of a standard formula, applicable to an average European (re)insurance undertaking.
437.	Lloyd's	3.43.	We agree and note that this leaves the possibility of the standard losses not representing a 1 in 200 year event for some undertakings.	Noted. These are the shortcomings of a standard formula, applicable to an average European (re)insurance undertaking.
438.	ACA – ASSOCIATION DES COMPAGNIE	3.44.	This means that the calibration of volatilities should be out of cat, so we must wait until the scenarios are known to remove them from the calculation of volatilities. We hope that this is the case. Otherwise there could be a double counting of certain risks cat.	Noted. The data collection process for the parameters clearly stated that the numbers shall be net of CAT events.

	S D'ASSURAN CES DU		(Like storms, flood or motor third party liability like Mont Blanc).	
439.	Association of British Insurers	3.44.	It is "assumed" that non-life premium risk and reserve risk module shall capture all risks that have not been captured under the catastrophe risk sub-module. How will this be justified? [See 3.7 also]. It is important to note that any double counting between premium and reserve risk and catastrophe cannot be determined until the standardised scenarios are finalised. In addition, if standardised scenarios are reviewed and updated annually, the premium and reserve risk parameters may also need to be updated to reflect these changes to ensure that there is no double counting.	Noted. A review will take place annually, which does not mean that the scenarios will actually be updated yearly.
440.	CEA, ECO-SLV-09-443	3.44.	Double counting of risk when considering premium and reserve risk and catastrophe risk Ceiops has recognised that there may be some double counting of risk due to the way in which the premium, reserve and catastrophe risk is currently being calculated. There have been a number of suggestions made to make allowance for this but these have been rejected by CEOIPS and no explicit change will be made to allow for this double counting. Ceiops will try to make an implicit allowance for this in choosing both the standardised scenarios for catastrophe risk and the distribution assumption for the premium and reserve risk. In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses as much as possible. An analogous remark applies to the use of undertaking-specific data: the calculation should be based on data where catastrophe losses have been removed as much as possible. The calibration of the market-wide and undertaking specific factors	Noted. In the data collection process CEIOPS indicated that the data submitted needs to be net of CAT claims to the extend possible. Double counting issues are addressed in 3.44 of the advice.

			for premium and reserve risk including to prevent double-counting of losses as far as possible in a standard approach should be discussed in the 3rd wave.	
441.	CRO Forum	3.44.	In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses. An analogous remark applies to the use of undertaking-specific data: The calculation should be based on data where catastrophe losses have been removed. The parameters for premium and reserve risk from 3.29 and 3.31 must therefore be calibrated on data corrected for CAT events. Otherwise the risk factors will be too high, and there will be an overlap with the CAT risk.	See resolution to comment 440 above.
442.	Dutch Actuarial Society – Actuarieel Genootschap (	3.44.	The parameters for premium and reserve risk from 3.29 and 3.31 must therefore be calibrated on data corrected for CAT events. Otherwise the risk factors will be too high, and there will be an overlap with the CAT risk. The actuarial function should form an opinion on this when looking at the quality of the data used.	See resolution to comment 440 above.
443.			Confidential comment deleted	
444.	Institut des Actuaires (France)	3.44.	Clarification should be made on how the non-life premium and reserve risk module shall capture all the risks that have not been captured under the catastrophe risk sub-module to avoid double-counting. This raises the issue of defining an appropriate level as from which an event is considered as a catastrophe for any undertaking given its specific exposure risks.	See resolution to comment 440 above.
445.	KPMG ELLP	3.44.	We agree. The calibration of catastrophe losses should exclude “normal” experience.	Noted.
446.	Legal &	3.44.	It is “assumed” that non-life premium risk and reserve risk module	See resolution to comment 440

	General Group		shall capture all risks that have not been captured under the catastrophe risk sub-module. How will this be justified? [See 3.7 also]. It is important to note that any double counting between premium and reserve risk and catastrophe cannot be determined until the standardised scenarios are finalised. In addition, if standardised scenarios are reviewed and updated annually, the premium and reserve risk parameters may also need to be updated to reflect these changes to ensure that there is no double counting. Also relevant to 3.94	above.
447.	Lloyd's	3.44.	We agree. The calibration of catastrophe losses should exclude "normal" experience.	Noted.
448.	Munich RE	3.44.	In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses. An analogous remark applies to the use of undertaking-specific data: The calculation should be based on data where catastrophe losses have been removed.	See resolution to comment 440 above.
449.	Association of British Insurers	3.45.	The requirement to run scenarios for earthquake and hail may be difficult due to limited data/knowledge to calibrate such a scenario. How are insurers to deal with this requirement if data is limited?	Noted. The CAT risk task force mentioned in 3.42 of CP48 will take care of the definition of the scenarios.
450.	CEA, ECO-SLV-09-443	3.45.	There is a clear need for national adjustments in building the standardized scenarios. Manmade disasters should be extended to include mass accident when there is lump sum compensation. Further, we think that having a comprehensive list of events can be imagined. Correlations of the events would need to be worked on by Ceiops.	Noted. Risk mitigation instruments shall comply with the provisions in CP52 or CP31. The issue of man made disasters will be treated in the third set of advice (calibration of the non life module). CEIOPS has set up a special CAT risk task force, in order to design EU scenarios. This

				task force will also address the issue of correlations between scenarios, either explicitly or implicitly.
451.	KPMG ELLP	3.45.	We agree.	Noted.
452.	Lloyd's	3.45.	We agree.	Noted.
453.	RBS Insurance	3.45.	Will terrorism scenarios be included?	Noted. This risk would fall into the man made disaster category, for which CEIOPS will provide a calibration in the third set of advice.
454.	Uni Oldenburg	3.45.	The LoB "Other motor" is only relevant for hail.	Not agreed. One could imagine a claim in the 'Motor, Other' class for other events like hail.
455.	AMICE	3.46.	CEIOPS considers that the capital requirement for health catastrophe risk should fall under the non-life catastrophe risk category. We do not agree with this categorisation.	Not agreed. Health Cat risk is addressed in CP50, where it is stated that the methodologies used to derive the CAT charge will be same than those used to derive non life CAT charges.
456.	CEA, ECO-SLV-09-443	3.46.	The section also mentions health. We note that health is not a part of the Non-Life module but captured within an own health module. Consequently, health catastrophe risk should be captured within the health module and not within the Non-Life module in order to account for a clear separation between, life, health and nonlife business.	See resolution to comment 455.
457.	CRO Forum	3.46.	The section also mentions health. We note that health is not a part of the nonlife module but captured in a separate advice, "CP50 – design of health risk module and sub module". Consequently,	See resolution to comment 455.

			health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	
458.			Confidential comment deleted	
459.	International Underwriting Association of London	3.46.	We would question whether Health should be included in the scenarios for the Non-Life Underwriting Risk module. However, we agree that there could be health implications following accidents, such as disease arising from a chemical spill. However such accidents might impact Casualty, and/or Transportation classes rather than Health classes, (dependent upon the scenario).	See resolution to comment 455.
460.	KPMG ELLP	3.46.	We agree.	Noted.
461.	Lloyd's	3.46.	We agree.	Noted.
462.	Munich RE	3.46.	The section also mentions health. We note that health is not a part of the nonlife module but captured within an own health module. Consequently, health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	See resolution to comment 455.
463.	ROAM	3.46.	CEIOPS considers that the capital requirement for health catastrophe risk should fall under the non-life catastrophe risk category. We do not agree with this categorisation.	See resolution to comment 455.
464.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.47.	If member did not have sufficient time or resource to coordinate the construction of the scenarios, Will there be enough to justify adding or removing a scenario?	Noted. As indicated in 3.41 of CP48, scenarios will be reviewed yearly and set via Level 3 guidance by CEIOPS. As stated in 3.55, the alternative factor method will be applied whilst scenarios are being developed.

465.	AMICE	3.47.	CEIOPS writes that Member States should consider any other relevant scenarios that they should apply. However, we are not convinced that uniform scenarios for large and diversified countries will properly reflect catastrophe events that may have an impact in some areas and lines of business. We would expect that large countries will consider regional scenarios provided by the local supervisor and relevant for a specific territory.	Not agreed. Scenarios are set via Level 3 guidance by CEIOPS and not by individual supervisors' decisions. However, some scenarios will anyway only be applicable to big countries or regions.
466.			Confidential comment deleted	
467.	KPMG ELLP	3.47.	We agree – this is important.	Noted.
468.	Lloyd's	3.47.	We agree – this is important.	Noted.
469.	Association of British Insurers	3.48.	We agree that a prospective view should be taken. However, we would like to hear further details of how this will be applied over a 1-year time horizon, in particular for climate change.	Noted. Scenarios will be reviewed yearly and updated as new information on claims behaviour becomes known.
470.	CEA, ECO-SLV-09-443	3.48.	More advice should be provided on how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	Noted. If scenarios are used, 3.48 applies. If the factors are used, 3.48 does not apply.
471.	CRO Forum	3.48.	Advice should be provided detailing how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	See resolution to comment 470.
472.	Dutch Actuarial Society – Actuarieel Genootschap (	3.48.	We agree that it is good to have a prospective view in designing an event. But to put a prospective view in the design of the event, such as climate change (something that is gradually changing) seems only relevant for multi-years business. When we look at one year horizon a short term view for short term business is more relevant. We suggest to design the events in such a way that it	Noted. Scenarios will be designed taking into account the 99,5% confidence level, and the one year time horizon.

			coincide with the length of the period from the business.	
473.	Groupe Consultatif	3.48.	Integrating the effect of climate change in the standardised scenarios may be a difficult task given the calculation of the SCR is made on a one-year time horizon and could introduce an additional complexity in the construction of the scenarios.	Noted.
474.	Institut des Actuaires (France)	3.48.	Integrating the effect of climate change in the standardised scenarios may be a difficult task given the calculation of the SCR is made on a one-year time horizon and could introduce an additional complexity in the construction of the scenarios.	Noted.
475.	KPMG ELLP	3.48.	We strongly agree.	Noted.
476.	Legal & General Group	3.48.	We agree that a prospective view should be taken. However, we would like to hear further details of how this will be applied over a 1-year time horizon, in particular for climate change. Also relevant to 3.99	Noted. The CAT risk task force mentioned in 3.39 will address this issue.
477.	Lloyd's	3.48.	We strongly agree.	Noted.
478.	Munich RE	3.48.	Advice should be provided how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	See resolution to comment 470.
479.	RBS Insurance	3.48.	Also refers to 3.99. We agree that the events should be forward looking. A detailed exercise by CEIOPS into climate change could involve considerable work and cost if developed from scratch, so any exercise should be based upon established work of experts.	See resolution to comment 476.
480.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN	3.49.	Market share, based on written premiums, penalize undertakings with conservative insurance premiums. To be consistent with the SII principles It would be better to use: - the number of contracts (for motor third party liability) - the maximum loss (Fire and property, hail, flood)	Noted. National market share might be available via national industry associations, or supervisors' websites. 3.49 only gives an example of one possible market share measurement.

	CES DU		- Other measurements of market share Moreover, it's difficult to obtain a national market share, European market share seems to be impossible	
481.	CEA, ECO-SLV-09-443	3.49.	The "degree of involvement of the undertaking in the market", i.e. the respective market share concerning NatCat, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	Noted.
482.	CRO Forum	3.49.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	See resolutions to comment 481.
483.	ECIROA	3.49.	Although standardized scenarios could not be used by captives we would like to point out that any model involving market share of total premium would not be suitable for captives.	Noted.
484.			Confidential comment deleted	
485.	KPMG ELLP	3.49.	We agree.	Noted.
486.	Lloyd's	3.49.	We agree.	Noted.
487.	Munich RE	3.49.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	See resolution to comment nr 481.
488.	RBS Insurance	3.49.	Basing on a percentage of GWP does not give a direct incentive for risk management in terms of control of accumulations / exposure to a catastrophe, or writing risks that are diversified and less cat-exposed. We believe the use of entity specific scenarios would overcome this. Even if specified events are used, the allocation should be by	Noted. National market share might be available via national industry associations, or supervisors' websites. 3.49 only gives an example of one possible market share measurement.

			exposed aggregate by geographical postcode / cresta zone. All companies should be able to produce this data, (for example it is required when purchasing reinsurance), and this will make the use of specified events somewhat more risk sensitive. We believe this is particularly important for flood scenarios.	
489.	Institut des Actuaires (France)	3.50.	Specific attention should be paid in the consistency between cross border scenarios and scenarios limited to a reduced regional scope to avoid double counting of specific events.	Noted. The CAT risk task force mentioned in 3.39 will consider this issue.
490.	KPMG ELLP	3.50.	We agree. Cross border scenarios are a very important factor.	See resolution to comment 489.
491.	Lloyd's	3.50.	We strongly agree. Cross border scenarios are a very important factor.	See resolution to comment 489.
492.	KPMG ELLP	3.51.	We agree.	Noted.
493.	Lloyd's	3.51.	We strongly agree.	Noted.
494.	KPMG ELLP	3.52.	We agree.	Noted.
495.	Lloyd's	3.52.	We agree.	Noted.
496.	Association of British Insurers	3.53.	We do not believe that either illustration in Annex A provides a sufficiently robust method of aggregation between events, as they do not allow for the interactions between perils and regions. For example, the aggregation approaches do not allow for the interaction of reinsurance programmes that may be multi-region and all perils etc.	Noted. The standard formula may not be designed to capture such situations, and a partial or full internal model might be more suitable in those circumstances.
497.	CEA, ECO-SLV-09-443	3.53.	We think alternative 1 (aggregate first by peril, then the perils) is more appropriate and also more in line with the way catastrophe exposures are managed and measured within the industry. By contrast, first aggregating different perils within one region will lead to large problems when aggregating the all-perils regional distributions as can be made clear by the following example.	On aggregation: Noted. We suppose the stakeholder meant 'first aggregation by region, then by peril'. On geographical diversification: The CAT risk task force

			Assume that a storm can affect two regions. Thus, a dependency between the two all-perils regional distributions is induced. But the dependency between the regional distributions will also depend on the amount of the other catastrophe risks within the respective regions. Thus, the dependency will heavily depend on the portfolio of the undertaking in question which calls the sensibility of a standard dependency in the standard formula into question. We understand that some geographical diversification applies in case of CAT risk, even if Ceiops stated that such a diversification should not exist under the non life module.	mentioned in 3.39 of the advice is considering this issue.
498.	CRO Forum	3.53.	We think alternative 1 (aggregate first by peril, then the perils) is more appropriate and also more in line with the way catastrophe exposures are managed and measured within the industry. By contrast, first aggregating different perils within one region will lead to large problems when aggregating the all-perils regional distributions as can be made clear by the following example: Assume that a storm can affect two regions. Thus, a dependency between the two all-perils regional distributions is induced. But the dependency between the regional distributions will also depend on the amount of the other catastrophe risks within the respective regions. Thus, the dependency will heavily depend on the portfolio of the undertaking in question which calls the sensibility of a standard dependency in the standard formula into question. In sum: We take a generic and standardized dependency assumption between different perils to be more sensible and easier to calibrate.	On aggregation: Noted. We suppose the stakeholder meant 'first aggregation by region, then by peril'. On geographical diversification: The CAT risk task force mentioned in 3.39 of the advice is considering this issue.
499.	Dutch Actuarial Society –	3.53.	In the CP it is clearly stated that for non life underwriting risk no geographical diversification benefits are taken into account, for several reasons. However it is not clear whether for CAT risk this	Noted.

	Actuarieel Genootschap (		also applies. In this article CEIOPS indicates that it will provide guidance on how to aggregate between events and countries. In Annex A two proposals are made. This implies a kind of geographical diversification. There should be, since it is not likely, even in a CAT event, that the entire EU will be flooded, for example. So some kind of diversification should be taken into account here. On one hand, we consider option 1 to be preferred from a theoretical point of view, since this is more in agreement with the actual dependencies of catastrophes and regions. However, we note that, if the assumptions are correct, adding the results from the CAT events and aggregating them should theoretically result in the same CAT SCR for both proposals. On the other hand, aggregation per region is more in line with the current reporting form and will probably be more useful for mergers and acquisitions where often regions are merged and not a line of business.	
500.	European Union member firms of Deloitte Touche To	3.53.	Both proposed methods have potential shortcomings. Method 2 may work best if the regions are not too narrow (i.e. single country) – for example, the danger could be that the same weather event might impact several neighbouring countries at the same time, and the overall impact on a diversified firm would be additive.	Noted.
501.	KPMG ELLP	3.53.	We agree.	Noted.
502.	Legal & General Group	3.53.	We do not believe that either illustrations in Annex A provide a sufficiently robust method of aggregation between events as they do not allow for the interactions between perils and regions. For example, the aggregation approaches do not allow for the interaction of reinsurance programmes that may be multi-region and all perils etc. Also relevant to 3.62	Noted. This is beyond the feasibility of the standard formula.

503.	Lloyd's	3.53.	We agree.	Noted.
504.	Munich RE	3.53.	We think alternative 1 (aggregate first by peril, then the perils) is more appropriate and also more in line with the way catastrophe exposures are managed and measured within the industry. By contrast, first aggregating different perils within one region will lead to large problems when aggregating the all-perils regional distributions as can be made clear by the following example: Assume that a storm can affect two regions. Thus, a dependency between the two all-perils regional distributions is induced. But the dependency between the regional distributions will also depend on the amount of the other catastrophe risks within the respective regions. Thus, the dependency will heavily depend on the portfolio of the undertaking in question which calls the sensibility of a standard dependency in the standard formula into question. In sum: We take a generic and standardized dependency assumption between different perils to be more sensible and easier to calibrate.	On aggregation: Noted. We suppose the stakeholder meant 'first aggregation by region, then by peril'. On geographical diversification: The CAT risk task force mentioned in 3.39 of the advice is considering this issue.
505.	KPMG ELLP	3.54.	We agree.	Noted.
506.	Lloyd's	3.54.	We agree.	Noted.
507.	CEA, ECO-SLV-09-443	3.55.	The catastrophe risk calculation for the Miscellaneous line of business should not be limited to the factor based approach. We recommend that personalised scenarios be allowed for this class of business given that this line of business will most likely be very different for each undertaking.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolutions to comment nr 7. Defining a scenario for the Miscellaneous LoB seems difficult given the diversity of risks which fall into this category.
508.	ECIROA	3.55.	Captives would be subject to either an alternative method (factor-	Noted.

			based) or personalised scenarios (partial internal model). The alternative method should be simplified for captives to recognise the simple insurance portfolio.	
509.	European Union member firms of Deloitte Touche To	3.55.	We welcome the retention of QIS4 method 1 as an alternative to be used in certain circumstances. However, the calibration for this is key, and will be very difficult to determine objectively - in particular for the Miscellaneous line of business.	Noted.
510.	Groupe Consultatif	3.55.	We welcome the retention of QIS4 method 1 as an alternative to be used in certain circumstances. However, the calibration for this is key, and will be very difficult to determine objectively - in particular for the Miscellaneous line of business.	Noted.
511.	Lloyd’s	3.55.	We agree. However the calibration of such a formula is extremely difficult. There needs to be a realisation that such a formula should only apply to a small proportion of firms, otherwise the results would be too inaccurate to be deemed proportionally risk-sensitive. We agree with the proposed approach for the miscellaneous line of business.	Noted.
512.	AAS BALTA	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	Noted. The cat risk task force will consider his issue.
513.	AB Lietuvos draudimas	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	Noted. The cat risk task force will consider his issue.
514.	AMICE	3.56.	We agree with the CEA that, when the scenario is not applicable, the undertaking should be allowed to use personalised scenarios instead of computing the higher capital charge between the standardized scenario and the alternative method.	See resolutions to comment 507.
515.	CEA,	3.56.	For the standard formula, the higher of the factor based and the	See resolutions to comments nr

	ECO-SLV-09-443		standardised scenarios are used for the following: ☐ Outside of EU. ☐ Non-proportional reinsurance. ☐ Footprint or scenario is not applicable. We would particularly stress the unfair treatment reserved to non-EU companies and non proportional reinsurance. The factors are excessively prudent here. Finally, if an undertaking has chosen to use the standard formula and it meets the last criterion, it shall be required to apply the higher capital charge between the alternative method and the standardised scenario, which is not applicable. In this case, personalised scenarios are preferable.	512 and 507. We wonder how the CEA can judge the factors to be excessively prudent without actually knowing the factors.
516.	CRO Forum	3.56.	It seems that either the alternative method is appropriate or not. However, if it is not appropriate it should not be used. Stating that the higher capital charge should be applied is misleading. We believe that it is crucial to develop scenarios outside the EU as well. Many European insurers write business outside the EU and not developing scenarios would leave these insurers with the alternative method only (a simple factor based approach for a major risk).	See resolution to comment nr 512.
517.	DENMARK: Codan Forsikring A/S (10529638)	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolution to comment nr 512.
518.	Dutch Actuarial Society –	3.56.	It is not clear why the alternative method should be used if the standard scenarios are not adequate. In that case, personalised scenarios are preferable. See also 3.39.	Partially agreed. Personalised scenarios have been rejected for reasons stated in resolution to

	Actuarieel Genootscha p (		Specifically: if the scenario is not applicable due to the fact that relevant scenario(s) are excluded from the contract and therefore are not a risk at all, it is not clear why a capital charge – based on scenarios or based on the factor-based alterative - is necessary at all. It seems strange that an undertaking can chose to use the standard formula, but has to calculate alternative method. We don't understand the choice in that case, it seems that the undertaking is not allowed to choose.	comment nr 7. A scenario may be not be applicable for various reasons; however, this does by no means imply that no capital charge shall apply. It would rather be a different capital charge. CEIOPS will reconsider the requirements in 3.56.
519.	European Union member firms of Deloitte Touche To	3.56.	The 3rd and 4th bullet points appear to suggest that if standardised scenarios are not available or applicable, then just the factor approach result will apply. There are clearly situations where this will be a reasonable and pragmatic, but equally others where this will not be the case. One option worth considering is requiring a much greater use of partial internal model for this key risk that insurers are faced with.	Noted. The use of partial internal models can either be done on the request by the entity or on request by the supervisor.
520.	Groupe Consultatif	3.56.	The 3rd and 4th bullet points appear to suggest that if standardised scenarios are not available or applicable, then just the factor approach result will apply. There are clearly situations where this will be a reasonable and pragmatic, but equally others where this will not be the case. One option worth considering is requiring a much greater use of partial internal model for this key risk that insurers are faced with.	Noted. The use of partial internal models can either be done on the request by the entity or on request by the supervisor.
521.	Institut des Actuaires (France)	3.56.	Clarifications should be made on how the higher capital charge between the standardised scenario and the alternative method will be calculated when the standardised scenario cannot be applied to the specific cases listed by CEIOPS (e.g. exposures outside the EU for which de facto no charge can be applied as from a standardised scenario based on EU events).	Noted. As stated in 3.39, EU as well as non EU scenarios will be developed.

522.	KPMG ELLP	3.56.	Our comments in 3.38 also apply here.	See resolutions to corresponding comments.
523.	Link4 Towarzystwo Ubezpieczeń SA	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
524.	Lloyd's	3.56.	Neither standard scenarios nor the proposed factor method sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available. For non-life catastrophe risk the only way to produce a sufficiently risk-based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolutions to comment nr 7.
525.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
526.	ROAM	3.56.	One of the criteria mentioned is that the scenarios are not applicable. If an undertaking has chosen to use the standard formula and it meets the above mentioned criterion, it shall be required to apply the higher capital charge between the alternative method and the standardised scenario, which is not applicable. In this case, personalised scenarios are preferable.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolutions to comment nr 7.

527.	RSA Insurance Group PLC	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
528.	RSA Insurance Ireland Ltd	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
529.	RSA - Sun Insurance Office Ltd.	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
530.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.56.	We disagree that the higher of the two methods should be used for exposures outside the EU.	See resolutions to comment 512.
531.	CEA, ECO-SLV-09-443	3.57.	CEOIPS will try to make the alternative factor based method more risk sensitive. CEA feels that this is a valuable improvement.	Noted.
532.	Dutch Actuarial Society – Actuarieel Genootschap (	3.57.	This could be an alternative to company specific scenarios: make the factor formula more risk sensitive. This also holds for the non-cat modules.	Noted.
533.	KPMG ELLP	3.57.	We agree and note that calibration of such a method is extremely difficult. If it is not deemed sufficiently credible to calibrate then the approach should not be used.	Noted.

534.	Lloyd's	3.57.	We agree and note that calibration of such a method is extremely difficult. If it is not deemed sufficiently credible to calibrate then the approach should not be used.	Noted.
535.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.58.	If undertakings use partial internal model building with standardized scenarios, the capital will be lower than the capital assessed with the standard model.	Not agreed. Standardised scenarios are designed for the standard formula, and do not need to apply in all cases to each internal model. An internal model will be assessed as a whole, taking also into account the relevance of CAT scenarios.
536.			Confidential comment deleted	
537.	KPMG ELLP	3.58.	We agree but this should not be assumed. The standard approach must aim to work and be sufficiently appropriate for all (re)insurance undertakings. It must not assume that a (re)insurance undertaking can easily move to a full or partial internal model which defeats the object of the standard approach.	Agreed.
538.	Lloyd's	3.58.	We agree but this should not be assumed. The standard formula must aim to work, and be appropriate, for all undertakings. The Framework Directive says (preamble (38)): "Provision should be made to lay down a standard formula for the calculation of the Solvency Capital Requirement, to enable all insurance and reinsurance undertakings to assess their economic capital." It must not be assumed that a firm can easily transfer to a full or partial internal model, as this requires supervisory approval (which may not be forthcoming) and compliance with an onerous and resource-intensive approval process. This assumption therefore	Agreed.

			defeats the whole purpose of a "standard" formula, as laid down by the Framework Directive.	
539.	RBS Insurance	3.58.	The use of a partial internal model is much more onerous on the entity, and requires supervisory approval which could be time-consuming.	Noted.
540.	AAS BALTA	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
541.	AB Lietuvos draudimas	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
542.	Association of British Insurers	3.59.	Neither exposure estimates, historical loss experience or share of premium income as a perfect measure of market share because: o There is no standard method for measuring exposure for some lines of business o Premium income does not relate to losses o Historical loss experience may not be relevant due to changes in product mix etc. Nevertheless, the calculation of market share needs to be objective so that undertakings are not left to select the measure that minimises their capital requirement.	Noted. The standard formula cannot be perfect for each undertaking, but should aim to be adequate to the average European insurance company. CEIOPS agrees that the selection of the market share by the entity should be challenged by the supervisor, as many other data submitted to him.
543.	CEA, ECO-SLV-09-443	3.59.	The formula as written may not cater for the whole variety of reinsurance programs in place on the market. Potentially a more principle based approach for all situations would be more appropriate. Also for the proposed methodology more details are needed to better grasp its content: the market share and its linear/non linear	Noted.

			translation into a possible degree of involvement which has regard to some thresholds too and so on. The rerunning of QIS4 in Germany may give more insight into the new approach for man-made Cat risks.	
544.	CRO Forum	3.59.	Determining the market share can only be carried out with reference to exposure estimates, but will remain challenging. For example: a small insurer (with a market share of 1%) writing household insurance mainly close to the Seine/Thames may be more exposed to flood risk than a large insurer (10% market share) mainly writing household insurance further away from the Seine/Thames. The same applies to an insurer with a portfolio which is concentrated in one part of the country versus one which is more spread over the entire country (more diversified).	Noted.
545.	DENMARK: Codan Forsikring A/S (10529638)	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
546.	European Union member firms of Deloitte Touche To	3.59.	The formula proposed does not really address the issue of the risks faced by a particular entity. It is 'one event' specific rather than net annual cost based. We suggest that rather than just one large event, consideration is given to other likely event structures, e.g. 1 large event at level 'x', 2 large events of (say) 60% 'x' and then 40% of 'x', 3 or more events of 40%, 40% and then 20% of 'x'. The combination giving rise to the largest cost would be used. This would ensure consistency of approach but allowing for the	Noted. See resolutions to general comments II and V.

			risks faced by a particular entity. It is unclear what the exact definition of market share is. The loss assessment from the standard scenarios is based upon a market loss, and then the market share that the company would have of that loss. CEIOPS should additionally publish event identifiers from proprietary catastrophe models that companies could use to directly get their gross loss amount from the scenario. The formula given assumes that there is only a single reinsurance protection covering the whole of the business, but this does not reflect the multiple reinsurances that could apply to a single scenario. For example, different classes of business may be covered by different protections, but this does not get reflect within the formula. Instead of specifying the formula, it would be better to make a statement saying the final loss amount should include: ☐ Aggregate exposure ☐ Gross loss amount ☐ Loss amount after reinsurance ☐ Final loss including inwards and outwards reinstatement premiums We would like to suggest that a suitably prudent, more principle based approach will be more effective. We refer to general comments II and V.	
547.			empty	
548.	Groupe Consultatif	3.59.	The formula proposed does not really address the issue of the risks faced by a particular entity. It is 'one event' specific rather than net annual cost based.	Noted. See resolutions to general comments II and V.

			We suggest that rather than just one large event, consideration is given to other likely event structures, e.g. 1 large event at level 'x', 2 large events of (say) 60% 'x' and then 40% of 'x', 3 or more events of 40%, 40% and then 20% of 'x'. The combination giving rise to the largest cost would be used. This would ensure consistency of approach but allowing for the risks faced by a particular entity. It is unclear what the exact definition of market share is. Further clarification on the concept of 'net' loss is required – we assume that the reinsurance recoveries should be net of expected reinsurance default? This allowance for default should be covered in the counter party credit risk module Moreover, the formula as written does not cater for the variety of reinsurance programs in place on the market. We refer to general comments II and IV. We would like to suggest that a suitably prudent, more principle based approach will be more effective. The requirement for a reinstatement premium should always be allowed for (unless the terms of the treaty include free reinstatements). For example, if the cat scenario is a single event then the insurance company must be expected to replace the cover, not doing so would be inappropriate.	
549.	KPMG ELLP	3.59.	We agree.	Noted.
550.	Legal & General Group	3.59.	Neither exposure estimates, historical loss experience or share of premium income is a perfect measure of market share because o There is no standard method for measuring exposure for some lines of business	Noted.

			o Premium income does not relate to losses o Historical loss experience may not be relevant due to changes in product mix etc. Nevertheless, the calculation of market share needs to be objective so that undertakings are not left to select the measure that minimises their capital requirement. Also relevant to 3.110	
551.	Link4 Towarzystwo Ubezpieczeń SA	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
552.	Lloyd's	3.59.	We agree.	Noted.
553.	Milliman	3.59.	Conceptually, the approach makes sense if MS were determined at a granular level, such as CRESTA zones. Countrywide MS estimates are poor predictors as the industry includes several undertakings with significant exposure levels in specific regions (high concentrations) rather than uniform exposures across a country. Further, the estimation of MS for each undertaking within each zone should be consistently calculated (perhaps a task for the applicable supervisor/regulator or CEIOPS), which means the guidance provided is by itself inadequate. Finally, any EEA decisions about granularity and methods to estimate MS should be supported by studies.	Noted.
554.	NORWAY: Codan Forsikring (Branch	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.

	Norway) (991 502			
555.	RSA Insurance Group PLC	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
556.	RSA Insurance Ireland Ltd	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
557.	RSA - Sun Insurance Office Ltd.	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
558.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.59.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how could the assessment be validated, particularly for non-EEA exposures?	Noted.
559.	Uni Oldenburg	3.59.	The formula doesn’t seem useful in consideration of the whole variety of reinsurance programs on the market.	Noted.
560.	AMICE	3.60.	See our comments to paragraph 3.111	See resolutions to corresponding comments.
561.	CRO Forum	3.60.	CEIOPS says that the catastrophe capital charge for a specific event type shall be the result of the maximum of the standardized scenario and factor-based method. We disagree with this proposal as currently the factor method (as used in QIS4) was gross of reinsurance effects.	Noted. See revised text.
562.	Dutch Actuarial Society –	3.60.	It is inconsistent to take a maximum. It should be clear beforehand which method would give the most appropriate result.	Noted. See revised text.

	Actuarieel Genootscha p (			
563.	KPMG ELLP	3.60.	We do not believe the factor method applies to an event type as it is by line of business. This would make this formula redundant.	Noted.
564.	Lloyd's	3.60.	We do not believe the factor method applies to an event type as it is by line of business. This would make this formula redundant.	Noted.
565.	KPMG ELLP	3.61.	We agree.	Noted.
566.	Lloyd's	3.61.	We agree.	Noted.
567.	Association of British Insurers	3.62.	See comments to 3.53.	See corresponding resolutions to comment.
568.	CEA, ECO-SLV-09-443	3.62.	As stated above, option 1 reflects better the current practice.	Noted.
569.	CRO Forum	3.62.	In the CP it is clearly stated that for non life underwriting risk no geographical diversification benefits are taken into account, for several reasons. However it is not clear whether for CAT risk this also applies. In this article CEIOPS indicates that it will provide guidance on how to aggregate between events and countries. In Annex A two proposals are made. This implies a kind of geographical diversification. There should be since, for example, it is not likely, even in a CAT event, that the entire EU will be flooded. So some kind of diversification should be taken into account here. We prefer option 1. However, we note that, if the assumptions are correct, adding the results from the CAT events and aggregating them should result in the same CAT SCR for both proposals.	Noted.

570.	Dutch Actuarial Society – Actuarieel Genootschap (	3.62.	In the CP it is clearly stated that for non life underwriting risk no geographical diversification benefits are taken into account, for several reasons. However it is not clear whether for CAT risk this also applies. In this article CEIOPS indicates that it will provide guidance on how to aggregate between events and countries. In Annex A two proposals are made. This implies a kind of geographical diversification. There should be, since it is not likely, even in a CAT event, that the EU will be flooded, for example. So some kind of diversification should be taken into account here. We prefer option 1 since this is more in agreement with the actual dependencies of catastrophes and regions.. However, we note that, if the assumptions are correct, adding the results from the CAT events and aggregating them should result in the same CAT SCR for both proposals. But on the other hand aggregation per region is more in line with the current reporting form and will probably more useful for mergers and acquisitions where often regions are merged and not a line of business.	Noted.
571.	KPMG ELLP	3.62.	We would suggest aggregation across events rather than regions.	Noted.
572.	Legal & General Group	3.62.	See 3.53	See corresponding resolution.
573.	Lloyd’s	3.62.	We suggest aggregation across events rather than regions.	Noted.
574.	Association of British Insurers	3.64.	We do not agree that the scenario should be considered to take place immediately after the valuation date. For example, seasonality of events would make this assumption unreasonable, e.g. UK windstorm losses are more likely to occur in Q1 and Q4. [See 3.40 also]. It is unclear why the reinsurance recoveries need to be broken down by reinsurer for each scenario for the purpose of calculating	Noted.

			the underwriting risk SCR.	
575.	CEA, ECO-SLV-09-443	3.64.	The CEA considers that assessing the range and probability of possible outcomes could be burdensome and difficult to obtain for many undertakings. A deterministic approach may lead to an adequate capital amount and avoids calculating the whole distribution. The CEA finds that "the breakdown of reinsurance recoveries by reinsurer under each scenarios" is difficult and burdensome to obtain. The assessment of reinsurance recoveries by reinsurer per scenario should be possible using estimations and approximations. In some cases the recoveries may depend not only on the own loss of the company but also on e.g. index values or parametric triggers. In such cases the determination of the respective recovery can only be estimated.	Noted.
576.	CRO Forum	3.64.	The assessment of reinsurance recoveries by reinsurer per scenario should be possible using estimations and approximations. In some cases the recoveries may depend not only on the own loss of the company but also on e.g. index values or parametric triggers. In such cases the determination of the respective recovery can only be estimated. 2nd bullet: "(…) consideration would need to be given to the appropriateness of the scenarios." 3rd bullet: "the assessment of catastrophe risks is part of a broader risk management framework / ORSA process. (Re) insurance undertakings shall review the scope of the scenario defines and assess the applicability of such scenario and range of possible outcomes that could arise on the occurrence of the scenario. (…)" 5th bullet : "the extent to which the risks covered by the scenario could deviate significantly from their risk profile (…)".	Noted. Personalised scenarios have not been kept by CEIOPS for reasons indicated in resolutions to comment nr 7.

			These arguments seem to justify using personalised scenarios instead of the standardised scenarios and/or the alternative method!	
577.	Dutch Actuarial Society – Actuarieel Genootschap (	3.64.	2nd bullet: "(…) consideration would need to be given to the appropriateness of the scenarios." 3rd bullet: "the assessment of catastrophe risks is part of a broader risk management framework / ORSA process. (Re) insurance undertakings shall review the scope of the scenario defines and assess the applicability of such scenario and range of possible outcomes that could arise on the occurrence of the scenario. (…)" 5th bullet : "the extent to which the risks covered by the scenario could deviate significantly from their risk profile (…)". There are also more arguments for using personalised scenarios instead of the standardised scenarios and/or the alternative method! We remark that depending on the number of scenario's (3.45 & 3.46) the requirements in this article could be quite laborious and an administrative burden	Noted. Personalised scenarios have not been kept by CEIOPS for reasons indicated in resolutions to comment nr 7.
578.	KPMG ELLP	3.64.	We agree.	Noted.
579.	Legal & General Group	3.64.	We do not agree that the scenario should be considered to take place immediately after the valuation date. For example, seasonality of events would make this assumption unreasonable e.g. UK windstorm losses are more likely to occur in Q1 and Q4. [See 3.40 also]. It is unclear why the reinsurance recoveries need to be broken down by reinsurer for each scenario for the purpose of calculating	Noted.

			the underwriting risk SCR. Also relevant to 3.115	
580.	Lloyd's	3.64.	We agree.	Noted
581.	Munich RE	3.64.	The assessment of reinsurance recoveries by reinsurer per scenario should be possible using estimations and approximations. In some cases the recoveries may depend not only on the own loss of the company but also on e.g. index values or parametric triggers. In such cases the determination of the respective recovery can only be estimated.	Noted
582.	RBS Insurance	3.64.	Also applies to 3.115. Agree that event should be assumed to occur immediately.	See corresponding resolution
583.	Uni Oldenburg	3.64.	Point 5: section 3.1.5.2 does not exist. It should be written instead 3.1.5.B.	Noted
584.	KPMG ELLP	3.65.	We agree.	Noted
585.	Lloyd's	3.65.	We agree. This applies to all elements of supervision.	Noted
586.	Association of British Insurers	3.66.	We seek clarification if unemployment risk covered by creditor insurance may be treated in the non life module since its risk driver is a non-life risk driver but, in some markets, its structure closely related to that of a disability product.	To be discussed.
587.	CEA, ECO-SLV-09-443	3.66.	The CEA asks for clarification if unemployment risk covered by creditor insurance may be treated in the non life module since its risk driver is a non-life risk driver but, in some markets, its structure is identical to that of a disability product. The correspondences between NLpr, NLcat and NLr andNLc should be made clearer.	To be discussed Noted
588.	CRO Forum	3.66.	In the formula, NLc should be NLCAT., and NLr should be NLpr	Noted
589.	European	3.66.	See 3.10	See corresponding resolution

	Union member firms of Deloitte Touche To			
590.	FFSA	3.66.	☐ CEIOPS created the SLT structure in the Health module to take into account the specificity of the disability guarantee in creditor insurance (among others). ☐ A question remains on the treatment of Unemployment risk covered by creditor insurance: It may be treated in the Non Life module because its risk driver is a non-life risk driver, but its structure is identical to the Disability one. FFSA suggests having a SLT structure in the Non Life module.	To be discussed
591.	Groupe Consultatif	3.66.	We refer to 3.10	See corresponding resolution
592.	KPMG ELLP	3.66.	We agree.	Noted
593.	Lloyd's	3.66.	We agree.	Noted
594.	Uni Oldenburg	3.66.	The used symbolism is inconsistent in the reference. We can't find e.g. NLCAT in the formula.	Noted
595.	CEA, ECO-SLV-09-443	3.67.	More work may be needed on the correlation matrix.	Work is in progress. The calibration is intended for the third wave
596.	KPMG ELLP	3.67.	We agree.	Noted
597.	Lloyd's	3.67.	We agree.	Noted
598.	Uni Oldenburg	3.67.	The used parameter in the correlation matrix should be justified.	See comments 595

599.	Association of British Insurers	3.68.	We agree with the definition of premium risk and suggest CEIOPS to work further on implementing the feedback from QIS4 which have not been considered yet: ☐ Premium increases lead to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure No allowance for future profit or for position in underwriting circle.	Noted Noted
600.	CEA, ECO-SLV-09-443	3.68.	We agree with the definition of premium risk and suggest Ceiops to work further on implementing also the pieces of feedback from QIS4 which have not been considered yet: ☐ Tariff increase leads to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure. ☐ No allowance for future profit or for position in underwriting circle.	See 599
601.	CRO Forum	3.68.	We would like CEIOPS to clarify precisely the definition of premium risk: Is the purpose of the SCR to only cover negative results, or a situation where profitability is less than expected?	Ceiops believes the purpose is to cover negative results.
602.	FFSA	3.68.	☐ CEIOPS defines the premium risk in §3.68. ☐ FFSA would like CEIOPS to precise the definition: Is the purpose of the SCR to only cover negative results, or a situation where profitability is less than expected?	See 601
603.	German Insurance Association –	3.68.	We agree with the definition of premium risk and suggest CEIOPS to work further on implementing also the pieces of feedback from QIS4 which have not been considered yet:	See 601 Noted

	Gesamtverband der D		☐ Tariff increase leads to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure ☐ No allowance for future profit or for position in underwriting circle.	Noted
604.	ROAM	3.68.	We agree with the definition of premium risk and suggest CEIOPS to work further on implementing also the pieces of feedback from QIS4 which have not been considered yet: ☐ Tariff increase leads to higher SCR (even if aim was to improve profitability), due to the choice of premium as volume measure ☐ No allowance for future profit or for position in underwriting circle.	Noted Noted Noted
605.	Uni Oldenburg	3.68.	See comments on reference 3.21	See corresponding resolution
606.	Association of British Insurers	3.69.	We ask for more clarification on the sentence "Premium risk also arises because of uncertainties prior to issue of policies during the time horizon" and how it is linked to the position of an undertaking in the underwriting cycle.	Ceiops believes that is difficult with accuracy determine the position in the UW cycle
607.	CEA, ECO-SLV-09-443	3.69.	The CEA asks for more clarification: ☐ On the sentence "Premium risk is present ….., before any insured events occur". This could mean if a policy is issued and at least one loss already occurring under that policy that there is no premium risk remaining, although the outstanding period if the contract might be 2 years, premiums will still be received, and (more) losses will occur during and after the beginning of the time	See 606

			horizon for the solvency assessment. This would not be in line with the point mentioned in 3.12, where it is stated that the "premium risk is understood to relate to future claims arising during and after the period until and after the time horizon for the solvency assessment". ☐ On the sentence "Premium risk also arises because of uncertainties prior to issue of policies during the time horizon" and how it is linked to the position of an undertaking in the underwriting cycle.	
608.	CRO Forum	3.69.	We do not understand the sentence "Premium risk also arises because of uncertainties prior to issue of policies during the time horizon". Although there may be a general uncertainty about the items mentioned they are only quantifiable and relevant as policies are issued. Therefore we propose not to consider these generic uncertainties within the SCR calculation and not to consider the sentence indicated for future purposes. In our view CEIOPS is referring to stale pricing risk here, which is the result of the inability to continuously update prices and the time lag between an offer to a client and the acceptation of the offer by the client. This should be valued. We suggest that companies manage this risk instead of price for it, however the remaining risk should be priced.	See 606
609.	KPMG ELLP	3.69.	We agree	Noted
610.	Lloyd's	3.69.	We agree	Noted
611.	Munich RE	3.69.	We do not understand the sentence "Premium risk also arises because of uncertainties prior to issue of policies during the time horizon". Although there may be a general uncertainty about the items mentioned they are only quantifiable and relevant as policies are issued. Therefore we propose not to consider these generic	See 606

			uncertainties within the SCR calculation and not to consider the sentence indicated for future purposes.	
612.	Uni Oldenburg	3.69.	See comments on reference 3.22	See corresponding resolution
613.	European Union member firms of Deloitte Touche To	3.70.	See 3.14	See corresponding resolution
614.	KPMG ELLP	3.70.	We agree	Noted
615.	Lloyd's	3.70.	We agree	Noted
616.	Dutch Actuarial Society – Actuarieel Genootschap (	3.71.	We refer to 3.15	See corresponding resolution
617.	ECIROA	3.71.	Captive insurance companies underwrite a restricted number of lines of insurance business and normally issue a small number of policies. They protect their exposure by the inclusion of annual aggregate limits (i.e. the maximum amount payable for all claims for a particular policy is limited) and by the purchase of stop loss reinsurance either for individual policies or across all the business they underwrite. They are therefore aware of the expected maximum loss exposure during the year.	Noted
618.	European Union member	3.71.	See 3.15	See corresponding resolution

	firms of Deloitte Touche To			
619.	KPMG ELLP	3.71.	We agree	Noted
620.	Lloyd's	3.71.	We agree	Noted
621.	AMICE	3.72.	CEIOPS states that premium risk relates to policies to be written (including renewals) during the period, and to unexpired risks on existing contracts. AMICE members would appreciate further guidance on which type of renewals should be included and in particular whether policy renewals not cancelled before maturity date and automatically prolonged at the reporting date for another period should be considered.	To be discussed
622.	CEA, ECO-SLV-09-443	3.72.	We agree with the inclusion of unexpired risks. The CEA asks for more clarity about renewals referred to in this paragraph – it's the renewals as defined in CP 30?	To be discussed
623.	CRO Forum	3.72.	We understand that "unexpired risks on existing contracts" relates to the premium provision. Regarding the wording of the paragraph (Premium risk relates to policies to be written (including renewals), Could it be confirmed that this includes renewals of the policy that are not cancelled before this date and automatically prolonged at the reporting date for another period (like in CP 30) ?	To be discussed
624.	FFSA	3.72.	☐ CEIOPS talks about policies to be written including renewals.	To be discussed

			☐ FFSA would like more information : are we talking about renewals of the policy that are not cancelled before this date and automatically prolonged at the reporting date for another period (like in CP 30) ? ☐ FFSA asks for more precisions because the impact could be very important.	Noted
625.	German Insurance Association – Gesamtverband der D	3.72.	We agree with the inclusion of unexpired risks.	Noted
626.	KPMG ELLP	3.72.	We agree	Noted
627.	Lloyd's	3.72.	We agree	Noted
628.	Munich RE	3.72.	We understand that "unexpired risks on existing contracts" relates to the premium provision.	Noted
629.	ROAM	3.72.	CEIOPS states that premium risk relates to policies to be written (including renewals) during the period, and to unexpired risks on existing contracts. ROAM members would appreciate if further guidance on which type of renewals should be included. in the premium risk, can be provided (in particular whether policy renewals not cancelled before maturity date and automatically prolonged at the reporting date for another period should be included)	Noted To be discussed
630.	Association	3.73.	Volatility in costs should be part of the premium risk. It would be	Ceiops agrees that a clarification

	of British Insurers		appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated. See comments to 3.17 and 3.19.	on which costs are covered in this case must be done
631.	CEA, ECO-SLV-09-443	3.73.	Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated.	See 630
632.	CRO Forum	3.73.	Is the expense risk meant for only claims handling costs, or also for other costs (e.g. maintenance costs, acquisition costs, …)? Especially for premium risk this must be specified more clearly.	See 630
633.	DIMA (Dublin International Insurance & Management	3.73.	It is accepted that expense risk is volatile and expected on some lines of business, however it may contradict an earlier consultation on estimates must be realised before the reduction of costs.	See 630
634.	Dutch Actuarial Society – Actuarieel Genootscha	3.73.	We refer to 3.17	See 630

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635.	ECIROA	3.73.	Captives do not have volatility of expense payments as they underwrite a limited number of policies. The principle of proportionality should be applied in this calculation.	CEIOPS agrees
636.	European Union member firms of Deloitte Touche To	3.73.	See 3.17	See 630
637.	German Insurance Association – Gesamtverband der D	3.73.	Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. A clear reference to a specific paragraph in CP39 might be helpful. In the C_{lob}^{PP} only costs are taken into account which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated.	See 630
638.	Groupe Consultatif	3.73.	We refer to 3.17	See 630
639.	KPMG ELLP	3.73.	We agree	See 630
640.	Legal & General Group	3.73.	See 3.17 and 3.19	See 630
641.	Lloyd’s	3.73.	We agree	Noted
642.	UNESPA-Association	3.73.	Clarification about the definition of costs	See 630

	of Spanish Insurers and Reinsu		Volatility in costs should be part of the premium risk. It would be appreciated to specify which costs are taken into account: only the claims handling costs or also other costs (e.g. maintenance costs, acquisition costs etc.) Presumably the text refers to all costs, but there could be some confusion. In the C_{lob}^{PP} only costs are taken into account, which are related to claims. But during the QIS 4 exercise in PCO_{lob} also the change in the provision for claims handling costs were incorporated.	
643.	Association of British Insurers	3.74.	The splitting up may be difficult practically. In many cases it is the sum that is observable. In these cases it is important that the companies are allowed to use their own run-off statistics.	See CP on undertakings specific parameters to the third wave
644.	CEA, ECO-SLV-09-443	3.74.	The splitting up in a systematic and a random error is difficult practically. In many cases it is the sum that is observable. It is of importance that for these cases that the companies are allowed to use their own run-off statistics.	See 643
645.	Dutch Actuarial Society – Actuarieel Genootschap (	3.74.	We refer to 3.18	See 643
646.	European Union member firms of Deloitte Touche To	3.74.	See 3.18	See 643
647.	German Insurance	3.74.	The splitting up in a systematic and a random error is difficult practically. In many cases it is the sum that is observable. It is of	See 643

	Association – Gesamtverb and der D		importance that for these cases that the companies are allowed to use their own run-off statistics.	
648.	KPMG ELLP	3.74.	We agree	Noted
649.	Lloyd's	3.74.	We agree	Noted
650.	AMICE	3.75.	CEIOPS has introduced a new element defined as (C^{pp}_{lob}) the expected present value of net claims and expected payments which relate to claims incurred after the following year and covered by existing contracts for each LoBs. We would appreciate it if CEIOPS could provide more guidance on the purpose of this new element and how it should be calculated.	To be discussed
651.	CEA, ECO-SLV-09-443	3.75.	PCO_{lob} should be the *discounted* best estimate for claims outstanding as this is the value carried on the economic balance sheet which is at risk. The CEA asks for more information on the newly introduced volume measure C^{PP}_{lob}: what does it entail and how can it be calculated? According to our understanding C^{PP}_{LoB} is defined as an economic equivalent of the premium provisions.	To be discussed
652.	CRO Forum	3.75.	PCOlob should be the discounted best estimate for claims outstanding as this is the value carried on the economic balance sheet which is at risk. According to our understanding ☐ is defined as an economic equivalent of the premium provision.	To be discussed (see 652)
653.	Dutch Actuarial Society – Actuarieel Genootscha	3.75.	We refer to 3.19	To be discussed

	p (			
654.	European Union member firms of Deloitte Touche To	3.75.	See to 3.19	To be discussed
655.	German Insurance Association – Gesamtverband der D	3.75.	PCO_{lob} should be the *discounted* best estimate for claims outstanding as this is the value carried on the economic balance sheet which is at risk. According to our understanding C^{PP}_{LoB} is defined as an economic equivalent of the premium provisions. More guidance is needed to calculate C^{PP}_{LoB} or a reference to CP39 should be given	To be discussed (see 652)
656.	Groupe Consultatif	3.75.	We refer to 3.19	To be discussed
657.	KPMG ELLP	3.75.	We agree. The term net written premium should be net of reinsurance, this would be a helpful clarification.	Noted
658.	Lloyd's	3.75.	We agree. The term "net written premium" should be net of reinsurance. This would be a helpful clarification.	Noted
659.	Munich RE	3.75.	PCOlob should be the discounted best estimate for claims outstanding as this is the value carried on the economic balance sheet which is at risk. According to our understanding C^{PP}_{lob} is defined as an economic equivalent of the premium provision.	To be discussed (see 652)
660.	ROAM	3.75.	CEIOPS has introduced a new element defined as C^{pp}_{lob} the	Noted

			expected present value of net claims ans expected payments which relate to claims incurred after the following year and covered by existing contracts for each LoBs. We would appreciate if CEIOPS can provide more guidance on the purpose of such new element and how it should be calculated.	
661.	Uni Oldenburg	3.75.	The definition of $PCO_{j,\ lob}$ is not clear. It's better to use the following definition: best estimate for <u>net reserve risk</u> in geographical area j in each of the LoBs Is the consideration of C^{PP}_{lob} correct in the calculation of premium and reserve risk if we know that solvency II is used in a one year time horizon?	To be discussed
662.	KPMG ELLP	3.76.	We agree	Noted
663.	Lloyd's	3.76.	We agree	Noted
664.	AMICE	3.77.	CEIOPS is proposing not to apply geographical diversification for non-life business. AMICE understands that geographical diversification should be taken into account. Furthermore, compared to the geographical diversification proposed in QIS 4, we consider that it does not yet sufficiently reflect the risk profile of entities.	Noted To be discussed
665.	Association of British Insurers	3.77.	We believe entity specific parameters are important, since standard scenarios often fail to capture proper risks in a particular book – e.g. Thames flood scenario. In this respect, Para 3.2 in CP 57, which explicitly recognises the possible use of entity-specific parameters is quite helpful and could be referred to.	Noted
666.	Belgian Coordination	3.77.	Geographical diversification for non-life business:	To be discussed

	Group Solvency II (Assuralia/		As also written in paragraph 3.3, no application of geographical diversification for non-life business is proposed. We believe that geographical diversification should be taken into account using a correlation matrix as for other risks aggregation.	
667.	CEA, ECO-SLV-09-443	3.77.	Entity specific parameters should be allowed for the premium and reserve risk capital calculations and geographical diversification should appropriately be taken into account. Allowing undertakings to use their own experience in calibrating the standard deviation for premium risk was viewed as an improvement of QIS4 over QIS3. The CEA considers that this was an extremely important addition as it helped companies to make the SCR formula more reflective of their own risks. Furthermore, the CEA considers that the geographical diversification proposed in QIS 4 does not yet sufficiently reflect the risk profile of entities.	Noted CP on undertaking specific parameters intended for third wave Noted
668.	FFSA	3.77.	☐ CEIOPS is proposing, as also stated in paragraph 3.3, to not apply geographical diversification for non-life business. ☐ FFSA thinks that geographical diversification should be taken into account. Furthermore, compared to the geographical diversification proposed in QIS 4, FFSA considers that it does not yet sufficiently reflect the risk profile of entities. ☐ CEIOPS has already justified its position about not applying a geographical diversification for non life business. FFSA suggests using a correlation matrix as for other risk aggregation. Moreover, CEIOPS states that volatility parameters are already based on historical diversified Loss ratio. It was not the case in QIS 4, so FFSA expects that it will be true for QIS 5 parameters.	See 666 Noted
669.	German	3.77.	Allowance of entity-specific parameters in calculating premium and	CP on undertaking specific

	Insurance Association – Gesamtverb and der D		reserve risk and geographical diversification should be taken into account.	parameters intended for third wave. Geographical diversification to be discussed.
670.	GROUPAMA	3.77.	We suggest recognizing geographical diversification as it was done during QIS 4. Being geographically well-diversified is an important element which reduces risk exposure	To be discussed
671.	KPMG ELLP	3.77.	Our comments in 3.21 apply here	Noted
672.	Lloyd's	3.77.	The calculation of premium risk still does not allow for the expected outcome of the business, which is an important feature in setting non-life capital. Profit-making business should require less capital than loss-making business and, yet, both would have the same capital requirements under the proposed formula, if solely based on volumes. This is uneconomical. Expected losses or profits from prospective business should be included in the formula.	To be discussed
673.	Pearl Group Limited	3.77.	We believe entity specific parameters are important, since standard scenarios often fail to capture proper risks in a particular book – e.g. Thames flood scenario. In this respect, para 3.2 in CP 57, which explicitly recognises the possible use of entity-specific parameters is quite helpful and could be referred to.	CP on undertaking specific parameters intended for third wave
674.	ROAM	3.77.	ROAM suggests recognizing geographical diversification as it was done during QIS 4. Geographical diversification should be recognised using a blending formula for business underwritten or commitments existing in different geographical areas. An important argument is an argument of level playing field. Recognizing geographical diversification on solo level is necessary to allow companies with foreign branches to be treated on	To be discussed

			diversification level equivalent to companies with subsidiaries who file group SCRs etc...	
675.	Uni Oldenburg	3.77.	See comments on reference 3.21	Noted
676.	Association of British Insurers	3.78.	SCR should be the capital charge for unexpected deviations from the expected values of premiums or claims provisions. Therefore the premium risk should take into account profitability and use instead a lognormal with parameters (μ , sigma). A reasonable candidate for μ would be recent observed combined ratio or its average value of the last years.	To be discussed
677.	CEA, ECO-SLV-09-443	3.78.	SCR should be the capital charge for unexpected deviations from the expected values of premiums or claims provisions. Therefore the premium risk should take into account profitability and use instead a lognormal with parameters (μ ,, sigma). A reasonable candidate for μ , would be recent observed combined ratio or its average value of the last years.	See 676
678.	German Insurance Association – Gesamtverband der D	3.78.	SCR should be the capital charge for unexpected deviations from the expected values of premiums or claims provisions. Therefore the premium risk should take into account profitability and use instead a lognormal with parameters (μ , sigma). A reasonable candidate for μ would be recent observed combined ratio or its average value of the last years.	See 676
679.	Association of British Insurers	3.79.	There should be allowance for using entity specific parameters: in the same line of business, claims do not fit necessarily the same parameters. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	CP on undertaking specific parameters intended for third wave

680.			Confidential comment deleted	
681.	CEA, ECO-SLV-09-443	3.79.	There should be allowance for using entity specific parameters: in the same line of business, claims do not fit necessarily the same parameters. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	See 679
682.	CRO Forum	3.79.	The multiplier used to calculate the 99.5%ile assumes a lognormal distribution. This is not always appropriate, for example latent claims, XoL reinsurance. Latent claims, especially asbestos, should be considered separately.	Noted
683.	German Insurance Association – Gesamtverband der D	3.79.	There should be allowance for using entity specific parameters.	See 679
684.	KPMG ELLP	3.79.	We agree	Noted
685.	Lloyd's	3.79.	We agree	Noted
686.	UNESPA-Association of Spanish Insurers and Reinsu	3.79.	The lognormal distribution is not always the distribution that better fits to historical data of all lines of businnes For this reason there should be allowance for using an undertaking specific parameters option that considers different statistical distribution (even in the same line of business) because of claims do not fit necessarily neither the same parameters nor the same distribution. It is necessary to allow a range of different statistical distributions (not only a lognormal) and allow the possibility of splitting the claims.	See 679
687.	Association	3.81.	It is not clear how accident / sickness / unemployment contracts	CEIOPS believes that

	of British Insurers		would be reported. Is the unemployment to be reported under miscellaneous in the non-life underwriting module with accident and sickness reported under the health module? Or should it be reported under a single line of business? See also comments to 3.25.	unemployment should be reported under miscellaneous in the non-life underwriting module. Accident and sickness should be reported under the new health module.
688.	CEA, ECO-SLV-09-443	3.81.	The CEA asks Ceiops to explicitly explain why Motor-TPL has become Motor-vehicle liability, a change which is not apparent in other parts of standard formula. The CEA understands to use proportionality and materiality principles in segmenting according to the table proposed in this paragraph. Additionally, the CEA thinks accident is part of non-life, so it should be included in the table.	See directive annex 1. See 687
689.	CRO Forum	3.81.	The segmentation does not necessarily help with embedding capital within a company. It might not be obvious for smaller companies with limited resource/expertise how to move from the segmentation to line of business. Smaller companies could also benefit from advice on how to allocate capital not only by line of business but by risk type.	See 688
690.	Dutch Actuarial Society – Actuarieel Genootschap (	3.81.	We refer to 3.25	Noted
691.	European Union member	3.81.	See 3.25	See 690

	firms of Deloitte Touche To			
692.	FFSA	3.81.	☐ CEIOPS provides for the calculation of both premium and reserve risk a segmentation of LoB. ☐ FFSA thinks that CEIOPS should explicitly explain why Motor-TPL has become Motor-vehicle liability. FFSA asks if it is linked with a possible unbundling of bodily injured annuities. It is not going in the generally simplified approach retained for other parameters in the standard formulae. Moreover, it won't help the use of the model for business management. The LoB segmentation should be business oriented. If CEIOPS wished to extract life risk from P&C products (annuities), it could be done with a different segmentation for premium risks and for reserves risks.	See 688
693.	German Insurance Association – Gesamtverband der D	3.81.	Accident is part of non-life, so it should be included in the table.	Accident should be reported under the new health module
694.	Groupe Consultatif	3.81.	We refer to 3.25	See 693
695.	Legal & General Group	3.81.	See 3.25	See 693
696.	Lloyd's	3.81.	It is proposed there be consistency between SCR, MCR and TP segmentations. We agree with the concept but do not believe the segmentations provided are suitable for all cases especially the SCR, where insufficient diversification is allowed. For example there	Noted. We appreciate that risk categories can be broad, but there are limits on the degree of segmentation that CEIOPS can do. And what we can do is

			is genuine diversification between Marine, Aviation and Transport classes but this is lost if calculations are undertaken at the proposed level.	limited by the available data.
697.	ROAM	3.81.	☐ CEIOPS provides for the calculation of both premium and reserve risk a segmentation of LoB. ☐ ROAM thinks that CEIOPS should explicitly explain why Motor-TPL has become Motor-vehicle liability. ROAM asks if it is linked with a possible unbundling of bodily injured annuities. It is not going in the generally simplified approach retained for other parameters in the standard formulae. Moreover, it won't help the use of the model for business management. The LoB segmentation should be business oriented. If CEIOPS wished to extract life risk from P&C products (annuities), it could be done with a different segmentation for premium risks and for reserves risks.	To be discussed
698.	Uni Oldenburg	3.81.	What does the abbreviation TP mean? Technical provision?	Yes
699.	European Union member firms of Deloitte Touche To	3.82.	See 3.26	Noted
700.	Association of British Insurers	3.83.	Include an allowance for the premium risk on multi-year contracts We ask for further clarification on C^{PP}_{lob} and how it relates to PCO_{lob}. In the formula for $V_{(prem,\ lob)}$, C^{PP}_{lob} should be included or only ΔC^{PP}_{lob}, which denotes the change of C^{PP}_{lob} from year t to year (t+1)? If the written premium is higher than the earned premium for year t, is there double counting of unexpired risks under max (...) and	To be discussed.

			C^{PP}_{lob} (which is an economic equivalent of the premium provision)? This allowance assumes that the claims in respect of multi-year contracts in each accident year are 100% correlated as the same SCR factor is being applied to the exposure in each year. For business such as engineering, this seems like an overly conservative assumption.	
701.			Confidential comment deleted	
702.	CEA, ECO-SLV-09-443	3.83.	The CEA asks Ceiops on further clarification on C^{PP}_{lob} and how it relates to PCO_{lob}. In the formula for $V_{(prem,\ lob)}$, C^{PP}_{lob} should be replaced by ΔC^{PP}_{lob}, which denotes the change of C^{PP}_{lob} from year t to year (t+1)? If the written premium is higher than the earned premium for year t, is there double counting of unexpired risks under max(...) and C^{PP}_{lob} (which is an economic equivalent of the premium provision)?	To be discussed
703.	CRO Forum	3.83.	In our view the formula for $V_{(prem,\ lob)}$ is not correct if our understanding of C^{PP}_{lob} is correct (cf. comment to 3.19) as the formula does not capture the risk of change in economic premium provision as indicated in 3.14. Thus, the formula should be changed to $V_{(prem,lob)} = \max(P^{t,written}_{lob}; P^{t,earned}_{lob}; P^{t-1written}_{lob}) + \Delta C^{PP}_{lob}$ where ΔC^{PP}_{lob} denotes the change of C^{PP}_{lob} from year t to year (t+1). The volume measure for premium (UW) risk has changed since QIS4 V(prem,lob) = max[P(lob t written), P(lob t earned), P (lob t-1 written) + C (pp lob)	To be discussed

			Since QIS 4 C(pp lob) has been added. C(pp lob) = payments which relate to claims incurred after the following year and covered by existing contracts for each LoBs This increases the exposure for S2 from 12 months to at least 18 months for companies continuing to write business. If the calibration for the standard deviation is the same as for QIS 4, then the following needs to be considered: Is it allowing for diversification between UPR t=0 and WP t=1? Is it still equivalent to the deterioration over 1 year? Does this include CATs?	
704.	Dutch Actuarial Society – Actuarieel Genootschap (	3.83.	We refer to 3.27	To be discussed
705.	European Union member firms of Deloitte Touche To	3.83.	See 3.27	To be discussed
706.	FFSA	3.83.	➢ FFSA disagrees with the inclusion of C^{pp}_{Lob} to capture claims and expenses in the volume measure for premium risk and would like this to be removed. Indeed, as the calculation of the premium SCR is based on written premiums, it already takes into account premium risk on multi-year contracts. Adding the	To be discussed

			C^{pp}_{Lob} would lead to double counting.	
707.	German Insurance Association – Gesamtverband der D	3.83.	Include an allowance for the premium risk on multi-year contracts	To be discussed
708.	Groupe Consultatif	3.83.	We refer to 3.27.	Noted
709.	Lloyd's	3.83.	We do not agree with this formula unless the term "written premium" has multiple meanings which are different to our understanding of the term. "Written premiums" is an accounting term and relates to the ultimate premiums to be received from contracts irrespective of when they are expected – it would include the expected premiums from multiyear contracts. By including the term "C" introduces double counting in the volume measure. Below are the definitions extracted from the UK ABI SORP on accounting for insurance business: Earned Premium In the case of general insurance business, earned premium is the proportion of written premiums (including where relevant those of prior accounting periods) attributable to the risks borne by the insurer during the accounting period. Written Premiums - General Business	To be discussed

			Premiums, which an insurer is contractually entitled to receive from the insured in relation to contracts of insurance. These are premiums on contracts entered into during the accounting period and adjustments arising in the accounting period to premiums receivable in respect of contracts entered into in prior accounting periods.	
710.	Munich RE	3.83.	In our view the formula for $V_{(prem,\ lob)}$ is not correct if our understanding of C^{PP}_{lob} is correct (cf. comment to 3.19) as the formula does not capture the risk of change in economic premium provision as indicated in 3.14. Thus, the formula should be changed to $V_{(prem,lob)} = \max(P_{lob}^{t,written}; P_{lob}^{t,earned}; P_{lob}^{t\text{-}1written}) + \Delta C_{lob}^{PP}$ where ΔC_{lob}^{PP} denotes the change of C_{lob}^{PP} from year t to year (t+1).	To be discussed
711.	ROAM	3.83.	CEIOPS has introduced a new element defined as C^{pp}_{lob} the expected present value of net claims ans expected payments which relate to claims incurred after the following year and covered by existing contracts for each LoBs . We would appreciate if CEIOPS can provide more guidance on the purpose of such new element and how it should be calculated.	To be discussed
712.	UNESPA- Association of Spanish Insurers and Reinsu	3.83.	The additional element seems to be too much prudent and is not clearly justified It is required to eliminate the introduction of additional element of prudency in determining the measure of premium volume - this element consists in adding the expected present value of net claims including expenses related to claims incurred after the following year and covered by existing contracts.	To be discussed

713.	AMICE	3.84.	CEIOPS does not consider the expected future profits and losses from the next year's new business. We agree with the CEA that underwriting cycles may have a material impact on the profitability of the portfolio over the year to come. Therefore, undertakings should be allowed to take into account in the SCR calculation, expected future profits and losses from the next year's new business.	To be discussed
714.	Association of British Insurers	3.84.	The underwriting cycle has not been taken into account when calibrating the premium risk Given that many markets exhibit the underwriting cycle as a feature we would recommend that this be taken into account when considering the premium risk. We understand that it is a difficult task to include an allowance for the underwriting cycle within the premium risk formula. We would therefore recommend that a simple approach of allowing for the expected profit for each undertaking be used when calculating the premium risk.	To be discussed
715.	CEA, ECO-SLV-09-443	3.84.	Please see also our comments to 3.2.	To be discussed
716.	Dutch Actuarial Society – Actuarieel Genootschap (	3.84.	We refer to 3.28	To be discussed
717.	FFSA	3.84.	☐ CEIOPS considers, as also stated in paragraph 3.6, that the standard formula is already complex and introducing additional	Noted

			complexity by taking into account non-proportional reinsurance may not be welcome. ☐ FFSA is in favor of a better consideration of non-proportional reinsurance under the standard formula. FFSA thinks that the risk mitigating effects of non-proportional treaties can be important for some undertaking. These undertakings should not be obliged to use internal models to take these treaties into account. ☐ FFSA disagrees with the inclusion of CppLob to capture claims and expenses in the volume measure for premium risk and would like this to be removed.	To be discussed
718.	German Insurance Association – Gesamtverb and der D	3.84.	We recommend to CEIOPS to take into account expected profits/losses when considering the premium risk, by developing a simple enough approach.	Noted
719.	GROUPAMA	3.84.	Non-proportional reinsurance should be taken into account even in the standard formula. Avoiding it is not consistent with the reality of the insurance business as NP reinsurance is a very widely used mitigation technique.	Noted
720.	Groupe Consultatif	3.84.	We refer to 3.28	Noted
721.	KPMG ELLP	3.84.	We agree. In this case the inclusion of the term “C” is appropriate.	Noted
722.	Lloyd’s	3.84.	We agree. In this case the inclusion of the term “C” is appropriate.	Noted
723.	ROAM	3.84.	CEIOPS considers, as also stated in paragraph 3.6, that the standard formula is already complex and introducing additional	Noted

			complexity by taking into account non-proportional reinsurance may not be welcome. ROAM is in favor of a better consideration of non-proportional reinsurance under the standard formula because the risk mitigating effects of non-proportional treaties can be important for some undertakings. These undertakings should not be obliged to use internal models to take these treaties into account.	
724.	UNESPA-Association of Spanish Insurers and Reinsu	3.84.	Refer to 3.83.	Noted
725.	AMICE	3.85.	The calibration which will be provided by the end of the year has to take into account: - The impact of non proportional reinsurance in the standard deviations: in such contracts, the remaining volatility should be much smaller than the one used in QIS4. We cannot accept a single estimation of volatility completely separated from the level of Non-Proportional reinsurance; - The size of the modelled business also has a significant impact on volatility. We regret the application of the same level of volatility regardless of the premium income. Having regard to the number of policies issued or the number of claims is a key element in the calibration.	Noted
726.	Association of British Insurers	3.85.	Market wide estimate of standard deviation for premium risk are as provided in QIS4 – these may be reviewed by CEIOPS in November 2009 We recommend that the standard deviations be reviewed in light of the entity specific and internal model results obtained from QIS4. Use of entity specific parameters may be needed to recognise the	Noted

			specificities of an undertaking's business. Parameters relating to the volume of business should be taken into account when assessing volatilities.	
727.	Belgian Coordination Group Solvency II (Assuralia/	3.85.	See comment on paragraph 3.29.	Noted
728.	CEA, ECO-SLV-09-443	3.85.	The values listed are high, following the experience of QIS4. We recommend that the standard deviations be reviewed in light of the entity specific and internal model results obtained from QIS4. The CEA thinks that the credibility method can better reflect the risk profile of entities. Avoiding recognition of entity specific parameters would lead to derecognising the specificities of the undertaking's business.	Noted
729.	CRO Forum	3.85.	The recalibration should consider the relative volatilities of the underlying exposure, for example is it reasonable that motor liability and motor other has the same calibration?	Noted
730.	Dutch Actuarial Society – Actuarieel Genootschap (	3.85.	We refer to 3.29	Noted
731.	European Union member firms of Deloitte	3.85.	See 3.29	Noted

	Touche To			
732.	FFSA	3.85.	☐ CEIOPS considers, as also stated in paragraph 3.5, that the drawback of using a credibility method with an undertaking-specific estimate outweighs its benefits. ☐ FFSA thinks that the credibility method can better reflect the risk profile of entities. FFSA is in favor of this methodology and hopes that CEIOPS will keep this methodology. ☐ Entity specific parameters should be allowed for SCR calculation. Avoid it would lead to derecognize specificities of the undertaking’s business. Parameters as volume of business should be taken into account when assessing volatilities. At least, national parameters on Level 3 should be allowed to take into account national specificities (as Securité Social in France for instance).	Noted See CP for the third wave
733.	German Insurance Association – Gesamtverband der D	3.85.	We recommend that the standard deviations be reviewed in light of the entity specific and internal model results obtained from QIS4. We think that the credibility method can better reflect the risk profile of entities. Avoiding recognition of entity specific parameters would lead to derecognising the specificities of the undertaking’s business and its volume.	Noted
734.	GROUPAMA	3.85.	Entity specific parameters should be allowed for SCR calculation. Avoiding it would lead to specificities of the undertaking’s business not being recognised. Parameters such as volume of business should be taken into account when assessing volatilities. National parameters on Level 3 should at least be allowed to take into account national specificities (such as Social Security in France for instance). T he calibration which will be provided by the end of the year has to take into account: - The impact of non proportional reinsurance in the standard	Noted

<table>
<tr><td></td><td></td><td></td><td>deviations: in case of non proportional contracts the remaining volatility should be much smaller than the level used for QIS4. We cannot accept a single level of volatility totally separated from the level of NP reinsurance;

- The size of modelled business has also a significant impact on volatility levels. We cannot accept to apply the same level of volatility whatever the premium income is. A link with the number of earned policies or number of claims has to be done in the final volatility level.

Hereafter an example of the volatility sensibility to the size of the business for one non-life line of business:

<table>
<tr><td></td><td></td><td colspan="3">Seuil de réassurance (en % des primes)</td></tr>
<tr><td></td><td></td><td>1%</td><td>5%</td><td>10%</td></tr>
<tr><td>Nombre</td><td>100 000</td><td>7,5%</td><td>9,3%</td><td>9,7%</td></tr>
<tr><td>de</td><td>250 000</td><td>5,4%</td><td>6,1%</td><td>6,3%</td></tr>
<tr><td>polices</td><td>500 000</td><td>4,1%</td><td>4,5%</td><td>4,6%</td></tr>
<tr><td></td><td>1 000 000</td><td>3,0%</td><td>3,2%</td><td>3,3%</td></tr>
</table>

From 100 000 policies to 1 000 000 policies the volatility is divided by 2.5 for a 1% of reinsurance, and by 3 for 10% of reinsurance. Not taking into account entity specificities, as size of the portfolio for instance, could lead to unrealistic and over-prudential calibration.</td><td>Noted</td></tr>
<tr><td>735.</td><td>KPMG ELLP</td><td>3.85.</td><td>We agree.</td><td>Noted</td></tr>
<tr><td>736.</td><td>Lloyd's</td><td>3.85.</td><td>We agree. Any recalibration should be transparent and detailed.</td><td>Noted</td></tr>
<tr><td>737.</td><td>ROAM</td><td>3.85.</td><td>☐ CEIOPS considers, as also stated in paragraph 3.5, that the drawback of using a credibility method with an undertaking-specific estimate outweighs its benefits.

The calibration which will be provided by the end of the year has to</td><td></td></tr>
</table>

			take into account: - The impact of non proportional reinsurance in the standard deviations: in such type of contracts the remaining volatility should be much smaller than the one used in QIS4. We cannot accept a single estimation of volatility totally separated from the level of NP reinsurance; - The size of modelled business has also a significant impact on volatility levels. We cannot accept to apply the same level of volatility whatever the premium income is. A link with the number of policies issued and number of claims has to be done in the final volatility level.	See response to comment 734
738.	UNESPA-Association of Spanish Insurers and Reinsu	3.85.	The standard factors are for the moment set by default without taking into consideration the historical experience of the company. It may be excessive for some of the introduced factors which involve an additional element of rigidity in the model. In another vein, CEIOPS will provide updated factors in November 2009, making it difficult to maintain a position until its publication. Profits and losses one year period should be recognized According to said above, it seems necessary to include in the standard formula the relevant mechanisms to collect the benefits and / or losses to one year period and their implications on the final capital requirements. This is the case of those companies which determine their premiums so that they are not equivalent with 50% percentile (risk premium). The final capital requirement should be appropriate to this effect, acknowledging the reduction in amount or increase accordingly.	Noted To be discussed
739.	KPMG ELLP	3.86.	We agree.	Noted

740.	Lloyd's	3.86.	We agree.	Noted
741.	ROAM	3.86.	We want to precise that we don't have to count in $PCO_{lob\ l}$ the claims from the future underwriting years (cf. one year horizon)	Disagreed
742.	Uni Oldenburg	3.86.	In the formula two commas are too much.	Noted
743.	AMICE	3.87.	Same comments as paragraph 3.85.	Noted
744.	CEA, ECO-SLV-09-443	3.87.	Some of the standard deviations appear to be quite high although we understand that these may be reviewed in November 2009. We recommend that the standard deviations be reviewed in light of the entity specific and/or internal model results obtained from QIS4 and that companies are permitted to use their own entity specific assumptions.	Noted
745.	CRO Forum	3.87.	The recalibration should consider the risk for each of the segmentations and proportion unpaid at the time of calculation. There should be guidance that differentiates between growing and shrinking lines of business.	Noted
746.	Dutch Actuarial Society – Actuarieel Genootschap (	3.87.	We refer to 3.31	Noted
747.	European Union member firms of Deloitte Touche To	3.87.	See 3.29	Noted

748.	German Insurance Association – Gesamtverband der D	3.87.	We recommend that the standard deviations be reviewed in light of the entity specific and/or internal model results obtained from QIS4 and that companies are permitted to use their own entity specific parameters.	Noted
749.	GROUPAMA	3.87.	Same comments as 3.85.	Noted
750.	KPMG ELLP	3.87.	We agree.	Noted
751.	Lloyd’s	3.87.	We agree. Any recalibration should be transparent and detailed.	Noted
752.	RBS Insurance	3.87.	These factors are market wide, so do not give larger companies the benefit of more stable results, through a lower standard deviation.	Noted
753.	ROAM	3.87.	Same comments as 3.85.	Noted
754.	Association of British Insurers	3.88.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is	Noted

			required to calibrate the standard model in this respect. See also comments to 3.32.	
755.	CEA, ECO-SLV-09-443	3.88.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	Noted
756.	CRO Forum	3.88.	We recognise that the calibration is for illustrative purposes only, but still most factors seem too low. A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim	Noted

			development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect. This assumes a correlation of 50% between prior year reserves and future UW. This could and should vary by line of business.	
757.	German Insurance Association – Gesamtverb and der D	3.88.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Furthermore, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	Noted
758.	KPMG ELLP	3.88.	We agree.	Noted
759.	Legal & General	3.88.	See 3.32	See corresponding resolution

	Group			
760.	Lloyd's	3.88.	We agree.	Noted
761.	Munich RE	3.88.	A generic correlation between premium and reserve risk of 0.5 for all lines of business seems rather high. In principle, the dependencies between premium and reserve risk should reflect the fact that the claim development result (reserving risk) and the first loss ratio pick (premium risk) may or may not rely on the same type of information depending on the line of business. Generally and due to the time lag of information, the claim development result for long tail lines such as liability will determine to some extend the first loss ratio pick of the current year. By contrast, in short tail lines the first loss ratio is usually based on more reliable information about the actual incidents. Thus, it might be argued that dependencies between premium and reserve risk should be higher for long-tail lines compared to short-tail lines. Further, the dependency between premium and reserve risk may differ between the lines of business considered in the standard formula, especially for non-proportional reinsurance. More work is required to calibrate the standard model in this respect.	See response to comment 754
762.	UNESPA-Association of Spanish Insurers and Reinsu	3.88.	Correlation between premium and reserve risk between the lines of business A generic correlation between premium and reserve risk of 0.5 should not fit to all LoB. More work is required to calibrate the standard model in this respect.	Noted
763.	KPMG ELLP	3.89.	Our comments in 3.21 apply here.	Noted
764.	Lloyd's	3.89.	The calculation of premium risk still does not allow for the expected outcome of the business which is an important feature in setting	Noted

			non-life capital. Profit-making business should require less capital than loss-making business and yet both would have the same capital requirements under the proposed formula, if solely based on volumes. This is uneconomical. The expected losses or profits from prospective business should be included in the formula.	
765.	Uni Oldenburg	3.89.	The used symbolism is mathematically meaningless and misleading, and it is inconsistent with the previous symbolism in the calculation of premium and reserve risk.	Noted
766.	CEA, ECO-SLV-09-443	3.90.	The correlation matrix is essential in order to allow for a proper level of diversification. Both the method and the results should be disclosed	Noted
767.	European Union member firms of Deloitte Touche To	3.90.	See 3.29	Noted
768.	German Insurance Association – Gesamtverband der D	3.90.	The correlation matrix is essential in order to allow for a proper level of diversification. Both the method and the results should be disclosed.	Noted
769.	Lloyd’s	3.90.	The revised factors when presented should include transparent and detailed derivations. They should be supported by experience.	Noted
770.	AAS BALTA	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company’s exposure. We feel that efforts should instead be directed	Not agreed. Some companies may not be able to build complex internal models for reasons of

			at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	human and financial resources.
771.	AB Lietuvos draudimas	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. Some companies may not be able to build complex internal models for reasons of human and financial resources.
772.	AMICE	3.91.	In this paragraph CEIOPS aims to deliver standardised scenarios for QIS 5. In our opinion this timeline is very ambitious if we consider that many undertakings have spent many years developing some scenarios.	Noted. CEIOPS aims at delivering scenarios in place for QIS5.
773.	Association of British Insurers	3.91.	See comments to 3.39.	See corresponding resolutions.
774.	CEA, ECO-SLV-09-443	3.91.	We look forward to the standard catastrophe scenarios being developed. We understand that Ceiops, with the help of a task force from the industry, will develop standard catastrophe scenarios for calculating the catastrophe risk. We see this as an improvement to the previous system and we would very much like to be part of the task	Not agreed. The CAT risk task force has already started its work and it would not be productive to join the process at this late stage. Personalised scenarios have not been kept by CEIOPS for reasons

			force which is being set up. We further stress that the standardized scenarios should reflect the different situations in the member states. Where such scenarios don not reflect appropriately the risk profile of undertakings, undertaking specific scenarios, subject to supervisory approval, should be available as an alternative option in the standard formula. The criteria for the development of undertaking specific scenarios should be provided by Ceiops and foster the harmonisation of such scenarios across member states	indicated in resolutions to comment nr 7.
775.	CRO Forum	3.91.	1st bullet: See general comment and see 3.28. 2nd bullet: Even though the standardized scenarios to be developed with the help of the industry is a great improvement over Method 2 in QIS4, we believe that CAT risk can still not be modelled in a sophisticated way, especially if risk concentrations within portfolios are not standard. For example: a small insurer (with a market share of 1%) writing household insurance mainly close to the Seine/Thames may be more exposed to flood risk than a large insurer (10% market share) mainly writing household insurance further away from the Seine/Thames. 5th bullet: At this stage it is very difficult to comment on the impact of CP48, without understanding the main components which drive the SCR such as calibration, correlations, undertaking specific parameters, catastrophe scenarios (1.4). We understand that standardized scenarios for CAT risk will most likely be developed for QIS5 (June 2010). Hence understanding the impact of this advice is delayed by almost 1 year. Especially, when such a large number of changes are proposed, compared to QIS4, we believe it is crucial to get understanding of these components as early as possible. We believe it is more effective to allow for personalised scenarios.	Noted.

776.	DENMARK: Codan Forsikring A/S (10529638)	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.
777.	Dutch Actuarial Society – Actuarieel Genootschap (	3.91.	In favour of company specific scenarios (QIS 4 option 3). The factor formula made more risk sensitive (QIS 4 option 1) could be an alternative solution. We do see the added value of scenarios, but remark that costs of development and maintenance of these scenarios will be high. We rather see companies explain in the ORSA which scenarios they have considered when forming their opinion on the cat risk. Also see comments 3.38 / 3.41	Noted. See corresponding resolutions.
778.	European Union member firms of Deloitte Touche To	3.91.	See 3.38 / 3.41	Noted. See corresponding resolutions.
779.	German Insurance Association – Gesamtverband der D	3.91.	We understand that CEIOPS, with the help of a task force from the industry, will develop standard catastrophe scenarios for calculating the CAT risk. We see this as an improvement to the proposal tested in QIS4 and we offer to discuss our experience and collaboration with the CEIOPS-task force which is being set up.	Not agreed. Personalised scenarios have been rejected by CEIOPS for reasons indicated in resolutions to comment nr 7.

			Such scenarios should reflect - the risk profile of undertakings, - undertaking specific non-proportional and proportional reinsurance structure, - CAT-exposure of undertaking´s portfolio, depending on the respective policy clauses (maximum amounts of cover, sums insured) The rerunning of QIS4 in Germany may give more insight into the new approach for man-made Cat risks. Only where such scenarios don’t reflect appropriately the risk profile of an undertaking , undertaking specific scenarios should be available as additional alternative, with more criteria for their development to be provided by CEIOPS in order to foster the harmonisation.	
780.	Groupe Consultatif	3.91.	We refer to 3.38 / 3.41	See corresponding resolution.
781.	KPMG ELLP	3.91.	We agree.	Noted.
782.	Legal & General Group	3.91.	See 3.39	See corresponding resolution.
783.	Link4 Towarzystwo Ubezpieczeń SA	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company’s exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort	Not agreed. See resolutions to comment 771 for instance.

			to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	
784.	Lloyd's	3.91.	We strongly agree.	Noted.
785.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.
786.	Pearl Group Limited	3.91.	Are standardised scenarios the appropriate way to deal with catastrophe risk? Each company should define the scenarios are appropriate to themselves.	Not agreed. See resolution to comment nr 7.
787.	RBS Insurance	3.91.	See comment 3.41	See corresponding resolution.
788.	RSA Insurance Group PLC	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.

789.	RSA Insurance Ireland Ltd	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.
790.	RSA - Sun Insurance Office Ltd.	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.
791.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.91.	We believe that the problem of producing a standard formula capital charge can not be solved due to the uniqueness of each company's exposure. We feel that efforts should instead be directed at promoting the use of partial internal models for all entities to manage their catastrophe risk. In our opinion all insurance undertakings should be devoting significant risk management effort to understand their aggregations and take appropriate mitigating actions. For many entities converting these efforts into a partial internal model may be relatively easy and would seem to a closer fit to the intentions of the Directive.	Not agreed. See resolutions to comment 771 for instance.

792.	UNESPA-Association of Spanish Insurers and Reinsu	3.91.	CEIOPS suggests that the capital charge of non life catastrophe risk sub-module is calculated through the application of standardized scenarios. Later proposed an alternative method that is based on applying a factor in line with the method known as a standard approach in QIS 4, although its use is restricted to certain cases. As stated below in paragraph 3.92, we advocate that undertakings could choose as an alternative the Entity Specific option (method 3 QIS 4).	Not agreed. See resolutions to comment nr 7 for instance.
793.	AAS BALTA	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	Noted.
794.	AB Lietuvos draudimas	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	Noted.
795.	AMICE	3.92.	AMICE welcomes the creation of a task force to work with CEIOPS in constructing the required scenarios. We are in favour of compiling a database of historic EU catastrophic losses as long as it ensures a high level of harmonisation in the development of standardised scenarios. Supervisory authorities should make public such a database to provide undertakings with scenarios for their (partial) internal models.	Noted. Scenarios will be provided at Level 3 guidance.
796.	CEA, ECO-SLV-09-443	3.92.	We welcome the proposal from Ceiops of creating a task force and we are in favour of the harmonisation of the scenarios for all members. Databases of CAT losses should be built for countries outside the	Noted. Scenarios will be provided at Level 3 guidance.

			EU also.	
797.	CRO Forum	3.92.	Last bullet: " Build a database of historic catastrophic losses. (…)" Of course this is necessary to be able to calibrate risk factors in the future. However, if CAT scenarios are also used for countries outside the EU (see 3.39), these countries should also provide updated data for calibration purposes. The CRO Forum welcomes the proposal from CEIOPS of creating a task force with the industry to work on constructing the required scenarios. It will clearly improve the harmonization of the scenarios among all members/ countries thus reducing local supervisors' discretion.	Noted.
798.	DENMARK: Codan Forsikring A/S (10529638)	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	Noted.
799.	Dutch Actuarial Society – Actuarieel Genootschap (	3.92.	We refer to 3.42	See corresponding resolution.
800.	FFSA	3.92.	☐ CEIOPS is proposing creating a task force with the industry to work on constructing the required scenarios. ☐ FFSA welcomes the proposal from CEIOPS of creating a task force. FFSA is in favour of the harmonization of the scenarios for all members thus reducing local supervisors' discretion.	Noted.

801.	German Insurance Association – Gesamtverband der D	3.92.	We welcome the proposal from CEIOPS of creating a task force and we are in favour of the harmonisation of the scenarios for all members (see our comment on previous para. 3.91.	Noted.
802.	KPMG ELLP	3.92.	We agree.	Noted.
803.	Link4 Towarzystwo Ubezpieczeń SA	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	See resolution to comment nr 403.
804.	Lloyd's	3.92.	We strongly agree.	Noted.
805.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	Noted. Scenarios will be provided at Level 3 guidance.
806.	RBS Insurance	3.92.	See comment 3.42	See corresponding resolution.
807.	ROAM	3.92.	ROAM welcomes the creation of a task force to work with CEIOPS in constructing the required scenarios. We would be interested in contributing to the calibration of the standard catastrophe scenarios.	Noted.
808.	RSA Insurance Group PLC	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic.	See resolution to comment nr 403.

			The ongoing nature of this task suggests that the commitment is unbounded.	
809.	RSA Insurance Ireland Ltd	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	See resolution to comment nr 403.
810.	RSA - Sun Insurance Office Ltd.	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	See resolution to comment nr 403.
811.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.92.	We think the task of producing the scenarios will be very complex and time-consuming and doubt this is the best use of the industry's time. Gaining agreement of all stakeholders is likely to problematic. The ongoing nature of this task suggests that the commitment is unbounded.	See resolution to comment nr 403.
812.	UNESPA- Association of Spanish Insurers and Reinsu	3.92.	It is required allowance for the Entity Specific option (method 3 QIS4) for determining the capital requirement for CAT No Life It is required allowance that companies use personalized scenarios according to the case of each of them. The consideration of this possibility would lead to a definition of risk modeling that reflects reality more of each. The consideration of this possibility would lead to a definition of risk more realistic for them. However, this possibility should be employed by companies without the prior development of an internal model. We agree with the main aim of CEIOPS to harmonize as much as possible catastrophic scenarios at European level in order to avoid arbitrary differences between markets, using standardized scenario	Noted. Scenarios will be reviewed annually at Level 3. Risk mitigation instruments in the CAT risk module will have to be complaint with CP 52 and CP31.

			but such scenarios should be sufficiently flexible to take into consideration all any specificities of each market. An example of this is the consideration of certain local elements of risk relievers such as the Consorcio de Compensación de Seguros (CCS) in the Spanish market. Such national pool agreements are specific to each country, therefore the limits of CAT exposure can be very different from one country to another. Take the example of a CAT that involves the intervention of the Spanish CCS: Hurricane, CCS takes charge of an important amount of the final claim cost for all insurers involved. Such an event could not be declared as CAT by some states and could be supported in more restrictive limits. It also raises the need for periodic review and improvement of the standard scenarios provided by CEIOPS.	
813.	Uni Oldenburg	3.92.	Point 1 disagrees with reference 3.40, point 2. Now we have the situation of cherry picking.	Not agreed. The cat risk task force will develop scenarios. The applicability criteria of these will remain in CEIOPS hands.
814.	AAS BALTA	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	Noted. Events should correspond to a 1 in 200 loss. Events might be aggregated, possibly with diversification effects. The CAT risk task force mentioned in 3.39 will analyse possible aggregation solutions.
815.	AB Lietuvos draudimas	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
816.	Association of British	3.93.	We believe entity specific parameters are important, since standard scenarios often fail to capture proper risks in a particular book –	Not agreed. Personalised scenarios have been rejected for

	Insurers		e.g. Thames flood scenario. In this respect, Para 3.2 in CP 57, which explicitly recognises the possible use of entity-specific parameters is quite helpful and could be referred to.	reasons stated in resolutions to comment nr 7.
817.			Confidential comment deleted	
818.	CEA, ECO-SLV-09-443	3.93.	Typo: "Ceiops is aware that standardized scenarios aim at reproducing a in 1 in 200 year industry loss level..."	Agreed. Advice will be updated.
819.	DENMARK: Codan Forsikring A/S (10529638)	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
820.	Dutch Actuarial Society – Actuarieel Genootschap (	3.93.	We refer to 3.43	See corresponding resolution to comment.
821.	KPMG ELLP	3.93.	We agree and note that this still leaves the possibility of the standard losses not representing a 1 in 200 year event for some (re)insurance undertakings.	Noted.
822.	Link4 Towarzystwo Ubezpieczeń SA	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
823.	Lloyd's	3.93.	We agree and note that this still leaves the possibility of the standard losses not representing a 1 in 200 year event for some	Noted.

			undertakings.	
824.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
825.	Pearl Group Limited	3.93.	It is not clear how changing the model, without changing the standardised scenarios themselves will lead to an appropriate 99.5% confidence interval over a one year period.	Noted.
826.	RSA Insurance Group PLC	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
827.	RSA Insurance Ireland Ltd	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
828.	RSA - Sun Insurance Office Ltd.	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
829.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.93.	It is unclear whether the standardised event aims to produce the 1 in 200 loss from a single event or the 1 in 200 loss from a combination of events.	See resolution to comment nr 814.
830.	Association of British Insurers	3.94.	See comments to 3.44.	See corresponding resolutions.
831.	CEA,	3.94.	Double counting of risk when considering premium and reserve risk	Noted. See 3.44 of CP 48 on the

	ECO-SLV-09-443		and catastrophe risk Ceiops has recognised that there may be some double counting of risk due to the way in which the premium, reserve and catastrophe risk is currently being calculated. There have been a number of suggestions made to make allowance for this but these have been rejected by CEOIPS and no explicit change will be made to allow for this double counting. Ceiops will try to make an implicit allowance for this in choosing both the standardised scenarios for catastrophe risk and the distribution assumption for the premium and reserve risk. In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses as much as possible. An analogous remark applies to the use of undertaking-specific data: the calculation should be based on data where catastrophe losses have been removed as much as possible. The calibration of the market-wide and undertaking specific factors for premium and reserve risk including to prevent double-counting of losses as far as possible in a standard approach should be discussed in the 3rd wave.	issue of double counting. The data used to calibrate the factors was net of cat risk, to the extend possible.
832.	CRO Forum	3.94.	In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses. An analogous remark applies to the use of undertaking-specific data: The calculation should be based on data where catastrophe losses have been removed. The parameters for premium and reserve risk from 3.29 and 3.31 must therefore be calibrated on data corrected for CAT events. Otherwise the risk factors will be too high, and there will be an overlap with the CAT risk.	Noted. See 3.44 of CP 48 on the issue of double counting. The data used to calibrate the factors was net of cat risk, to the extend possible.

833.	Dutch Actuarial Society – Actuarieel Genootschap (	3.94.	The parameters for premium and reserve risk from 3.29 and 3.31 must therefore be calibrated on data corrected for CAT events. Otherwise the risk factors will be too high, and there will be an overlap with the CAT risk. See comment 3.44	Noted. The data used to calibrate the factors was net of cat risk, to the extend possible.
834.	ECIROA	3.94.	The CAT risk sub module should take into account the aggregate limits that stop the Captive commitment. Furthermore, there should be a link to premium risk. The maximum claim charge is limited by the aggregate limit. Part of this exposure limit is covered by the premium and the premium risk sub module capital charge. The CAT risk sub module is therefore linked to the premium risk sub module to avoid double-counting.	Noted. CEIOPS considers integrating the effect of aggregate limits / stop loss covers in the non life final advice. The effect of the aggregate limit / stop loss cover in the aggregation process will be considered.
835.	German Insurance Association – Gesamtverband der D	3.94.	Double counting of risk when considering premium and reserve risk and catastrophe risk CEIOPS has recognised that there may be some double counting of risk due to the way in which the premium, reserve and catastrophe risk is currently being calculated. We propose the deduction of the basic risk from the cat risk in an approximate way by means of subtraction of the expected value (this is approximately the 2-3-year's loss).of the loss distribution. It is very difficult to define one borderline for all sizes of all undertakings between basic and cat risk, because a loss which is a cat loss for one undertaking is a (small) basic loss for the other. It should be noted, that the risk factors are based on net-calculations after reinsurance. Therefore cat losses only have small influence on undertaking-specific (net-) basic risk. The calibration of the market-wide and undertaking specific factors for premium and reserve risk including to prevent double-counting	Noted. See 3.44 of CP 48 on the issue of double counting. The data used to calibrate the factors was net of cat risk, to the extend possible.

			of losses as far as possible in a standard approach should be discussed in the 3rd wave.	
836.	KPMG ELLP	3.94.	We agree. The calibration of catastrophe losses should exclude “normal” experience.	Noted. The data used to calibrate the factors was net of cat risk, to the extend possible.
837.	Legal & General Group	3.94.	See 3.44	See corresponding resolution to comment.
838.	Lloyd’s	3.94.	We agree. The calibration of catastrophe losses should exclude “normal” experience.	Noted. The data used to calibrate the factors was net of cat risk, to the extend possible.
839.	Munich RE	3.94.	In order to prevent double-counting of losses the calibration of the market-wide factors for premium and reserve risk should be calibrated based on data excluding catastrophe losses. An analogous remark applies to the use of undertaking-specific data: The calculation should be based on data where catastrophe losses have been removed.	Noted. See 3.44 of CP 48 on the issue of double counting. The data used to calibrate the factors was net of cat risk, to the extend possible.
840.	UNESPA-Association of Spanish Insurers and Reinsu	3.94.	Clear differentiation between premium / reserve and CAT We agree with CEIOPS that should be clearly defined differentiation so that should be considered premium o reserve risk those who are not considered in non-life catastrophic risk sub-module.	Noted. See 3.44 of CP 48 on the issue of double counting. The data used to calibrate the factors was net of cat risk, to the extend possible.
841.	AMICE	3.95.	CEIOPS provides a list of scenarios that should be constructed for a minimum set of catastrophe events. AMICE would appreciate further guidance on how such events should be added. Since the list of events would probably not happen in the same year, more advice is needed on how to take into account this probability	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.

842.	CEA, ECO-SLV-09-443	3.95.	There is a clear need for national adjustments in building the standardized scenarios. Manmade disasters should be extended to include mass accident when there is lump sum compensation. Further, we think that having a long and exhaustive list of events can be imagined. Correlations of the events would need to be worked on by Ceiops.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
843.	FFSA	3.95.	☐ CEIOPS gives a minimum list of catastrophe events. ☐ FFSA thinks that having a long and exhaustive list of events can be imagined. (There is actually no limit for this list) ☐ FFSA wonders how to sum them: They would probably not appear all the same year and how to take account this probability?	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
844.	German Insurance Association – Gesamtverband der D	3.95.	There is a clear need for national adjustments in building the standardized scenarios. The rerunning of QIS4 in Germany may give more insight into the new approach for man-made Cat risks.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
845.	KPMG ELLP	3.95.	We agree.	Noted.
846.	Lloyd's	3.95.	We agree.	Noted.
847.	ROAM	3.95.	ROAM would appreciate if further guidance is provided on how such events should be added. Since the list of events would probably not appear in the same year, more advice is needed on how to take into account this probability	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
848.	Uni Oldenburg	3.95.	The LoB "Other motor" is only relevant for hail.	Not agreed. Claims in the 'Motor, other' LoB can occur due to events other than hail.

849.	Association of British Insurers	3.96.	The section also mentions health. We note that health is not a part of the non-life module but captured within one health module. Consequently, health catastrophe risk should be captured within the health module and not within the non-life module in order to account for a clear separation between, life, health and non-life business.	Not agreed. Health cat risk is treated in the health module, as indicated in CP50. Only the methods used to derive the CAT charge shall be the same for the health module and the non life module.
850.	CEA, ECO-SLV-09-443	3.96.	The section also mentions health. We note that health is not a part of the nonlife module but captured within an own health module. Consequently, health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	Not agreed. Health cat risk is treated in the health module, as indicated in CP50. Only the methods used to derive the CAT charge shall be the same for the health module and the non life module.
851.	CRO Forum	3.96.	The section also mentions health. We note that health is not a part of the nonlife module but captured in a separate advice, “CP50 – design of health risk module and sub module”. Consequently, health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	Not agreed. Health cat risk is treated in the health module, as indicated in CP50. Only the methods used to derive the CAT charge shall be the same for the health module and the non life module.
852.	German Insurance Association – Gesamtverband der D	3.96.	The section also mentions health. We note that health is not a part of the nonlife module but captured within an own health module (CP50). Consequently, health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	Not agreed. Health cat risk is treated in the health module, as indicated in CP50. Only the methods used to derive the CAT charge shall be the same for the health module and the non life module.
853.	KPMG ELLP	3.96.	We agree.	Noted.

854.	Lloyd's	3.96.	We agree.	Noted.
855.	Munich RE	3.96.	The section also mentions health. We note that health is not a part of the nonlife module but captured within an own health module. Consequently, health catastrophe risk should be captured within the health module and not within the nonlife module in order to account for a clear separation between, life, health and nonlife business.	Not agreed. Health cat risk is treated in the health module, as indicated in CP50. Only the methods used to derive the CAT charge shall be the same for the health module and the non life module.
856.	CEA, ECO-SLV-09-443	3.97.	No text here?	Noted. The advice will be updated.
857.	Dutch Actuarial Society – Actuarieel Genootschap (	3.97.	3.97 does not contain text.	Noted. The advice will be updated.
858.	European Union member firms of Deloitte Touche To	3.97.	3.97 does not contain text.	Noted. The advice will be updated.
859.	Lloyd's	3.97.	This paragraph appears to be redundant.	Noted. The advice will be updated.
860.	Uni Oldenburg	3.97.	Empty reference	Noted. The advice will be updated.
861.	AMICE	3.98.	See our comments to paragraph 3.47	See corresponding resolutions to

				comment .
862.	KPMG ELLP	3.98.	We agree	Noted.
863.	Lloyd's	3.98.	We agree – this is important.	Noted.
864.	AAS BALTA	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
865.	AB Lietuvos draudimas	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
866.	AMICE	3.99.	Climate change has been never taken into account in the calibration of catastrophe events. The calibration of cat scenarios with this type of assumption seems to be irrelevant since market data are scarce and not reliable.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
867.	Association of British Insurers	3.99.	Advice should be provided how to incorporate the factors mentioned in order to account for the prospective nature of the calculation. See comments to 3.48.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
868.	CEA, ECO-SLV-09-443	3.99.	Advice should be provided how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.

869.	CRO Forum	3.99.	Advice should be provided detailing how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
870.	DENMARK: Codan Forsikring A/S (10529638)	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
871.	Dutch Actuarial Society – Actuarieel Genootschap (	3.99.	We refer to 3.48	See corresponding resolution to comment.
872.	GROUPAMA	3.99.	Climate change is never taken into account in calibration of cat events. The calibration of cat scenarios with this type of assumption seems to be irrelevant: market data are widely self-contradictory.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
873.	KPMG ELLP	3.99.	We agree.	Noted.
874.	Legal & General Group	3.99.	See 3.48	See corresponding resolution to comment.
875.	Link4 Towarzystwo Ubezpieczeń	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned

	SA			in 3.39 of CP48.
876.	Lloyd's	3.99.	We strongly agree.	Noted.
877.	Munich RE	3.99.	Advice should be provided how to incorporate the factors mentioned in order to account for the prospective nature of the calculation.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
878.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
879.	RBS Insurance	3.99.	Refer 3.48	See corresponding resolution to comment.
880.	RSA Insurance Group PLC	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
881.	RSA Insurance Ireland Ltd	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
882.	RSA - Sun Insurance Office Ltd.	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned

				in 3.39 of CP48.
883.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.99.	The inclusion of an allowance for climate change is likely to be controversial, especially given the fact that scenarios relate only to the next year. We think this is best omitted to limit the scope of the work.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
884.	CEA, ECO-SLV-09-443	3.100.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	Agreed. See revised text.
885.	CRO Forum	3.100.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	Agreed. See revised text.
886.	DIMA (Dublin International Insurance & Management	3.100.	This takes into account the degree of market share which will be taken into account on scenario tests to derive the capital requirements; how can this be measured accurately? As well as cross-border scenarios, third country issues need consideration.	Noted.
887.	ECIROA	3.100.	We refer to our comment under 3.49	See corresponding resolution.
888.	German Insurance Association – Gesamtverb and der D	3.100.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.110 The rerunning of QIS4 in Germany may give more insight into the new approach for man-made Cat risks.	Noted.
889.	KPMG ELLP	3.100.	We agree.	Noted.
890.	Lloyd's	3.100.	We agree.	Noted.

891.	Munich RE	3.100.	The "degree of involvement of the undertaking in the market", i.e. the respective market share, should be gross instead of net of reinsurance. Reinsurance shall be taken into account by means of the formula in section 3.59 / 3.110.	Noted.
892.	RBS Insurance	3.100.	Refer 3.49	See corresponding resolution to comment.
893.	CEA, ECO-SLV-09-443	3.101.	To ensure consistency across Europe, and to facilitate coordination of companies of a group, the CEA recommends Ceiops to publish one single document with all scenarios applying to all the countries. This document will have to give scenarios also for countries outside Europe (for example if a European country has a branch in Japan).	Noted. CEIOPS aims at delivering scenarios for QIS5. Later on these scenarios will be part of Level3.
894.	FFSA	3.101.	☐ CEIOPS states that for a (re)insurance undertaking that operates in more than one member state, standardized scenarios from all Member States would need to be considered to the exposure in such countries. ☐ To ensure consistency across Europe, and to facilitate coordination of companies of a group, FFSA recommends CEIOPS to publish one single document with all scenarios applying to all the countries. This document will have to give scenarios also for countries outside Europe (for example if a European country has a branch in Japan).	Noted. CEIOPS aims at delivering scenarios for QIS5. Later on these scenarios will be part of Level3.
895.	KPMG ELLP	3.101.	We agree.	Noted.
896.	Lloyd's	3.101.	We strongly agree. Cross border scenarios are a very important factor.	Noted.
897.	KPMG ELLP	3.102.	We agree.	Noted.
898.	Lloyd's	3.102.	We strongly agree.	Noted.

899.	KPMG ELLP	3.103.	We agree.	Noted.
900.	Lloyd's	3.103.	We agree.	Noted.
901.	CEA, ECO-SLV-09-443	3.104.	We think alternative 1 (aggregate first by peril, then the perils) is more appropriate and also more in line with the way catastrophe exposures are managed and measured within the industry.	Noted.
902.	CRO Forum	3.104.	In the CP it is clearly stated that for non life underwriting risk no geographical diversification benefits are taken into account, for several reasons. However it is not clear whether this also applies for CAT risk. In this article CEIOPS indicates that it will provide guidance on how to aggregate between events and countries. In Annex A two proposals are made. This implies a kind of geographical diversification. There should be since, for example, it is not likely, even in a CAT event, that the entire EU will be flooded. So some kind of diversification should be taken into account here. We prefer option 1. However, we note that, if the assumptions are correct, adding the results from the CAT events and aggregating them should result in the same CAT SCR for both proposals.	Noted. The whole CAT risk module is currently under review, taking into account the work of the cat risk task force mentioned in 3.39 of CP48.
903.	Dutch Actuarial Society – Actuarieel Genootschap (	3.104.	We refer to 3.53	See corresponding resolution to comment.
904.	German Insurance Association – Gesamtverb	3.104.	We think alternative 1 (aggregate first by peril, then the perils) is more appropriate and also more in line with the way catastrophe exposures are managed and measured within the industry.	Noted.

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905.	KPMG ELLP	3.104.	We agree.	Noted.
906.	Lloyd's	3.104.	We agree.	Noted.
907.	KPMG ELLP	3.105.	We agree.	Noted.
908.	Lloyd's	3.105.	We agree.	Noted.
909.	RBS Insurance	3.105.	Footnote is missing	Noted. Advice will be updated.
910.	Uni Oldenburg	3.105.	Footnote 8 is missing	Noted. Advice will be updated.
911.	CEA, ECO-SLV-09-443	3.106.	The catastrophe risk calculation for the Miscellaneous line of business should not be limited to the factor based approach. We recommend that personalised scenarios be allowed for this class of business given that this line of business will most likely be very different for each undertaking.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7. Developing a standardised scenario for the Miscellaneous LoB is a challenging task because of the great variety of risks falling into that LoB.
912.	CRO Forum	3.106.	It is not clear why the alternative method should be used if the standard scenarios are not adequate. In that case, personalised scenarios are preferable.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7.
913.	European Union member firms of Deloitte Touche To	3.106.	See 3.55	See corresponding resolution to comment.

914.	FFSA	3.106.	☐ CEIOPS is proposing to use a simple factor-based approach in two cases: as an interim solution while the scenarios are being developed, and on a permanent basis in cases that will be clearly defined. One such case is that the factor method shall be the default method for the Miscellaneous line of business. ☐ FFSA believes that CEIOPS should allow using a simple factor-based approach for all undertakings in line with the principle of proportionality.	Noted.
915.	Groupe Consultatif	3.106.	We refer to 3.55	See corresponding resolutions to comment.
916.	KPMG ELLP	3.106.	We agree.	Noted.
917.	Lloyd's	3.106.	We agree. However the calibration of such a formula is extremely difficult. There needs to be a realisation that such a formula should only apply to a small proportion of firms, otherwise the results would be too inaccurate to be deemed proportionally risk-sensitive. We agree with the proposed approach for the miscellaneous line of business.	Noted.
918.	ROAM	3.106.	The catastrophe risk calculation for the Miscellaneous line of business is limited to the factor based approach. We recommend that personalised scenarios be allowed for this class of business given that this line of business will most likely be very different for each undertaking.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7.
919.	AAS BALTA	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
920.	AB Lietuvos	3.107.	We disagree that the higher of the two methods should be used for	Noted. The CAT risk task force

	draudimas		exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	will consider this issue.
921.	Association of British Insurers	3.107.	For the standard formula, the higher of the factor based and the standardised scenarios are used for following: ☐ Outside of EU ☐ Non-proportional reinsurance ☐ Footprint or scenario is not applicable We suggest that an undertaking is permitted to use personalised scenarios in case the scenario is not applicable instead of the alternative method. We would particularly stress the unfair treatment reserved to non-EU companies and non-proportional reinsurance. The factors are excessively prudent here.	Noted. The CAT risk task force will consider this issue.
922.	CEA, ECO-SLV-09-443	3.107.	For the standard formula, the higher of the factor based and the standardised scenarios are used for following: ☐ Outside of EU. ☐ Non-proportional reinsurance. ☐ Footprint or scenario is not applicable. We would particular stress the unfair treatment reserved to non EU companies and non proportional reinsurance. The factors are excessively prudent here. We suggest that an undertaking is permitted to use personalised scenarios in case the scenario is not applicable instead of the alternative method.	Noted. The CAT risk task force will consider this issue.

923.	CRO Forum	3.107.	It seems that either the alternative method is appropriate or not. However, if it is not appropriate it should not be used. Stating that the higher capital charge should be applied is misleading. We believe that it is crucial to develop scenarios outside the EU as well. Many European insurers write business outside the EU and not developing scenarios would leave these insurers with the alternative method only (a simple factor based approach for a major risk).	Noted. The CAT risk task force will consider this issue. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
924.	DENMARK: Codan Forsikring A/S (10529638)	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
925.	Dutch Actuarial Society – Actuarieel Genootschap (	3.107.	We refer to 3.56	See corresponding resolutions to comment.
926.	European Union member firms of Deloitte Touche To	3.107.	See 3.56	See corresponding resolutions to comment.
927.	German Insurance Association –	3.107.	We suggest that an undertaking is permitted to use personalised scenarios in case the scenario is not applicable instead of the alternative method.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7.

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928.	Groupe Consultatif	3.107.	We refer to 3.56	See corresponding resolutions to comment.
929.	KPMG ELLP	3.107.	Our comments in 3.38 apply here.	See corresponding resolutions to comment.
930.	Link4 Towarzystwo Ubezpieczeń SA	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
931.	Lloyd's	3.107.	Neither standard scenarios nor the proposed factor method sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available. For non-life catastrophe risk the only way to produce a sufficiently risk-based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7.
932.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
933.	RSA Insurance Group PLC	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.

934.	RSA Insurance Ireland Ltd	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
935.	RSA - Sun Insurance Office Ltd.	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
936.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.107.	We disagree that the higher of the two methods should be used for exposures outside the EU. The standardised scenario method should be applicable without reference to the alternative method.	Noted. The CAT risk task force will consider this issue.
937.	XL Capital Ltd	3.107.	For the standard formula, the higher of the factor based and the standardised scenarios are used for following: ☐ Undertakings with exposures outside the EU ☐ non-proportional reinsurance ☐ footprint or scenario is not applicable We suggest that an undertaking should be permitted to use personalised scenarios in case the scenario is not applicable instead of the alternative method. We would particularly stress the unfair treatment reserved to non-EU companies and non-proportional reinsurance. The factors are excessively prudent here.	Noted. The CAT risk task force will consider this issue.
938.	CEA, ECO-SLV-09-443	3.108.	CEOIPS will try to make the alternative factor based method more risk sensitive. CEA feels that this is a valuable improvement.	Noted.

939.	Dutch Actuarial Society – Actuarieel Genootscha p (	3.108.	We refer to 3.57	See corresponding resolutions to comment.
940.	German Insurance Association – Gesamtverb and der D	3.108.	We feel that it is a valuable improvement to make the alternative factor based method more risk sensitive. One of the criteria mentioned is that the scenarios are not applicable. If an undertaking has chosen to use the standard formula and it meets the above mentioned criterion, it shall be required to apply the higher capital charge between the alternative method and the standardised scenario, which is not applicable. In this case, personalised scenarios are preferable.	Not agreed. Personalised scenarios have not been kept for reasons indicated in resolutions to comment nr 7.
941.	KPMG ELLP	3.108.	We agree and note that calibration of such a method is extremely difficult. If it is not deemed sufficiently credible to calibrate then the approach should not be used.	Noted.
942.	Lloyd's	3.108.	We agree and note that calibration of such a method is extremely difficult. If it is not deemed sufficiently credible to calibrate then the approach should not be used.	Noted.
943.	KPMG ELLP	3.109.	We agree	Noted.
944.	Lloyd's	3.109.	We agree but this should not be assumed. The standard formula must aim to work, and be appropriate, for all undertakings. The Framework Directive says (preamble (38)): "Provision should be made to lay down a standard formula for the calculation of the Solvency Capital Requirement, to enable all insurance and reinsurance undertakings to assess their economic	Noted.

			capital." It must not be assumed that a firm can easily transfer to a full or partial internal model, as this requires supervisory approval (which may not be forthcoming) and compliance with an onerous and resource-intensive approval process. This assumption therefore defeats the whole purpose of a "standard" formula, as laid down by the Framework Directive.	
945.	AAS BALTA	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
946.	AB Lietuvos draudimas	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
947.	Association of British Insurers	3.110.	See comments to 3.59.	See corresponding resolutions to comment.
948.	CEA, ECO-SLV-09-443	3.110.	The formula as written may not cater for the whole variety of reinsurance programs in place on the market. Potentially a more principle based approach for all situations would be more appropriate. Also for the proposed methodology more details are needed to better grasp its content. The rerunning of QIS4 in Germany may give more insight into the	Noted.

			new approach for man-made Cat risks.	
949.	CRO Forum	3.110.	Determining the market share can only be carried out with reference to exposure estimates, but will remain challenging. For example: a small insurer (with a market share of 1%) writing household insurance mainly close to the Seine/Thames may be more exposed to flood risk than a large insurer (10% market share) mainly writing household insurance further away from the Seine/Thames. The same applies to an insurer with a portfolio which is concentrated in one part of the country versus one which is more spread over the entire country (more diversified).	Noted.
950.	DENMARK: Codan Forsikring A/S (10529638)	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
951.	ECIROA	3.110.	When using a stop-loss cover or annual aggregate this cover will be subject to risks maturing under both premium and CAT risk. Therefore this cover should also be considered in the CAT risk module.	Noted.
952.	European Union member firms of Deloitte Touche To	3.110.	See 3.59	See corresponding resolution to comment.

953.	German Insurance Association – Gesamtverb and der D	3.110.	For the proposed method more details are needed to better grasp its content. The rerunning of QIS4 in Germany may give more insight into the new approach for man-made Cat risks.	Noted.
954.	Groupe Consultatif	3.110.	We refer to 3.59	See corresponding resolution to comment.
955.	Legal & General Group	3.110.	See 3.59	See corresponding resolution to comment.
956.	Link4 Towarzystw o Ubezpieczeń SA	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
957.	Lloyd's	3.110.	We agree.	Noted.
958.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
959.	RSA Insurance Group PLC	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.

960.	RSA Insurance Ireland Ltd	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
961.	RSA - Sun Insurance Office Ltd.	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
962.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.110.	It is unclear how insurers will be able to determine their prospective market share with any accuracy. Further how can the assessment be validated particularly for non-EEA exposures?	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.
963.	AMICE	3.111.	CEIOPS writes that the catastrophe capital charge for a specific event type shall be the result of the maximum of the standardized scenario and the factor method. AMICE members do not agree with this proposal. The factor method does not take into account the effect of reinsurance. The standardised scenario should be used for the capital charge calculation as long as this method has been chosen by the company.	Partially agreed. Noted. The CAT risk task force will consider this issue. The factor method will be calibrated taking into account non proportional reinsurance for instance.
964.	CEA, ECO-SLV-09-443	3.111.	The CEA asks for more guidance on the proposed formula. How does it link to 3.110? How is reinsurance reflected in the CAT factor method? With the QIS4 factors, the factor method without reinsurance effect is very	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48.

			expensive compared to scenario method.	
965.	CRO Forum	3.111.	CEIOPS says that the catastrophe capital charge for a specific event type shall be the result of the maximum of the standardized scenario and factor-based method. We disagree with this proposal as currently the factor method (as used in QIS4) was gross of reinsurance effects.	Noted. The CAT risk task force will consider this issue.
966.	Dutch Actuarial Society – Actuarieel Genootschap (	3.111.	We refer to 3.60	See corresponding resolution to comment.
967.	FFSA	3.111.	☐ CEIOPS says that the catastrophe capital charge for a specific event type shall be the result of the maximum of the standardized scenario and factor. ☐ FFSA does not agree with this proposition. This approach doesn't take into account the effect of reinsurance. With the QIS4 factors, the factor method without reinsurance effect is very expensive comparing to scenario method.	Noted. The CAT risk task force will consider this issue.
968.	German Insurance Association – Gesamtverband der D	3.111.	More guidance on the proposed formula is recommended. How is reinsurance reflected in the CAT factor method? With the QIS4 factors, the factor method without reinsurance effect is very expensive compared to scenario method. Only one scenario should be calculated; factor based scenario or standardised scenario.	Noted. The whole CAT risk section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of CP48. Noted. The CAT risk task force will consider this issue.

969.	Lloyd’s	3.111.	We do not believe the factor method applies to an event type as it is by line of business. This would make this formula redundant.	Not agreed. The situations where the standard scenarios based on events are not applicable are stated in 3.107. Then, the Lob – specific alternative approach should be used.
970.	ROAM	3.111.	ROAM members do not agree with this proposition. This approach does not take into account the effect of reinsurance. With the QIS4 factors, the factor method without reinsurance effect is very expensive comparing to scenario method	Agreed. CEIOPS will reconsider this issue.
971.	CEA, ECO-SLV-09-443	3.112.	The CEA asks if also the CAT factor method should be net of reinsurance recoverables and be calculated as outlined under 3.110.	Noted.
972.	Lloyd’s	3.112.	We agree.	Noted.
973.	Dutch Actuarial Society – Actuarieel Genootschap (	3.113.	We refer to 3.62	See corresponding resolution to comment.
974.	Lloyd’s	3.113.	We would suggest aggregation across events rather than regions.	Noted.
975.	Uni Oldenburg	3.114.	The symbolism is inconsistent with the previous symbolism. It should be written: NL_{CAT}	Noted. The advice will be updated.
976.	AAS BALTA	3.115.	The need to reconcile the standardised scenarios with an undertaking’s own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios.	See resolution to comment nr 814.

			It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	
977.	AB Lietuvos draudimas	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.
978.	Association of British Insurers	3.115.	See comments to 3.64.	See corresponding resolution to comment.
979.	CEA, ECO-SLV-09-443	3.115.	The CEA considers that assessing the range and probability of possible outcomes could be burdensome and difficult to obtain for many undertakings. A deterministic approach may lead to an adequate capital amount and avoids calculating the whole distribution. The CEA finds that "the breakdown of reinsurance recoveries by reinsurer under each scenarios" is difficult and burdensome to obtain. The assessment of reinsurance recoveries by reinsurer per scenario should be possible using estimations and approximations. In some cases the recoveries may depend not only on the own loss of the company but also on e.g. index values or parametric triggers. In such cases the determination of the respective recovery can only be estimated.	Noted.

980.	CRO Forum	3.115.	The assessment of reinsurance recoveries by reinsurer per scenario should be possible using estimations and approximations. In some cases the recoveries may depend not only on the own loss of the company but also on e.g. index values or parametric triggers. In such cases the determination of the respective recovery can only be estimated. 2nd bullet: "(…) consideration would need to be given to the appropriateness of the scenarios." 3rd bullet: "the assessment of catastrophe risks is part of a broader risk management framework / ORSA process. (Re) insurance undertakings shall review the scope of the scenario defines and assess the applicability of such scenario and range of possible outcomes that could arise on the occurrence of the scenario. (…)" 5th bullet : "the extent to which the risks covered by the scenario could deviate significantly from their risk profile (…)". These arguments seem to justify using personalised scenarios instead of the standardised scenarios and/or the alternative method!	Not agreed. Personalised scenarios have been rejected for reasons indicated in resolutions to comment nr 7.
981.	DENMARK: Codan Forsikring A/S (10529638)	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.

982.	Dutch Actuarial Society – Actuarieel Genootschap (	3.115.	We refer to 3.64	See resolution to corresponding comment.
983.	FFSA	3.115.	☐ For CEIOPS, "(Re) insurance undertakings shall review the scope of the scenario defined and assess the applicability of such scenario and range of possible outcomes that could arise on the occurrence of the scenario. The range (and probability distribution) of possible outcomes shall determine the best estimate of loss from the scenario." ☐ FFSA thinks that assessing the range and probability of possible outcomes could be burdensome and difficult to obtain for many undertakings. FFSA thinks that a deterministic approach leads to an adequate capital amount and avoids calculating the whole distribution. ☐ CEIOPS states that "(Re) insurance undertakings shall provide a breakdown of reinsurance recoveries by reinsurer under each scenario" ☐ FFSA thinks that this information is difficult and burdensome to obtain. Furthermore, if providing reinsurance recoveries is useful, FFSA thinks that breaking it down by reinsurer does not provide much value compared to the work needed.	Noted.
984.	Legal & General Group	3.115.	See 3.64	See resolution to corresponding comment.
985.	Link4 Towarzystw	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe	See resolution to comment nr 814.

	o Ubezpieczeń SA		events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	
986.	Lloyd's	3.115.	We agree.	Noted.
987.	NORWAY: Codan Forsikring (Branch Norway) (991 502	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.
988.	RBS Insurance	3.115.	We would welcome expansion of the second bullet in level 3 advice. This may provide the ability to move towards an entity specific event.	Noted.
989.	ROAM	3.115.	☐ For CEIOPS, "(Re) insurance undertakings shall review the scope of the scenario defined and assess the applicability of such scenario and range of possible outcomes that could arise on the occurrence of the scenario. The range (and probability distribution) of possible outcomes shall determine the best estimate of loss from the scenario." ☐ ROAM thinks that assessing the range and probability of possible outcomes could be burdensome and difficult to obtain for many undertakings. ROAM thinks that a deterministic approach	Noted.

			leads to an adequate capital amount and avoids calculating the whole distribution. ☐ CEIOPS states that "(Re) insurance undertakings shall provide a breakdown of reinsurance recoveries by reinsurer under each scenario" ☐ ROAM thinks that this information is difficult and burdensome to obtain. Furthermore, if providing reinsurance recoveries is useful, ROAM thinks that breaking it down by reinsurer does not provide much value compared to the work needed.	
990.	RSA Insurance Group PLC	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.
991.	RSA Insurance Ireland Ltd	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.
992.	RSA - Sun Insurance	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe	See resolution to comment nr 814.

	Office Ltd.		events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	
993.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	3.115.	The need to reconcile the standardised scenarios with an undertaking's own assessment of its exposure to catastrophe events imposes requirements very akin to producing a partial internal model. Therefore we see little value in the intermediate step of the standardised scenarios. It is unclear if the standardised scenario aims to produce a single event with a 1 in 200 loss or a combination of events with a 1 in 200 loss. We note the recovery by individual reinsurer could vary significantly depending on which option is chosen.	See resolution to comment nr 814.
994.	Uni Oldenburg	3.115.	Point 5: section 3.1.5.2 does not exist. It should be written instead 3.1.5.B.	Agreed. See revised text.
995.	ACA – ASSOCIATIO N DES COMPAGNIE S D'ASSURAN CES DU	3.116.	This means that some supervisors may be more flexible than others. This creates a problem of consistency between states?	Noted. Practices amongst supervisors will be challenged trough peer reviews.
996.	AMICE	3.116.	CEIOPS writes that "(re) insurance undertakings shall review the scope of the scenario defined and assess the applicability of such a scenario and range of possible outcomes that could arise on the occurrence of the scenario. The range (and probability distribution)	Noted.

			of possible outcomes shall determine the best estimate of loss from the scenario.” AMICE members understand that assessing the range and probability of possible outcomes could be burdensome and difficult to obtain for many undertakings and that a deterministic approach leads to an adequate capital amount and avoids calculating the whole distribution.	
997.	Association of British Insurers	3.116.	Supervisors should apply their discretion in a consistent manner and be prepared to explain how they arrived at their decision.	Noted.
998.			Confidential comment deleted	
999.	Lloyd’s	3.116.	We agree. This applies to all elements of supervision.	Noted.
1,000.	Pearl Group Limited	3.116.	We suggest following rewording: “Supervisors may apply judgement, interpretation, discretion and flexibility where appropriate when assessing whether all the risks have been captured.”	Noted.
1,001.	KPMG ELLP	33)	We disagree with the proposal to exclude geographical diversification for the reasons explained in 3.3	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.
1,002.	KPMG ELLP	7)	We do not believe this is the best solution to improve the proposed splits under QIS4. In some areas there were too many splits (e.g. Europe and South America) and in others too few (e.g. North America and Asia). An improvement would be to segment most areas/continents into broad regions, for example The USA could be 4 regions as could	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.

			Europe etc. This would lead to FEWER splits than QIS4 but the overall impact would be a significant improvement. We strongly recommend that this option is tested under QIS5.	
1,003.	KPMG ELLP	8)	The introduction of geographical diversification was widely welcomed. The formula could (and should) be improved – which it can easily be.	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.
1,004.	KPMG ELLP	9)	We disagree with deliberately ignoring a fundamental risk mitigation technique to encourage internal model applications. There should be no assumption any entity will get an internal model approved.	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.
1,005.	CRO Forum	A.	In the CP it is clearly stated that for non life underwriting risk no geographical diversification benefits are taken into account, for several reasons. However it is not clear whether this also applies for CAT risk. In this article CEIOPS indicates that it will provide guidance on how to aggregate between events and countries. In Annex A two proposals are made. This implies a kind of geographical diversification. There should be since, for example, it is not likely, even in a CAT event, that the entire EU will be flooded. So some kind of diversification should be taken into account here. We prefer option 1. However, we note that, if the assumptions are correct, adding the results from the CAT events and aggregating them should result in the same CAT SCR for both proposals.	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.
1,006.	Dutch Actuarial Society – Actuarieel	A.	We refer to 3.62.	See corresponding resolution.

	Genootschap (			
1,007.	ACA – ASSOCIATION DES COMPAGNIES D'ASSURANCES DU	B.1.	We are in favour of option 2 because it is easy to use and produce a standard and harmonized result for all undertakings. The results of the Scenario based approach will probably be less comparable because exposed to multiple interpretations.	Noted.
1,008.	ACA – ASSOCIATION DES COMPAGNIES D'ASSURANCES DU	B.2.	A harmonised method will never be suitable for niche undertakings. Those undertakings should probably develop internal models to represent accurately their risks.	Noted.
1,009.	Dutch Actuarial Society – Actuarieel Genootschap (	B.4.	We fully agree with this, but incentivizing improved risk management is not reflected in the formula.	Noted.
1,010.	Lloyd's	B.7.	We agree that this approach is not feasible for a standard formula.	Noted.
1,011.	Lloyd's	B.8.	We agree that a factor based approach is preferable for most elements. We consider that some elements of the standard formula, such as non-life catastrophe risk, can be calculated in a manner other than formula driven.	Noted.
1,012.	Lloyd's	B.9.	The drawbacks of a factor based approach can be overcome, especially if the calculation of some elements, such as non-life	Noted.

			catastrophe risk, do not have to be factor based.	
1,013.	Lloyd's	B.10.	We agree but note that a combination of methods should not be ruled out.	Noted.
1,014.	Lloyd's	B.11.	We agree. Transparency in calibration methods is key. We are concerned that some factors in the proposed level 2 measures explicitly deviate from history and arbitrary assumptions have been made instead. This practice needs to be avoided.	Noted.
1,015.	CEA, ECO-SLV-09-443	B.12.	Large undertakings will most likely apply a (partial) internal model.	Noted.
1,016.	KPMG ELLP	B.12.	We disagree. Large (re)insurance undertakings understand that shortcomings of a standard formula SCR and would disagree with approaches that specifically discriminate against them (for example the removal of geographical diversification) on the ground that they "will probably have an internal model". We do not think such assumptions are suitable for a standard formula.	Noted.
1,017.	Lloyd's	B.12.	Large undertakings understand the shortcomings of a standard formula SCR. Large undertaking would disagree with approaches that specifically discriminate against them (for example the removal of geographical diversification) on the grounds that large undertakings "will probably have an internal model". We do not think such assumptions are suitable for a standard formula.	Noted.
1,018.	CEA, ECO-SLV-09-443	B.13.	Agreed that it is difficult to calibrate the standard deviations. That is why it makes sense to allow companies to use their own data and/or company specific standard deviations.	Noted.
1,019.	Dutch Actuarial	B.13.	Agreed that it is difficult to calibrate the standard deviations. That is why it makes sense to allow companies to use their own data	Noted.

	Society – Actuarieel Genootschap (		and/or company specific standard deviations.	
1,020.	German Insurance Association – Gesamtverband der D	B.13.	Agreed that it is difficult to calibrate the standard deviations. That is why it makes sense to allow companies to use their own data and/or company specific standard deviations.	Noted.
1,021.	KPMG ELLP	B.13.	We agree and suggest that rather than “partial internal models” that “personalised scenarios” are allowed in the process as was the case in QIS4 for non-life catastrophe risk. This approach recognises the small number of elements.	Noted.
1,022.	Lloyd’s	B.13.	We disagree. In this case the standard formula would be inappropriate for a significant portion of undertakings. To simply propose these undertakings should apply for an internal model appears to defeat the object of the standard formula. We suggest that rather than “partial internal models” that “personalised scenarios” are allowed in the standard formula process, as was the case in QIS4 for non-life catastrophe risk.	Noted.
1,023.	KPMG ELLP	B.14.	We agree.	Noted.
1,024.	Lloyd’s	B.14.	We agree.	Noted.
1,025.	ECIROA	B.15.	There should be no doubt that any increased costs and other expenses will be passed on to policyholders.	Noted.
1,026.	KPMG ELLP	B.15.	We agree and note that excessive costs of a full risk sensitive standard formula would also extend to larger (re)insurance undertakings as well.	Noted.

1,027.	KPMG ELLP	B.17.	We agree. This is exactly why the standard approach should only deviate from a formulaic system when absolutely necessary. For example non-life catastrophe risk where it is almost impossible to cover reliably with a formula or limited standard scenarios.	Noted.
1,028.	Lloyd's	B.17.	We agree. This is exactly why the standard approach should only deviate from a formulaic system when absolutely necessary. For example non-life catastrophe risk where it is almost impossible to cover reliably with a formula or limited standard scenarios.	Noted.
1,029.	Dutch Actuarial Society – Actuarieel Genootschap (	B.19.	We think that sufficiently complex includes the possibility to use undertakers own historical data, where small undertakings do not have to use this possibility.	Noted.
1,030.	KPMG ELLP	B.19.	Our comment in B.17 also applies here	See corresponding responses.
1,031.	Lloyd's	B.19.	We agree. This is exactly why the standard approach should only deviate from a formulaic system when absolutely necessary. For example, non-life catastrophe risk where it is almost impossible to cover reliably with a formula or limited standard scenarios.	Noted.
1,032.	KPMG ELLP	B.20.	We agree.	Noted.
1,033.	Lloyd's	B.20.	We agree.	Noted.
1,034.	KPMG ELLP	B.21.	We agree.	Noted.
1,035.	Lloyd's	B.21.	We agree.	Noted.
1,036.	Groupe Consultatif	B.22.	Agree as companies will have the opportunity to use internal models to make a more entity specific assessment of the risk.	Noted.
1,037.	KPMG ELLP	B.22.	We agree with CEIOPS' recommendation of Option 2 - Closed formula calibrated to a VaR at the 99.5% confidence level over a	Noted.

			one-year period. We agree that this factor based approach is appropriate for a standard formula calculation. We agree that using a scenario-based approach as described under Option 1 would be challenging to allow for all (re)insurance undertakings' risk profiles and types of business. We agree that where the standard formula would not be appropriate to adequately capture the risk profile and complexity of the business, then undertakings would be able to applying a partial internal model (or full).	
1,038.	Lloyd's	B.22.	We agree. It is also important that the standard approach should only deviate from a formulaic system when absolutely necessary. For example non-life catastrophe risk where it is almost impossible to cover reliably with a formula or limited standard scenarios.	Noted.
1,039.	Danish Insurance Association	C.	Further, the argumentations for choosing option 1 stated in C.8 to C.18 of annex C does not comply with the economic risk-based proportionality and complexity principles of solvency II.	Noted.
1,040.	German Insurance Association – Gesamtverb and der D	C.	At least as long as there is no information. about whether and how the use of entity specific parameters is permitted, we don't agree to CEIOPS option 1. The non-allowance of geographical diversification, if no or insufficient entity specific parameters are permitted, will decrease to incentive to spread risk as well over different geographies. If there are no or insufficient entity specific parameters permitted, we agree to option 3, using not necessarily a more granular but a more risk sensitive approach, which would be discussed in the 3rd wave.	Noted.
1,041.	UNESPA- Association of Spanish Insurers and Reinsu	C.	Option 3 would be most appropriate in determining capital requirements, although its implementation would introduce an extra degree of complexity in the model CEIOPS presents three possible options in terms of geographical	Noted.

			diversification. The first one is to not consider geographic diversification in the analysis, the second one suggests the recognition of geographical diversification, as suggested in QIS 4 and the third one is to consider the benefits of geographic diversification but with a greater level of detail. The second option is more acceptable than the first one even if the QIS 4 approach is not optimal due to the geographical classification that arises, so the third option seems a better way to incorporate the benefits of geographical diversification in determining capital requirements, Therefore, Option 3 would be most appropriate. Omitting recognition would be a serious departure from the Directive and lead to substantial additional prudence. This non allowance will decrease to incentive to spread risk as well over different geographies. CEIOPS should review the decision to exclude geographical diversification. If option 3 is not possible, option 2 can recognize the benefits of geographic diversification in a way less flexible than the previous one. The option of not considering the geographic diversification as a risk mitigation does not reflect adequately the reality of the sector.	
1,042.	CEA, ECO-SLV-09-443	C.1.		No comment available.
1,043.	German Insurance Association – Gesamtverb	C.1.		No comment available.

	and der D			
1,044.	Lloyd's	C.2.	The recognition of diversification is a fundamental concept of insurance/reinsurance. A diversified insurer/reinsurer will face reduced risk and under the economic principle that underlie solvency II should be required to hold less capital.	Partially agree. See response to comment 3.
1,045.	Lloyd's	C.4.	This is accepted but reference to the calculation method underlying calibration should be made. For example if calibration will be based only on small or medium sized entities then this impacts the arguments on geographical diversification.	Noted.
1,046.	Lloyd's	C.7.	We do not believe this is the best solution to improve the proposed splits under QIS4. In some areas there were too many splits (e.g. Europe and South America) and in others too few (e.g. North America and Asia). An improvement would be to segment most areas/continents into broad regions, for example, the USA could be 4 regions, as could Europe. This would lead to FEWER splits than QIS4 but the overall impact would be a significant improvement. We strongly recommend that this option is tested under QIS5.	Noted. The whole CAT section is currently under review, taking into account the work of the CAT risk task force mentioned in 3.39 of the advice.
1,047.	Lloyd's	C.8.	The introduction of geographical diversification was widely welcomed. The formula could (and should) be improved – which it can easily be.	Partially agree. See response to comment 3.
1,048.	Lloyd's	C.9.	We strongly disagree with the approach implied by this paragraph. It suggests that an essential risk mitigation technique should be ignored, so as to encourage certain types of undertaking to develop internal models.	Noted. See response to comment 3.

			As we have commented elsewhere (e.g. against para 3.58), the standard formula is intended to apply to all insurance and reinsurance undertakings. The removal of geographical diversification means that calculation of a geographically diversified undertaking's SCR using the standard formula could mean that it is required to hold capital at an unrealistically punitive level. Its only remedy is to use an internal model, requiring supervisory approval, which may not be forthcoming. Moreover, a supervisor's assessment of an internal model may be influenced by the non-inclusion of geographical diversification in the standard formula, which could be viewed as implying that this is not an entirely appropriate technique for the calculation of capital requirements. We assume that CEIOPS does not accept the implication detailed in this paragraph, that geographical diversification has no beneficial effect.	
1,049.	ECIROA	C.10.	Higher capital requirements WILL result in higher premiums and maybe the policyholder will not appreciate the enhanced protection offered.	Noted.
1,050.	Lloyd's	C.10.	We strongly disagree with this comment. Solvency II's approach to capital setting is set out in the Framework Directive. Preamble (37) makes clear that an undertaking's SCR is determined on the basis of a 99.5% VaR, "…calculated on the basis of the true risk profile of those undertakings, taking account of the impact of possible risk mitigation techniques, as well as diversification effects". There is no justification for deliberately targeting a higher level to offer additional comfort to policyholders. Such an approach is contrary to Solvency II' s intentions. As drafted, this statement is inaccurate. There is no simple trade-off between higher premiums and enhanced policyholder protection. A regulatory requirement that premium levels be	Noted.

			artificially inflated in itself detracts from policyholder protection, as it could make insurance products prohibitively expensive. Higher capital requirements could force insurers to withdraw products. Not only would this reduce policyholder protection and choice, it would also be contrary to the Framework Directive, Preamble (50), which states: “Within the framework of an internal market it is in the interest of policyholders that they should have access to the widest possible range of insurance products available in the Community.”	
1,051.	AAS BALTA	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,052.	AB Lietuvos draudimas	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,053.	DENMARK: Codan Forsikring A/S (10529638)	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,054.	Link4 Towarzystwo Ubezpieczeń SA	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,055.	Lloyd’s	C.11.	We strongly disagree with the statement as a justification for option 1. The recognition of diversification is a fundamental concept of insurance/reinsurance and therefore a fundamental principle of Solvency II. A diversified undertaking faces reduced risk and under the economic principle that underlies solvency II should therefore	Noted.

			be required to hold less capital. It is inappropriate to use this statement to justify deliberately ignoring a fundamental risk mitigation technique. This, in fact, is a strong reason not to choose option 1. The Framework Directive Preambles (14a) and (39) make provision for the specific situation of small and medium sized undertakings through the principle of proportionality and the recognition of simplified approaches to SCR calculation respectively. There are no provisions justifying the approach set out in this paragraph.	
1,056.	NORWAY: Codan Forsikring (Branch Norway) (991 502	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,057.	RSA Insurance Group PLC	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,058.	RSA Insurance Ireland Ltd	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,059.	RSA - Sun Insurance Office Ltd.	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.
1,060.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	C.11.	This seems to infer that smaller firms have some sort of intrinsic competitive disadvantage. We disagree with this view.	Noted.

1,061.	Lloyd's	C.12.	We disagree with the use of implicit allowance for geographical diversification for the following reasons: - we understand that the calibration of premium and reserving risk factors will be based more on small and medium sized entities which, as stated in this paper, will not benefit as much from geographical diversification as large or reinsurance entities. Therefore under this approach the allowance will be significantly understated. - there will be a large number of entities which will have too low a risk charge. That is, they will be credited with implicit geographical diversification when they in fact have none.	Noted.
1,062.	Lloyd's	C.13.	It is widely accepted that most classes of business do benefit from geographical diversification. An improved split of diversification areas, as we have proposed, would improve the position.	Noted.
1,063.	Lloyd's	C.14.	This argument applies to any module of the SCR and is irrelevant. We strongly disagree with the argument that if the module can be calculated using entity specific parameters or an internal model under certain conditions this replaces the need to calculate the parameters accurately. We strongly believe that it should be assumed that all entities use a standard formula and the formula should be calibrated to the level required under the Framework Directive.	Noted.
1,064.	AAS BALTA	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may	Noted.

			have had significant change in geographical exposure over time.	
1,065.	AB Lietuvos draudimas	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,066.	DENMARK: Codan Forsikring A/S (10529638)	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,067.	Dutch Actuarial Society – Actuarieel Genootschap (	C.15.	Agreed to leave out the formula from QIS 4 for the geographical diversification – this did not work well. But do allow companies to use own data or accept that difference with internal models will be high and unexplainable.	Noted. See response to comment 3.
1,068.	Link4 Towarzystwo Ubezpieczeń SA	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may	Noted.

			have had significant change in geographical exposure over time.	
1,069.	Lloyd's	C.15.	We disagree. Our concern is that, as has been intimated in the past, the calibration of premium and reserving risk factors will be more based on small and medium sized entities, which may not contain characteristics of large or reinsurance entities. CEIOPS needs to clarify its approach to calibration on premium and reserving before relying on the factors.	Noted.
1,070.	NORWAY: Codan Forsikring (Branch Norway) (991 502	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,071.	RSA Insurance Group PLC	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,072.	RSA Insurance Ireland Ltd	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may	Noted.

			have had significant change in geographical exposure over time.	
1,073.	RSA - Sun Insurance Office Ltd.	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,074.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	C.15.	In this and the next paragraph there seems to be an assumption that entity specific parameters will be calibrated using the whole business. For groups this seems to imply a recalibration of the parameters for the group so different ones are used at group level compared with solo level. We think this is impractical. Moreover the tacit assumption of stable geographical diversification is needed to support this approach. In reality both Group and solo entities may have had significant change in geographical exposure over time.	Noted.
1,075.	Dutch Actuarial Society – Actuarieel Genootschap (	C.16.	Agreed that this is included for companies estimating their own standard deviations. But then do allow for this. The standard parameters have resulted inadequate in QIS 4.	Noted.
1,076.	Lloyd’s	C.16.	This may only be correct depending on the calculation of undertaking specific parameters. If undertaking specific parameters exclude catastrophic losses to avoid double counting this statement is not correct.	Noted. USPs are covered by other advice.
1,077.	Lloyd’s	C.17.	We strongly disagree and believe this statement makes assumptions about calibrations that are incorrect.	Noted.

1,078.	Lloyd's	C.18.	We strongly disagree. This makes assumptions about calibrations that are incorrect and will in fact lead to an understatement of capital requirements for a large number of undertakings, who will gain implicit allowance for geographical diversification when this is not justified. We also disagree with the introduction of an option that specifically discriminates against a significant proportion of undertakings (large and reinsurance entities) on the ground that this group "will probably have an internal model". We do not think such assumptions are suitable for a standard formula.	Noted.
1,079.	Lloyd's	C.19.	We agree that geographical diversification will not impact all undertakings. We do not agree that this is an argument against option 2: for those undertakings it does affect geographical diversification may be very significant.	Noted. See response to comment 3.
1,080.	Lloyd's	C.20.	We disagree. The choice of geographical areas does not have to be purely arbitrary. It can reflect the broad pattern of non-life underwriting risks. Although the approach to geographical diversification under QIS4 may have been imperfect, we do not accept that it necessarily demonstrated that geographical diversification cannot be based on political areas. An improvement would be to segment most areas/continents into broad regions, for example, the USA could be 4 regions as could Europe etc. This would lead to FEWER splits than QIS4 but the overall impact would be a significant improvement. We strongly recommend that this option is tested under QIS5.	Noted.
1,081.	Lloyd's	C.21.	The argument for sophisticated, risk-sensitive approaches is covered in appendix B and applies to most elements of the standard formula. This is therefore irrelevant to this given module.	Noted.

1,082.	Lloyd's	C.22.	Again requiring a complex risk based calculation is irrelevant. The proposals are not overly complex.	Noted.
1,083.	Lloyd's	C.23.	We strongly disagree with this argument. See our comments under C.10. The capital required under Solvency II is meant to be appropriate, it is not designed to force insurers/reinsurers to hold excessive capital to protect policyholders. The measure of a 99.5% VaR has been chosen and the standard formula should not be deliberately targeting a higher level to offer additional comfort to policyholders.	Noted. See corresponding responses.
1,084.	Lloyd's	C.24.	We strongly disagree with this argument. There is no justification for a supervisor stepping up its monitoring of undertakings who have correctly calculated their SCR in accordance with the requirements of the Framework Directive. Any reduction in capital requirements through the proper recognition of diversification benefits would reflect reductions in risk. There is no evidence to suggest that geographically diversified undertakings are more vulnerable than undertakings that are not geographically diversified.	Noted.
1,085.	Lloyd's	C.25.	We strongly disagree. An improvement would be to segment most areas/continents into broad regions, for example The USA could be 4 regions as could Europe etc. This would lead to FEWER splits than QIS4 but the overall impact would be a significant improvement. We strongly recommend that this option is tested under QIS5.	Noted.
1,086.	Lloyd's	C.26.	This appears to be a redundant paragraph relating to risk free term structures and not non-life catastrophe risk.	Noted.
1,087.	Lloyd's	C.28.	We agree that geographical diversification is justified as it	Noted. See response to comment

			translates to economic realities. We also agree that it would apply to larger multinational organisations but note this group represents a very significant proportion of the EU insurance/reinsurance industry. We absolutely disagree with the statement that this will introduce undue complexity. The requirement to split premiums and outstanding claims into broad geographical regions should not daunt any insurance undertaking. A small or medium sized undertaking carrying on business in a single country would need to report transactions in one area only and hence would have to do little or no extra work. Geographical diversification is aligned with the principle of proportionality, as those undertakings it affects are expected to do extra work (and should have the capabilities to do this), On the other hand, it has little or no effect on those undertakings to whom it is not relevant.	3.
1,088.	Lloyd's	C.29.	We agree with this recognition that international bodies favour geographical diversification and that they are theoretically correct to do so. Given this, we cannot understand why it is proposed to go against theory, the underlying principles of Solvency II and various international associations' views by ignoring geographical diversification.	Noted. See response to comment 3.
1,089.	AAS BALTA	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,090.	AB Lietuvos draudimas	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.

1,091.	DENMARK: Codan Forsikring A/S (10529638)	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,092.	Link4 Towarzystwo Ubezpieczeń SA	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,093.	Lloyd's	C.30.	We absolutely disagree. Geographical diversification is not necessarily marginal for those solo undertakings to which it applies, which includes a significant part of the European insurance industry and entities for which issues of international competitiveness are particularly important. It is not correct that there are "substantial problems with the practicability" of geographical diversification. Any requirement to split premiums and outstanding claims into broad geographical regions should not daunt any insurance undertaking. Existing EU reporting requirements require an undertaking carrying on business on an establishment or services basis to split premiums and claims by the member state from which the business is obtained. A small or medium sized undertaking carrying on business in a single country would need to report transactions in one area only and hence would have to do little or no extra work	Noted. See response to comment 3.
1,094.	NORWAY: Codan Forsikring	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.

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1,095.	RSA Insurance Group PLC	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,096.	RSA Insurance Ireland Ltd	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,097.	RSA - Sun Insurance Office Ltd.	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,098.	SWEDEN: Trygg-Hansa Försäkrings AB (516401-7799)	C.30.	Some solo entities write businesses, whether through branches or otherwise, that have significant geographical diversification so we disagree with the assertion that the impact is marginal.	Noted. See response to comment 3.
1,099.	Lloyd’s	C.31.	See comments under C.30. We note the intention to confirm whether the conclusions reached should also apply to reinsurers and cross-border groups. The assessment carried out must take account of the Framework Directive, Preamble (68a), which states: “The consolidated Solvency Capital Requirement for a group should take into account the global diversification of risks that exists across all the insurance entities in that group in order to reflect properly the risk exposures of that group.” We suggest that this provision will limit the ability to remove geographical diversification from the calculation of group SCR. If it	Noted. See response to comment 3.

			is available for groups, consistency would also require it to be available for solo undertakings, whether insurance or reinsurance.	
1,100.	Lloyd's	C.32.	We absolutely disagree with the proposal to exclude geographical diversification as it: - goes against theory (as stated in para C.29) - goes against the principles of Solvency II (an economic assessment) - goes against the views of various respected international associations such as the IAIS and IAA - Actively discriminates against a significant portion of the EU insurance/reinsurance market. That is the large, cross border or reinsurance undertakings - Implies that certain undertakings will get internal (or partial internal) model approval or will use undertaking specific parameters. This is an inappropriate assumption when forming the standard formula parameters and approaches - Incorrectly states the alternatives are complex or impractical. There are alternatives that are completely aligned with the principle of proportionality (in that only those for whom the simplified approach produces material inaccuracies have to do any significant extra work) - Proposes implicitly allowances that will be inadequate if not calibrated correctly (CEIOPS Needs to confirm that calibration methods) - Proposes implicit allowances that will knowingly (and avoidably) understate the capital requirements for a large number	Noted. See response to comment 3.

			of undertakings - Ignores realistic improvements to the QIS4 approach (rather than the alternative suggested). The introduction of geographical diversification in QIS4 was widely welcomed	
1,101.			Confidential comment deleted	
1,102.	CEA, ECO-SLV-09-443	C.33.	The conclusion may force international companies into (partial) internal models.	Noted.
1,103.	Dutch Actuarial Society – Actuarieel Genootschap (	C.33.	The conclusion almost forces international companies into (partial) internal models. But if companies can use their own historical data (on total business level), part of the problem is gone, because that includes geographical diversification. We can only agree on option 1 in combination with the use of historical data.	Noted.
1,104.	Lloyd's	C.33.	- See our comments under C.32.	See corresponding responses.
1,105.	CRO Forum	C.34.	More clarity is needed. It is not clear how geographical diversification, in an implicit manner, is taken into account.	Noted.
1,106.	Dutch Actuarial Society – Actuarieel Genootschap (	D.	Please also see 3.41.	See corresponding resolution to comment.
1,107.	European Union member	D.	Please also see 3.41.	See corresponding resolution to comment.

	firms of Deloitte Touche To			
1,108.	German Insurance Association – Gesamtverband der D	D.	We agree that a closed formula (option 2) is not risk adequate. A scenario based approach (option 1) may be not feasible for the standard approach. It should be taken into account that a general impact of scenarios could be provided and the specific impact on the undertaking (concerning size and specific business) could be considered by an "impact factor" including lower and upper limit.	Noted.
1,109.	Groupe Consultatif	D.	Please also see 3.41.	See corresponding resolution to comment.
1,110.	UNESPA-Association of Spanish Insurers and Reinsu	D.	CEIOPS proposes three alternatives for the calibration of the CAT risk. The first approach is based on standardized scenarios developed by CEIOPS with support from the sector. To the extent that there are certain scenarios previously developed, it should be noted that all possible casuistic and specificities of each sector have been taken into account in the development. The second option is the use of predetermined factors, as outlined in QIS 4 approach. Its implementation is simpler but the factors raised for certain lines of business seem excessive. Also they are not sensitive to risk bringing an extra degree of stiffness to the model. The third option is a combination of the above. Therefore, in response to the above, Option 1 is recommended on the first one, to the extent that appropriately reflects the realities of the implementation. Option 3 is recommended on the second one as it incorporates part of option 1, reducing therefore, the rigidity inherent in the method proposed in option 2.	Noted.
1,111.	ACA – ASSOCIATION DES	D.1.	We are also in favour of Option 1 because it permits to take account of the undertaking-specific structure of reinsurance, which can have a strong influence on the results. We are conscious that	Noted.

	COMPAGNIES D'ASSURANCES DU		this method is more time-demanding for little-size undertakings but this analyse has also to be done in the credit-risk module.	
1,112.	Lloyd's	D.3.	We agree that a factor based approach is preferable for most elements. We see no reason why some elements of the standard formula, such as non-life catastrophe risk, should not be calculated in a manner other than formula driven.	Noted.
1,113.	Dutch Actuarial Society – Actuarieel Genootschap (	D.5.	We refer to 3.38	See corresponding resolution to comment.
1,114.	European Union member firms of Deloitte Touche To	D.5.	See 3.38	See corresponding resolution to comment.
1,115.	Groupe Consultatif	D.5.	We refer to 3.38	See corresponding resolution to comment.
1,116.	Lloyd's	D.6.	We agree and note the importance of methods as well as target levels. It is also important to target 1 in 200 year industry loss event whilst considering this might not lead to 1 in 200 year events for individual undertakings.	Noted.
1,117.	ACA – ASSOCIATION DES	D.7.	It seems paradoxical to say that the personalised scenarios are difficult to judge for supervisors, and push the undertakings to use partial internal model, which will be judged by supervisors.	Noted.

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1,118.			Confidential comment deleted	
1,119.	KPMG ELLP	D.7.	We disagree that personalised scenarios are not considered in the proposals. Non-life catastrophe risk is one element of the standard approach where complete standardisation is impossible. A significant proportion of the EU non-life catastrophe risk resides outside the EEA. It is therefore unrealistic to assume EU standard scenarios or a formula calibrated on EU catastrophe experience/expectations will ever represent a significant portion of the risk is designed for. It should be recognised that, in the same way that standard scenarios methodologies are being proposed, then standard approaches to personalised scenario methodologies should be included. We do not believe it is suitable to assume that where the standard formula is unsuitable then a firm will apply (and obtain) a partial internal model. We propose that, like QIS4, personal scenarios are included in the standard formula but under strict guidance to their construction. The steps to non-life catastrophe risk would be; a) use standard EU based scenarios b) if standard scenarios are inappropriate or disproportionate then use a formula c) if the standard formula is also demonstrably unrepresentative of the entities non-life cat risk (due to location of risks etc) then apply personalised scenarios which are produced	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.

			under guidelines/disclosures provided by CEIOPS The use of personalised scenarios would improve allowance for non-proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will acts more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most "non-working" non-proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. This is another known issue with the non-life element of the SCR. Personalised scenarios would therefore go towards solving two issues simultaneously.	
1,120.	Lloyd's	D.7.	We strongly disagree with the exclusion of personalised scenarios. Non-life catastrophe risk is one element of the standard approach where complete standardisation is impossible. A significant proportion of non-life catastrophe risk for EU insurers resides outside Europe. It is therefore unrealistic to assume that EU standard scenarios or a formula calibrated on EU catastrophe experience/expectations will ever represent a significant portion of the risk it is intended to measure. It should be recognised that, in the same way standard scenarios methodologies are being proposed, then standard approaches to personalised scenario methodologies should be included. We do not believe it is appropriate to assume that, where the standard formula is unsuitable, an undertaking will apply (and obtain supervisory approval for) a partial internal model. We propose that personal scenarios be included in the standard formula but under strict guidance to their construction, as occurred	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.

			under QIS4. The steps to assessment of non-life catastrophe risk would be; - use standard EU based scenarios - if standard scenarios are inappropriate or disproportionate then use a formula - if the standard formula is also demonstrably unrepresentative of the entities non-life cat risk (due to location of risks etc) then apply personalised scenarios which are produced under guidelines/disclosures provided by CEIOPS The use of personalised scenarios would improve allowance for non-proportional reinsurance in the non-life underwriting risk module. The rationale is that working non-proportional covers will acts more like proportional reinsurance and so its allowance is more acceptable under the standard formula. Most "non-working" non-proportional reinsurance will cover extreme or exceptional losses (which are specifically covered by the non-life cat module). Personalised scenarios would accurately reflect the impact of such covers, as this would be part of the evaluation, and would naturally improve the allowance in the standard formula. This is another known issue with the non-life element of the SCR. Personalised scenarios would therefore go towards solving two issues simultaneously.	
1,121.	Dutch Actuarial Society – Actuarieel Genootscha	D.8.	It is unclear what the added value of this paragraph is. Perhaps is it referring to Life like A&H portfolios (e.g. long term disability), as stated in B.6.	Noted.

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1,122.	European Union member firms of Deloitte Touche To	D.8.	It is unclear what the added value of this paragraph is. Perhaps is it referring to Life like A&H portfolios (e.g. long term disability), as stated in B.6.	Noted.
1,123.	Groupe Consultatif	D.8.	It is unclear what the added value of this paragraph is. Perhaps is it referring to Life like A&H portfolios (e.g. long term disability), as stated in B.6.	Noted.
1,124.	Lloyd's	D.10.	We agree but as noted below the calibration of such a formula is extremely difficult. There is also the realisation that such a formula should only apply to a small proportion of firms otherwise the results would be too inaccurate to be deemed proportionally risk sensitive.	Noted.
1,125.	Lloyd's	D.11.	We strongly agree. Given that it is recognised as not being very risk sensitive, it is important to ensure this is expected to only apply in a small number of cases.	Noted.
1,126.	Lloyd's	D.12.	It is simplistic but still should only be aimed as exceptional cases rather than the majority.	Noted.
1,127.	Lloyd's	D.13.	We agree that this is extremely difficult to calibrate accurately and would like to see transparency in the calibration. If it is not deemed sufficiently credible to calibrate then the approach should not be used.	Noted.
1,128.	Lloyd's	D.16.	We agree that a combination of methods could apply but this should include personalised scenarios as detailed above. There needs to be a clear understanding that, for a significant number of entities, the personalised scenario is the only way to	Noted.

			ensure sufficiently accurate risk assessment of non-life cat risk. The process should have clear guidelines and disclosures but should not be ruled out in this instance.	
1,129.	Lloyd's	D.17.	We agree. The complexity leads to our solution that requires personalised scenarios for a number of entities.	Noted.
1,130.	Lloyd's	D.18.	We support a combination of methodologies and believe it should be designed to be effective for all undertakings, including those writing significant international business.	Noted.
1,131.	Lloyd's	D.19.	We strongly disagree with the statement that "...undertakings can always shift to a partial internal model if the method seems inappropriate in their particular circumstances". This should not serve as justification for selecting any approach. This stance would apply to any module of the standard formula and is therefore irrelevant. The standard approach must aim to work and be sufficiently appropriate for all firms. It must not assume that a firm can easily transfer to a full or partial internal model which defeats the object of the standard approach.	Noted.
1,132.	Lloyd's	D.20.	We agree and believe neither the proposed options sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available.	Noted.
1,133.	Lloyd's	D.21.	We agree and believe neither the proposed options sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available.	Noted.
1,134.	Lloyd's	D.22.	This would make personalised scenarios possible within adequate guidelines and disclosures.	Noted.
1,135.	Lloyd's	D.23.	We agree and believe neither the proposed options sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available.	Noted.

			Personalised scenarios would be proportionate for small firms as they would be unlikely to be required to use them.	
1,136.	Lloyd's	D.25.	We strongly agree. Given it is recognised as not being very risk sensitive it is important to ensure this is expected to only apply in a small number of cases.	Noted.
1,137.	Lloyd's	D.26.	We agree. However, neither the proposed options sufficiently capture risk in an appropriate manner for enough undertakings to make them the sole options available.	Noted.
1,138.	Lloyd's	D.27.	We strongly disagree. Neither of the proposed options sufficiently capture risk in an appropriate manner for a large enough proportion of undertakings to make them the only options available. This does not maximise the approach. For non-life catastrophe risk the only way to lead to a sufficiently risk based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a residual number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios. We also note the positive simultaneous benefit of an improved allowance for non-proportional reinsurance by including personal scenarios for non-life catastrophe risk.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.
1,139.	Dutch Actuarial Society – Actuarieel Genootschap (	D.29.	Although catastrophe risk may be difficult to calibrate, we suspect that the cost of developing and applying a set of scenarios isn't worth the benefit in 'better' results. Catastrophe risk is a difficult subject, we argue if a set of typical scenario's would lead to better results than a factor-based approach. The latter is easier to apply and outcomes are comparable between entities. In a scenario	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.

			approach there will always be interpretation of the scenario. Furthermore we think that an entity itself is most aware of the catastrophe risks it is exposed to. The entity should disclose this in the ORSA rather than applying a set of scenario's which probably misfits its true risk profile. Therefore we favour company specific scenarios (QIS 4 option 3) and second best the factor formula made more risk sensitive (option 2).	
1,140.	European Union member firms of Deloitte Touche To	D.29.	We refer to 3.38. Moreover we refer to CP 57 regarding Capital Add-on and the discussion contained recognising the concept of materiality when considering the appropriateness of the standard formula.	Noted.
1,141.	Groupe Consultatif	D.29.	We refer to 3.38. Moreover we refer to CP 57 regarding Capital Add-on and the discussion contained recognising the concept of materiality when considering the appropriateness of the standard formula.	Noted.
1,142.	KPMG ELLP	D.29.	We disagree. Neither the proposed options sufficiently capture risk in an appropriate manner for a large enough proportion of (re)insurance undertakings to make them the only options available. For non-life catastrophe risk the only way to lead to a sufficiently risk based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a residual number of undertakings. The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.

			We also note the positive simultaneous benefit of an improved allowance for non-proportional reinsurance by including personal scenarios for non-life catastrophe risk.	
1,143.	**Lloyd's**	**D.29.**	**We strongly disagree.** **Neither of the proposed options sufficiently capture risk in an appropriate manner for a large enough proportion of undertakings to make them the only options available. For non-life catastrophe risk the only way to lead to a sufficiently risk based assessment is to require personalised scenarios (with specific guidelines and disclosures) for a residual number of undertakings.** **The aim should be to design the factor and standard scenario approach in such a way to minimise (but not remove) the number of undertakings requiring personalised scenarios.** **We also note the positive simultaneous benefit of an improved allowance for non-proportional reinsurance by including personal scenarios for non-life catastrophe risk.**	Not agreed. Personalised scenarios have been rejected for reasons stated in resolution to comment nr 7.