	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Name of Company:	Insurance Europe	
Disclosure of comments:	Please indicate if your comments should be treated as confidential:	Public
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Reference	**Comment**	
General Comments	Insurance Europe welcomes the opportunity to provide feedback on EIOPA's discussion paper on the review of the Solvency II Delegated Regulation. The industry notes that a number of elements in the Solvency II package deserve a careful reconsideration and addressing by policymakers. Many of these elements were actually already identified and raised by the industry ahead of finalisation of the Solvency II package, but it was not possible to address them at that time. In addition, the implementation and application of the Solvency II framework over the past two years has revealed a range of new areas where there is scope for improvement. Insurance Europe appreciates that the scope of the review, as identified by the Commission in its call for advice, is used by EIOPA as a basis for a comprehensive discussion paper, which offers the industry the right opportunity to provide input on emerging concerns and identify area where improvements are needed. However, Insurance Europe believes that one particular area raised in the discussion paper, namely the interest rate risk sub-module, which does not form part of the EC call for advice, should not be looked at as part of the 2018 review but rather as part of the 2020 review, as this is closely linked not only to the overall political agreement of the Solvency II framework of 2013, but also because technically the issue is closely linked to the long-term guarantees package,	

	which is itself under the scope of the 2020 review. The key positions of Insurance Europe on the areas under discussion are as follows: **1. Simplified calculations** – Proportionality is an overarching principle of Solvency II as described in the Framework Directive. Insurance Europe welcomes that simplified approaches and calculations are investigated in this discussion paper, which should allow for a wider and consistent application of simplifications in a number of key areas, identified in the more detailed responses to the relevant questions. **2. Reducing reliance on external credit ratings in the standard formula** - While Insurance Europe understands policymakers' objectives to reduce reliance on ECAI ratings, it highlights that, in practice, it would not be feasible nor desirable to refrain from any references to external ratings. Insurance Europe therefore believes that the ability to use ratings provided by ECAIs should be preserved in the framework. No changes should be made to increase costs for companies using ECAIs. Insurance Europe supports efforts to reduce reliance by allowing the use of alternatives to ECAIs, including internal credit risk assessment models, as well as other private or public credit risk assessment models, subject to appropriate supervisory controls. **3. Treatment of guarantees, exposures guaranteed by a third party and exposures to regional governments and local authorities (RGLA) –** Insurance Europe strongly supports a better recognition of the risk-mitigating effect of guarantees in Solvency II, aimed at reflecting both the risk-based nature of the framework and the economic reality of insurers' risk exposures. Specifically, exposures containing guarantees by an RGLA and guarantees by entities equivalent to an RGLA or a central government should receive the same treatment as direct exposures to a central government or an RGLA. Additionally, the risk-mitigating effect of partial guarantees should be recognised in a similar way to full guarantees, and proportionally to the actual (partial) risk coverage. **4. Risk-mitigation techniques (RMT) –** Insurance Europe highlights the need for a more appropriate recognition of risk-mitigation techniques in Solvency II, recognizing their actual contribution to the risk management of insurers. Insurance Europe notes the following: • **Qualitative requirements for RMT –** the current requirement to scale down the risk mitigation impact of a reinsurance contract in cases of SCR breach should be removed, not least because it is not practically applicable as information on SCR breach by a counterparty is not available. • **Finite reinsurance –** it should be appropriately treated as a risk-mitigation technique, in line with the reality of the risk transfer involved. • **Adverse Development Covers –** the associated reduction in SCR should be recognized as it corresponds to a true reduction of reserve risk. • **Rolling of derivatives –**the requirement to not replace risk-mitigation techniques more often than every 3 months should be removed. In practice, more frequent rolling	

	programmes could reduce basis risk and be less costly. • **Credit risk derivatives –** the framework should improve the current recognition of credit risk derivatives used for hedging, by reviewing the unnecessarily stringent requirements around basis risk. • **Profit and loss transfer agreements -** such agreements between insurers and their parent companies should be classified as a risk-mitigating technique and the impact recognised. **5. Volume measure for premium risk** - The current approach for measuring premium risk needs improvements to take on a number of issues. • Current premium measurement has flaws but EIOPAs proposed change would lead to an exaggeration of premiums. Insurance Europe has proposed simple improvements which should be tested. • Asymmetric treatment of capital requirements and future profit recognition – currently the expected profit priced into the future premiums is ignored, overstating the capital charge and leading to perverse incentives. Insurance Europe proposes an improvement which should be tested. **6. Assessment of the appropriateness of standard parameters for non-life premium and reserve risks and for medical expense risk**. - Insurance Europe supports recalibration of the areas identified by EIOPA and does not see a need for recalibrations beyond this list. Insurance Europe currently does not see a need to change the parameters for the other lines of business than the ones identified by EIOPA. **7. Natural catastrophe risks** – Insurance Europe believes there is scope to simplify the specifications and calculation of this sub-module, while maintaining an appropriate level of risk sensitivity. In its detailed response it proposes an alternative modelling approach which would better align the design of the standard formula to industry practice, as well as a number of practical simplifications to the current approach. **8. Man-made catastrophe risk –** Insurance Europe supports and proposes a new modelling approach, which is consistent and homogenous across all lines of business and is calibrated to reflect a range of covers and legal frameworks for each jurisdiction. **9. Health catastrophe risk -** Insurance Europe welcomes simplifications to this sub-module and notes that there are a number of challenges in the currently required calculations, which should be addressed. **10. Mortality and longevity risk** - Insurance Europe welcomes recognition in the discussion paper that the current longevity shock of 20% across all ages is too onerous. It is important to consider the relationship between the way the best estimate is calculated (ie the mortality tables that are used) and the shock that is applied. When the best estimate calculations already include future mortality improvements, the stress level needs to be lower. In line with Lee and Carter's findings in their 1992 paper (Modelling and Forecasting US mortality) that mortality improvements trends	

	differ per age group, Insurance Europe supports an approach that recognizes the differences across all ages. Equally important, the use of Undertaking Specific Parameters (USPs) should be allowed, for an appropriate modelling of longevity risk and/or mortality risk, especially when these are material. 11. **USP and GSP on underwriting risks** - Insurance Europe remains strongly supportive of the use of USPs which, together with the proportionality principle, are meant to ensure that Solvency II works for all companies, irrespective of their size (SMEs, monoliners). Insurance Europe is concerned by the restricted scope of USPs in terms of methods and areas of application as currently defined in the Delegated Regulation. It therefore believes that the scope should be enlarged and aligned to the Solvency II Directive, which only foresees limitations for market and counterparty default risk. In addition, Insurance Europe is concerned that in practice the application of USPs is often made significantly burdensome by the approval procedure, as well as by a number of data requirements – many of which deserve a careful reconsideration. 12. **Counterparty default risk module –** Insurance Europe notes that a number of elements in the module are overly complex and burdensome (eg delta SCR, calculation of LGD for groups of single name exposures, collateralised derivatives etc). It therefore supports simplifications, aimed at reducing the burden of calculations while remaining proportionate to the risk exposure and in line with the objectives of a risk-based framework. 13. **Exposures to qualifying central counterparties and derivatives –** Insurance Europe supports EIOPA's work aimed at ensuring a better interaction between Solvency II and EMIR provisions, as well as a better reflection of significantly lower risk exposures that insurers are facing when investing in derivatives, as a direct consequence of the G-20 OTC derivatives reform and its European implementation, ie EMIR. Specifically, with regard to derivatives cleared by a CCP, Insurance Europe believes that the risk exposure should be zero and should therefore trigger no capital requirement. Similarly, the treatment of exposures to OTC derivatives should be reviewed, to reflect not only significantly higher expected recovery values in case of default, but also the calibration of collateral haircuts in EMIR. 14. **Assumptions of the market concentration risk sub-module –** Insurance Europe has identified a number of difficulties and inconsistencies, in particular in relation to the applicability of the requirements related to single name exposures (eg determining the single name when single name exposures include at the same time insurance undertakings, credit institutions, or other financial institutions). In its detailed response, Insurance Europe is seeking for a range of clarifications and improvements in the current provisions. 15. **Currency risk** – Insurance Europe reiterates that the existing calibration of the currency risk charge in the standard formula incorrectly treats FX translation risk and incentivises poor risk management. This is an issue for both group entities and solo entities which conduct business in	

	foreign currencies. Insurance Europe proposes improvements to the methodology which would enable insurers to operate sound risk management strategies without undue capital charges. 16. **Look-Through approach** - Insurance Europe supports the extension of the application of look through to investment related undertakings that are used as investment vehicles by insurers. This would ensure a more tailored capital requirement of these vehicles, better aligned with underlying risks. A review of the 20% level of assets for which a simplified approach may be applied should be undertaken, and the calculation changed so that assets backing unit/index linked funds should be excluded from the calculation. In addition, Insurance Europe highlights that the current wording regarding the availability of a fund's target asset allocation is often not workable in practice and other proxies for the asset allocation should be accepted. 17. **Interest-rate risk –**Insurance Europe believes that the interest rate risk methodology remains appropriate within the existing Solvency II framework and doesn't need changing. The current calibrations, while not perfect, should not give rise to prudential concerns, because the overall conservative design of Solvency II, compared to realistic cash flows, ensures insurers hold capital for extreme interest rate scenarios. In addition, key features of the methodology were designed in conjunction with other aspects of the framework and should not be considered in isolation or without impact assessment, and definitely not before the 2020 Solvency II review. In terms of calibration, it has to be noted that: • interest rates should have a floor because insurers would seek alternatives if rates were significantly negative • it is not plausible to assume that volatility observed at positive rates would be observed in equal measure when rates are negative • it should be designed to be applied only to the liquid part of the term structure ie up to the last liquid point 18. **Loss absorbing capacity of deferred taxes** - Insurance Europe does not support a default approach whereby the loss absorbing capacity of deferred tax (LAC DT) would be capped at the level of net deferred tax pre-shock (net DTL). This would go against the economic approach underpinning Solvency II and contradict the Framework directive and article 207 of the Delegated regulation which recognise, in full, the loss absorbency of deferred taxes so long as the undertaking can demonstrate credible future profits would be generated to make use of the assets or when the deferred tax assets which will reverse in the future without negatively impacting future taxable income. In this context, management actions after the shock, including recapitalisation (ie, receiving capital from a parent) should be given due consideration.	

	19. Risk margin – Insurance Europe believes the current method and assumptions for the risk margin are not appropriate as they lead to excessive levels of risk margin and volatility particularly for long-term insurance business, especially in this low interest rate environment. The need for the risk margin added to the liabilities should be reexamined, given that the MCR was also designed so that an entity can be taken over while there is still enough capital remaining to allow orderly sale/transfer/wind-up of the business with no loss to policyholders. Insurance Europe provides methods for improving the calculation of the risk margin in its detailed responses. **20. Comparison of own funds in insurance and banking sectors** - Insurance Europe believes full alignment between insurance and banking regulations is not possible nor desirable as differences in business models between insurance and banking exist and justify differences in regulations. However, such differences should be analysed individually, as some issues would in fact deserve alignment of treatment between the two regimes. For example, while some of the differences regarding principal loss absorbency mechanisms (PLAM) between the two sectors are justified, unintended consequences for the write down/conversion mechanism should be addressed. Similarly, the differences in the treatment of applicable tax rules should also be investigated as Insurance Europe believes that these are not justified; specifically, while early call rights should be subject to prior regulatory approval, there should be no limitation on call rights. **21. Capital instruments only eligible as tier 1 up to 20% of total tier 1** – Insurance Europe would not support the removal of the limit of 20% on the restricted tier 1 capital instrument as Restricted tier 1 is of weaker quality than Unrestricted tier 1 and should therefore remain limited. Moreover, adding more onerous requirements to improve the quality of restricted tier 1 to offset the removal of the limit is likely to effectively prohibit most insurers from issuing Tier 1 in the form of subordinated debt (market acceptance) and will increase the cost of such instruments. Insurance Europe appreciates that all the sections under discussion require more detailed discussion and work in the coming months. It therefore looks forward to further engagement opportunities with EIOPA on the above issues.	
Q1.1	**Q1.1: Did you encounter any specific issue(s) when carrying out the evaluation of the error introduced in the results of the simplified calculation(s)? If yes, please explain the issue(s) and provide suggestions that would allow a feasible and realistic evaluation** Yes. Article 88(b) of the Delegated Regulation foresees that an assessment in qualitative or quantitative terms of the error introduced in the results of the simplified calculation due to any deviation between the risk profile of the company and the assumptions underlying the simplified calculation must be carried out. This assessment is extremely burdensome and time-consuming, in particular, regarding the level of documentation it entails, which in the end acts as a disincentive against the use of simplification. A practical way forward would be to replace the assessment requirement by a qualitative explanation regarding the general approach taken to calculate simplifications in general.	
Q1.2	**Q1.2: Please describe the main challenges faced when calculating the capital requirement**	

	for the non-life premium and reserve risk, as referred to in Article 115 of the Delegated Regulation. First, Insurance Europe does not believe that the level of reduction the geographical diversification (as set out in article 116) factor provides, appropriately reflects the reduction in the risk as a result of writing business in differing geographical areas. Further to this, diversification benefit from writing business from different countries within regions (eg Western Europe), is not properly taken into account. Other serious challenges are taking into account the contract boundaries as described in DA to determine the future cash flows for premium reserves, and the future premiums for premium risk NL and Health NSLT. Second, the factor based nature of the non-life premium and reserve risk sub-module poses a significant challenge in terms of the ability to recognize risk mitigation techniques, including reinsurance. As most major types of reinsurance cover including proportional and non-proportional covers are affected in some way, this issue concerns nearly all standard formula users because reinsurance which is a highly effective risk mitigation tool from an economic perspective (and recognized under internal models) is widely used across all markets. The overall EU non-life reinsurance market size is around USD 35 billion. Below some examples are provided of how some of the risk mitigation techniques are affected: 1. **Recognition of reinsurance in the first year after inception:** The standard formula premium volume measure is based on the larger of the last 12 and future 12 months of net earned premium (NEP). Therefore, any new cession or increase in cession would not be recognized in the first year as the prior year's NEP will always be higher on account of the new/ extended reinsurance. The option using the future 12 months NEP subject to a cap on earnings is unattractive and something most companies are not willing to do. 2. **Recognition of non-proportional reinsurance:** Non-proportional (NP) reinsurance, which is used as a major risk mitigation instrument is not appropriately reflected under the standard formula. Solvency II recognizes NP reinsurance via fixed adjustment factors of 80% only for 3 business segments, ie motor liability, property and general liability (regardless of whether reinsurance is used as risk mitigation). There is no credit for NP reinsurance for other segments, and specific types of non-proportional reinsurance such as stop loss or facultative covers may not be recognised due to limitations of the standard formula. 3. **Recognition of retrospective (reserve risk) covers such as Adverse Development Covers (ADCs):** Reserve risk covers may not be taken into account due to limitations of the standard formula. Major deficiencies of the standard formula regarding the recognition of reinsurance can be addressed in a simple, yet risk sensitive scenario based adjustment to the standard formula which is further	

	described in our answer to Q 1.4.	
Q1.3	**Q1.3: Is the geographical diversification factor established in Article 116(2) of the Delegated Regulation material in the calculation of the capital requirement for the non-life premium and reserve risk?** Yes. The purpose of the diversification factor is to reflect the benefits of a diversified risk exposition at least to a certain extent. Insurance Europe therefore considers it a material factor. However, as mentioned in Q1.2, Insurance Europe does not believe that the level of reduction the geographical diversification (as set out in article 116) factor provides, appropriately reflects the reduction in the risk as a result of writing business in differing geographical areas. A telling example is Credit insurance for which geographical diversification is not foreseen as the factor is equal to 1. Nevertheless, in practice, geographical diversification dilutes credit risk significantly and therefore should be taken into account.	
Q1.4	**Q1.4: Do you have any suggestions for a simplified calculation of the capital requirement non-life premium and reserve risk? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.** Insurance Europe proposes to deal with the issue of recognition of reinsurance in the first year after inception with an improved definition of the volume measures for premium risk as described in our answer to Q 5.5. Regarding any other type of reinsurance, Insurance Europe proposes a simple extension to the standard formula for Non-Life Underwriting Risk (Article 115) to adjust for the risk mitigating impact of any reinsurance which currently cannot be taken into account in the premium and reserve risk or Cat modules. An adjustment factor "**RM_{other}**" should be added which will be calculated by the undertaking using a scenario based approach (similar to that used for life and the Non-Life Cat module). Insurance Europe believes that the calculations to be performed for RM_other are not more complex than other calculations as required under the standard formula which are under the governance of the Actuarial Function (DAs Art. 272 and Article 48(1)(g) of the Directive), ie in particular with regard to Reinsurance, for which DAs Art. 272 (7) foresees that the Actuarial function should analyse the adequacy of the overall reinsurance arrangements, including the expected cover under stress scenarios. The solution would also effectively address current issues with Undertaking Specific Parameters caused by the reliance on historic data and related effort for the approval process because under the scenario based approach the risk mitigation impact of the reinsurance will be assessed in the context of a well-defined scenario (on a forward-looking basis). "**RM_{other}**" denotes the risk mitigating effect on premium and reserve risk of reinsurance arrangements that meet the requirements of Articles 209, 210, 211 and 213 but for premium risk excluding	

	reinsurance premiums referred to in Article 116(5) (a), and that otherwise have not been reflected in the standard formula. It shall be calculated as the risk mitigating impact of the reinsurance on a change in basic own funds that would result from an instantaneous loss in the amount of 3σnl *Vnl (which is the 200-year loss for premium & reserve risk as defined under the standard formula). In accordance with Article 109 of the Solvency II Directive, the proposed approach may be used to allow the recognition of reinsurance where it cannot be appropriately reflected within the structure of the standard formula. It is also consistent with the requirements for the calculation of the SCR under the standard formula as described in Article 101 of the Solvency II Directive, in particular it allows an adequate reflection of the 99.5% Value-at-Risk over one-year period (Art. 101.3). This method would allow proper recognition of many types of reinsurance, for example, Adverse Development Covers (ADCs), Stop Loss reinsurance, Quota Shares (QS) with profit commissions or loss corridors if the QS is not recognized elsewhere. Additionally, future premiums in Loss Portfolio Transfers and ADCs could be considered in an appropriate way. This change would also future proof the standard formula against new forms of risk transfer. Finally, not only would the allowance of a scenario based approach for Non-Life premium & reserve risk makes the reflection of reinsurance much simpler, but it would also make the methodology of the standard formula more consistent between Non-Life and Life.	
Q1.5	**Q1.5: Please describe the main challenges faced when calculating the capital requirement for the non-life lapse risk, as referred to in Article 118 of the Delegated Regulation.** Insurance Europe believes that EIOPA should consider removing the lapse risk within the non-life underwriting risk sub-module from the standard formula as this sub-module adds unnecessary complexity for a risk that is immaterial for non-life business. Moreover, there is a double counting of lapse risk between the lapse risk module and the premium risk module; this is because the calibration of the premium risk module was based on historical premium volumes which also included the effect of lapses. If a separate risk module for lapses is kept, then the calibration of the premium risk must be recalculated based on data from which lapses have been removed. Finally, there is no justification of the stress factors of 40 %. Apart from questioning the unduly high level of the calibration for this risk, there is a strong operational challenge in applying the discontinuance of 40% on a policy by policy basis. Such a process is completely disproportionate as non-life risks are not monitored on a policy by policy basis, but rather on portfolios. Also, other challenges arise out of the calculation of the loss given lapse for which more guidance could be provided, for: (1) The assumptions regarding the recoverability of cancellation fees. (2) The requirement to determine what the most negative impact on the basic Own funds is. For non-life insurers, this is difficult due to the unpredictable and erratic progress of claims. For the moment,	

	some markets calculate this by taking 40% of average premium income and Insurance Europe suggests to include this approach as an option in the SII legislation.	
Q1.6	**Q1.6: Do you have any suggestions for a simplified calculation of the capital requirement for the non-life lapse risk? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive** Insurance Europe believes that EIOPA should consider removing the non-life underwriting risk sub-module from the standard formula as this risk is completely immaterial for the clear majority of non-life (re)insurance undertakings and reinsurers do not possess all required information. More generally, Insurance Europe believes that as EIOPA is now in possession of data regarding Solvency II, it should analyse this database and simplify the standard formula by removing immaterial risks. At the very least, it should be made possible for companies to set the SCR for immaterial sub risk to zero and report thereon in the ORSA. As an alternative, article 118(a) of the Delegated Regulation could be simplified, such that it considers the way non-life risk are monitored in practice (see 1.5). Insurance Europe proposes in this context a shock that would be applied at the aggregate level of the policies included in the best estimate of premiums. The following rewording of article 118(a) of the Delegated Regulation would address this: "the discontinuance of [40% to be reviewed] of insurance policies included in the non-life premium provision as a whole"	
Q1.7	**Q1.7: Please describe the main challenges faced when calculating the capital requirements for the life underwriting risk, as referred to in Article 136 of the Delegated Regulation.** In the overall model framework, many calculations are done with rough parameters. In particular, the correlations are overly conservative and their levels, which were never substantiated by Ceiops, produce conservative and quite rough levels of SCR. At the same time, several intermediate parameters must be calculated correctly even if they make no material difference to the total SCR. This gives a sense of spurious accuracy of the standard formula. Thus, the principle of proportionality ought to be applied on an individual basis from undertaking to undertaking for parameters that have no material influence on the total SCR. For the Life underwriting risk the shock for mass lapse risk is unrealistically high. The historical evidence of actual lapses (in many member states) clearly contradicts the currently assumed high discontinuance rates of 70% (resp. 40% for SLT health lapse).	
Q1.8	**Q1.8: Do you consider the simplified calculations provided in Articles 91, 92, 93, 94, 95 and 96 of the Delegated Regulation appropriate given the main challenges? If no, please provide suggestions and explain why the proposals meet the requirements of Article 109 of the Solvency II Directive** Insurance Europe considers that, while the simplified calculations are not inappropriate, the the documentation requirements to use the simplifications pose a significant challenge. In certain situations, when a simplified method would be appropriate, it is less time consuming to implement the	

	full standard formula calculation rather than applying the simplification method due to the additional documentation requirement related to the use of simplifications.	
Q1.9	**Q1.9: Do you have any other suggestions for a simplified calculation of the submodules of the life underwriting risk module? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.**	
Q1.10	**Q1.10: Please describe the main challenges faced when calculating the capital requirement for the NSLT premium and reserve risk, as referred to in Article 146 of the Delegated Regulation** The main challenges faced are the estimate factors for the calculation of the volume measure. The standard deviation depends on the volume measure.	
Q1.11	**Q1.11: Is the geographical diversification factor established in Article 147(2) of the Delegated Regulation material in the calculation of the capital requirement for the NSLT premium and reserve risk?** Yes, it is material for a global reinsurer	
Q1.12	**Q1.12: Do you have any suggestions for a simplified calculation of the capital requirement NSLT premium and reserve risk? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive**	
Q1.13	**Q1.13: Please describe the main challenges faced when calculating the capital requirement for the NSLT lapse risk, as referred to in Article 150 of the Delegated Regulation.** Group income protection insurance contracts are not adequately considered in the delegated regulation Also, the shock of the mass lapse of insurance policies is greatly overstated, in particular for a global reinsurer operating in numerous markets both within and outside the EU. Due to the diversification benefits inherent in our large list of cedants, a 40% lapse of the insured policies being reinsured is a statistically improbable event and holding capital at this level is excessive.	
Q1.14	**Q1.14: Do you have any suggestions for a simplified calculation of the capital requirement for the NSLT lapse risk? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.**	
Q1.15	**Q1.15: Please describe the main challenges faced when calculating the capital requirements for the SLT health underwriting risk, as referred to in Article 151 of the Delegated Regulation.** Regarding segmentation of insurance contracts covering disability, a simplified approach on how to distribute the risks among the health and life submodules could be very helpful. Moreover, if the unbundling of such insurance contracts is below a materiality threshold or technically not feasible, a simplified approach to include all risks within the life module should be possible.	

	A further challenge is the calculation of those parts that refer to contracts which are not considered as similar-to-life techniques in national regulation.	
Q1.16	**Q1.16: Do you consider the simplified calculations provided in Articles 97, 98, 99, 100, 101 and 102 of the Delegated Regulation appropriate given the main challenges? If no, please provide suggestions and explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.**	
Q1.17	**Q1.17: Do you have any other suggestions for a simplified calculation of the submodules of the SLT health underwriting risk sub-module? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive**	
Q1.18	**Q1.18: Please describe the main challenges faced when evaluating if conditions of Article 89 for the use of market risk simplifications for captives are met.**	
Q1.19	**Q1.19: Do you consider the simplified calculations provided in Articles 103, 105 and 106 of the Delegated Regulation appropriate given the specificities of captives? If no, please provide suggestions and explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.** Insurance Europe is in favor of the use of simplifications for all undertakings so long as they pass the proportionality test; this would ensure an industry wide approach. Insurance Europe does not agree that there should be specific measures applicable for captives.	
Q1.20	**Q1.20: Do you have any suggestions for a simplified calculation of the market risk module for captives? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive** Refer to Q1.19 for views on simplifications specifically dedicated to captives.	
Q1.21	**Q1.21: Please describe the main challenges faced when calculating the capital requirements for the spread risk for bonds and loans, as referred to in Article 176 of the Delegated Regulation.** Basically, the relevant data is available. For certain securities, eg structured securities, this shall depend on the effective duration and not on modified duration. Insurance Europe would also point out that using interest rate duration is not an appropriate metric for assessing credit spread risk and that spread duration would be the more adequate risk measure.	
Q1.22	**Q1.22: Do you consider the simplified calculations provided in Article 104 of the Delegated Regulation appropriate given the main challenges? If no, please provide suggestions and explain why the proposals meet the requirements of Article 109 of the Solvency II Directive**	

Q1.23	**Q1.23: Do you have any other suggestions for a simplified calculation of the submodules of spread risk for bonds and loans? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.**	
Q1.24	**Q1.24: Please describe the main challenges faced when calculating the capital requirements for the operational risk, as referred to in Article 204 of the Delegated Regulation.** The reference values for operational risk (TP or premiums) measure business volume instead of risk volume and are therefore are not always appropriate. Furthermore, the complex calculations (parameter Op) are a major challenge. Another huge challenge is to split expenses by Ring fenced funds (RFF) which requires an allocation driver.	
Q1.25	**Q1.25: Do you have any suggestions for a simplified calculation of the operational risk module? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive**	
Q1.26	**Q1.26: Do you have any other suggestions for a simplified calculation of the SCR standard formula? If yes, please explain why the proposals meet the requirements of Article 109 of the Solvency II Directive.** Yes. Insurance Europe has other suggestions to simplify the calculations of the SCR standard formula. First, from a general point of view, Insurance Europe believes that as EIOPA is now in possession of data regarding Solvency II, it should analyze this database and simplify the standard formula by removing immaterial risks. In addition, it should be possible for companies to take one of the following options to simplify their calculations and as part of the proportionality principle: • set the SCR to zero any sub risk to which they have no exposure. • set the SCR to a fixed amount that they can show is no less prudent than the standard formula. • use a simplified methodology that they can show is no less prudent than the standard formula. While examples of simplifications can be of use, particularly to smaller companies, there should not be a closed list of simplifications available for undertakings to use. Any simplification should be possible under the proportionality principle provided it can be shown that it is no less prudent than the full calculations. However, Insurance Europe would not want the use of these simplifications to impose a significant additional documentation burden on firms, or add to the governance and compliance costs arising out of Solvency II. Also, all simplifications and alternative ways to calculate should be optional: it should be up to company's own decision whether they want to calculate/define more granular way.	

	Elsewhere in this submission, Insurance Europe has proposed simplifications for the following sub-modules: • The complexity of the counterparty default risk module should be alleviated both in the identification of the exposures subject to Counterparty Default Risk and through the identification of a simplified approach. • The workings of the operational risk module should be considered as it produces very volatile results. Furthermore, the by-default absence of diversification with other risks should be rectified. • The lapse risk of the non-life underwriting risk module could be removed as it is not material for the clear majority of non-life undertakings. • The non-life premium and reserve risk module: with an improved definition of the volume measures for premium risk to allow the recognition of reinsurance in the first year after inception • The Health SLT sub module: Regarding segmentation of insurance contracts covering disability, a simplified approach on how to distribute the risks among the health and life submodules could be very helpful. Moreover, if the unbundling of such insurance contracts is below a materiality threshold or technically not feasible, a simplified approach to include all risks within the life module should be possible • The requirements to have access to underwriting specific parameters should be made easier, and the scope enlarged in keeping with the spirit of the Solvency II directive. • The look-through process of fund investments for which the relevant SCR could be calculated based on the distributions within the funds (to currency, rating, etc) and not item by item. • Regarding the non-life catastrophe risk module: For reinsurers, some data is impossible to obtain from the cedants (eg man-made motor & liability risk sub-module - the number of vehicles is impossible to obtain; man-made fire risk sub-module - the gross exposure within 200m radius is also impossible to observe in many cases). • A single stress of 22% for all participations. Insurance Europe notes as an aside that intangible assets shock is not proposed for revision. However, some of our members report that the current shock (80 % of intangible assets value) is too severe and should be reviewed/reassessed	
Q2.1	**Q2.1: Do you think Article 4 could be improved to reduce the reliance on external credit ratings in relation to the calculation of the SCR standard formula? If yes, please provide suggestions and pros and cons.** While Insurance Europe understands policymakers' objectives to reduce reliance on ECAI ratings, it highlights that, in practice, it would not be feasible nor desirable to refrain from any references to external ratings. Insurance Europe therefore believes that the ability to use ratings provided by ECAIs should be preserved in the framework. No changes should be made to increase costs for companies using ECAIs. Insurance Europe supports efforts to reduce reliance by allowing the use of alternatives to ECAIs, including internal credit risk assessment models, as well as other private or public credit risk assessment models, subject to appropriate supervisory controls.	

	Against this background, a recognition of alternatives to ECAIs in Article 4 would help support a diversification of sources of credit risk assessments. From this perspective, the requirement that an insurers should nominate one or more ECAIs should be removed (see Art 4(2) Delagated Regulation). Possible alternatives could be: 1. Credit risk assessment models, developed by and with either private or public support, approved by EIOPA, which could be then used by market participants consistently across member states. This approach would incorporate a standardised mapping between the credit ratings the CQS used in the standard formula. Its key benefit would be a harmonized application across Europe. 2. Internal credit risk assessments by insurers (see response to Q2.1) 3. Credit risk assessments provided by third parties such as asset managers, which would be, by definition, in the scope of (prudential) supervision of the relevant third party. 4. Pre-determined credit risk assessments in the case of, eg, investment assets with embedded guarantees, collateral, etc, for which the risk exposure is zero and for which a credit quality steps of either 0 or 1 could be assigned by default. Such assignments should apply consistently to all investors investing in the same asset. 5. A mapping by EIOPA between risk classifications by other international organisations (eg OECD, IMF) and credit quality steps. It is at the same time key to understand that not only do insurance companies have limited interest and ability in developing exhaustive credit risk assessment models, but they also do not have the special expertise, access to a wealth of internal information and ability to make use of economies of scale and scope that CRAs have, and which make it possible for them to issue credit ratings. It is very difficult to imagine how such a complex business model could be replicated within each insurance company. However, where companies do have the internal resources and expertise to develop such models, then these should be recognised and allowed to be used in the Solvency II SCR calculation.	
Q2.2	**Q2.2: How might the mapping of credit quality steps (CQS) (as defined in the Commission Implementing Regulation laying down ITS on ECAI mapping) be improved to reduce reliance on external credit ratings?** Yes, please refer to the answer on Q2.8 for more detail.	
Q2.3	**Q2.3: In which other areas, apart from the SCR standard formula, should the reliance on external credit ratings be reduced? Please provide pros and cons of your suggestion.** While Insurance Europe understands policymakers' objective to reduce over-reliance on ECAIs, these do remain an important input in investment decision making and risk assessment, and it would be practically very difficult to replace the role of ECAIs with a completely different set of information parameters. It should also be recognized that significant regulatory and policy action has been taken over recent years by European policymakers, precisely aimed at addressing the shortcomings that	

	had been previously identified in the performance and reliability of ECAIs. For insurers external credit ratings are an important element of the risk assessment process. While the recent financial crisis revealed a number of shortfalls of external credit ratings in certain asset classes, their performance and value as a risk indicator has been very good in many other asset classes. In fact, these shortfalls triggered significant scrutiny by regulators and supervisors over the past years, with precisely the objective of improving the overall quality and validity of external ratings. Insurance Europe therefore believes that policymakers' concerns on over-reliance on ECAIs should be re-assessed in the new context of increased regulation and supervision of ECAIs. In addition, there are a number of qualitative regulatory safeguards that insurers need to assess when using credit ratings. These include the Solvency II prudent person principle, as well as the technical standards on the procedures for assessing external credit assessments, which were precisely designed to ensure that insurers do not "automatically" rely on the ECAI information. From a practical perspective, and as highlighted in the answer to Q2.1, in many instances insurers are not in a position to realistically come to comparable or even better credit assessments than CRAs given a range of barriers such as the lack of specific expertise in model design and calibration, lack of quantitative and qualitative data. Against this background, Insurance Europe believes that the significant role of ECAIs in insurers' risk management framework should be recognised by policymakers. At the same time, reducing reliance on ECAIs could be achieved by encouraging the voluntary development and use of own credit risk assessment expertise. It should be the responsibility of insurers to decide on the use and scope of internal rating assessment processes and models, based on their individual risk situation, availability of internal expertise and data, etc.	
Q2.4	**Q2.4: Do you have any proposal that would allow insurance undertakings to calculate their capital requirements, at least partly, on the basis of internal measures and ratings and still ensure that the level of protection of policy holders is equivalent to the one reached with the standard formula and internal models.** Allowing for internal ratings and assessment would help promote the voluntary development of such approaches to assessing credit risk. Insurance Europe supports the allowance of internal measures and ratings to calculate the capital requirements and it believes that a number of existing Solvency II provisions, including the prudent person principle, are already supportive of maintaining the same level of reliability of the capital assessment and hence policyholder protection. In practice, bilateral engagement with supervisors would be used to discuss and address any emerging concerns on the development and/or use of internal assessments. In addition, cases where a model would be developed/endorsed by a third party (eg a trade/industry association) and then used more widely by market participants could be discussed with the supervisor at a more centralised level and any recommendations could then be followed-up on also at a broad	

	market level. However, there should always be a possibility to use external ratings. The cost to maintain and use approved internal ratings would be prohibitively high for some firms, especially small and mid-sized insurance companies.	
Q2.5	**Q2.5: Do you think a methodology based on market implied ratings could be used in the standard formula? If yes, please provide your suggestion. Please also provide a justification why such a methodology would meet the requirement of Article 101(3) of the Solvency II Directive that the Solvency II Capital Requirement corresponds to the Value-at-Risk of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99,5% over a one-year period.** No, Insurance Europe does not support using a methodology based on market implied ratings and in fact agrees with a range of shortfalls that the discussion paper refers to. Specifically, Insurance Europe raises the following concerns on using the suggested approach: • A formulaic market-based ratings approach would not be able to reflect the actual risk profile of an asset/entity as it would not move based solely on forward looking changes to credit worthiness, but would rather incorporate other elements such as market sentiment, rumors and, consequently, could be pro-cyclical. This would lead to pro-cyclicality in the capital requirements – a similar consequence triggered by similar market behavior realities was in fact recognised in the case of equity, where an equity dampener was proposed to address concerns of pro-cyclicality. • Pricing information, on eg credit default swap spreads, is only available for a limited number of instruments, and such market pricing is often (and increasingly) also reflective of non-credit specific elements such as illiquidity, which makes pricing information less meaningful from a pure credit perspective.	
Q2.6	**Q2.6: Do you think a methodology based on accountancy-based measures could be used in the standard formula? If yes, please provide your suggestion. Please also provide a justification why such a methodology would meet the requirement of Article 101(3) of the Solvency II Directive that the Solvency II Capital Requirement corresponds to the Value-at-Risk of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99,5% over a one-year period.** While Insurance Europe in principle supports the investigation of a wide range of alternative methodologies, including based on accountancy measures, it notes that a number of considerations need to be taken into account: Specifically: • Financial ratios often only reflect the past data and performance of companies, and fail to	

	recognise business prospects. In fact, in the case of corporates, the future business perspectives are a decisive factor for assessing the credit worthiness. • There are positive experiences with the use of accountancy-based measures, for example in the assessment of the credit quality of standardized German private placements (Schuldscheindarlehen).	
Q2.7	**Q2.7: On what conditions and under which restrictions may market implied ratings or accountancy-based measures be used to approximate the credit quality step of financial instruments?** Please refer to answer to Q2.5 and Q2.6. Insurance Europe believes that any alternative measures should be considered as part of a comprehensive credit assessment approach, and should allow for relevant interactions, similarities, discrepancies between alternatives to be appropriately identified and used to improve the calibration of the alternative measures.	
Q2.8	**Q2.8: Do you have suggestions for alternative approaches that could be used in the standard formula? Please explain why such alternative approaches would meet the requirement of Article 101(3) of the Solvency II Directive that the Solvency Capital Requirement corresponds to the Value-at-Risk of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99,5% over a one-year period.** Insurance Europe supports an enlargement of the spectrum of acceptable sources for credit rating assessment. It also highlights that insurers should continue to be allowed to use ECAIs assessments, not least due to the significant costs that alternatives may in practice imply. Possible alternatives could be: 1. Credit risk assessment models, developed by and with either private or public support, approved by EIOPA, which could be then used by market participants consistently across member states. This approach would incorporate a standardised mapping between the credit ratings the CQS used in the standard formula. Its key benefit would be a harmonized application across Europe. 2. Internal credit risk assessments by insurers (see response to Q2.1) 3. Credit risk assessments provided by third parties such as asset managers, which would be, by definition, in the scope of (prudential) supervision of the relevant third party. 4. Pre-determined credit risk assessments in the case of, eg, investment assets with embedded guarantees, collateral, etc, for which the risk exposure is zero and for which a credit quality steps of either 0 or 1 could be assigned by default. Such assignments should apply consistently to all investors investing in the same asset. 5. A mapping by EIOPA between risk classifications by other international organisations (eg OECD, IMF) and credit quality steps.	

	In terms of methodologies, Insurance Europe notes that: • Where specific securities are part of a larger issuance programme, with similar characteristics and under the same regulatory framework, internal risk assessment could be limited to the issuance programme as opposed to it being necessary for each and every issue of the programme (eg the highly regulated German Pfandbrief market). • Where risk exposures are covered by the existence of eg deposit guarantee schemes, this should be recognised in any internal credit risk assessment. • The credit risk assessment of financial institutions subject to prudential supervision such as CRD, Solvency II, etc, is closely linked to the solvency positions of such institutions.	
Q2.9	**Q2.9: Is there a specific line of business and/or size of undertaking and/or asset class where you consider the use of external ratings for the purpose of investment and risk management not to be proportionate? Please explain your answer.** Yes, there are a number of areas that Insurance Europe has identified as being of concern. Specifically: In the case of **securitisations**, the capital charge for securities with only one credit rating is prohibitively high, in particular for type 1 securitisations which are in fact high-quality securitisations. The concern can be addressed by allowing the use of ECAI in the case of type 1 securitisations, even when a single ECAI is available. Specifically, according to article 178(5) of the Delegated Regulation: *"Securitisation positions for which a credit assessment from a nominated ECAI is not available shall be assigned a risk factor stress$_i$ of 100 %."* The drafting of this article took place before Solvency II was amended to reflect a split between type 1 and type 2 securitisations. However, given the introduction of the specific requirements for type 1 securitisations, this approach should be changed. Concretely, Article 6 of the Delegated regulation should be amended as follows: *"By way of derogation from Article 4(4)(d), where only one credit assessment is available from a nominated ECAI for a type 2 securitisation position as referred to in Article 177(3), that credit assessment shall not be used. The capital requirements for that item shall be derived as if no credit assessment by a nominated ECAI is available.* In the case of **non-listed assets**, the availability of ECAIs is often lacking, which in practice makes associated capital requirements extremely high. This concern would be addressed by the allowance of internal credit risk assessments (see response to Q2.1). The **size of the undertakings** is closely linked to previously raised concerns around reporting of ECAI related information which, in particular for SMEs, is extremely onerous and burdensome. Insurance Europe suggests to remove the ECAI rating reporting requirements from the general reporting requirements.	
Q2.10	**Q2.10: If the answer to the previous question is yes, do you think references to credit**	

	quality steps in those specific cases could be removed? What could be the alternatives? What would be the advantages and disadvantages? Insurance Europe believes that, as long as credit quality steps remain a parameter in the SCR calculation, mapping between credit assessment sources and credit quality steps remain necessary. In practice, such mappings are done either by EIOPA (eg in the case of ECAIs) or by insurers (eg in the case of an internal credit risk assessment).	
Q3.1	**Q3.1: Are the differences between the Delegated Regulation and the banking framework justified by differences in a) the business model of the two sectors, b) the determination of capital requirements, or c) other reasons. Please provide explanations for your answers.** No, the need for such an expansion in scope does not arise from similarities in the business models of the two sectors. The similar treatment is warranted by similarities in risk profiles, and those in turn are related to the assets' intrinsic characteristics, as opposed to who the asset holder is. The expansion in scope, as outlined in the answers to subsequent questions, should be done to reflect the economic reality of certain investments and transactions and is also in line with the objectives of the Commission to reduce regulatory gaps between different financial sectors in Europe in the context of the CMU.	
Q3.2	**Q3.2: On what conditions or under which circumstances should the recognition of guarantees under Solvency II be modified? Are there any missing elements?** The scope of criteria for third party guarantees should be expanded. It should include public entities which are not currently part of the list, contained in Implementing Regulation (EU) 2015/2011 and which may not benefit from an explicit and direct contractual guarantee by a central government or an RGLA (please also see response to Question 3.8 for further arguments and detail). Some guarantees are not directly provided by an RGLA, but by a related government institution which is linked to an RGLA. A distinction can be made between different types of guarantees provided by the RGLA: • A direct guarantee entails that insurance companies are directly exposed to the creditworthiness of the RGLA in case of a default of the bond issuer. Direct guarantees can therefore be seen as direct exposures to RGLA. • Guarantees can be provided by a third party, which is counter-guaranteed by a RGLA. In case of a default of the issuer, the insurer is exposed to the third party which has provided the guarantee (which itself is backed by an RGLA). Also in this case, the insurance company is exposed to the credit risk of the RGLA. It is therefore important to also take into account the counter-guarantees, similar to articles 214 and 215 of the CRR. • Guarantees can also be provided by agencies, branches or regional development banks	

operated or backed by a RGLA. For example, such agencies include Vlaams Infrastructuurfonds voor Persoonsgebonden Aangelegenheden (VIPA), Vlaamse Maatschappij voor Sociaal Wonen (VMSW) in Belgium, NRW.Bank, L-Bank, BayernLB in Germany, MuniFin in Finland and Kommunkredit in Denmark. These are separate legal entities, but receive a strong backing by a RGLA. It is therefore important that supervisory authorities have some discretion to treat exposures to or guarantees by such entities as exposures to central governments or RGLA, like under article 116(4) of the CRR.

In the cases of direct exposures to RGLA, direct guarantees by RGLA, counter-guarantees provided by RGLA or guarantees provided by entities equated with RGLA, a central, regional or local government administration eventually backs them. Hence, there is no reason to make any distinction from a prudential perspective.

Furthermore, the fact that a counterparty is of strategic importance for a sovereign/RGLA (eg public service, funding from State budget, no profitability aim) should be reflected even when no explicit guarantee is given. Examples of such entities are national companies engaged in the storage of energy as per the European directive of the International Energy Association (companies such as Cores, Sagess, Apetra).

Having the above in mind, the following changes are proposed:

1. **Add the following paragraphs to Articles 180 and 187 of the Solvency II Delegated Regulation:**

   Exposures in the form of bonds and loans which are fully, unconditionally, and irrevocably guaranteed by counterparties listed in the implementing act adopted pursuant to point (a) of Article 109a (2) of Directive 2009/138/EC shall be treated as exposures to the central government.

2. To **avoid confusion, it is proposed to delete the last sentence of recital 42**
   […] ~~The effect of the implementing act adopted pursuant to Article 109a(2)(a) of Directive 2009/138/EC relating to these lists is that direct exposures to the regional governments and local authorities listed are treated as exposures to the central government of the jurisdiction in which they are established for the purposes of the calculation of the market risk module and the counterparty default risk module of the standard formula.~~

3. **Furthermore, and as outlined above, guarantees can also be provided by separate legal entities, which receive a strong backing by an RGLA or a central government. It is therefore important that supervisory authorities have some discretion to treat exposures to or guarantees by such entities as exposures to central governments or RGLA, similar to article 116(4) of the CRR. It is proposed to add the following**

	paragraphs to the Solvency II Delegated Regulation: **Article 1 (definitions)** *'public sector entity' means a non-commercial administrative body responsible to central governments, regional governments or local authorities, or to authorities that exercise the same responsibilities as regional governments and local authorities, or a non-commercial undertaking that is owned by or set up and sponsored by central governments, regional governments or local authorities, and that has explicit guarantee arrangements, and may include self-administered bodies governed by law that are under public supervision.* **Article 85a (regional governments and local authorities)** *Exposures to public-sector entities may be treated as exposures to the central government, regional government, or local authority in whose jurisdiction they are established where in the opinion of the competent authorities of this jurisdiction there is no difference in risk between such exposures because of the existence of an appropriate guarantee by the central government, regional government or local authority.* **4. Furthermore, the following amendments to the Delegated Regulation are proposed to recognise counter-guarantees provided by RGLA, similar to articles 214 and 215 of the CRR:** **Article 215 (guarantees)** The text below should amend Article 215 of the Delegated Regulation: 1. *In the calculation of the Basic Solvency Capital Requirement, guarantees shall only be recognised where explicitly referred to in this Chapter, and where in addition to the qualitative criteria in Articles 209 and 210, all of the following criteria are met, subject to article 215a (…)* 2. *In the case of guarantees provided by or counter-guaranteed by entities listed in Article 215 (a) (2), the requirements in point (d) of paragraph 1 of this Article shall be considered to be satisfied where either of the following conditions is met:* *(a) the insurance or reinsurance undertaking has the right to obtain in a timely manner a provisional payment by the guarantor that meets both the following conditions:* *(i) it represents a robust estimate of the amount of the loss, including losses resulting from the non-payment of interest and other types of payment which the borrower is obliged to make, that the insurance or reinsurance undertaking is likely to incur;* *(ii) it is proportional to the coverage of the guarantee;* *(b) the insurance or reinsurance undertaking can demonstrate to the satisfaction of the*	

	supervisory authorities that the effects of the guarantee, which shall also cover losses resulting from the non-payment of interest and other types of payments which the borrower is obliged to make, justify such treatment. **New Article 215 (a) should be inserted** *Insurance or reinsurance undertakings may treat the exposures referred to in paragraph 2 as protected by a guarantee provided by the entities listed in that paragraph, provided all the following conditions are satisfied:* *(a) the counter-guarantee covers all credit risk elements of the exposure;* *(b) both the original guarantee and the counter-guarantee meet the requirements for guarantees set out in Articles 215(1), except that the counter-guarantee need not be direct;* *(c) the cover is robust and nothing in the historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct guarantee by the entity in question.* *The treatment set out in paragraph 1 shall apply to exposures protected by a guarantee which is counter-guaranteed by any of the following entities:* *(a) the European Central Bank;* *(b) Member States' central government and central banks denominated and funded in the domestic currency of that central government and central bank;* *(c) a regional government or local authority listed in the implementing act adopted pursuant to point (a) of Article 109 (a) (2) of Directive 2009/138/EC;* *(d) multilateral development banks referred to in Article 117(2) of Regulation (EU) No 575/2013;* *(e) international organisations referred to in Article 118 of Regulation (EU) No 575/2013.* *Insurance or reinsurance undertakings shall apply the treatment set out in paragraph 1 also to an exposure which is not counter-guaranteed by any entity listed in paragraph 2 where that exposure's counter-guarantee is in turn directly guaranteed by one of those entities and the conditions listed in paragraph 1 are satisfied.* Finally, guarantees should be recognised as risk mitigation where "collateral" is mentioned. For example, in Article 176 (5) of Regulation 2015/35 only refers to collateral. Included in this, there should also be a reference to article 215 enabling the use of guarantees for these exposures. By only explicitly referring to collateral, the possibilities for risk mitigations are limited unless the list of institutions is clarified, as in Article 180 (2).	
Q3.3	**Q3.3: Should the risk mitigating effect of a partial guarantee be recognised in the SCR**	

	standard formula calculations (for example by defining a "minimum guarantee level") assuming that the partial guarantee is unconditional, irrevocable and meets all the other relevant requirements set out above? What are the costs associated with "splitting" an exposure into a guaranteed and a non-guaranteed part for the purpose of the capital requirement calculation? Yes, the risk mitigating effect of a partial guarantee should be recognised in the SCR standard formula. The condition that the guarantee should cover 100% of a loan should be removed. This should be done in such a way as to reflect the economic reality of the exposure. For example, infrastructure project bonds which are partially guaranteed by the European Investment Bank (EIB) already benefit from a more risk-sensitive approach under Solvency II, and such treatment should be expanded to similar risk profiles. Currently, however, if the guarantee is not fully compliant with Article 215 (f) of the Delegated Regulation, insurance companies have to treat those loans as lacking a guarantee. In practice, this leads to unnecessarily onerous capital requirements, does not reflect a risk-based measurement and leads to a different approach applied to insurance investors vs banking investors (as, in the case of banks, this guarantee is recognised). At this stage, Insurance Europe would like to present anecdotal evidence from the Netherlands which illustrates the above. In the Netherlands, the National Mortgage Guarantee scheme (Nationale Hypotheekgarantie, hereinafter 'NHG') is a housing market instrument designed to improve access to the owner-occupied housing market in the Netherlands. It is an instrument deployed by the national government. The NHG scheme is administered by the Homeownership Guarantee Fund (Waarborgfonds Eigen Woningen, hereinafter 'WEW'). WEW is responsible for policy regarding the NHG scheme and its implementation. WEW's goal is to promote homeownership and improvements in housing quality and help homeowners retain their homes. To achieve this, it uses sureties (for mortgages) as an instrument. To ensure that WEW can indeed fulfil its guarantor function, WEW's articles contain several key elements such as the surety fee and the backup system. The WEW in short: • Is autonomous, not-for-profit, yet private organization • Improves homeowners' access to Dutch housing market • Stands surety for +/- €190 billion in mortgage loans • Guarantor of +/- 1.3 million active guarantees NHG is included in the risk weighting of mortgages on the balance sheet of mortgage lenders. For banks, under the EU Capital Requirements Regulation (CRR) and Capital Requirements Directive	

	(CRD-IV), NHG is considered to be a CRM both in the standardized approach and in banks' internal models. In broad terms the same applies to insurers that use internal models to estimate mortgage risks as to banks (article 235, delegated regulation for Solvency II). The NHG scheme satisfies the legal requirements in practice and can be applied as a CRM, although a capital buffer still needs to be held for operational risks and that part of the mortgage that is not covered by the NHG surety. However, the NHG scheme is not considered to be a form of CRM according to the Standard Formula under Solvency II. According to De Nederlandsche Bank (DNB), Solvency II does not allow taking into account the risk mitigating effects of NHG. To justify this, DNB points to two new stipulations in Solvency II: • Firstly, under Solvency II guarantees can only be treated as a form of CRM if this option is specifically stated in Solvency II. This is not the case for mortgages. • Secondly, CRM only applies if the guarantee covers all payments in full. The NHG scheme does not satisfy this requirement due to the annuity-based decline in the surety amount, the lender's own risk and the fact that future interest income — and consequently the difference between the market value and the book value — is not covered. This means that lenders have to maintain capital buffers in accordance with the standard formula for mortgages, and consequently do not enjoy any advantages. The NHG does not meet the requirement set out in Article 215 (f) for the following three reasons: • The amount paid out in case of default is at most the difference between the nominal value and the value of the collateral, which means that NHG does not cover all types of regular payments the obligor is expected to make in respect of the claim • The guaranteed sum decreases on an annuity basis • Effective from 2014, NHG mortgage loan providers must consider an excess of 10% If a partial guarantee were allowed, the NHG would be able to meet the criteria covered by Article 215. In addition to the example from the Netherlands, Insurance Europe believes that the costs of splitting the exposure into a guaranteed and non-guaranteed part should also be considered, such as one-off IT implementation costs. In the cases of transactions where such costs outweigh the risk-mitigation impact, insurers should be allowed not to recognise the partial guarantee, as such treatment will be more conservative and should not lead to any prudential concerns. The actual effect of the guarantee should be recognised, regardless of magnitude. There is no need	

	for a minimum guarantee threshold as it would misrepresent economic reality for transactions which fall below such threshold but nevertheless benefit from a guarantee. Furthermore, the exact recognition of the guarantee depends on the structure of the guarantee the protection provider is giving to the lender. Some guarantees could be embedded in a transaction to ensure repayment of principal in cases of default (eg guarantees whereby a % of the notional is underwritten by a central government/an RGLA or another government- or RGLA-backed entity). Others may be guaranteeing a minimum regular interest/coupon payment. In this context, the flexibility allowed by Article 215 (1) (c) of the CRR is a good approach. The extent of the guarantee should be reflected in the value of the exposure. In addition, appropriate recognition of partial guarantees would help support the development of such products, including potential secondary markets.	
Q3.4	**Q3.4: What are partial guarantees exposures that insurance undertakings are investing in or will invest in? How relevant are these exposures relative to their importance in the banking sector?** Examples include unlisted assets such as real estate and project finance, eg construction guarantees. For example, in France, in certain cases such as real estate, bank guarantees cover part of the rent. Additional investment categories which also have partial guarantees include (subordinated) loans, mortgage loans, and infrastructure loans. Such investments typically have direct impact on the real economy and further aid insurers to diversify their asset base and risk profile. For some life insurers, exposures with partial guarantees amount to 10% of their total investments value. For example, on the Dutch mortgage market in 2016: • The outstanding mortgage debt in the Netherlands amounted to € 662 billion. The share of banks in this was 75%, and the proportion of insurers stood at 8%. • The total of new loans amounted to € 33 billion in 2016. Of this, 62% was financed by banks and 9% by insurers. • The share of NHG-mortgages in the mortgage lending by banks was about 21% in 2016, and by insurers approximately 38%. Finally, in the Netherlands there are loans to hospitals and housing associations which also receive partial RGLA guarantees. In such cases, recognising such partial guarantees will be beneficial, particularly because such loans are typically unrated.	
Q3.5	**Q3.5: How would you take the effect of a partial guarantee into account in the spread risk sub-module which depends on the modified duration and the credit quality step?**	

	As explained in Q3.3, Solvency II should allow for the exposure values to be adjusted for a partial guarantee. Additionally, where the guarantee is provided by a private enterprise (eg a bank), guarantor rating should be recognised. The corresponding per-year duration stresses can then be applied to the adjusted exposure value. This overcomes the binary approach currently embedded in the Solvency II framework whereby exposures are either fully guaranteed or no guarantee is recognized at all (and the exposure is treated as a normal corporate bond). In cases of protection above an "excess point", where the guarantee sets in after the excess point, one can estimate a recovery rate of X% and reduce the resulting risk capital by the factor (1 – Excess Point)/(1 – Recovery Rate).	
Q3.6	**Q3.6: Should the recognition of Member States' central governments guarantees be extended also for type 2 exposures? Please explain pros and cons.** Yes, the recognition of central government and RGLA guarantees and partial guarantees should be extended for Type 2 exposures. This will ensure a consistent approach within different risk submodules. Furthermore, RGLA or central government guarantees for cash or derivatives should be considered in the counterparty default risk module. Please also refer to the input to Question 3.3 and the NHG scheme in the Netherlands as an example of a Type 2 exposure to which the recognition should be extended. A wide range of exposures can fall under the Type 2 counterparty default module, as this module is a residual category for investments which cannot be classified elsewhere. If such exposures are guaranteed either fully or partially, such guarantees should also be reflected. The choice to extend these guarantees to Type 2 exposures would be coherent with Article 189 (5) (note that this article is part of the General Provisions, so it is related to all exposures not just to Type 1 ones), so the extension could be already in place according to a wider interpretation of the Delegated Regulation. Failing to extend these guarantees to Type 2 exposures also produces a logical inconsistency that leads to two opposite evaluations of the same risk mitigation item: • A deposit with ceding undertakings classified as Type 1 exposure according to article 189 (4) guaranteed by a central government will bear no risk according articles 189 (5) and 199 (8) • The same deposit with ceding undertakings classified as Type 2 exposure according to article 189 (3) (d) guaranteed by the same central government will bear full risk.	
Q3.7	**Q3.7: Please explain if insurance undertakings would decrease or increase their exposures to guarantees if your proposals were taken into account.** As demonstrated in Q3.8 below, failure to make appropriate adaptations to the Solvency II delegated	

	regulation may heavily impact the role insurers can take up in financing future public investment projects. As observed in the EIOPA discussion paper, bonds and loans issued by public institutions and (counter-) guaranteed by RGLA are often unrated and currently are subjected to significant capital requirements because the risk mitigating effect of the guarantee is not recognised. Only through correctly recognising the lower risk provided by the RGLA (counter-) guarantees can the disincentives to investing in these bonds and loans be removed. In this way insurance companies can take up their key role as institutional investors who provide stable and long term financing to the economy. In terms of increase/decrease of exposures, it should be noted that the capital requirement is only one parameter of the investment decision making process, which includes many other parameters such as the risk/return profile of assets, their ability to match liability-generated characteristics, etc. However, if bonds guaranteed by entities which are themselves guaranteed by a member state's central government are not recognised under Solvency II, those exposures will probably be reduced in the future since the return of these bonds will be compared to bonds with similar SCR. Insurance investors would expect a return comparable to bonds and loans in the Solvency II spread risk classification. A better reflection of risks would lead to a more risk-based approach of the framework, which would remove the current investment disincentives.	
Q3.8	**Q3.8: Should the guarantees issued by RGLA be treated similarly as guarantees issued by the central government of the jurisdiction in which they are established also in the market risk module? Please explain your answer.** Yes, guarantees issued by RGLA should be treated similarly to those issued by central governments in the market risk module. In Solvency II, exposures to regional governments and local authorities (RGLAs), as well as exposures that are guaranteed by member states' central governments, are granted the same zero risk factor as exposures to central governments, in recognition of the impact such guarantees have on the credit risk of the assets. However, guarantees given by RGLAs to other public sector entities such as hospitals, universities, schools or social housing are ignored and the bonds treated like normal corporate debt. This issue of guarantees provided by RGLAs is particularly relevant for countries organised as federal states, where the central government has transferred significant (fiscal) powers to RGLAs. While these bonds are usually unrated, the government guarantees lead to low credit spreads at the issuance of the instruments and consequently relatively low (but stable) returns. Because they are often unrated and of long duration, they have very high Spread Risk Module capital charges. If such fixed income assets were calibrated in the Counterparty Default Risk Module then the guarantees could be taken into account as a form of collateral, which means that recoveries could be expected to be 100%, justifying the zero risk factor. Some companies made significant investments in such assets with the understanding that their treatment would be consistent and the real economic value of the	

guarantee would be appropriately recognised by Solvency II.

In what follows, Insurance Europe puts forward empirical evidence from the Belgian market.

a. Overview of RGLA guarantees in Belgium

The table below provides data on the stock of government guarantees in Belgium at year-end 2014. More than 50% of guarantees are provided by regional governments or local authorities.

Administration	Value of guarantees (€m)	Source
Total government	46.489,4	Eurostat, stock of general government guarantees
Flemish Region & Community	13.338,28	Flemish government, guarantee management, p.45
Brussels Region	2.653,36	Region of Brussels, debt annual report, p.9
Walloon Region	6.926,7	Region of Wallonia, budget, p. 185
Local governments	2.429,37	Eurostat, stock of local government guarantees
% of RGLA in total government guarantees	**58.5%**	

b. Juncker Investment plan

At the end of 2014, Belgium has submitted a list of 162 projects requesting financing from the Juncker investment plan. Statistics on the proportion of federal vs. local and regional governments are provided below:

Administration	**Number of projects**
Federal Administration	22
Flemish Region	30
Walloon Region	29
Brussels Region	48
French Speaking Community	24
Private sector	9
Total	**162**

The Flemish Region, Walloon Region, Brussels Region and French Speaking Community are all recognized as RGLA under the Implementing Regulation (EU) 2015/2011. Hence, with respect to the projects submitted for the Juncker Investment plan, 81% were proposed by RGLA, compared to only

14% by the Federal government. This clearly indicates the importance of RGLA in Belgium with respect to public investment.

c. Public-private partnerships

Recent public-private partnerships (PPPs) conducted in Belgium further provide evidence on the importance of RGLA. The table below provides statistics on the authorities involved in PPPs established for large investment projects in Belgium between 2005 and 2015. Data is extracted from the Infrastructure Journal database. This table shows that, for 15 out of 24 PPPs established, the involved authorities are RGLA as recognized under the Implementing Regulation (EU) 2015/2011.

Administration	**Number of projects**
Federal Administration	9
Flemish Region & Flemish Community	11
Other RGLA	4
Total	**24**

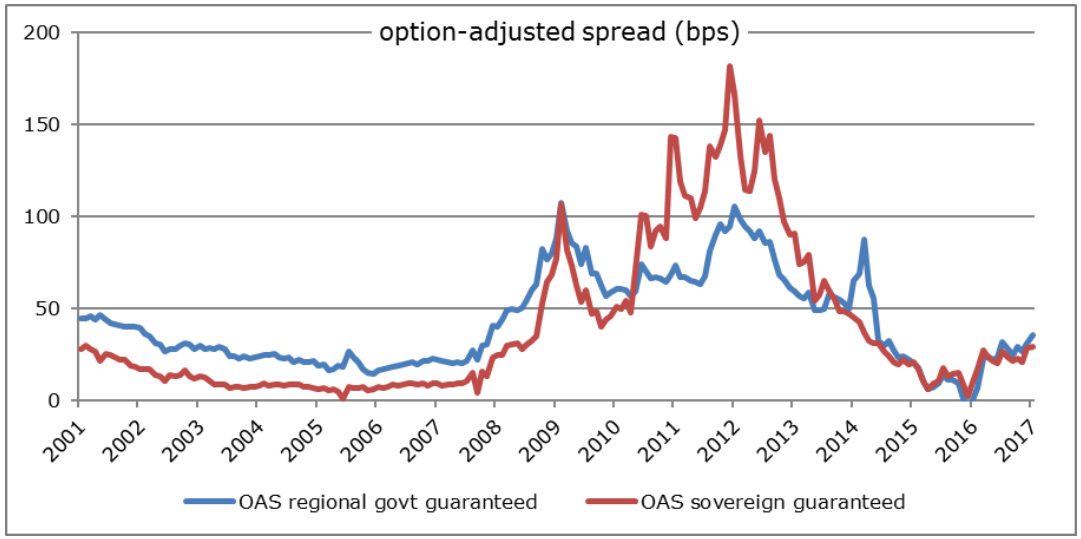
Regarding the nature of the guarantees on the Belgian market, regional governments can have even more fiscal powers than central governments. The high credit standing of regional governments in Belgium is also recognised in their rating, which can even be higher compared rating of the central government:

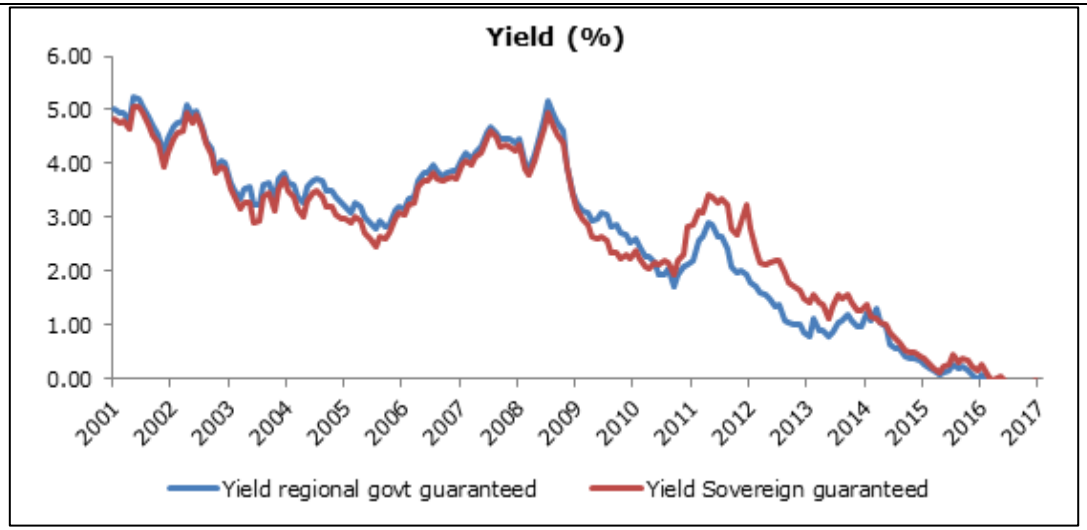
Administration	**Rating**	**Source**
Brussels-Capital Region (RGLA)	AA	S&P
Flanders (RGLA)	Aa2	Moody's
Belgium (central gov.)	Aa3	Moody's

If the revenue raising capacities of RGLA are equal or exceed these of central governments, there is no reason to perceive the RGLA as more risky than central governments. A comparable treatment from a risk and solvency perspective is then warranted.

To conclude, the above evidence shows the importance and impact of an appropriate treatment of credit risk provided through RGLA guarantees and counter-guarantees. Guarantees by RGLA, counter-guarantees provided by RGLA or guarantees provided by entities equated with RGLA should be considered as central government exposures, in the same way as direct RGLA exposures or guarantees by the central government are considered as central government exposures. It is therefore proposed that the Solvency II Delegated Regulation is amended in line with the suggestions made in Q3.2. Furthermore, the Solvency II Delegated Regulation on risk mitigation techniques (guarantees) should be amended to provide a consistent treatment with respect to guarantees and counter-guarantees.

Q3.9	**Q3.9: How does the spread risk for exposures guaranteed by RGLAs differ from the spread risk for exposures guaranteed by the central governments? Please provide supporting**	

	evidence. The charts below present data on the *Citi Euro Broad Investment-Grade* sovereign guaranteed and regional government guaranteed indices. Especially during the credit crisis during year-end 2008 and the sovereign crisis during 2011, spread movements of the regional government guaranteed index appear more stable compared to the sovereign guaranteed index.  	

	 Furthermore, in Germany, the spread evolution for RGLA and government guaranteed development banks and agencies are highly correlated to the respective guarantor in contrast to any private corporate. The spread risk of exposures guaranteed by RGLAs is not perceived as higher than the spread risk for exposures guaranteed by the central governments to the respective guarantor if the guarantee is sufficing Article 215 of Solvency II (eg NRW.Bank guaranteed by Land NRW compared to KfW guaranteed by Germany). It is difficult, however, to make any definitive conclusions based solely on observations of the difference in spreads. While spreads do, to some extent, reflect investors' perception on the credit worthiness of the investee, they also contain a reflection of the liquidity of an investment (ie an illiquidity premium). Therefore, EIOPA should not look at the spread differences as fully reflecting the differences in default risk between RGLAs and central governments.	
Q3.10	**Q3.10: Are the differences between Solvency II and the banking regulation with regard to the treatment of exposures to RGLA justified, for example by differences in the business model of the two sectors or the determination of capital requirements?** No, differences in the business model do not justify the different treatment. In fact it could be argued that while for banks a "run" in stressed market conditions might pose a real threat to its liquidity position, this is less likely for insurance companies due to the general long-term nature of the business. Regarding the treatment of exposures to regional governments and local authorities, EIOPA provided	

	a list of RGLAs which can be treated as exposures to the central government. Although this list helps to reduce uncertainty, it is not exhaustive. For example, RGLA in Italy are compliant with the two criteria outlined in Article 85, and the list in Article 1 of Implementing Regulation (EC) 2015/2011 should be amended to include Italian RGLAs even if they are not in EBA's database. Additionally, neither Article 85 of the Delegated Regulation nor Article 109a (2) (a) of the directive restricts the application of guarantees to member states or the EEA. The list should therefore be extended covering all member/EEA states and relevant third countries. Furthermore, such a list comes with the caveat that it needs to be updated regularly. For example, each time an undertaking invests into an RGLA which is not mentioned on the list, the risk arises that it might not receive a zero-capital treatment. If some national supervisors in that case nevertheless allow the undertaking to assume the RGLA is risk-free, the provisions are not applied uniformly throughout Europe. Instead of an inflexible list that does not automatically change with markets and investment decisions, it would be better to give undertakings more flexibility in making principle-based decisions. Undertakings, in close collaboration with national supervisors, should therefore decide which RGLAs could be considered as risk-free. Guiding principles should help making sound decisions. Please also see responses to Quesitons 3.1, 3.2 and 3.8.	
Q3.11	**Q3.11: Should Solvency II incorporate the categorisation set out in Article 115 of the Capital Requirements Regulation, ie applying risk weights to exposures to RGLA based on the three cases: a) no special treatment, b) treatment as central governments, c) intermediate treatment? If the answer is yes, please provide evidence that having three different treatments for exposures to RGLA is justified.** No, no such categorisation is necessary. Exposures to RGLA which fulfil the requirements should still be treated like exposures to their central government (no intermediate treatment). Valuable partial guarantees or counter-guarantees given by RGLA should also be recognized and reflected. Please see answers to Questions 3.1, 3.2, 3.3 and 3.8.	
Q3.12	**Q3.12: What would be the impact of aligning the treatment of exposures to RGLAs in Solvency II to the treatment in the banking regulation? Would insurance and reinsurance undertakings change their investment strategy?** If the insurance and banking sector regulations are to align the recognition of exposures to RGLAs, demand for guaranteed exposures might increase and thus, the spreads on those exposures may decrease.	

	Furthermore, if there is no harmonisation in insurance and banking sector regulation, regional development banks could lose their long-term funding partnerships with insurance companies for long-dated SME-loans to start ups and small companies as well as local infrastructure support. Finally, Insurance Europe would like to point out that for regulatory reasons, banks are more inclined to have shorter term assets on their balance sheet, while insurers need more long term assets to match their liabilities. Long-term partial RGLA (guaranteed) assets are currently challenging to access for insurers. By recognising the RGLA (partial) guarantees, long term RGLA guaranteed assets could become more attractive. Going beyond market dynamics, alignment of the two frameworks is particularly relevant in the context of bancassurance groups. Such alignment will ensure comparability and facilitate a less complex risk management processes, particularly in relation to use tests and internal models.	
Q4.1	**Q4.1: What are the most recent developments in the area of risk-mitigation techniques (RMT), in particular in the area of embedded derivatives and longevity risk transfer?** **General developments** Insurance Europe have observed reinsurance solutions which are being developed at European level that specifically address risk mitigation in excess of the BEL associated with such risk (eg for longevity, UP and MASS lapse). **Longevity/Indemnity Swaps** The standard products which have been used in eg the UK and Dutch markets take the form of indemnity swaps and longevity index-linked swaps. Such swaps are an arrangement between two counterparties to exchange fixed payments against variable payments linked to the number of survivors in a reference population. So far, deals have mainly involved pension funds and insurers providing annuity products who seek to hedge their exposure to longevity risk. This means that the variable payments in longevity swaps are driven by the mortality experience of each hedger (hence the name indemnity-based, or bespoke, longevity swaps). This type of transaction is essentially a form of longevity risk insurance, similar to annuity reinsurance in reinsurance markets. **Reserve Risk Covers/Adverse Development Covers (ADC)** Apart from the life solutions as explicitly mentioned by EIOPA, there are also trends affecting non-life reinsurance which is currently not sufficiently considered under the standard formula. For example, Insurance Europe members observe increasing interest in solutions mitigating reserving risk which has become a major contributor to the overall required risk capital under Solvency II's risk based regime compared to Solvency I.	

	Companies are particularly interested in Adverse Development Covers (ADC) which are an alternative way of transferring reserving risk; but which allow companies to effective manage the risk while maintaining liquidity and diversification. However, because the risk mitigating impact of an ADC is not recognised under the standard formula and has therefore largely been only implemented by companies using an internal model. In particular, smaller and medium sized companies that usually have a larger need for runoff portfolio / reserve risk solutions are affected. Without addressing the issue the standard formula will provide the wrong incentives by only supporting less effective solutions with respect to risk management and policyholder protection, eg runoff portfolio transfers.	
Q4.2	**Q4.2: For each RMT mentioned in the answer to the question above:** • **How do you define the RMT? Is there a legal definition?** • **How has the situation with respect to the RMT changed in the last years (in other words, what is ''recent'') ?** • **What is the materiality of the RMT for your undertaking/for your country/ in Europe (ideally measured on notional and SII values absolute and relative for all assets)? How has this materially changed over time?** **For RMT which do not meet the conditions set out in Article 208 and 215 of the Delegated Regulation:** • **Why does the RMT not meet the conditions for the recognition of risk-mitigation techniques for the standard formula calculation (please provide specific legal provisions)?** • **Why do you consider that the RMT should be recognised despite not meeting all the requirements? Why is the risk from not meeting certain requirements sufficiently low?** • **How would the requirements have to be altered to allow recognition of the RMT?** • **What is the effect from not recognising the RMT in absolute terms as well as relative to the overall SCR and the capital requirement for the relevant module or sub-module on the level of your individual undertaking/your country/Europe? When quantifying please follow to the extent possible the standard-formula methodology and explain in detail your methodology.** **For RMT that meet the conditions set out in Article 208 to 215 of the Delegated Regulation, but for which you are of the view that the risk-mitigating effect is not adequately reflected in the capital requirement:**	

	• **Why do you think that the risk-mitigating effect is not adequately reflected?** • **What is in your view the effect from this ''non-adequate reflection'' both in absolute and relative terms to the overall SCR and the capital requirement for the relevant module or sub-module on the level of your individual undertaking/your country/Europe? When quantifying please explain in detail the methodology** • **What change(s) would you propose?** **Longevity/Indemnity Swaps** Regarding longevity, the standard formula assigns the biggest SCR per unit of longevity risk for older lives, which is not where the longevity risk is concentrated. Even though the volume of such transactions has Growl recently, much of the market is heading out of the EU, as Solvency II capital charges are perceived as unnecessarily high. **Qualitative requirements for risk mitigation techniques** Insurance Europe is concerned with the practicalities around reinsurance contracts, the risk-mitigation effect of which would need to be scaled down in case of SCR breach by the entity which assumes the risk. More specifically, Insurance Europe does not believe that such scaling is possible in practice, given the availability of information to the ceding counterparty when it comes to reporting specifically to the regulator. Article 211(2) of the Delegated Regulation states that in the case of reinsurance contracts the counterparty shall be a (re)-insurance undertaking which complies with SCR requirements. If this (re)-insurer ceases to comply with the SCR requirements after the reinsurance contract has been entered into, *"the protection offered… may be partially recognised, provided that the…undertaking can demonstrate that the counterparty has submitted a realistic recovery plan"* and compliance with the SCR *"will be restored within the timeframe defined in the recovery plan"*. Then, the effect of the risk-mitigation technique is *"reduced by the percentage by which the SCR is breached".* These provisions are not practical: • The information of the ceding company is necessarily limited to published information with regard to its counterparty's SCR. The obligations to submit a recovery plan to the supervisory authority within 2 months of the notification date and restore SCR within 6 months do not require any public disclosure unless a "major development" occurs which, in relation to non-compliance with SCR only happens should the supervisor not obtain a realistic recovery plan from the reinsurance undertaking within 2 months of the notification date.	

	• The policy objective is to allow the reinsurer to fix the SCR non-compliance as a private matter between the reinsurer and its supervisory authority, outside of public view and without triggering collateral and termination provisions and avoid any pro-cyclical effects. Reducing the effect of risk mitigation by a percentage by which the SCR is breached is arbitrary and contradicts the perspective of recovery. • Furthermore, the ceding company is not in a position to "demonstrate" that the counterparty has submitted a realistic recovery plan. The supervisory authority is responsible for assessing the recovery plan of the undertaking; this plan has to be submitted only to the supervisory authority, on a confidential basis). • These provisions tend to increase pro-cyclicality as they incentivize ceding companies to request Termination Triggers based on SCR breaches (the right for ceding companies to terminate the contract if the reinsurer breaches its SCR). They can also induce ceding companies to request collateral, which is not the intention of the Directive, either at the beginning of the contract, or subject to SCR breaches, which would also increase pro-cyclicality. • The risk of counterparty default is already taken into account in the counterparty default risk sub-module. According to Article 189, exposures linked to risk-mitigation contracts, including reinsurance arrangements, give rise to capital requirement for counterparty default risk (they are considered as "Type 1" exposures). If a reinsurer is in financial distress, then its rating will probably evolve, so that the capital charge for counterparty default will increase for the ceding company. Article 211 of the Delegated Regulation should be modified to remove the misconceived provision requesting the ceding company to demonstrate that the counterparty has submitted a realistic recovery plan. A partial recognition of a reinsurance risk-mitigation technique should only be possible where a counterparty to a reinsurance contract has ceased to comply with its SCR based on its latest published solvency and financial condition report (SCFR) or any subsequent published intra-year update to the SCFR. **Financial RMTs** There is also a distinction between the use of reinsurance contracts (per Article 211) and financial instruments (per Article 212) as effective risk mitigation tools under Solvency II. It is not clear how financial instruments could be used to transfer underwriting risks. Article 212(4) requires that "where the risk-mitigation technique includes the use of financial instruments, the financial instruments shall have a credit quality which has been assigned to credit quality step 3 or better". This requirement is burdensome and not adapted to assess the reality of the risk transfer.	

	There should be no credit quality requirement for the use of financial instruments included in a risk-mitigation technique. **Recognition of finite reinsurance** As a framework based on sound economic principles, Solvency II should give priority to substance over form. Finite reinsurance is defined in Article 210 (3) of the Solvency II Directive. Article 208 (2) of the Delegated Regulation states that finite reinsurance contracts shall be recognized in the scenario-based calculations of the standard formula underwriting risk modules (Non-Life/Life/Health) only to the extent underwriting risk is transferred to the counterparty of the contract. However, finite reinsurance, or similar arrangements, where the lack of effective risk transfer is comparable to that of finite reinsurance, shall not be considered for the purposes of determining the volume measures (Articles 116 and 147 of the Delegated Regulation) for non-life and NSLT health premium and reserve risk or of calculating USPs "in accordance with Section 13"). The concept of risk transfer is not defined in the Directive nor in the Delegated Regulation (for instance, article 210 of the Delegated Regulation, on "effective risk transfer", does not explain the concept of risk transfer). There is a risk that the appreciation of the reality of risk transfer becomes highly subjective and formal, based on the qualitative analysis of the details and specific features of the contract (eg profit sharing arrangements or commissions, multi-year agreements etc), instead of considering if the risk exposure of the ceding company will effectively be quantitatively reduced. As stated in the IAIS 2012 report on reinsurance and financial stability, risk transfer transactions, typically known as "finite reinsurance", is "the most widely used product" amongst alternative risk transfer techniques and "supervisors test it for substance over form, requiring a significant amount of risk transfer in conjunction with appropriate disclosure mechanisms". The current Solvency II treatment is not consistent with an appropriate recognition of the potential risk mitigating impact of finite reinsurance contracts. Finite reinsurance should be appropriately treated as a risk mitigation technique. Finite reinsurance contracts should not be systematically excluded from being recognizable in the calculation of the non-life and other risk modules, but allowance should be given to the recognition of that contract to the extent risk is transferred under such transactions. Moreover, structured reinsurance contracts should not be automatically considered as finite reinsurance and disregarded based on formal considerations of the structure of the deal, without	

consideration of the reality of the risk transfer involved.

Adverse Development Covers (ADC)

1. Definition

A form of retrospective reinsurance in which the insurer cedes the claims development risk associated with policies from past underwriting periods. The reinsurer assumes the risk that the existing claim liabilities are deficient (ie reserve risk).

2. Latest developments

With the introduction of Solvency II non-life reserve risk has become a major risk capital driver, in particular for insurers that write long tail lines of business such as general third party liability. ADCs effectively address companies' reserve risk mitigation needs while maintaining non-life claims reserves on their balance sheets for liquidity and diversification reasons.

3. Materiality of ADC

According to EIOPAs report on QIS 5 more than 50% of non-life provisions of non-life undertakings relate to Motor third party liability (MTPL) and General Liability[1], which might after diversification roughly make up around 30% of the SCR for premium & reserve risk SCR. Indeed, these segments typically make up a higher portion for many smaller companies which would largely benefit from proper recognition of ADCs as an effective risk mitigation on reserve risk.

4. Additional information, suggestions, and examples

- ADCs comply with the qualitative requirements for risk mitigations.
- The risk mitigating impact of ADCs cannot be adequately reflected under the structure of the standard formula: The volume measure for reserve risk as defined under Art. 116.6 of the Delegated Regulation is understood as the current net best estimate reserves (as of last financial year-end). Any ADC providing coverage for adverse developments of incurred losses for the upcoming year (and thereafter depending on the contract terms) will not be considered.
- The following example demonstrates the impact of a typical ADC structure covering the MTPL segment. Assumptions and risk mitigation impact are summarised below:

Net reserves MTPL:	100m
ADC 22m xs 105m, cession to the	70%

reinsurer:	
Retention:	5
Up-front premium:	15% rate-on-line (15% x 70% x 22m = 2.31m)
Add. premium paid in three years if the reinsurance is not commuted:	10% rate-on-line (10% x 70% x 22m = 1.54m)
Impact on the BOF of reserve risk scenario as defined under the SF:	3 * 9% * 100 = 27m
Impact on BOF reserve risk scenario after ADC:	22m * (100%-70%) + 5 + 1.54m = 13.14m (note: since up-front premium is paid at the inception of the reinsurance agreement, 2.31m would already be subtracted from the insurer's own funds)
Risk mitigation effect of the ADC:	27-13.14 = 13.86m, ie 51% of reserve risk. This is not recognized under the current standard formula.

- Insurance Europe's proposed solution under Q 11.5 ("RM_other") supports adequate recognition of all types of ADCs. The advantage of this solution is that it can also accommodate other types of reinsurance that are currently not appropriately considered under the standard formula.

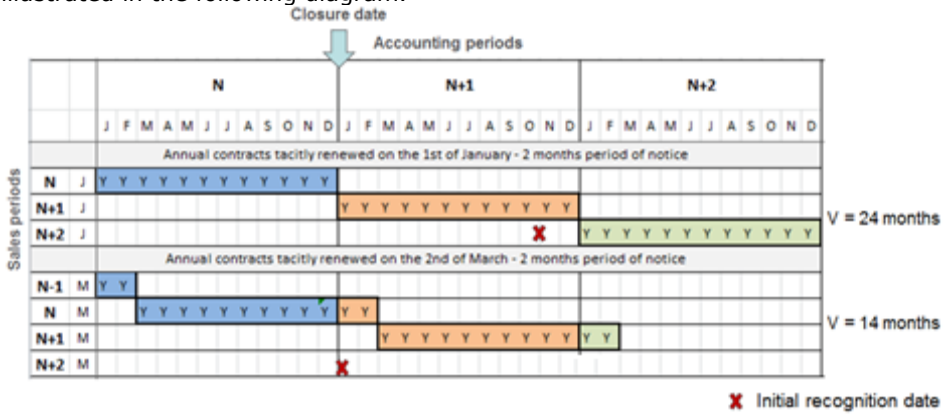
- An alternative would be to amend Article 117 just to address the recognition of ADC transactions. For example:

4. For all segments set out in Annex II, the standard deviation for non-life reserve risk of a segment shall be equal to the product of the standard deviation for non-life gross reserve risk of the segment set out in Annex II and the adjustment factor for non-proportional reinsurance. For all segments set out in Annex II the reserve risk adjustment factor for non-proportional reinsurance shall be equal to:

NPres = (A – (B – C) x D) / A

- ***A**: Impact on the BOF of reserve risk scenario as defined under the SF = Nominal best estimate net reserves x Standard deviation for non-life gross reserve risk of the segment x 3*
- ***B:** ADC recovery under reserve risk scenario = The lower of the following:*
  - *Nominal best estimate net reserves covered by the reinsurance structure x $(1 + 3 \cdot \sigma_{(res,s)})$ – Reinsurance structure attachment point*
  - *Reinsurance structure cover size*
- ***C**: Additional reinsurance premium or the equivalent thereof*

	○ ***D:*** *Cession to the reinsurer in %* **Rolling of derivatives** Insurance Europe has concerns about the minimum frequency of rolling allowed under Article 209 (3) (b). More specifically, the 3-month minimum rolling period requirement is too restrictive. It penalises monthly automatic hedge rolling, based on fully documented management rules (eg foreign exchange risk hedges). A more frequent rolling has the dual advantage of reducing basis risk and reducing cost. **Credit risk derivatives and basis risk requirement** • For risk mitigants such as credit risk derivatives, documented within the firm's risk mitigation policy, the current Standard Formula approach (Article 179 of the Level 2 text) is too onerous. It fails to recognise the risk mitigant entirely. In the best-case scenario, firms are required to hold credit risk capital in relation to the underlying assets (gross exposure). In the worst-case scenario (majority of cases), firms need to hold capital in relation to both the credit derivative and the underlying asset unless they can prove there is no material basis risk resulting in firms receiving a "double hit" for trying to implement a strategy to reduce risk (see second point below) and disincentivises risk mitigation. • Separately, the requirement around basis risk is inappropriate. It is difficult to prove that the basis risk related to a risk mitigation policy is not material. However, even if the hedge is not perfect, it will still provide a reduction in risk to a certain degree and this is not recognised in the current approach. **Profit and loss transfer agreements** Profit and loss transfer agreements between insurance companies and their parent companies (which also oblige the parent to ensure a sufficient equity position compared to the quantified risks) could duly be classified as a risk-mitigating technique. The underlying contract legally defines such profit & loss transfer agreements. Despite the risk mitigating text of the contract which is vital for subsidiaries (especially the introduction of the commitment to ensure sufficient equity) the risk mitigating effect can currently not be considered because of the impossibility to quantify it according to Solvency II standards. **Additional comments** • In life insurance, risk transfer to policy holders via cutting bonuses (the loss absorbing capacity of technical provisions) and diversification are both very significant risk transfer tools. • Furthermore, it should be ensured that the allowance of RMTs should not be more restrictive for IM users than for users of the standard formula. Recognized reinsurance types should be more regulated in a more granular fashion to fit the risk profiles of specialised insurers.	

Q5.1	**Q5.1: Should the definition of *FP(future,s)* that excludes 'the premiums to be earned during the 12 months after the initial recognition date' be changed to only exclude 'premiums to be earned during the following 12 months' ? Please explain why.** **No. Insurance Europe is of the opinion that changing the definition in such a way would extend the volume measure for one year contracts beyond the 1-year horizon. This would not be in line with the calibration objective of Solvency II (article 101(3)).** The current approach for measuring premium risk needs improvements to take on a number of issues: • Current premium measurement has flaws but EIOPAs proposed change would lead to an exaggeration of premiums. Insurance Europe has proposed simple improvements which should be tested. • Asymmetric treatment of capital requirements and future profit recognition – currently the expected profit priced into the future premiums is ignored, overstating the capital charge and leading to perverse incentives. Insurance Europe proposes an improvement which should be tested. Insurance Europe highlights the following points: • the proposed definition leads to a significant unfair treatment between undertakings. While the risks are the same, the differences in premium volume measure for annual contracts with tacit renewals can be substantial, up to 71%, depending on the renewal date. This is illustrated in the following diagram.  **The non-life premium risk driver is the variation in the claim events covered by the insurance obligations resulting from the premiums earned in N+1.** Making reference to the definition of the SCR (article 101 of the Directive), of the non-life premium risk (article 105 of level 1) as well as to the calibration that followed (December 2011 JWG report) and which all point out that the underlying exposure is meant to be equal to the premiums earned	

	in N+1. Against this background, an exposure equal to the premiums earned in the following 12 months (including the premiums of the new business written in those following 12 months) is required by the Solvency II Directive. Premiums earned in the 12 months following the next 12 months should not be taken into consideration. Unfortunately, currently a number of supervisors in Europe are requiring two years instead of one year of new business to be measured. Therefore, the definition of premium measure needs to be clarified to avoid this incorrect interpretation. • **given the current calibration of premium risk parameters**, it is important to count 1-year exposure, although possibly automatically renewed, with the premium of one year. In the existing definition, this fact is mostly considered, whereas the change of the definition as proposed would consider an exposure from 1.5 to 2 years depending on the local supervisors' interpretation of the SII texts. • feedback from companies indicates is mostly impossible for Non-Life insurance undertakings to select the "initial recognition date from the data systems' • EIOPA's proposed change in definition increases the capital requirements for non-life activities, notwithstanding the fact that the capital requirements for several non-life insurance activities already increased with the implantation of Solvency II. • **if the definition is changed despite of the abovementioned remarks, also the volatilities need to be recalibrated since they are calibrated using the current definition, ie a 1-year horizon for 1-year contracts.** • clarifications should be provided to avoid discrepancies regarding local interpretation. Example: • For a one year contract with renewal (initial recognition) in the beginning of month 12 of year n+1, the proposed definition would include 11 months of earned premiums in year n+2. In contrast, with the current definition, no earned premiums for year n+2 would be included, which is in line with article 101(3) of the Solvency II directive.	
Q5.2	**Q5.2: Do you have an alternative proposal for defining the premium risk volume measure? How does the alternative proposal effect the calibration of the risk factors for premium risk?** Yes, Insurance Europe asks EIOPA to investigate the following three alternatives addressing the premium flaws outlined in Q5.1: **<u>Alternative 1: removal of FP(future,s)</u>** As outlined in the response to Q5.1, the volume measure for the non-life premium risk should be equal to the premiums earned in the 12 months following the reference date (including the premiums of the new business written in those following 12 months). Nothing should be added in relation to premiums earned in the 12 months following the next 12 months.	

	Against this background, **FP(future,s) should be removed from the current formula for the volume measure for premium risk.** This should be at least the case for 1 year contracts. However, premium risk for pluriannual should also be reflecting correctly the SII directive definition. The non-life premium risk driver are the claim events covered by the insurance obligations resulting from the premiums earned in N+1. Irrespective the duration of the contract (annual or pluriannual), the formula aims at capturing a 1 out of 200 years volatility event. As such, it is not relevant to assume that the volatility scenario calibrated on the basis of a VaR(99.5%) would occur in several consecutive years. For annual contracts, the proposed change in FP(future,s) definition, implies an increase of up to 70% of the premium perimeter in comparison to the existing definition. For pluriannual contracts, the proposed change in FP(future,s) definition increases the premium perimeter by around 10% and confirms a large gap in comparison to the existing definition. . The proposed alternative is consistent with the current calibration of the risk factors for premium risk. **Alternative 2: Identify the maximum of actual premiums relating to the past 12 months and expected premiums relating to the following 12 months** To determine premium volume at reporting date end 2016 the definition should be: *Maximum of:* *Actual Premiums relating to 2016* *AND* *Expected Premiums relating to 2017* *Insurance Europe emphasizes that for one year contracts, although possibly renewed, only the initial single year should be included because the company can reprice to avoid any premium risk on renewals.* **Alternative 3: Proposal for exclusion of profit margin and consideration of loss absorbing effects** The volume measure should exclude the profit margin expected to be earned that is not recognized in the balance sheet. As premium risk covers fluctuations in the timing, frequency and severity of insured events, only expected claims (cost of insured events) should be included in the volume measure. Following a prudent approach the fluctuations of expenses are also included in the proposal below.	

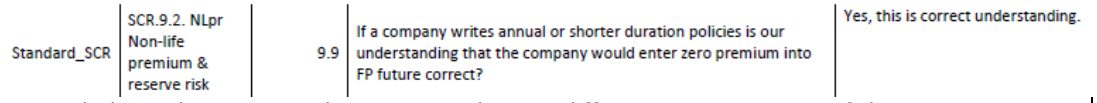
	Accordingly, the following definition of the volume measure for premium risk is proposed to be incorporated in article 116: 2. For all segments set out in Annex NLUR1, the volume measure for premium risk of a particular segment *s* shall be equal to the following: $$V_{(prem,s)} = CS_{(esisting,s)} + CS_{(future,s)} + FCS_{(existing,s)} + FCS_{(future,s)}$$ where: (a) *CS(existing,s)* denotes an estimate of the claims and expenses corresponding to existing premiums to be earned by the insurance or reinsurance undertaking in the segment s during the following 12 months; (b) *CS(future,s)* denotes an estimate of the claims and expenses corresponding to future premiums to be earned by the insurance or reinsurance undertaking in the segment s during the following 12 months; (c) *FCS*(*existing*,*s*) denotes the expected present value of claims and expenses corresponding to premiums to be earned by the insurance or reinsurance undertaking in the segment *s* after the following 12 months for existing contracts; (d) *FCS*(*future*,*s*) denotes the expected present value of claims and expenses corresponding to premiums to be earned by the insurance and reinsurance undertaking in the segment *s* for contracts where the initial recognition date falls in the following 12 months but excluding claims and expenses premiums to be earned during the 12 months after the valuation date. In addition, in order to appropriately reflect that not all fluctuations cause losses (eg due to variable commissions which may absorb the volatility of losses), an amendment of article 115 is proposed to include the buffer of profit margin not recognised in the balance sheet. This is in order to consider that Expected Profits in Future Premiums corresponding to future business is not included in the Balance Sheet: *Non-life premium and reserve risk sub-module* The capital requirement for non-life premium and reserve risk shall be equal to the following: $SCR_{nl\ premium\ and\ reserve} = 3 \cdot \sigma_{nl} \cdot V_{nl} - PM_{(future,s)}$ where: (a) σ_{nl} denotes the standard deviation for non-life premium and reserve risk determined in accordance with Article NLUR4; (b) V_{nl} denotes the volume measure for non-life premium and reserve risk determined in accordance with Article NLUR3. (c) $PM_{(future,s)}$ denotes the expected profit corresponding to future premiums corresponding. EIOPA is recommended to revise the definition of the premium measure for premium risk to address	

	the above-mentioned deficiencies. Insurance Europe notes that there are various other issues with adequate recognition of future premium which might lead to an overstatement of risk compared to own funds.	
Q5.3	**Q5.3: According to your assessment, would the change of the volume measure according to point 1 or, if applicable to point 2, have a material impact on the SCR? Can you quantify the impact?** Yes, Insurance Europe believes that changing the definition of FP_future would have a material impact on the volume measure for premium risk. For example, Insurance Sweden estimates the volume measure would increase by 30 %. This number could even be higher for some companies depending on the distribution of the written contracts during the following 12 months. A French estimate refers to a substantial impact between 5 and 15% on the Solvency II Ratio.	
Q5.4	**Q5.4: Should the definition of the volume measure for premium risk be reviewed in order to decrease its dependency on pricing strategies?** Yes, Insurance Europe believes that companies with a more conservative pricing strategy should not be penalised with a higher capital requirement. As this could lead to inappropriate risk management. Please see proposal below. Insurance Europe notes there are two issues regarding elements of the formula for determining the premium and reserve risk volume measure for NSLT. One issue concerns the rounding of the projection factor from 2.58 to 3, and the other issue is concerning overstating the measure. To address the first issue Insurance Europe proposes to use the correct projection factor, ie 2.58 and in order to resolve the second issue a cap could be introduced to the formula. The reasoning below provides a more detailed explanation of the issues and of the proposed solutions. At the same time, it should be noted that any adjustments made should not result in the standard formula not becoming appropriate for some insurers. *Background* Within Solvency II legislation for Health insurance a distinction is made between 'Not Similar To Life (NSLT)' and 'Similar To Life (SLT)'. For NSLT business, non-life approach for determining the underwriting capital requirements is used, whereas for SLT business the life scenarios are used. Capital requirements for non-Life insurance lines of business including NSLT health insurance (medical expense, income protection and worker's compensation) are based on the formula in which the volume factor is multiplied by a standard deviation which is again multiplied by a projection factor. This is done for each identified Line of Business. The projection factor and standard deviation for reserve risk and premium risk are pre-defined. *Projection factor* The projection factor serves to project the normal development of the premium- and reserve risk in order to obtain a VaR over a twelve month time horizon with a confidence of 99.5%. The formula for non-Life underwriting risk has not changed since the first QIS. For the QIS-studies EIOPA provided technical specifications which were based on the emerging views of the Solvency II legislation including need for options to be tested, the projection factor was equal to 2.58. In the Regulation	

	(2015/35) which was adopted in 2015, the projection factor was set equal to 3 rather than the earlier agreed upon 2.58. This change has neither been properly documented nor justified. This change amounted to an increase in the non-Life underwriting risk capital requirements of 16.3%. Insurance Europe believes the 2.58 is still justified and should still be used in order to calculate the capital requirements for Premium and Reserve Risk (non-Life underwriting risk and NSLT underwriting Risk). *Volume factor times Standard deviation-NSLT* The capital requirements for premium and reserve risk rely on the assumption that the claims can increase infinitely. Based on the premiums or best estimate value the standard deviation per LoB determined the capital requirement. For NSLT Health – medical expense this is not an appropriate assumption. Typically for medical expense the claim is only paid when health care has been provided to the policyholder, this implies there is a direct relationship between the ability to provide health care and the premium- and reserve risk incurred by the (health) insurer. However, the standard formula does not recognise this principle and assumes an infinite possibility to provide health care in a member state. Health insurance can be split in basic health care (either private, but in most member states financed by (partial) public means) and supplementary health care. The cover of Supplementary health care is mostly defined in quantity and quality. This implies that the actual costs can never exceed this pre-defined number and amount. This 'cap' is not recognised within the current approach for medical expense. The basic health care is provided by the medical infrastructure available in a country based on the local legislation enforced in each Member State. The extent to which medical infrastructure and medical cost financing is organised, defines how much the medical costs can increase over a twelve-month period. However, the possibility for an increase in reality is very limited. Within a twelve-month time horizon it is not possible to have fully operational hospital in place or to have new medical care specialists able to provide the health care demand as needed. This implies that the formula used to determine the capital requirements for Premium- and reserve risk will overstate the actual possible risk. *Solution* In order to accommodate for this "natural" boundary of the medical infrastructure a cap could be placed. This cap could be determined based on the extent in which the medical infrastructure is used or not per Member State. $SCR_{(NSLT,\ medical\ expense,\ pr)} \sim 3 * \delta_{NSLT} * V_{NSLT} * \tilde{N}_{Member_State}$ Where, $\tilde{N}$ = (1-max (0,use of medical cost infrastructure$_{t-1}$/ full employment medical cost infrastructure$_{t}$))	

	The Ñ should be determined by the NSA based on the same methodology throughout Europe based on statistical data as published by the national statistical agencies (or another organisation providing objective and transparent health data). **Approach to take into account expected profit to improve risk-sensitiveness** Currently in the case of unearned premium (ie premiums still to be collected corresponding to the time period remaining from contracts already written), the expected profits are included in the balance sheet, but no inclusion is given for future premiums on expected new contracts. If there is evidence that this is significant then the following approach could be considered to provide an estimate of the future profit to be added to own funds: Estimated profit on future premiums (EPFP) EPFP = 1- Average Combined Ratio for product segment s. Average combined ratio could be calculated from average of combined ratios from past [X] years for the segment, potentially weighted so latest year gets highest weighthing because it is the best indication of combined ratio for immediate future. Number of years could be 3 or 5, but longer than that is unlikely to be sensible. This leads to the following outcome for Expected Profit allowed (EP), which is to be added to the own funds: EP = P(future,s) * EPFP (to be added to own funds) Note that if the premiums for 2017 are used rather than 2016 then the existing profit from earned premiums should be deducted because otherwise there is double counting. Since the risk will be measured based on expected premium for 2017 along with expected profit for 2017 and some of the expected profit relating to 2016 premiums. In addition, concerning pricing strategy, the standard formula could take into account management actions, in particular the ability of insurance undertakings to adapt their pricing strategy related to new business underwriting.	
Q5.5	**Q5.5: Have you noticed any other issues regarding the definition of volume measure for premium risk? If yes, please provide details and concrete suggestions for addressing the issues.** Yes, the standard formula premium volume measure is based on the larger of the last 12 and future 12 months of net earned premium (NEP). Cedants have the option of using the future 12 months NEP as an alternative, but must agree to a cap on earnings. This has the potential to limit the recognition of any new cession or increase in cession in the first year. Therefore Insurance Europe proposes a	

	clarification of the formula for the volume measure through an amendment to DA Art. 116(5). "Where P(last, s) is higher than Ps due to the insurance or reinsurance undertaking extending or entering into new reinsurance contracts, P(last, s) should be calculated as though the reinsurance contracts were in place during the last 12 months." As acquisition costs are not sensitive to claims volatility, Insurance Europe suggests that insurance undertakings that are able to isolate the acquisition costs from the other costs (sensitive to claims volatility, ie claim management costs) may exclude these costs from the premium volume. Additionally in case distribution costs payment would be linked to the claim result, Insurance Europe proposes that insurance undertakings are allowed to take into account the risk mitigating impact of these schemes. Example: Some supervisors have a different interpretation than EIOPA with regard to 'the volume measure for premium risk of a particular segment', in order to calculate the non-life underwriting risk. The general interpretation is that only multi-year contracts are in scope, and not annual contracts, whereas these supervisors state that even annual contracts with tacit renewals are in scope. These supervisors were requested to reconsider their point of view and to liaise with EIOPA and other European Supervisors (NSAs), in order to ensure that a common, reasonable and especially harmonized interpretation across Europe is retained by all supervisors. ▢ *Impact:* This interpretation issue can have a substantial impact (between 5 and 15%) on the Solvency II Ratio. ▢ *Article 116 of SII Delegated Regulation:* The volume measure for premium risk of a particular segment *s* to be taken into account in the calculation of the non-life underwriting risk shall be equal to the following: V(prems,s)=max[Ps;P(last,s)]+FP(existing,s)+FP(future,s) where: (a) Ps denotes an estimate of the premiums to be earned by the insurance or reinsurance undertaking in the segment s during the following 12 months; (b) P(last,s) denotes the premiums earned by the insurance or reinsurance undertaking in the segment s during the last 12 months; (c) FP(existing,s) denotes the expected present value of premiums to be earned by the insurance or reinsurance undertaking in the segment s after the following 12 months for existing contracts; (d) FP(future,s) denotes the expected present value of premiums to be earned by the insurance and reinsurance undertaking in the segment s for contracts where the initial recognition date falls in the following 12 months but excluding the premiums to be earned during the 12 months after the initial recognition date.	

	The issue is related to the interpretation of component (d) of this formula: Following the industry perspective component (d) concerns the multi-year contracts and does not concern annual contracts. This interpretation was confirmed by EIOPA in its Q&A document for the preparatory exercise in 2014 (see document attached). 'QA for preparatory phase technical specifications set 8 premiums and reserves NL issue':  Nevertheless, the concerned supervisors have a different interpretation of this component: They considers this component should cover the guarantees in the contracts (even annual contract with tacit renewals) that engage the insurer including engagements for the year N+2.	
Q5.6	**Q5.6: According to your assessment, would the change of the volume measure according to point 6 or, if applicable, according to point 7, have a material impact on the SCR? Can you quantify the impact?** *Note to EIOPA: There appears to be an error in the wording of this question as it refers to points 6 and 7 instead of 4 and 5.* Insurance Europe believes the difference in scope between SCR and technical provisions could have a large impact on the solvency ratio. For the reinsurance market, overall EU non-life reinsurance market size is around USD 35 billion. Proportional business tends to be dominated by mid-sized and smaller companies who are more likely standard formula users. The impact for an individual cedant can be easily quantified by multiplying the cession rate of the new quota share with the volume measure for any segment covered under the reinsurance.	
Q6.1	**Q6.1: Do you have evidence that standard parameters of other lines of business should be recalibrated? If yes, please provide a comprehensive justification, supporting evidence including data and examples and a materiality assessment. Please note that only evidence and materiality assessment relevant at European level will be considered.** Insurance Europe supports recalibration of the areas identified by EIOPA and does not see a need for recalibrations beyond this list. Following the gathering of data from undertakings, Insurance Europe supports a transparent process for the recalibrations, as well as impact assessments to be carried out before calibration reviews. Importantly, recalibration should not be performed with an intention to (and should not lead to an	

Standard_SCR	SCR.9.2. NLpr Non-life premium & reserve risk	9.9	If a company writes annual or shorter duration policies is our understanding that the company would enter zero premium into FP future correct?	Yes, this is correct understanding.

	automatic) increase in SCR. Insurance Europe currently does not see a need to change the parameters for the other lines of business than the ones identified by EIOPA. It would be too early in the process to recalibrate the parameters, as Solvency II was only implemented in January 2016. However, for assistance, credit and suretyship and even for non-proportional reinsurance, there is a clear need for review of calibrations, considering figures based on collected data by EIOPA from market. Insurance Europe is of the opinion that national specific parameters could be an alternative solution, if there is no clear evidence for an appropriate common and harmonized calibration at European level, due to significant differences between markets.	
Q7.1	**Q7.1: Should the specifications for the capital requirement for natural catastrophe risk be simplified? How?** Yes, Insurance Europe believes there is scope to simplify the specifications for the natural catastrophe risk capital requirement, in a way that also supports increased usability and reliability of the standard formula. Any emerging proposals by industry and/or supervisors should therefore be assessed against the objective of simplicity, while also aiming to avoid unnecessary implementation costs for insurers. Simplification can be further justified on the grounds of proportionality where entities have immaterial exposure to specific types of risk in a region. With respect to simplifications for the capital requirements for nat cat risk, Insurance Europe believes that one approach could be to aggregate zones where those zones are exposed to similar levels of risk. Another approach could be to aggregate zones at country level for each peril. These approaches are discussed further in the response to Q7.2. In addition, an approach aimed at modelling scenarios by line of business and peril could be investigated. Concretely, the modelling should be based on LoBs and perils instead of only perils. This would better align the design of the standard formula to the way in which insurers segment risks in their underwriting activities. By aggregating LoBs per peril it would still be possible to apply reinsurance per peril. This approach would require, as a first step, an investigation for each LoB of whether segmentation into zones is appropriate. For example, for LoB 6 and 18 (MAT) a segmentation is not feasible as the risks are not necessarily located at the contractual address, particularly for moving goods. In fact, a regional segmentation in zones would not be appropriate/feasible for every country. Insurance Europe proposes below a modelling approach. The geographical spread/extent (neighbourhood, distance, location) of a 1-in-200 year event can be mapped to a matrix. Such a matrix models "concentration" and comprises some special cases: a) $AGG = (1_{ij})$ then CAT_{peril} = weighted sum of *TIV*	

b) $AGG = \begin{pmatrix} I & \Theta \\ \Theta & I \end{pmatrix}$ with submatrices $I = (1_{ij})$ and $\Theta = (0_{kl})$ where the regions i,j are totally dependent but losses in regions k,l are uncorrelated from i,j

Calibrating the aggregation matrix AGG can be done widely independently of sum insured and loss data (either historical or synthetic). And this calibration may be independent from data/systems used in calibration of F_r **and** Q_{CTRY} **.**

c) Calibrate AGG by assuming an elliptical regional expansion of a 1-in-200 year event. The cells in AGG measure a combination of distances and tracks.

A simplified formula for AGG could be eg $AGG_{r,c} = \exp\left(-\frac{distance(r,c)}{D}\right)$ with an appropriate constant D, where D may be chosen per peril and a higher D models higher correlation (eg $D = 100$ for hail or $D = 600$ for windstorm). This, however, is not applicable to flood risks.

Insurance Europe proposes further simplifications for consideration:

- For undertakings with little exposure in non-EEA countries (eg less than 10% of total premium income) the treatment of the nat cat risk sub-module for non-EEA countries can be difficult due to the required split of premiums by perils. For these undertakings, an approach which combine all perils together could be investigated.

- The existence of standard correlations between the different natural perils is another source of complexity while applying the reinsurance covers which can cover multi-perils per event. The definition of several clear scenarios mixing the occurrence of different perils could be a source of simplification due to an easier application of reinsurance without any interpretation and correlation treatment. Insurance Europe is investigating specific proposals to address this issue.

Insurance Europe also notes a suspected technical inconsistency in EIOPA's Guidelines on application of outwards reinsurance (EIOPA-BoS-14/173). Guideline 8 on disaggregating the gross loss to individual countries or other components allows the application of (certain) reinsurance covers after the allocation of diversification benefits where this is consistent with how the reinsurance works economically. The examples in the technical annex are of cases which apply when companies need to disaggregate gross losses to a finer granularity for reinsurance application in order to re-aggregate net losses (for example, in the case of country or business unit specific covers).

Insurance Europe agrees that companies should have the freedom to choose either method 0 or method 1 for re-aggregation (as described in the annex) if the chosen method can be justified.

	However, there is a risk of the spread method being applied in circumstances which arguably cannot be justified on prudential grounds. For example, if the spread method is applied after the capital charges for individual perils have been aggregated, eg to the overall nat cat capital charge (after diversification) which is then allocated back to the different perils, these capital charges are no longer consistent with the gross loss related to the 200 year nat cat event as defined under the standard formula. Using the spread method to adjust for a Cat XL which provides cover on an event basis would underestimate the severity of the 200 year loss. There appears to be some confusion from differing interpretations of "aggregate covers" as referred to in the technical annex, which is not clearly defined. Further clarification on the conditions of application of the spread method and in particular the definition of "aggregate cover" in EIOPA guidelines would be welcome.	
Q7.2	**Q7.2: Should there be simplified calculations for the calculation of the capital requirement for natural catastrophe risk? Could the grouping of zones or regions serve as an alternative for simplifications? If yes, which approach to aggregation would you envision as more adequate: computing the SCR straightforward from region-level, or aggregate currently existing zones where the risk is deemed to be sufficiently similar? What other simplifications could be used?** As noted in the answer to question 7.1, Insurance Europe is supportive of further investigation into the grouping of zones as an optional (rather than mandatory) approach to simplifying the calculation. This may be particularly relevant for smaller insurance entities on the grounds of materiality. Similarly, further investigation of the most appropriate method of aggregation is required. The **aggregation of existing zones** into areas of sufficiently similar risk would be more transparent from a reinsurance perspective. Impact studies should be undertaken on any newly defined areas. In addition, a recalibration between border countries should be investigated, with the objective of improving the reliability of the standard formula. An example of such a situation is the "country" coefficient corresponding to storm risk, for Portugal and Spain. CRESTA factors by province in Spain for storm risk indicate that this risk is greater in the northwestern area and decreasing in the southeast direction. This indicates that the storms in Spain come by the Atlantic, so that the country factor of Spain should be similar to Portugal. With respect to **aggregation at regional level**, EIOPA should investigate current market practice and industry segmentation of sums insured across zones. The existing zone risk factors and correlation coefficients could then be used to apply to country level sums insured. The resulting regional level risk factors could be used as a simplification for entities where their portfolios do not materially deviate from the industry portfolio. This approach could also be applied on the basis of proportionality for entities that do not have material exposure to a particular region.	

	For undertakings with little exposure in non-EEA countries, a possible simplification could be to eliminate the approach by peril and to deal with this risk sub-module at the same level as nat cat risk sub-module. The new formulae would be : $SCR_{NatCat} = \sqrt{\sum_i SCR_{EEA,i}^{\ 2} + SCR_{non_EEA}^{\ 2}}$ With i = windstorm, hail, flood, earthquake and subsidence And $SCR_{non_EEA} = \beta \times (0{,}5 \times DIV + 0{,}5) \times P_{NatCat}$ With β to be calibrated P_{NatCat} : premiums relative to all natural Catastrophes events in regions outside EEA. In addition, some annexes in Delegated Regulation are not consistent, for example: • Annex IX – duplication of postal codes in „Mapping of risk zones for the Republic of Slovenia" (page 249 in OJ EU L12/2015). • Annex X – „Risk weights for earthquake risk" are the same and in the same order as for the Stress test/QIS V, although the order of the risk zones is changed (page 255 in OJ EU L12/2015). • Annex XXIII – „Correlation coefficients for earthquake risk in the Republic of Slovenia" are the same and in the same order as for the Stress test/QIS V, although the order of the risk zones is changed (page 547 in OJ EU L12/2015). • Annex X - „Risk weights for flood risk" are the same and in the same order as for the Stress test/QIS V, although the order of the risk zones is changed (page 258 in OJ EU L12/2015). • Annex XXIV – „Correlation coefficients for flood risk in the Republic of Slovenia" are the same and in the same order as for the Stress test/QIS V, although the order of the risk zones is changed (page 655 in OJ EU L12/2015).	
Q7.3	**Q7.3: Please describe the main challenges faced when calculating the windstorm risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** The main challenges faced when calculating the windstorm risk submodule include: • The resources required to allocate the risk across the prescribed risk zones. • The factor-based approach applied to non-EEA exposures, which is unduly onerous. • Fulfilling the ORSA requirements, given the lack of transparency on the calibrations as well as the difference between the design of the standard formula (based on perils) and the market practice (based on perils and LoBs).	

	Regarding the allocation of risk into zones, it is currently challenging and time consuming to map the sum insured to the correct risk zones. Particular challenges emerge in the case of: • LoB 6 and 18 (marine, aviation and transport insurance), where risks are not necessarily located at the contractual address. • Business risks in LoB 7 and 19 (fire and other damage to property insurance). • In Sweden generally as there is no direct one-to-one match between postal codes and risk-zones (note that definitions for Sweden in Annex IX complicates matters further since it refers to zoning being based upon both postal codes and administrative units). The windstorm risk factors for some of the regions in Sweden are unreasonably high, not consistent with empirical data and should be reviewed. For example, the storm risk factor for the county of Jämtland is the highest in Europe. A potential simplification of the sub-module would be to develop regional level risk factors as explained in Q7.2. **The factor-based treatment of non-EEA exposures is onerous**. Improved risk sensitivity may be achieved through the use of a scenario based approach. In addition, some territories, such as Canada, could be split into smaller regions to increase the risk-sensitivity of the standard formula. **A number of difficulties in fulfilling the ORSA requirements** are caused by the currently missing documentation on the calibrations of the applied factors and correlations, by the lack of recognition of national specificities, by the fact that the current model is based on a simple average assumption etc. These make it impossible for undertakings to estimate whether their risk profile deviates from the assumptions underlying the standard formula.	
Q7.4	**Q7.4: Please describe the main challenges faced when calculating the earthquake risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to response to Q7.3. Specific examples of where the calculation of earthquake risk can be challenging are the correlation matrices which are not useful and can be erratic, for example in Germany. As seismic exposed areas in a specific country are well known, dependencies between zones of not exposed areas are not helpful. A relativity vector is sufficient. For smaller countries, one-region factor should be an available simplification and further investigated.. Evidence of historical events and their related losses, as well as the results of evaluations carried out by specialised software, show strong miscalibration of the earthquake submodule for Italian exposures. This suggests that the standard formula does not adequately incorporate the presence of policy conditions (indemnity limits and deductibles) in the Italian risk portfolio (the average	

	contractual limit is less than 30% of the sums insured). The reinsurance and CAT bond markets similarly reflect a risk assessment inconsistent with that expressed by the standard formula.	
Q7.5	**Q7.5: Please describe the main challenges faced when calculating the flood risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to answer to Q7.3. Evidence of historical events and their related losses show miscalibration of the flood risk submodule for Italian exposures. This suggests that the standard formula does not adequately incorporate the presence of policy conditions (indemnity limits and deductibles) in the Italian risk portfolio (the average contractual limit is less than 30% of the sums insured). There have been a number of developments in flood risk in motor portfolios over recent years which justify a recalibration. For certain countries, such as Germany, flood risk for motor portfolios can be considered to be a very minor risk and not a catastrophe risk. A possible simplification would be to disregard LoB for this submodule.	
Q7.6	**Q7.6: Please describe the main challenges faced when calculating the hail risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to answer to Q7.3. Hail risk is primarily a risk for the structure of a property rather than contents of the property, insured sums of content often include goods whose value is high (for example jewelry). Insurance Europe believes there is scope to remove or reduce the value of the exposure of contents in the calculation of the total sum insured for the purposes of calculation of compulsory capital. The frequency of hail storms in some countries, such as Slovenia, justify the recalibration of this submodule. Evidence of historical events and their related losses also shows miscalibration of hail submodule for Italian exposures. In line with the response to Q 7.1, a calculation based on both LoB and peril with separate parameters for motor, property and MAT risk would take into account the different risk situation of the LoBs. In this case the random selection of the factor 5 to multiply the sum insured for aggregation purposes could be dropped.	
Q7.7	**Q7.7: Please describe the main challenges faced when calculating the subsidence risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.**	

Q7.8	**Q7.8: Do you have any suggestion to improve the risk-sensitivity of the natural catastrophe risk sub-modules? If yes, please provide a cost-benefit analysis.** Insurance Europe is fully supportive of appropriate recognition and measurement of risk sensitivity in the Solvency II framework. However, in the particular area of nat cat, achieving the greatest possible level of risk sensitivity in the standard formula may be challenging, not least because company exposures differ across zones, number of contracts, highest exposures, reinsurance programs etc. Instead, it may be easier to achieve a better reflection of the very own risks of a company in the ORSA.	
Q7.9	**Q7.9: Do you have any evidence that suggests that average contractual limits per country and per peril have changed since 2010? If yes, what would be the impact of taking these new average contractual limits on the SCR of the natural catastrophe sub-modules?** Many of our members note that there is no evidence that average contractual limits have changed since 2010. However, one member has noted that their regulator has forbidden the application of recital 54 of the Delegated Regulation arguing that the contractual limits were already incorporated into the calibration for the Czech Republic. Insurance Europe supports a transparent recalibration of this part of the standard formula to enable the use contractual limits. As noted in the response to Q7.4 and Q7.5, average contractual limits for flood and hail risks in the Italian market are very low (less than 30% of sums insured). There is evidence to suggest a recalibration of these risks is required.	
Q7.10	**Q7.10: In the recent years, did insurance undertakings have to face such cases of windstorm clustering events? How often did it occur? What was the estimated cost of such a clustering of events?** Examples of windstorm clustering events in different countries are detailed below: **Spain** The biggest storms or at least those that have been considered as catastrophic and where the *Consorcio de Compensación de Seguros* has intervened main way are as follows: • Delta (November 2005) • Baleares (October 2007) • Klauss (January 2009) • Floora (January 2010) • Xynthia (February 2010)	

	• Gong (January 2013) • Dirk (December 2013) • Cataluña (December 2014) The amount paid for these storms was high, but in the majority was assumed by the *Consorcio de Compensación de Seguros*. **Germany** • Daria (January 1990) • Hertha (February 1990) • Vivian (February 1990) • Wiebke (February/March 1990) • Anatol (December 1999) • Lothar/Martin (December 1999) **Sweden** Data shows no indications of windstorm clustering in Sweden that results in a significant amount of insurance claims. Insurance Europe members see no reason to add another windstorm event to the stress. The capital requirement is already higher than the effect of any storm seen to date. **United Kingdom** Nat cat events in the UK have been limited in number over recent history and have not been of sufficient frequency and magnitude to provide conclusive evidence of windstorm clustering. Recent low intensity storm clusters have mainly resulted in flood losses as opposed to windstorm clustering.	
Q7.11	**Q7.11: Is this specific risk taken into account in insurance contracts and reinsurance treaties?** Vendor models are used in the reinsurance purchase process. These models have an allowance for windstorm clustering and clustering is considered when deciding the number of reinstatements to include in a reinsurance treaty, for example. In Spain, some natural catastrophe risks are covered by the Consorcio de Compensación de Seguros, so the entity is not exposed. The risks that are not covered by the Consorcio, are guaranteed by multi-risk policies, and in turn are reinsured with both proportional and non-proportional contracts.	
Q7.12	**Q7.12: Would you consider the risk of windstorm clustering as material at European level?** While vendor models often embed clustering, this does not provide proof of a material impact.	
Q7.13	**Q7.13: If you confirmed the materiality of the issue, how would you suggest taking into account a third windstorm event? Please explain if your proposal increases the complexity of the calculations and provide a cost-benefit analysis.**	

Q8.1	**Q8.1: Please describe the main challenges faced when calculating the motor vehicle liability risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** The calculation of the motor vehicle liability risk sub-module is straightforward and requires no simplification. However, for all man-made catastrophe risks, there is currently no consistent model but rather a collection of scenarios of divergent complexity. Insurance Europe proposes a consistent and homogenous approach across all LoBs is considered which takes into account the non-linear relationship between risk exposure and company size. A transparent calibration should reflect different covers and legal frameworks for each country. As mentioned in the response to Q7.1 it would also be appropriate to perform the modelling of man-made catastrophe risks based on LoBs (motor, liability, fire/property, …) or sub-LoBs (marine, aviation, transport → MAT, LoB 6 and 18; fire property, fire industry → fire, Lob 7 and 19). The intention is to develop one closed formula for all man-made risks (for all LoBs) with Solvency II principles met (requirement of Article 101 (3) of the Solvency II Directive), the calibration of the parameters reflecting the underlying risk and the capital requirement of an insurer being calculated based on the involvement and individual risk exposure. To achieve this catastrophe losses (as 1-in-200-years events) should be defined on the level of the total market per LoB and should then be broken down to the individual company by means of the insurer's individual involvement. For man-made catastrophes, the insurer's involvement can be calculated using a non-linear function depending on the above mentioned market loss, the market share of the company and a fixed lower threshold. Specific circumstances should be considered separately (eg using partial internal models). Even though cover within a LoB generally comprises different causes of loss, all considerations are made irrespective of the cause of the loss. Insurance Europe proposes below a modelling approach for all man-made cat risks. The first step is to calculate the (gross) company involvement VU_{200}. This term includes the one year safety level of 99.5 % to meet the requirement of Article 101 (3) of the Solvency II Directive. It is	

dependent upon the size of the company, the 200 years' market loss M_{200} and a lower threshold u.

To get closer to the term „company involvement" the following considerations are based on the idea that the amount of the 1-in-200-years' event for a company is equal to the 1-in-$200 \cdot c$-years' event of the total market:

$$VU_{200} = M_{200 \cdot c}.$$

Therefore a company with $100 \cdot c$ % market share with respect to the risk exposure (0 < c < 1) is considered. So the insurer's involvement is a non-linear function of the market share c, which depends only on the exponent of the Pareto-distribution and the "annuality" t_u of the threshold u. This can be interpreted as the estimate of the recurrence interval for losses above u:

$$VU_{200} = u + (M_{200} - u) \cdot f(c) \quad \text{with} \quad f(c) = \frac{\left(\frac{200 \cdot c}{t_u}\right)^{\xi} - 1}{\left(\frac{200}{t_u}\right)^{\xi} - 1}.$$

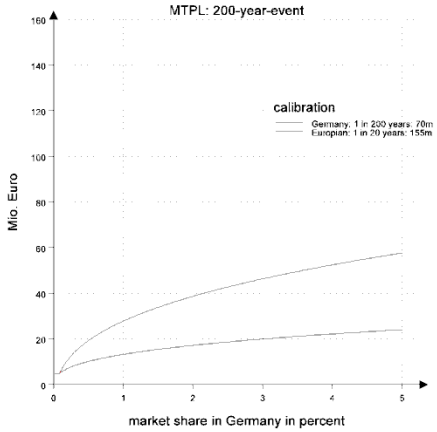
This allows a wide scope for in setting the threshold u and the exponent $\alpha = 1/\xi$ to accommodate the specific characteristics of the data.

The threshold u and the exponent α of the pareto distribution should be defined initially by approximation, supported by expert knowledge which takes into account the total amounts of losses of catastrophes observed in the past. For LoB or countries where there is insufficient data available, expert judgement would have to be used to define the exponent and the 1-in-200-years market loss.

The calculated gross company involvement can be interpreted as the 1-in-200-years claims burden of the following year. To allow for a specific reinsurance program for the undertaking this gross loss can be interpreted as a single loss (high-severity-low-frequency event) or a cumulative loss (high-frequency-low-severity event) depending on a specific LoB. The calculation of the net loss would need to allow for the impact of different reinsurance programmes on these losses.

Calibration of the model for every LoB would be required and could be undertaken at regional/country level or as a Europe-wide initiative. The granularity of the calibration requires further investigation but should include considerations such as the regulatory framework of individual countries, contract

	design and insurance density of the risk.	
Q8.2	**Q8.2: Please describe the main challenges faced when calculating the marine risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to the response in 8.1	
Q8.3	**Q8.3: Please describe the main challenges faced when calculating the aviation risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to the response in 8.1	
Q8.4	**Q8.4: Please describe the main challenges faced when calculating the fire risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive. Please also refer to section 8.4 dedicated to fire risk.** Please refer to the response in 8.12	
Q8.5	**Q8.5: Please describe the main challenges faced when calculating the liability risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to the response in 8.1 Classification of premium into the given liability risk groups can be challenging. An important difficulty lies in classifying the types of civil liability in those established in the standard formula.	
Q8.6	**Q8.6: Please describe the main challenges faced when calculating the credit and suretyship risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please refer to the response in 8.1	
Q8.7	**Q8.7: Do you have evidence that the SCR for a specific man-made catastrophe risk is not appropriately calibrated (please also refer to section 8.4 for fire risk)? If yes, please provide the following information, mentioning the particular risk to which the answer is referred:** **What is the evidence that the risks are currently not well calibrated?** **- Historical experience (if yes, please report the events)** **- Internal model (if yes: source of expertise)** **- Any other evidence (if yes: please specify)** **What is the source of the incorrectness in your opinion (parameter, volume measure, scenario, etc.)?**	

	Could you provide evidence of the materiality of the incorrect calibration? Ideally, this evidence should be based on a comparison with the current capital requirements for the same volume measures, and it should be backed by statistical analysis. Insurance Europe does not believe that the SCR for man-made cat risk is appropriately calibrated. In addition, there is a lack of transparency on the calibration factors for sub-risks in certain sub-modules which makes it difficult to assess the level of calibration in each country for the application of risk mitigation. An example is the fire sub-module. With respect to motor insurance, parallel calculations between the current calibration and capital requirements derived from the model detailed in Q8.1 provide the following comparison which shows the conservatism of the current calibration.  The current calibration is based on a "Selby-like" event with 155 m€ as the 1-in-200-years event. The calibration derived from the model outlined in Q8.1 provides a value of 70 m€ as the 1-in-200 year event. Both assumptions are made based on expert judgement but the German calibration additionally includes experience of claims data in Germany over the last 40 years. The source of incorrectness defining the "catastrophic event" in this case is the use of only expert judgement without taking into account appropriate claims data. Regarding the credit and surety risk submodule it is not appropriate to simply separate recession risk from the premium and reserve risk. Company defaults cannot be classified as recession drivers versus	

	defaults which would have occurred anyway. The industry has established risk management processes and tools to deal with recession (dynamic exposure management), which should be appropriately accounted for in the recession risk charge.	
Q8.8	**Q8.8: Should the calculation of the capital requirement for marine, aviation and fire risks be modified to address the issue outlined above? Do you foresee any practical difficulties when the calculation is modified? What would be the impact of the modification on the size of the capital requirement?** The proposed modification to the calculation of the capital requirements for marine, aviation and fire risks would address the issues outlined and arguably increase the risk sensitivity of the calculation. However, it is questionable whether the increased risk sensitivity justifies the additional data and calculation requirements. Further investigation into this change in approach is needed. It should also be noted that ORSA reporting requirements, amongst others, mean that national supervisors already have access to the full details of an insurer's reinsurance programme which would enable them to identify these issues if there were concerns.	
Q8.9	**Q8.9: Does the fire risk sub-module of the standard formula produce capital requirements in line with the calibration objectives of Solvency II? Please provide evidence for your assessment.** No, Insurance Europe does not believe that the fire risk sub-module is appropriately calibrated. It produces an overly conservative measure of risk and is not in line with the measures used by undertakings in their underwriting process. There is no evidence that the existing calibration meets the requirements of Article 101 (3) of the Solvency II Directive. Specifically, a loss equal to 100% of the largest sum insured within a 200m radius is extremely unlikely, well beyond the intended 99.5% calibration.	
Q8.10	**Q8.10: If not, how should the loss scenario of the sub-module be changed to ensure consistency with the calibration objectives:** - **Changing the impact radius of 200 meters referred to in Article 132(2)(b) of the Delegated Regulation?** - **Modifying the loss from 100% of the sum insured to a lower percentage of sum insured?** - **Modifying the loss by using probable or possible maximum loss (PML) instead of sum insured in the loss definition?** **Any other way?** To bring the calibration in line with the Solvency II objectives Insurance Europe would be supportive of investigation in to changes to the calibration which could involve:	

	• Reduction in the impact radius to a level below 200m. • Modifying the loss as a percentage of the sum insured. • A combination of the two above methods. The use of PML (or other similar) measures to improve the calibration of the submodule has several merits but also some drawbacks. These measures are used extensively as part of the underwriting and risk management processes and are generally readily available. They arguably improve the risk sensitivity of the calculation as they are derived with consideration to construction material, the use of firewalls and other preventative measures. Their use would also alleviate the potential issue of insurers having to purchase facultative reinsurance for certain top-risks with the sole aim of minimizing capital requirements. However, using PMLs introduces an element of subjectivity into the calculation which could be considered inappropriate for a prescriptive calculation. It further introduces the potential to reward underestimation of risk as low PMLs will translate into lower capital requirements (although the long run impact on reinsurance pricing would likely deter this practice). As noted in the discussion paper, there is also no common definition across the industry which is a disadvantage to the current approach. Insurance Europe welcomes further investigation into the use of PML (or similar measures) as part of a more risk sensitive calculation. Their introduction would require careful recalibration, clear definition and an appropriate supervisory process to ensure their limitations were appropriated reflected in the submodule. The background information in the discussion paper also discussed the use of multiple levels of damage which would be dependent upon the distance from the core of the fire. This would increase the complexity of the calculation from an already high starting point without materially increasing the risk sensitivity and would be an unwelcome development. It is crucial that any changes are true simplifications, do not result in significant implementation burden and are clear in their definition.	
Q8.11	**Q8.11: In case PMLs should be used instead of sums insured in the loss scenario** - **How should PML be defined?** - **Is there evidence on the reliability of PML estimates?** - **Does the definition ensure an objective and consistent determination of PMLs across undertakings and jurisdictions?** - **How can supervisors assess the appropriateness of the PMLs estimates?** As noted in response to Q8.10 Insurance Europe welcomes further investigation into the use of PMLs	

	and other similar measures.	
Q8.12	**Q8.12: Does the calculation of the fire risk sub-module need to be simplified? Please specify the parts of the calculations that are too complex or burdensome and explain why. Please suggest concrete changes to simplify the calculation.** The main challenge in the calculation of the fire risk sub-module is the determination of the gross exposure within the prescribed 200m radius. This information is typically unavailable for insurers in this format and often requires significant manipulation of data. This creates a unneccesary burden for the (re)insurer and also results in approximations which reduce the risk sensitivity of the calculation. A simplification would be to use an alternative, but more easily accessible, exposure measure. One approach could be to use the (re)insurer's largest single exposure, perhaps with an adjustment to reflect the possibility of conflagration, calibrated based upon habitation density. .Alternatively, zones could be specified, not unlike with natural catastrophe but more granular, and the largest concentration of these zones determined.	
Q9.1	**Q9.1: Would a change in the standard formula be justified with respect to the materiality of the terror risk?** No, Insurance Europe does not believe there is justification for a change in the standard formula with respect to the materiality of terror risk.	
Q9.2	**Q9.2: The scenario chosen to calibrate the mass accident risk was based on a footprint for a 10-ton truck bomb, the largest bomb modelled, causing fatalities and serious injuries within the largest arena in a given country. Does this calibration properly capture terror risks? If no, please provide suggestions and indicate if these suggestions would simplify or increase the complexity of the calculations.** Yes, Insurance Europe believes that the current calibration adequately reflects the terror risk to the calibration level required by Solvency II. However, the frequency of terrorism attacks, as well as the increase in multiple events, in Europe recently may justify further investigation in to the calibration of the mass accident risk sub-module. As an example, one insurer reports that the present calibration results in 2 500 deaths, which is roughly the same number as in the 9/11 attacks. The recent attack in France also suggests that the current calibration to be appropriate.	
Q9.3	**Q9.3: Please describe the main challenges faced when calculating the mass accident risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain**	

	why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive. The main challenges faced are • The number of assumptions that must be made. • Ensuring sufficient data quality • The concept of disability for 10 years as outlined in Appendix XVI relating to Article 161 of the Delegated Regulation. Both for Medical Expenses and Income Protection lines of business there are a number of assumptions which have to be made, such as estimates about the hypothetical number of days in hospital, admissions in an intensive care unit and hospitalizations out of place of residence which have large impact on the value of benefits payable by the health insurance company. This is a particular issue when benefits are recurring and depend on the duration of the injury. Furthermore, assumptions and estimates have to take into account the service and benefits offered by national health services. Reformulating the event definitions may help to reduce the number of assumptions being made and would limit divergence in the interpretation of these. Another challenge is the timely update of data within group insurance policies to ensure the correct level of company exposure is used in the calculation. For some markets, there is a separation between the notions of incapacity (not exceeding 3 years) and disability (final status) which can prove to be problematic in the evaluation of whether a guarantee would provide payment. The notion of disability for 10 years implies that the insured will regain his full capacity after 10 years. Thus, this duration being greater than that characterizing the incapacity, handicaps during 10 years are considered as permanent handicaps. This leads to an overestimation of overall exposure. An alternative would be to specify in Article 161 of the Delegated Regulation that the severity of the disability is proportional to its duration. This would make it possible to determine differentiated levels of severity based on the observation of its portfolio and be closer to the level of potential risk of the insurer. The other difficulty concerns products whose guarantees are on an indemnity basis (as opposed to a flat-rate basis). Article 161 paragraph 3 of the Delegated Regulation states that "Where the benefits of an insurance contract depend on the nature or severity of the physical injury (...), the calculation of the amount of benefits is based on the maximum level benefit which may be obtained under the contract in respect of the event concerned". This would lead to an extreme position to retain the guarantee ceilings for each contract. This is very conservative and far from reality, given that each insured person has different characteristics and cannot claim to be unattached to the guarantee ceilings.	

	The text could thus be amended by specifying that this maximum level must be assessed with regard to the characteristics of each insured person. This could be estimated with the observed loss distribution of the (re)insurer if its portfolio is large enough and if the number of years of historical data is sufficient.	
Q9.4	**Q9.4: Please describe the main challenges faced when calculating the accident concentration risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** The main challenge faced in the calculation of the accident concentration risk submodule is collation of the information as it is generally not readily available for (re)insurers, making it difficult to estimate the benefits payable. For the sake of prudence and as an approximation, it is sometimes considered to be the biggest insurance policy where the insured are supposed to work all together in the same building.	
Q9.5	**Q9.5: Please describe the main challenges faced when calculating the pandemic risk sub-module. Do you have any suggestion to simplify the sub-module? If yes, please explain why the suggestion meets the requirement of Article 101(3) of the Solvency II Directive.** Please see the response to Q9.3.	
Q10.1	**Q10.1: Do you have remarks on the Lee Carter model or could you suggest another more appropriate model** Yes, Insurance Europe does. First, Insurance Europe welcomes the fact that discussion paper suggests that the reduced shocks to mortality implied by EIOPA's work with the Lee-Carter model demonstrate that the current shock of 20% across all ages is too onerous. Second, the described model is the Poisson version of the Lee-Carter model which has gained widespread popularity due to its good balance between accuracy and simplicity and ease of interpretation. However, this model has some notable drawbacks the main of which being (1) it does not take explicitly into account the cohort effect (generational effect) since the main parameters are age and calendar year. (2) The model exhibits a lack of fit for small populations. One way of responding to the drawback of not integrating this cohort effect is to use instead the Cairns-Blake-Dowd model (CBD model) in which this cohort effect is considered. However, this model has also its shortcomings.	

	Regarding the lack of fit for small population, a more appropriate model than the current methodology could be the SAINT-model which allows to better take into account the volatility of sub population (small population of a reference population) while assuming that it will follow the long term trend of the reference population. (Link here: modelling-adult-mortality-in-small populations).	
Q10.2	**Q10.2: How would you take account of parameter uncertainty and model risk with respect to mortality-longevity risks?** Parameter uncertainty will always be present because the most common of the models used for forecasting mortality are extrapolative models (Lee Carter, Cairns-Blake-Dowd), which means that the projections from such models can only be reliable if past trends continue. Medical advances or resurgence of certain diseases (eg increasing resistance to antibiotics, entrenchment of obesity throughout the world) can invalidate these projections by changing the trend. This is why it is important to consider the relationship between the way the best estimate is calculated (ie the mortality tables that are used) and the shock that is applied. When the best estimate calculations already include future mortality improvements, the stress level needs to be lower. Therefore, a way to reduce the uncertainty is to regularly gather sufficient regularly (eg annually) updated data (based on most recent experience), make comparisons to national benchmarks for the insured population and review the parameters calibration based on Monte Carlo simulations. As suggested above, some countries keep their mortality assumptions up to date and regulators impose on companies for the calculation of the best estimate, the use of mortality tables that reflect the actual current level of mortality, and incorporate future mortality improvements, which considerably reduce incertainty. Another way to reduce parameters uncertainty could be the one suggested in UNESPA-Towers Perrin´s study, consisting in the addition of a uniform percentage to the table values of the longevity shock depending on age and duration ranges. This single factor should be determined by the Insurance undertaking itself. The larger the portfolio size (that is, the greater the data´s representiveness), the lower the single factor. A third way to reduce parameters uncertainty is to allow their estimation by the of USPs for longevity risk, and mortality risk because the insured population is always a sub-population of a reference population (In this case the national population) and hence the volatility of the insured population can be company-specific. It will also allow to take into account country specific supervisory practices.	
Q10.3	**Q10.3: Should account be taken of possible future deviations from the estimated mortality trend and how (ie expert opinions)? If yes, could you please provide a suggestion?** Yes, models should not be blindly trusted as no single model captures the risk in its fullness – including the model risk. Generally, adding additional assumptions may increase the complexity and uncertainty of the model. Therefore, the calibration should be carried out based on the available data. Nevertheless, changes in	

	behavioral factors, socio-economic developments and developments in ethics should be monitored as they influence mortality improvements. Along the same lines, the scientific developments in demographic research, in advances of science (and resulting mortality improvements), but also in the appearance of new diseases including those that can arise from the increasing resistance of microbes to antibiotics or the entrenchment of obesity throughout the world (which can result in mortality degradation) should be carefully analyzed. This is the field of expert opinions and therefore, expert views on scenarios can be used to supplement or challenge calibration of statistical models. In this case however, care should be taken that expert judgement does not incorporate a significant degree of subjectivity.	
Q10.4	**Q10.4: Which other data could be used? Is the data you are suggesting to use publicly available?** The best general mortality data publicly available for a wide range of countries are the ones mentioned in the report: Human Mortality Database (HMD) and EUROSTAT database. Insurance Europe does not know other publicly relevant and representative data that could be used. However, one should be careful with the HMD data which might be incomplete according to some researchers. Another way to proceed to strengthen this database is to conduct actions across the EU Members to make the data collected by state agencies available. In conjunction, actuarial or insurance associations or if relevant the national Supervisory Authorities (on behalf of EIOPA) could collect data from the life undertakings, such that the base would be a combination of insured lives and country population.	
Q10.5	**Q10.5: To what extend and how could account be taken of: Differences between general mortality and insured mortality? Portfolio specific risk characteristics with respect to level, trend and volatility?** Insurance Europe understands that there is no consistent, regularly published, information available which adequately covers the European insured population. That said, there are various approaches to take into account these differences, some of which are outlined below: • One approach is based on the application of selection factors to the mortality rates derived on general mortality. • Another approach is to use a national database for insured population, provided that the database exist and is large enough, and the estimations would be made directly on this as follows: using the population mortality for projecting mortality and "experience factors" to adjust population mortality to the mortality of the undertaking. This could be achieved via two approaches: (1) using parametric or non-parametric methods or (2) using a credibility approach after calibrating the national table with the model chosen. • A third solution would be to calibrate the model to the specific portfolio in question. In practice, the industry data may be considered together with modifications taking into account the specific portfolio. When calibrating to population data, a basic risk might be considered for which	

	additional risk capital could be necessary. Also, and even more importantly, Insurance Europe would expect Undertaking Specific Parameters to be available so that for those insurers for whom longevity risk or mortality risk is material, this can be modelled appropriately.	
Q10.6	**Q10.6: Do you think that a more granular approach for longevity and mortality risks is appropriate? If yes, please explain what would be the costs and benefits, in particular in terms of risk sensitivity and complexity.** Yes, a more granular approach for longevity and mortality risks is appropriate. Such an approach allows taking into account the specificities of an insurance portfolio whereas a uniform shock implies the consideration of all ages in the calibration. In particular for the longevity risk, Insurance Europe finds that a pan-European stress is an inappropriate modelling of the longevity risk because of the large differences in population characteristics, frequencies of mortality data updates, and supervisory practices on technical provision. The Longevity shock under the SCR standard formula (an instantaneous permanent decrease of 20 % in the mortality rates used for the calculation of technical provisions) is too simplistic as it is not sufficiently granular, (* see at the bottom of our response our reference to the UNESPA paper) and results in: (1) a calculation which does not reflect the real nature of the risk or the risk profile over time. (2) a simplification that requires higher longevity risk capital than the generally intended 99.5% confidence level over one year (see also the response to Q10.10). Therefore, the benefits (accuracy) clearly outweight the costs (more complexity). Also, life undertakings operating in countries where updated longevity and mortality rates are used when calculating technical provisions face a risk taking into account the data uncertainty twice, meaning that the outcome SCR will be largely overestimated. Therefore, it is important that the calibration is consistent with the best estimate calculations. That is, if the best estimate calculations contain future mortality improvements, the stress level needs to be lower. In conclusion, Insurance Europe strongly supports a more granular approach for longevity and mortality risk and would suggest adding a country specific or undertakings specific parameter to the standard model stress. However, companies should be given a choice of approaches, a more granular approach (which could be more complex in terms of calculations) or the current one. (*) Regarding the calibration of the longevity shock, relevant and verifiable empirical evidence on this matter can be found in UNESPA Longevity Risk Investigation, Towers Perrin, 21 January 2009. This calibration exercise is also mentioned in page 32 of EIOPA´s report on the underlying assumptions in the standard formula for the SCR calculation (25 July 2014). please see the study carried out by Unespa/Towers Perrin at:	

	http://www.unespa.es/adjuntos/fichero_4319_20170221.pdf which suggests that longevity improvements vary by age and duration of the policy.	
Q10.7	**Q10.7: Do you have any comments on, or suggestions to, the approach described above to calculate an alternative more granular shock to mortality rates being equivalent to financial stress consistent with the SCR definition?** Yes. Although the current formulation is simple, it is not reflective of the effect of the duration of the liabilities. Furthermore, the standard formula does not take into account that the undertakings insured life populations differ greatly in distribution by age. Therefore, Insurance Europe suggest that an age dependent uniform stress could be considered, taking into account the findings of the UNESPA paper noted in 10.6 that there is a correlation between longevity improvements and both age and duration of the policy. For calculating the uniform longevity stress for each age, EIOPA would need to make assumptions on longevity rates for all relevant country populations. This can be dealt with by calculating a country specific parameter provided by the National supervisor.	
Q10.8	**Q10.8: Do you have any suggestions on the composition of appropriate (portfolios) of liabilities? For instance, which level of granularity would be necessary: model point approach (per LoB) versus full portfolio approach?** Insurance Europe understands that the question refers to the recalibration of the risk factors for mortality and longevity, to be based on either a portfolio approach or a model point approach. In this context, Insurance Europe would like to highlight the lack of relevant and exhaustive data on general mortality. In fact, the only data publicly available for a wide range of countries is the EUROSTAT database and the Human Mortality Database (HMD), which, according to some researchers, is incomplete. Regarding the proposed methodologies, Insurance Europe would like to stress the importance that in its work EIOPA needs to ensure that recalibrations are appropriate, representative and have the right level of granularity to cover the wide range of specificities of European markets.	
Q10.9	**Q10.9: Do you have any suggestions on how to take account of the interest rate sensitivity inherent in the calculation of the loss of own funds?** Although the SCR mortality and longevity are expressed in terms of "loss in basic own funds", the Longevity/Mortality shock should be calibrated solely taking the biometric elements into account. There is no need to take interest rate sensitivity explicitly into account here as any life underwriting stress scenario primarily changes the expected cash flows. Interest rate impact will normally be	

	neutralized by the fact that the same discount curve will be used on the baseline balance sheet and on the shock scenario. Insurance Europe note for that matter, that the sensitivity of own funds to interest rate can be managed for example via traditional asset liability management techniques, which life insurers are familiar with.	
Q10.10	**Q10.10: Do you have any other suggestions on how to relate the 1-year value-at risk measure of the SCR standard formula to changes to mortality rates? Currently these changes are defined as instantaneous and uniform shocks, would you have other suggestions?** Yes. As mentioned above, Insurance Europe would favour a uniform age dependent shock. Another proposal can be to apply an instantaneous and uniform shock. Insurance Europe propose a change based on the future mortality trend (eg an increase/decrease of 2% per year over the run-off period) which more closely captures the underlying risk. This approach would be based on the future mortality trend, as distinct from the current approach which uses a series of observed mortality rates and does not take into account future mortality rate improvements. Also, the current calibration levels lack justification as to how they are calibrated to the 99.5% VaR for the following points. • Ceiops' final advice on the correlation coefficient between longevity and mortality discusses their reasons for not setting the correlation to -1. The justification provided for the decision to instead set a correlation of -0.25 is very vague and could just as easily justify a correlation coefficient of -0.5 or -0.75. Insurance Europe believes that the correlation factor should at least be –0.5 as this better reflects the nature of dependence between mortality risk and longevity risk. • In addition, the 15% calibration for mortality risk is too high and the move from the QIS4 calibration of 10% has not been sufficiently justified by Ceiops at the time. • The same argument holds for the 20% calibration for longevity risk which is too high. The current factor is too high. Longevity risk is a key risk for insurers providing pension business and so it is essential that no level of excessive prudence is factored into the calibration over the 99.5% VaR. Insurance Europe questions some of the assumptions used by Ceiops in this calibration. A study published by the Danish Actuarial Association concludes that a 10%-15% longevity risk charge, with a company specific component, would be more appropriate (Link: Solvency 2: Longevity Stress and the Danish Longevity)	
Q11.1	**Q11.1: Do you have any suggestions on the introduction of USP in the mortality and longevity risk modules that would be consistent with the approach described in section 10 of this document?**	
Q11.2	**Q11.2: Did you identify other standard parameters that could be replaced by parameters specific to the undertaking concerned when calculating the life, nonlife and health**	

	underwriting risk modules? Yes. Non-life underwriting The following subset of standard parameters of the NatCat risk sub-module may be replaced by undertaking-specific parameters (a) the peril risk factor per LoB for region r Q(peril,r) (b) the risk weight for the risk of a peril in a peril zone i of region r W(peril,r,i). In addition, Insurance Europe would recommend that an option be introduced to allow firms to: • calculate every parameter concerning the underwriting risk as USP, including in the lapse-risk for Life, Non-life and Health NSLT. The standard formula lapse stress is not appropriate for some markets where the possibility to terminate a policy is restricted by law. • Incidentally, the 40% stress level in mass lapse for the life and health SLT underwriting risk module is therefore well above the intended 99.5% calibration. In addition, there is evidence in several studies showing that calibration of mass lapse event risk should be established below 40% (around 30% as was established in early versions of the Solvency II framework eg QIS3, QIS4). • use USPs for correlations in general and in addition to allow correlations between classes of business on the General Insurance side. • Use USPs for the geographical diversification factor for (1) the LoB Credit & Suretyship (NL6 Segment) which is not taken into account for the moment as it is set to 1 whereas credit insurance business is globally diversified and (2) to address the lack of geographical diversification for General Insurance underwriting within regions	
Q11.3	**Q11.3: For these parameters, which criteria regarding the data and which standardised methods would you recommend to calculate the USP?** Regarding the data, article 219 1.(e) (i) : this requirement is redundant if the Article 19 applies. Also, the requirement set out in article 219 2. (d) is difficult to comply with. In many cases where external data is used, there is no sufficient historical internal data, which makes impossible to run the probability and volatility comparison tests. If the requirement from article 19.4. are fulfilled, the requirement of article 219 2 will not improve data quality. For calculating the undertaking specific parameters, the methods could be the same that were used in the calibration of the market parameters. On the other hand, as undertakings have to calculate every parameter of their own risk in ORSA with their specific methods, there are commonly used methods which may serve as standardised methods. However, Insurance Europe is against limiting the application of USPs to a single prescribed method as any restricted list will fail to fully render the true value of the USP for all undertakings. Therefore a set of criteria should be set out which would help assess whether any one method is a standardised one. This process will ensure that academic advancements are kept up with and undertakings can produce methods (and underpinning assumptions) that are the most suitable to reflect their risk	

profile. At the very least, undertakings should be able to choose from a wide set of standardised methods in order to calculate their undertaking-specific parameters. This would account for differences between undertakings as well as lines of business.

Premium risk
Especially **in case of premium risk** the ablility to choose from a wide set of standardised methods seems to be necessary since the method in Delegated Regulation raises several difficulties. Additionally, it is based on the method used for the calibration of the premium risk factors in the standard formula, which results in the fact that companies the underlying assumptions of which differ from that of the standard formula (ie the majority of European companies), cannot use the USPs. Insurance Europe stand ready to discuss four additional methods for calculating the premium risks factors which are sketched out below:

1-Empirical Standard Deviation
Instead of using complex methods with underlying assumptions, the premium risk parameter could be estimated with the robust empirical standard deviation S (notation as introduced above):

$$S^2 = \frac{T}{T-1}\sum_{t=1}^{T}\frac{x_t}{T\cdot\bar{x}}\cdot\left(\frac{Y_t}{x_t}-M\right)^2, \text{ where } M=\frac{\sum_t Y_t}{\sum_t x_t}.$$

where x_t is the earned premium by accident year t, Y_t, is the aggregate loss after the first year of development, by accident year t and LoB.

2-Least Squares Estimation (Prof. Schmidt (TU Dresden, em.))
Another method uses the assumptions of the EIOPA proposal regarding the expectation and variance of aggregate loss. However, the model is more general since the lognormal distribution is not needed. The method derives unbiased estimators of β and σ^2.

A Simplified Model and Unbiased Parameter Estimation
Instead of starting with a very particular model and ending up with a rather crude method of parameter estimation, one may start with a more general model and apply a more efficient estimation method.
Assume for the moment that δ is known and put

$$Z_t := Y_t/x_t$$

and

$$a_t := (1-\delta)\bar{x}/x_t + \delta$$

Then we have

$$E[Z_t] = \beta$$

$$\mathrm{var}[Z_t] = a_t\sigma^2$$

Using independence of the family $\{Z_t\}_{t\in\{1,\dots,T\}}$ it is not hard to show that

$$\hat{\beta} := \sum_{t=1}^{T} \frac{1/a_t}{\sum_{s=1}^{T} 1/a_s} Z_t$$

is the *best linear unbiased estimator* of β (with $\mathrm{var}[\hat{\beta}] = \frac{1}{\sum_{s=1}^{T} 1/a_s}\sigma^2$) and that

$$\widehat{\sigma^2} := \frac{1}{T-1}\sum_{t=1}^{T} \frac{1}{a_t}\left(Z_t - \hat{\beta}\right)^2$$

is an *unbiased estimator* of σ^2.

The estimators $\hat{\beta}$ and $\widehat{\sigma^2}$ depend on δ and should be computed for several values of δ to check their sensitivity under changes of δ.

Comment: The estimators $\hat{\beta}$ and $\widehat{\sigma^2}$ do not depend on the assumption of lognormality. One may, of course, use this assumption for maximum-likelihood estimation in the simplified model, but one would run into the same difficulties as in the original model. However, since maximum-likelihood estimators may be biased, maximum-likelihood estimation is not generally preferable to other methods of estimation.

Remark: Because of the general criticism with regard to the use of $\overline{x}$ one might also consider the simplified model with $\delta := 1$, in which case $a_t = 1$ and hence

$$\hat{\beta} = \frac{1}{T}\sum_{t=1}^{T} Z_t$$

$$\widehat{\sigma^2} = \frac{1}{T-1}\sum_{t=1}^{T}\left(Z_t - \hat{\beta}\right)^2$$

Then one has a neat model with only two parameters and one has unbiased estimators for each of these parameters.

3-Method Allowing for Trends and Cycles (Dr. Matitschka (GDV))

Time series of loss ratios are usually determined by underwriting cycles or trends, eg in the German motor liability market cycle periods of 7 years can be observed. Therefore the assumption of a global loss ratio beta is often not realistic.

Instead we assume a time-dependent local loss ratio β_t (without specifying the type of cycle or trend) and determine the undertaking-specific parameter as average deviation from this local loss ratio. Thus, the undertaking-specific parameter is adjusted for underwriting cycles or trends.

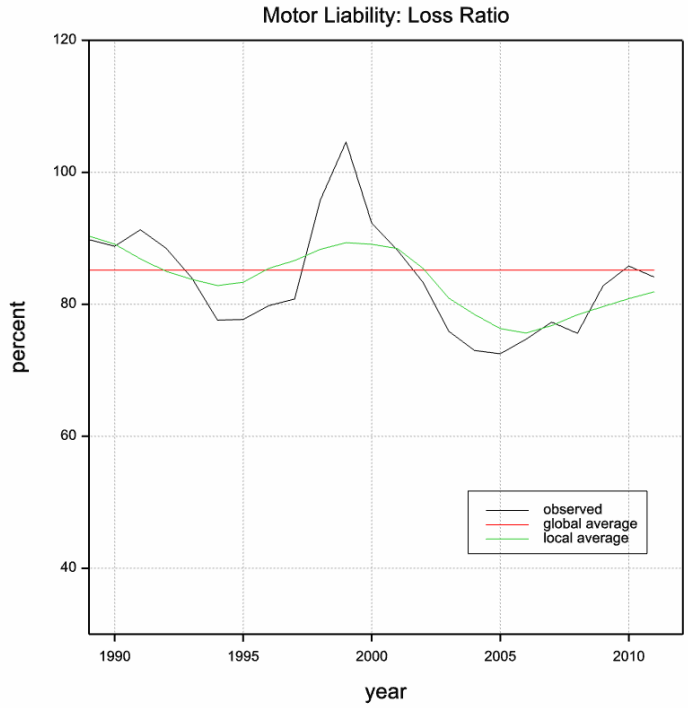
Given observations y_t and premiums x_t, we take as estimator for β_t the m-year centered moving

average:

$$\hat{\beta}_t = \frac{\sum_{|s-t|\le m} y_s}{\sum_{|s-t|\le m} x_s}$$

For $m = 7$ one obtains the 7-year moving average.

In the following example of a German undertaking both the cycle and the decreasing trend are represented by the local loss ratios:



The empirical undertaking-specific standard deviation is thus given as average deviation from the local loss ratio:

$$S^2 = \frac{1}{T-1} \cdot \sum_t \frac{x_t}{\bar{x}} \cdot \left(\frac{y_t}{x_t} - \hat{\beta}_t\right)^2$$

4-Premium Risk Considering Existing Trends (Prof. Wiedemann, University of Esslingen)

In this additional method the premium risk as USP is estimated as the standard deviation of the claims costs taking into account existing trends. It is designed for lines of business with a high predictability of the portfolio size as well as of the expenses and earned premiums (i. e. motor liability in the German market). This method could especially be used in lines of business with underwriting cycles, since premium is not used as exposure.

The method delivers an estimation of the undertaking-specific parameter for premium risk. It is intended to be designed for LoBs with a high predictability of the portfolio size as well as of the expenses and earned premiums. These assumptions seem to be thoroughly realistic for LoBs where standard products are offered on a mass market. As a direct consequence of these assumptions, the premium risk may be understood as the standard deviation of the paid claims costs. In other words, the described method fits to LoBs where the premium risk results first and foremost from the volatility of the average claims costs.
In addition, it has to be taken into consideration that the average paid claims costs might follow a trend over the years. Even though the described method can easily be modified in a way to allow any class of trend-describing functions, we restrict ourselves to the case of linear trends.

Inputs

$5 \leq T$	Number of accident years
$t = 1, \cdots, T$	Accident years
N_t	Size of the underlying portfolio in accident year t
P_t, $P_t^* \coloneqq \frac{P_t}{N_t}$	Total and average earned premium in accident year t
C_t , $C_t^* \coloneqq \frac{C_t}{N_t}$	Total and average paid claims costs (including claim management costs) after the first year of development by accident year t
E_t, $E_t^* \coloneqq \frac{E_t}{N_t}$	Total and average expenses by accident year t
$L_t \coloneqq P_t - C_t - E_t L_t^*$ $\coloneqq \frac{L_t}{N_t}$	Total and average loss by accident year t

Outputs

$\hat{a}, \hat{b}$	Estimates of the parameters a and b describing the linear trend of the expected average claims cost.

$\hat{\sigma}_{prem}$	Undertaking-specific estimate of the standard deviation of the premium risk

Assumptions

- Our main assumption is that at the beginning of every accident year t one can estimate the number of risks N_t as well as the earned premiums P_t and the expenses E_t with a sufficiently high precision. It follows that
$$\boldsymbol{Var}(L_t) \approx \boldsymbol{Var}(C_t).$$
- We furthermore assume that the expected average claims costs follows a linear trend, ie, there are constants a and b with
$$\boldsymbol{E}(C_t^*) = at + b.$$
- We put $f_{a,b}(t) := at + b$. Accordingly, it follows that for each accident year t the difference
$$D_t^* := C_t^* - f_{a,b}(t)$$
between the average claims costs and the trend line has expected value zero, ie,
$$\boldsymbol{E}(D_t^*) = 0.$$
- Furthermore, we assume that these differences $D_1^*, \dots, D_T^*$ are pairwise uncorrelated and share the same variance σ^2, ie, $\boldsymbol{Cov}(D_s^*, D_t^*) = 0$ for $s \neq t$ and $\boldsymbol{Var}(D_t^*) = \sigma^2$.

Description

- One determines the estimates $\hat{a}$ and $\hat{b}$ of the constants a and b by applying the method of least squares. More precisely, one has to minimize the sum
$$S_{a,b} := \sum_{t=1}^{T} \left(C_t^* - (at + b)\right)^2.$$
- Accordingly, it holds true that
$(\hat{a}, \hat{b}) := \underset{(a,b)\in\boldsymbol{R}^2}{\operatorname{argmin}} S_{a,b}$.
- An explicit representation of the solution to this standard optimization problem is the following:
$$\hat{a} = \frac{12\sum_{t=1}^{T}\left(t - \frac{T+1}{2}\right)C_t^*}{(T-1)T(T+1)} \quad \text{and} \quad \hat{b} = \overline{C^*} - \frac{(T+1)\hat{a}}{2},$$
where $\overline{C^*} := \frac{1}{T}\sum_{t=1}^{T} C_t^*$ denotes the mean average of the average claims costs C_t^*.
- Due to the Gauss-Markow theorem the pair $(\hat{a}, \hat{b})$ is the best linear unbiased estimator of the coefficients of the linear trend. Moreover,
$$\hat{\sigma} := \sqrt{\frac{S}{T-1}} \quad \text{with} \quad S := S_{\hat{a},\hat{b}}$$

	is an unbiased estimator of σ. • Considering our first assumption together with $\boldsymbol{Var}(D_t^*) = \boldsymbol{Var}(C_t^*) = \sigma$, we receive that $$\hat{\sigma}_{prem} \coloneqq N_{T+1} * \hat{\sigma}$$ is an estimate of the standard deviation of L_{T+1}.	
Q11.4	**Q11.4: Do you have any suggestion for improving the data criteria as defined in Article 219 and/or in Annex XVII of the Delegated Regulation? Please explain whether your proposal simplifies or not the framework and the consequences in terms of quality of USP.** Article 219 b and d pertains to data being capable of being incorporated into the standardised methods. However, the strong requirement in the use of prescribed methods does not allow undertakings to exert their expert judgement through experts (eg actuaries) when dealing with the set-up of the USPs (in terms of data, assumptions and methods). Indeed, data can be not entirely complete for the use of a prescibed method and therefore, the requirements on data criteria can be improved by laying down that expert judgment may be relied upon to deal with this issue (eg selection of a different range for the data, selection of appropriate assumptions and/or statistical/actuarial methods). In addition, the draft Delegated Regulation set out already very prescriptive rules on data quality standard. However, these requirements should be such that if a segment or a line of business is not material to the undertaking, the data quality standard could be relaxed. The data criteria should not be counterproductive by setting much too high barriers and thereby limiting or discouraging the use of USPs.	
Q11.5	**Q11.5: Do you have any suggestion how the current non-proportional reinsurance factor USP method could be amended or replaced by a different method?** Non-proportional reinsurance is used as predominant risk mitigation instrument for Non-life, which accounts for more than 50% of total non-life reinsurance premiums in major European markets. Its importance as a risk mitigation instruments becomes even clearer when looking at its impact under the 200-year event, where the risk mitigating impact (relative to the reinsurance premium) of a non-proportional cover is much higher than for a proportional cover. The standard formula does not recognize this difference, ie the adjustment factors for non-proportional reinsurance as currently implemented which are defined as 80% for only three lines of business are not appropriate in this respect. Insurance Europe support USPs as one way of improving the recognition of non-proportional reinsurance. However, it thinks that other steps are also needed. The current method for the adjustment factor for non-proportional reinsurance has some limiting characteristics: • It uses a Poisson statistical law to model the frequency of all losses which is not appropriate because it implies that frequency mean and variance will be the same for the whole portfolio, which is not necessarily the case.	

	• The proposed model is based on all claims, whatever their size. As Excess-of-loss reinsurance only impacts (very) large claims, Insurance Europe think that only those claims should be modelled to evaluate the impact of excess-of-loss reinsurance. It is generally recognized that attritional and (very) large claims have quite different probability distributions. A joint letter of Insurance Europe and the Reinsurance Advisory Board sent to the European Commission on 22nd June 2012 (RAB-12-015) proposed: a) to implement a version of the USP method for the adjustment factor non-proportional reinsurance that requires priority and cover of the reinsurance as undertaking specific inputs, only. All other parameters of the USP method can be based on a market calibration. The calibration of such market parameters can be done with reasonable effort in an appropriate quality based on available market claims statistics. b) Add the method set out in the Insurance Europe paper sent to the European Commission and EIOPA on 19 July 2011 referenced ECO-SLV-11-562 which is not more complex than the current method and addresses the two abovementioned issues. It basically recommends that the calculation distinguishes large claims from attritional claims and that the net premium factor is only applied to large claims. However, USPs are unattractive (not widely used). This is because its scope is limited to only certain types of non-proportional reinsurance. Other types of cover, eg Stop Loss or Adverse Development Covers, are not recognised. Moreover, high demands on available data based on the credibility factor approach and the supervisory approval process, act as a disincentive to USP use. Therefore, Insurance Europe think that also other steps are needed to address issues with recognition of non-proportional reinsurance and propose to that end two approaches: an alternative option, and an alternative formula for NP' **An alternative option**. Insurance Europe propose a straightforward adjustment to the standard formula. The adjustment would capture the risk mitigating impact of any non-proportional reinsurance cover that is currently not taken into account in the premium and reserve risk module. The adjustment would be calculated by the undertaking using a scenario based approach, using the same method as is already applied for the scenario based calculations for Life and the Non-Life Cat module. With that, non-proportional reinsurance should provide the same capital relief as proportional reinsurance if the undertaking can provide evidence that economic risk transfer towards the reinsurer is identical for the scenarios defined under the standard formula. The amended formula for the SCR for premium and reserve risk in Art. 116 of the Delegated Regulation would look like: $SCR_{nl\ prem\ res} = 3\sigma_{nl}\ V_{nl}$ - $\boldsymbol{RM_{other}}$	

RM_other *denotes the risk mitigating effect on premium and reserve risk of reinsurance arrangements that meet the requirements of Articles 209, 210, 211 and 213 but for premium risk excluding reinsurance premiums referred to in Article 116(5) (a), and that otherwise have not been reflected in the standard formula. It shall be calculated as the risk mitigating impact of the reinsurance on a change in basic own funds that would result from an instantaneous loss in the amount of* $3\sigma_{nl}\ V_{nl}$.

Insurance Europe members think that the calculations to be performed for RM_other are not more complex than other calculations as required under the standard formula which are under the governance of the Actuarial Function, ie in particular with respect to reinsurance the Actuarial function should already consider the adequacy, eg including with respect to the expected cover under stress scenarios under their opinion according to DAs Art. 272 (7) and Article 48(1)(g) of Directive.

An alternative formula for NP' to capture the effects of Stop-loss reinsurance: Insurance Europe can provide for a thorough derivation that the method in DA Annex XVII the factor for non-proportional reinsurance is given by

$$NP' := \frac{Std(X_{net})}{Std(X)} = \frac{\sqrt{E(X_{net}^2) - E(X_{net})^2}}{\sqrt{E(X^2) - E(X)^2}}$$

This formula could also be used in case of stop loss reinsurance contracts:

Consider a stop loss reinsurance with priority [ ] and unlimited liability of the reinsurer. The factor should be determined per LoB.

Let [ ] be the overall loss and V_i the earned premium of year [ ] (alternative volume measures could be used). The overall losses of each year follow a lognormal distribution however are

not identically distributed. They also depend on the volume measure V_i. For example, the requirements to calculate the premium risk factor according to DA Annex XVII could be postulated, however here a simplified approach for the variance is chosen:

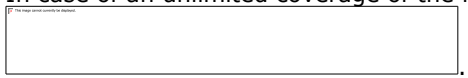
[ ]

The parameters β and S^2 can then be estimated (respectively with empirical estimators).

The overall loss [ ] of the following year therefore follows a lognormal distribution with expected value [ ] and variance [ ] (the future premium should be known).

Let

	$$f(y \mid \theta, \eta^2) = \frac{1}{y\eta\sqrt{2\pi}} \exp\left(-\frac{1}{2}\left(\frac{\log(y)-\theta}{\eta}\right)^2\right) \text{ für } y > 0$$ be the corresponding density function. The first two moments are given by $$E(X_{T+1}) = \exp\left(\theta + \frac{1}{2}\eta^2\right) = \beta v_{T+1}$$ $$E(X_{T+1}^2) = \exp\left(2\theta + 2\eta^2\right) = S^2 v_{T+1} + (\beta v_{T+1})^2$$ So the parameters  and  can be written as  Since  we only have to further consider . For a random variable following a lognormal distribution with density function  (where  is the distribution function of the standardized normal distribution) the following applies:	

	 In case of an unlimited coverage of the reinsurer this yields  . In case of a limited coverage of the reinsurer one has to proceed according to the prior description, considering the relevant formulas and respective parameters.	
Q11.6	**Q11.6: In particular, do you have any idea how the NP factor USP method could be extended to take other types of reinsurance contracts into account (eg stop loss reinsurance or finite reinsurance)?** **For the stop loss reinsurance**, Insurance Europe proposed using the company´s own historical data of the claims number. **Regarding Finite reinsurance**, Insurance Europe would like to point out and propose the following: Finite reinsurance is defined in the Solvency II Directive (Article 210) as "reinsurance under which the explicit maximum loss potential, expressed as the maximum economic risk transferred, arising both from a significant underwriting risk and timing risk transfer, exceeds the premium over the lifetime of the contract by a limited but significant amount, together with at least one of the following features: a) explicit and material consideration of the time value of money; b) contractual provisions to moderate the balance of economic experience between the parties over time to achieve the target risk transfer". As stated in the IAIS 2012 report on reinsurance and financial stability, risk transfer transactions, typically known as "finite reinsurance", are "the most widely used products" amongst alternative risk transfer techniques and "supervisors test it for substance over form, requiring a significant amount of	

	risk transfer in conjunction with appropriate disclosure mechanisms". The current Solvency II treatment is not consistent with an appropriate recognition of the potential risk mitigating impact of finite reinsurance contracts. Therefore, finite reinsurance contracts should not be systematically excluded from being recognised in the calculation of the non-life premium and reserve risk module or any other module of the standard formula, but allowance should be given to the recognition of that contract to the extent risk is transferred under such transactions. Insurance Europe propose the following adjustment to Art. 208(2) of the Delegated Regulation: "Where insurance or reinsurance undertakings transfer underwriting risks using finite reinsurance, as defined in Article 210(3) of Directive 2009/138/EC, which meet the requirements set out in Articles 209, 211 and 213 of this Regulation, these contracts shall be recognised in the scenario based calculations set out in Title I, Chapter V, Sections 2, 3 and 4 of this Regulation and for the purposes of determining the volume measures for premium and reserve risk in accordance with Articles 116 and 147 of this Regulation only to the extent underwriting risk is transferred to the counterparty of the contract".	
Q11.7	**Q11.7: Did you identify specific issues related to the application of GSP, other than the one identified for USP?** The issues identified for the USPs are even more pronounced in the group context for the calculation of GSPs for the following reasons: (1) The possibility to develop and use group specific parameters (GSP) is more reduced than USP, if not even entirely excluded. This is due to, first, the application of the restrictive requirements for GSP and, second, problems that arise when applying the given standardized methods on consolidated group data, eg the inconsistency with respect of the calculation of the best estimate of technical provisions in group context (reserve risk method 2). (2) In addition, fixed formulas to calculate GSP (especially based on USP) are less appropriate than to calculate USP due to very specific circumstances in groups. So group specific modifications of the methods or alternative group specific methods to calculate GSPs should be allowed for. Finally, an insurance group can sometimes be confronted with different depths of data history depending on its different constituents. This situation results in a data history for the group set at the level of the lowest history among its solos. When the contribution of the solo concerned is small in terms of its size, this may appear too penalizing at the level of a group, as this limits the consideration of its specific volatility because of a reduced credibility factor.	
Q11.8	**Q11.8: Which solution would you recommend to the specific GSP issues you identified? Do you have suggestions for alternative methods to calculate GSP**	

	The consolidated best estimate for a group shall be equal to the sum of solo best estimates. Indeed, the standardized methods for USP/GSP within solvency II (eg Merz-Wüthrich within the reserve risk module) require the true consolidated data and not the sum of solo data. Hence, the data is available to calculate the best estimate based on this data source. The best estimates calculated from single development patterns only sum up to the same amount calculated on consolidated patterns under specific circumstances: (see http://www.math.tu-dresden.de/sto/schmidt/dsvm/dsvm2012-01.pdf, Corollar 2.2.8 (3)) which may not hold in groups. An alternative method could be to calculate GSP as a weighted average of USPs. Regarding the difference of depth in data history, the regulator should explicitly allow the insurance group, when the historically weakest solos contribute a small share (to be calibrated) to the GSP calculation, to reconstruct by estimation the historical data in order to apply correctly on longer data history the standardized methods proposed in Annex XVII of the Level 2 implementing measures. Obviously, in this case, the group should be able to demonstrate that the risk profile of the low-historical firm is homogeneous with all the group's risks.	
Q11.9	**Q11.9: Do you have any suggestion for additional specific parameters that would apply to groups only, and not to solo (re)insurance undertakings?**	
Q12.1	**Q12.1: Are there any cases where you find it unclear if an exposure should be treated in the counterparty default module or not? Please explain providing the legal provisions that you deem ambiguous.** It is not clear whether reinsurance receivables are classified as a type 1 or a type 2 exposure.	
Q12.2	**Q12.2: In case you consider any steps in the calculation in the counterparty default risk module as being unclear, please explain and provide a suggestion how clarity could be improved.** It is unclear how the life, health and non-life submodules are aggregated and whether correlation factors should be used in the calculation of the hypothetical SCR calculation. Further clarity on the intended process would be welcomed.	
Q12.3	**Q12.3: Are there any other aspects of the module in question that are unclear? Please explain.** The aspects of the submodule where there is a lack of clarity include: • the choice of recovery rate for cash at bank • the factor for the risk mitigating effect for pool solutions • the classification of mortgage loans	

	Article 192 (6) of the Delegated Regulation prescribes that the loss-given-default on cash at bank to be equal to its value. The recovery rate for deposits and treasury is therefore 0% which is arbitrary and unjustified. In most studies[1] the average recovery rate for certain corporate debt tends to be 30% - 40% and therefore for cash at bank assets should be at least similar. For example, in Spain as of today (and except just one counterparty), there were no losses recorded for deposits and treasury. With regard to the risk mitigating effect of pool solutions there is justification to investigate whether a similar 50% factor for the risk mitigating effect for "non-pool" solutions in the counterparty default risk to be available for pool solutions. The classification of mortgage loans, as outlined in Article 191 of the Delegated Regulation, is too complex. Insurance Europe believes there is scope to simplify the classification requirements without impacting the risk sensitivity of the sub-module. In addition, Insurance Europe would note that the calculation for type 1 exposures exhibits discontinuity due to the changing scaling factors used when the standard deviation of risk exceeds 7% (and 20%). A minimal change in the portfolio composition, such as the downgrading of a single counterparty, can therefore have a disproportionate impact on the overall counterparty default risk SCR. The complexity of the calculation also makes it difficult to reallocate the SCR charges to individual positions and to manage the counterparty default risk profile. 1. Moody's Ultimate Recovery Database: https://www.moodys.com/sites/products/DefaultResearch/2006600000428092.pdf Regarding senior unsecured debt, the average recovery rate is 38% (page 5). Corporate Default and Recovery Rates, 1920-2010: http://efinance.org.cn/cn/FEben/Corporate%20Default%20and%20Recovery%20Rates,1920-2010.pdf Regarding senior unsecured bonds (1982-2010), average recovery rate is 37,4% (page 5), and measured by ultimate recoveries (1987-2010) is 49,2% (page 7).	
Q12.4	**Q12.4: What part of the counterparty default risk module, if any, do you see as complex? Please provide an assessment of each identified part; what is costly or time consuming in the calculation, structure etc.** Insurance Europe believes that the counterparty default risk module as a whole is overly complex and burdensome, especially in relation to its impact on the overall SCR for the majority of (re)insurers. The most laborious part is the calculation of the risk mitigating effect (delta SCR) for the loss given default. For each exposure, the difference between the SCR with and without the counterparty	

	exposure has to be calculated. This is a costly and time consuming process for large portfolios with many counterparties. Similar complex calculations have to be undertaken to calculate the risk-adjusted value of the collateral, as outlined in Article 197. The calculation of the risk mitigating effect for collateralised derivatives is overly conservative because it assumes that in the event of default there will be a complete loss of hedging coverage. However, in this scenario the risk mitigation could be replaced directly through the purchase of equivalent derivatives financed by the liquidation of the collateral. The requirement in Article 192 of the Delegated Regulation to regularly assess if the proportion of a counterparty's assets which are pledged as collateral is above 60% is burdensome. In addition, Article 192 requires the identification of bank counterparties which can be difficult to obtain when applying a look through to a UCITS fund. Obtaining this information requires additional time and cost with marginal impact on the overall SCR.	
Q12.5	**Q12.5: What are possible simplifications of the counterparty default risk module (structure of the model, calculations etc.)? Please provide for each suggestion a thorough description and explanation.** Insurance Europe is supportive of simplifications to the counterparty default risk submodule but believe that these must be designed to avoid inappropriate risk management incentives. For example, simplified calculations should not incentivise the use of higher number of counterparties because this would ignore the fact that highly-rated, well-diversified counterparties have much lower credit risk than lower rated counterparties. Insurance Europe believes that the most effective way of reducing the complexity and burden of the calculation of the submodule would be to remove the delta SCR aspect of the calculation. Given the low overall impact of the counterparty default risk sub-module on an undertaking's SCR this would save significant resource without materially affecting capital requirements. If the inclusion of risk mitigating effect was deemed necessary then a simple factor based approach, based on the notional exposure of each contract, would provide a proportionate and suitably risk sensitive alternative. Alternatively, Insurance Europe believes that benefits could be derived from the improvements to the existing permissible simplifications which would have negligible impact on the overall SCR but which would significantly reduce the calculation burden. • The existing simplification, detailed in Article 110 of the Delegated Regulation, could be extended to allow calculation of the delta SCR based upon grouping of single name exposures. • Removal of the reference to Article 88 within Article 112, which permits the use of a standard	

factor to calculate the risk adjusted value of the collateral, would enable more widespread usage of this simplification.

- A standard risk weighting could be introduced for bank exposures, regardless of their credit rating. The IAIS expects to use a 2% weighting for the ICS in this regard and Insurance Europe believe this would be a suitable starting point for discussion.

The introduction of criteria under which certain requirements can be assumed to be met would further reduce the unnecessary data collection and calculation burden. For example, standard contracts and arrangements where the counterparty and third party requirements, outlined in Article 197, can be assumed to be met.

Insurance Europe further proposes a simplification, based upon a proposal detailed in section 6.35 of the Technical Specifications for the Solvency II valuation and Solvency Capital Requirements calculations (Part I) (EIOPA-DOC-12/262, 18 October 2012) is made available for use for entities which have only one counterparty affecting only one non-life LoB.

In this case the difference $RM_{re,i} = SCR_{vt,i}^{hyp} - SCR_{vt}$ may be approximated by the following term:

$$\sqrt{\begin{aligned}&\left(NL_{cat}^{hyp} - NL_{cat}^{without}\right)^2 + \left(3\sigma_{prem}\left(P_{lob}^{hyp} - P_{lob}^{without}\right)\right)^2 + (3\sigma_{res}\ recoverables)^2 \\ &+9\sigma_{prem}\,\sigma_{res}\left(P_{lob}^{hyp} - P_{lob}^{without}\right) recoverables \\ &+1{,}5\sigma_{res}\ \left(NL_{cat}^{hyp} - NL_{cat}^{without}\right) recoverables \\ &+1{,}5\sigma_{prem}\left(NL_{cat}^{hyp} - NL_{cat}^{without}\right)\left(P_{lob}^{hyp} - P_{lob}^{without}\right)\end{aligned}}$$

with:

$\left(NL_{cat}^{hyp} - NL_{cat}^{without}\right)$ Counterparty's share of CAT losses,

$\left(P_{lob}^{hyp} - P_{lob}^{without}\right)$ Reinsurance premium of the counterparty in the affected line of business,

$recoverables$ Reinsurance recoverables in relation to the counterparty in the affected line of business,

$\sigma_{(prem,lob)}$ Standard deviation for premium risk in the affected line of business as used in the premium and reserve risk sub-module

	$\sigma_{(res,lob)}$ Standard deviation for reserve risk in the affected line of business as used in the premium and reserve risk sub-module In comparison to the original proposed simplification, the correlation between premium and reserve risk and between cat risk and premium/reserve risk is now taken into account. The revised proposal resolves the shortcomings of the old formula, which led to an underestimation of risk.	
Q12.6	**Q12.6: Please explain for each simplification how it saves time/costs and how it affects the risk-sensitivity of the calculation.** As noted above, the removal of the delta SCR from the counterparty default risk calculation would eliminate the most time-consuming aspect of the calculation. Overall this is expected to have a marginal impact on capital requirements given the relatively low impact of the counterparty credit risk sub-module on the overall SCR in the majority of cases. With respect to the grouping of single name counterparties, under the current standard formula methodology insurers have to calculate the SCR with and without the hedging exposure for each individual counterparty to calculate the loss-given-default (LGD). If an insurer has 10 counterparties belonging to three rating classes, then the grouping of counterparties into rating classes would reduce the number of LGD calculations from 10 to three which would clearly save considerable time and cost. The requirements for the proposed simplification for insurers with only one counterparty affecting one non-life LoB are readily available either directly or are calculated as part of other sub-modules.	
Q12.7	**Q12.7: Are there certain conditions under which the use of the simplification should be allowed?** The proposed simplification for non-life risk mitigation factors should be allowed, but should not be mandatory. It may only be applicable for entities where the reinsurance treaties with a counterparty only affect one non-life line of business.	
Q13.1	**Q13.1: Do insurance or reinsurance undertakings have other exposures to central counterparties or clearing members than those resulting from derivatives transactions? If so:** • **What are these other exposures?** • **What are the volumes?** • **Is there any reason to assume that the risks of these exposures are not properly reflected in the standard formula?**	

	An increasing volume of repo transactions are centrally cleared.	
Q13.2	**Q13.2: Are there any insurance or reinsurance undertakings that use the standard formula for calculating their SCR that are clearing members of a qualifying central counterparty? Please provide the names if possible. Would you expect many standard formula insurers to become clearing members in the future? If so, why?** Insurance Europe does not expect that companies using the standard formula will become clearing members (ie gain direct access to CCPs). To Insurance Europe's knowledge, the central counterparties have not yet introduced direct membership models for the buy-side. The new ISA Direct membership of Eurex allows quasi direct access for buy side firms with the clearing house, however, the default management obligation stays with the clearing agent.	
Q13.3	**Q13.3: In case you think that there should be a specific treatment of the exposures resulting from being a clearing member of a qualifying CCP for insurers in the standard formula: should the standard formula treatment be differentiated based on the cases and conditions set out in Article 304 and 306 CRR? If not: Why and what would be a better alternative?** Please see Q13.2	
Q13.4	**Q13.4: Where an insurer is using a qualifying CCP as a client of a clearing member:** • **What is the relevance of the different cases set out in Article 305 CRR (transaction volume for (standard formula) insurers in terms of notional/market value)?** • **Should the capital requirement be differentiated based on the cases and conditions set out in Article 305 CRR? If not:** - **Why?** - **What should be changed?** - **How could the consistency with the banking rules as required in Article 111(fa) Solvency II be achieved when different cases and conditions were used?** - **Provided the cases and conditions of Article 305 CRR were used: How could the required consistency with the banking rules set out in Article 111 (fa) Solvency II be achieved in terms of the level of the capital requirement for the different cases?** Insurance Europe believes that if the following conditions are fulfilled regarding a derivative position cleared by a qualifying CCP (as governed by EMIR), insurers should be allowed to assume an exposure value of zero on a derivative position under Solvency II's counterparty default risk module (assuming clearing takes place via a contractual relationship with a clearing member):	

	• The derivative and any collateral due are segregated from the assets of the clearing member and the assets of the CCP and are also bankruptcy remote. • The regulations of the jurisdiction which govern the derivative contract allow for the timely transfer of assets & collateral to another CCP or clearing member in the case of default of the original CCP or clearing member. Such transfer can be made at market value. • The counterparty has obtained an independent legal opinion that the market value of the collateral and derivative will not be affected by default of the CCP or clearing member if there is a legal challenge to the aforementioned segregation. In cases where the above are not met, the standard treatment under the counterparty default module in Solvency II should be applied, pursuant to the formulaic changes which Insurance Europe has outlined in its response to Question 13.5 below. The following important points should be noted if the principles outlined above (stemming from Article 305 of the CRR) are to be applied to insurers: • Regarding Article 305 (2) (c) CRR, Insurance Europe would like to point out that, at this stage, insurers do not usually obtain independent legal opinions on consequences of CCP default. In fact, a recent EBA and ESMA report on the implementation of CRR (in relation to EMIR) points out that the concept of "legal opinion" did not work properly in the past and adjustments to Article 305 CRR are required. • The current proposal by the European Commission for an adaptation to Article 305 CRR ("CRR II") would still pose significant challenges to small and medium sized insurers. Even though the proposed amendments lower the "legal opinion" requirement, instead making a "legal review" sufficient, it remains burdensome and cost-intensive to provide such reviews. To avoid these problems, Insurance Europe suggests that EIOPA establish a contractual standard for central counterparties and clearing members, that justifies a reduced solvency capital requirement. Furthermore, Insurance Europe would like to point out that derivative transactions subject to Central Clearing will have a different risk profile from derivatives not centrally cleared. Currently, the counterparty module does not recognise the difference between the two types. The Loss Given Default of a derivative transaction subject to the arrangements following the central clearing should reflect the impact of the arrangements and the procedures following a possible default of parties. Finally, the LGD calculation should reflect the default fund (Article 42) which is part of the CCP, the collateral requirements by the CCP and the default procedures (as mentioned within Article 48). In fact, the default fund established by the CCP is aimed at covering any derivative exposure in case of defaults, so this is an additional key layer of protection that insurers receive when clearing via CCPs. It must be ensured that revisions of the CRR and corresponding clarifications are also incorporated into the Solvency II-Delegated Regulation to guarantee a level playing field.	

Q13.5	**Q13.5: Does the treatment of derivatives subject to the margining requirements set out in Article 11(3) EMIR in the counterparty default risk module properly reflect the risk? If not:** • **Why?** • **What should be changed (detailed suggestion)? Please elaborate on how your suggestion is in line with the fact that the scenario-based calculations are based on the impact of instantaneous stresses.** No, Insurance Europe believes that the counterparty risk module treatment of derivatives, subject to the EMIR margining requirements, does not properly reflect the risk exposure. The Solvency II approach was established before EMIR so there is currently no interaction between EMIR and the Solvency II Delegated Regulation with respect to derivatives and associated capital charges for counterparty default risk and collateral treatment. The assumption under Solvency II for calculating a risk-adjusted value of collateral by assuming a one-year holding period overstates the actual risk and leads to over-collateralisation. In fact, collateral (in the form of both initial and variation margins) already receives a haircut according to regulations specific to the derivatives market, and this haircut is calibrated based on a 10-day holding period. In short, derivatives market practice indicate that 10 days would be an appropriate time for settlement of margins in case of default, and implicit repayment of counterparties to a specific transaction. Additionally, as initial margins due to EMIR are usually calculated on a counterparty level, single initial margins payments are often difficult to allocate to single derivative contracts. It should therefore be clarified, that calculations can also be performed at a counterparty level according to the following formula: LGD_counterparty = max[SUM_i max(50% (Derivative_i + RM_fin_i) – F'* Collateral_i; 0) – F'*Collateral_counterparty; 0] Insurance Europe also has concerns regarding the following formula in the counterparty risk module: LGD = max(90% (Derivative + RM_{fin}) – F' * Collateral; 0) It does not reflect the changes introduced under EMIR. A significantly lower factor would be more appropriate, to reflect the expectations of high recovery rates in derivatives transactions.	
Q13.6	**Q13.6: Are there any other clearing arrangements or other arrangements related to derivatives transactions that EIOPA should consider? If so: Why (what are the volumes) and how?** N/A	

Q14.1	**Q14.1: EIOPA considers that the scope of the market risk concentration risk submodule covers all assets held by an insurance or reinsurance undertaking except those listed in Article 184(2) of the Delegated Regulation. Do you see any ambiguities regarding the scope?** Insurance Europe believes that a number of improvements are necessary. More specifically: • The limitations to the exclusion from the market risk concentration risk submodule induced by article 184 (2)(b) (i) (ii) & (iv) should be removed. These restrictions exclude from the exemption entities from other financial services and in particular credit institutions even in cases where the credit institution would be fully owned. Because SII requires a consolidation only on the ultimate parent on every other layer of the group, such a company will be recognised as a single line item (participation). Thus, if the insurer merged with this subsidiary there would be no capital requirement for concentration risk while not-consolidating based on the solvency II legislation would require a capital requirement for concentration risk. Moreover, the current text is detrimental to the competitiveness of European insurance undertakings, since the capital requirement imposed may limit the ability of insurers to make strategic investments in eg third countries. • Strategic participations should qualify for being excluded from the market risk concentration sub-module, by appropriate adjustments to Article 184(2). • Specific exposures to member States' central government and central banks debt should receive a risk factor of zero in Article 187(3), independent of whether the debt is issued in domestic or foreign currency. This would ensure a consistent approach across European currencies.	
Q14.2	**Q14.2: What assumptions are made by insurance and reinsurance undertakings relating to the application of Article 186(2) to (5) of the Delegated Regulation? In particular:** • **assumptions with respect to the applicability of these paragraphs to single name exposures that consists not exclusively of exposures to one single insurance undertaking, credit institution or financial institution (eg insurance group)? If it is assumed that they can be applied, what assumptions are used to calculate the risk factor gi?** • **assumptions when deciding whether a credit assessment by a nominated ECAI is not available (no issuer rating by the nominated ECAI, none of the exposures is rated by a nominated ECAI, something else)? Please cover where relevant the different cases mentioned in a.** In relation to the applicability to single name exposures, difficulties can arise when assessing the exemptions and determining the single name. Consider for example a situation in which an insurance undertaking has an exposure to a banking entity, both entities being part of a mixed financial holding company (MFHC). According to the drafting of article 182.1, one could conclude that the single name entity is the MFHC and thus subject	

	to the exemption. However, based on article 184 (2)(b) the exposure to the bank is not to be included within the single name exposure (which by the way, would not be consistent with article 182.1). If the the conclusion is that the exemption does not hold for the example, it is therefore odd that if the exposure were restructured (i.e Insurer has an exposure to the MFHC which in turn has an exposure to the bank), the exemtion would hold and no concentration risk charge would be needed. In our view the assessment should be made at the level of the single name exposure (ie the MFHC in this example). More broadly, difficulties related to the interpretation of single name exposure can be seen when some single name exposures include at the same time insurance undertakings, credit institutions, or other financial institutions. Consequently, the application of article 186 needs clarification. One solution could be to include the specific treatment allowed for undertakings fulfilling the conditions of article 186 more specifically in the article 182(5). Article 182(5) details the expected treatment for exposures related to one same single name which have no credit rating assessment. In such a case, the default credit quality step 5 to be affected should be adjusted by EIOPA to induce a gi coefficient consistent with the one currently defined in article 186. In addition, it is unclear how equity should be treated. In particular, it is unclear how the credit quality steps should be applied to equity (if at all). In relation to the assumptions around ECAIs, where no ECAI rating is available, the CQS should be 5 (as per Article 182(5) of the Delegated Regulations). For the partial case, it is expected to follow a similar approach to the credit module or a prudent CQS of 5.	
Q14.3	**Q14.3: What is the volume of assets/exposures falling within Article 186(2) to (5) of the Delegated Regulation (based on Solvency II valuations) in your undertaking/country/in the EU?** Because the capital requirement has been in place as of the 1 January 2016, companies have reduced their exposure. This implies that funds were invested in other credit institutions outside the influence of the group.	
Q14.4	**Q14.4: Article 199(4) to (7) of the Delegated Regulation use the same terminology as Article 186(2) to (5) of the Delegated Regulation. Are there any differences in the assumptions that insurance and reinsurance undertakings make regarding the points mentioned in Q14.2 between the market risk concentration sub-module and the counterparty default risk module?** Article 199 exhibits the same issue as the one mentioned above (Q14.2). One way to deal with this issue could be to split each multi-activity single name exposure into some single-activity exposures before the treatment.	
Q14.5	**Q14.5: What is the volume of assets/exposures falling within Article 199(4) to (7) of the Delegated Regulation (based on Solvency II valuations) in your undertaking/country/in**	

	the EU?	
Q14.6	**Q14.6: What assumptions are made by insurance and reinsurance undertakings with respect to the types of groups of exposures other than corporate groups and single immovable property? What characterizes these types? What would be the effect on the capital requirement for market risk concentration if they were not treated as single name exposure in your undertaking/country/in the EU?** The definition of single name exposure is not easy in certain cases. This happens with, for example, private equity funds or with funds for which the look-through approach is not performed. As these assets will most probably not lead to concentration risk, simplifications should be authorized provided the undertaking takes into account concentration risk in its limits management and policy.	
Q14.7	**Q14.7: What assumptions are made by insurance and reinsurance undertakings regarding the question whether exposures to separate counterparties that are owned by the same public entity should be considered as a single name exposure? What considerations form the basis for the decision? What would be the effect on the capital requirement for market risk concentration in your undertaking/country/in the EU if they would always/never be treated as single name exposure?** Insurance Europe members face difficulties with the definition of the group of related counterparties – sometimes it seems like for one entitiy a very narrow circle of entities is considered (eg. subsidiaries of entity A represent one group, subsidiaries of entity B represent a second group, and above A and B there is one group parent entity), sometimes it is very broad (eg. when the parent is the government). Therefore, Insurance Europe ask for a clearer definition about related entities and groups.	
Q14.8	**Q14.8: What assumptions are made by insurance and reinsurance undertakings regarding funds for which the look-through approach is not possible (in particular regarding allocation to single name exposures)?** When the look through approach is not possible, that fund is taken out of the concentration risk module as Insurance Europe members believe that it is quite diversified and a concentration shock is not needed and thus not applied.	
Q14.9	**Q14.9: The Solvency II framework does not provide a legal definition of the term "exposure" referred to in Article 182(2) of the Delegated Regulation. EIOPA considers that for an asset in the scope of the market risk concentration risk submodule the value of the exposure should normally equal the value of the asset as determined in accordance with Article 75 of the Solvency II Directive. Are there any assets where in your view a different approach is justified and why?**	

	Adding exposures of the same nature from the same counterparty makes sense, but when they are of a different nature, problems arise in this concentration risk submodule. For example, when you add shares and bonds, you have to provide a rating to the added exposure, but shares by nature do not have a rating. So the average asset rating criterion (article 182.4 and 182.5) obliges you to assign a quality credit step of 5 for shares, which clearly penalizes the whole exposure. Even if assets are of the same nature, the rounded-up average asset rating criterion is unduly conservative and does not adequately reflect the risk, when calculating average rating for single name exposures. For example, in the case of one issuer with two issues, one of 100 million euros with an "A" rating and another issue of 1 million euros with a "BBB" rating, this rule establishes the average rounded up rating is BBB in the calculation of concentration risk, which is a clear penalty for the purposes of calculating this risk. In order to avoid this effect the rounded-up average criterion should be deleted. To guarantee a consistent but not complex calculation, Insurance Europe recommend using the market value for the metric for all the assets in the portfolio.	
Q14.10	**Q14.10: How do insurance and reinsurance undertakings take into account the effect of qualifying RMT in the calculation of the capital requirement for market risk concentration? In particular:** • **How are the values of the exposures as referred to in Article 182(1) of the Delegated Regulation adjusted (for example if an insurer holds both stocks in a company and put options on the same stock)?** **How is the effect of collateral taken into account?** Insurance Europe members would expect that, when calculating the capital requirement for market risk concentration, the exposure on default of a single name to allow for the pay-off of a put-option on the stock. Collateral is associated with counterparty risk on derivatives, so generally it would not affect the concentration risk.	
Q14.11	**Q14.11: In case this was in line with the requirements set out in Article 132 Solvency II insurers could use derivatives to gain exposures to market risk (eg long future or long call position on individual stocks). How would insurance and reinsurance undertakings treat this case in the market risk concentration submodule** When using derivatives to gain exposures to market risk, long futures are treated like single name stock holdings less the risk free cash element. The long stock leg is treated as a typical stock and the cash leg is excluded. Long calls would typically expire with no value on default of the single name, hence the exposure is the opening market value. The long-call, if over-the-counter (OTC), would go through the counterparty module.	
Q14.12	**Q14.12: Are risk-mitigation techniques (eg derivatives) included in the determination of the calculation base as referred to in Article 184(1) of the Delegated Regulation? If so,**	

	how ? Regarding the determination of the calculation base as referred to in Article 184(1) of the Delegated Regulations, Insurance Europe would expect single name derivatives to be included and index based derivatives to be excluded	
Q15.1	**Q15.1: Do you consider the currency risk arising at the level of the group due to the currency used to prepare the consolidated accounts being different from the reporting currencies of the solo undertakings ('FX translation risk') to be a real risk?** The current currency risk methodology is flawed at both group level and entity level. This is because at entity level a company operating across different currency markets will be wrongly penalised for holding currency in proportion to its foreign currency operations and a group will even be penalised for backing local capital requirements in local currency. The current methodology will encourage currency mismatch and penalise logical and economically sound currency management practices. The deficiencies in the current methodology can be rectified through the simple improved methodology provided below in answer to Q15.4. Whatever approach taken, it should achieve the following outcomes. If one defines minimum local foreign currency requirements (LFXmin) as local liabilities + any local capital requirement needed to avoid regulatory intervention, then a) There should be no currency risk charge for backing the Local Foreign Currency Requirements with local currency b) There should be currency risk charge only for deviating from the two following, different but equally, legitimate approaches to currency risk management 1) Distribute surplus above that needed to cover LFXmin pro-rata based on LFXmin 2) Hold all surplus above LFXmin centrally in group head office currency Further explanations follow below. FX translation risk can be considered to be a real risk because it can impact levels of surplus and group solvency ratio, but it cannot threaten overall group solvency. The current methodology treats a group which backs its local solvency capital requirement with assets in the local currency as taking FX translation risk. This is wrong and penalises good FX risk management. The current approach is also in contradiction with Recital 106 of the Directive 2009/138/EC which states that, "it is necessary to ensure that own funds are appropriately distributed within the group and are available to protect policy holders and beneficiaries where needed. To that end, insurance and reinsurance undertakings within a group should have sufficient own funds to cover their solvency capital requirements. " The treatment of FX translation risk therefore needs changing. If a group or undertaking fully cover their respective capital requirements with assets in the currency	

	with which the capital requirements are measured, then FX movements cannot result in insolvency at a group level. Changes in exchange rates can impact the value of the foreign currency exposures on the group balance sheet and therefore the value of the group. But there is effectively a lower bound to the solvency ratio of such a group as conversion of a positive local solvency position into the group reporting currency cannot result in a negative group solvency position. The existing currency risk charge methodology results in a capital charge for groups which have foreign currency exposures which are in excess of their foreign currency liabilities. Assuming the local undertaking holds assets to meet its capital requirements then the existing methodology clearly incentivises the hedging back to reporting currency of these foreign currency capital requirements at group level which makes no economic sense and can actually create real FX risk because hedging the currency exposure at group level can potentially expose the group to insolvency. Capital charges should apply for (re)insurers who hold significant amounts of excess capital in foreign currencies. However, there are a number of sound currency risk management strategies which result in overly conservative currency risk capital charges under the existing regulation. Solvency II's approach to currency risk is also a problem for solo entities carrying on business in foreign currencies, for example a solo undertaking operating in multiple currencies due to the passporting rules in the European Union. A currency risk capital charge based on the value of net assets held in foreign currencies results in excessively high capital charges. It also incentivises undertakings to follow poor currency risk management practices, as it encourages them to reduce the level of assets held in foreign currencies to a minimum required to cover foreign-denominated liabilities. Although the Commission's Call for Advice refers to the application of the accounting consolidation-based method to groups, Insurance Europe believes that it should also consider the impact of the calculation of currency risk on solo entities. As this also affects the functioning of the Solvency II framework, it is unclear why it should not form part of the Commission's review of the standard formula. The Commission's Call for Advice asked that EIOPA's investigation of the approach to currency risk consider "the incentives given to the group's risk management". This is an important aspect, which is not referred to in the Discussion Paper. The current use of the discount rate of the local currency also prevents an undertaking from achieving a state of risk mitigation to both interest rates and currency rates if one believes that the measure of a risk free position is solvency ratio stability. To reduce volatility of the solvency ratio of the undertaking and safeguard the assets to ensure payment of the liabilities to the policyholders, prudent risk management would suggest that the assets backing the risk margin be invested in the same currencies as the underlying policy cash flows. However, to do so creates an interest rate mismatch which then introduces additional volatility to the solvency ratio.	

Q15.2	**Q15.2: If answer to Q15.1 is no, should there be restrictions on the availability of the own funds at the level of the group?** No, there should not be restrictions on the availability of own funds at the level of the group except for natural restrictions such as regulatory restrictions. It is reasonable to assume that surplus above the local capital requirement is fungible across the group. A group could, in their ORSA, report on any significant practical or legal constraints in moving surplus capital around the group and confirm they have considered this in their overall group capital planning and management.	
Q15.3	**Q15.3: Do you consider own funds across the group to be fungible? Please explain why this would be the case in a situation of stress on a given currency.** Yes, it is reasonable to assume that own funds are fungible across the group to the extent there are no regulatory restrictions. A group should report in their ORSA and/or liquidity reporting on any significant practical or legal constraints in moving surplus capital around the group and confirm they have considered this in their overall group capital planning and management. FX translation risk capital, if properly measured, will address the issue of potential changes in FX impacting the availability of funds to be moved to where needed. Availability at group level of the eligible own funds of related undertakings is detailed in Article 330 of the Delegated Regulation. FX translation risk should not impact on the assessment of the fungible own funds.	
Q15.4	**Q15.4: Do you consider the treatment of the currency risk at the level of the group to be appropriate under the standard formula? If not, what elements would you propose to change? Please explain how your suggestion meets the requirements of Article 101 of the Solvency II Directive.** No, as noted in our answer to Q15.1 Insurance Europe does not consider the treatment of currency risk at group level to be appropriate under the standard formula. The standard formula levies a capital charge against net foreign currency exposure and therefore against groups which hold assets to meet their foreign currency capital requirements. To mitigate this capital charge groups would either need to hold local capital requirements in the group reporting currency, which is likely to result in a capital charge at a local level, or hedge the exposure at group level, which as discussed in our answer to Q15.1 results in the group's solvency being exposed to FX movements.	

	Changes to the methodology should result in the following outcomes: 1) Groups should not be penalized for foreign currency exposures which are held to meet undertakings' local capital requirements. 2) Sound risk management practices such either as pro-rating own funds across different currencies according to liability exposures or holding all surplus in group currency should not generate FX translation risk capital. **Insurance Europe proposed solution** Insurance Europe proposes the following methodology for the treatment of currency risk which is simple to calculate from existing data within groups: **Capital requirement for the risk of an increase/decrease in the value of the foreign currency against the group reporting currency shall be equal to** **25% * [Max(0,(Exp_{fi}-LFX_{maxfi}))+Max(0,(LFX_{minfi}-Exp_{fi}))]** Where **Exp_{fi}** is the value of the aggregate asset exposure for foreign currency i **LFX_{minfi}** = local Minimum Foreign Currency requirement = local liabilities + any local SCR **LFX_{maxfi}** =local Maximum Foreign Currency requirement = Total assets*{$LFX_{minfi}/\sum_{i=1}^{n} LFXminfi$} The definition of the local SCR could be the level of capital at which the local supervisors would intervene. (ie similar to SCR for Solvency II) The proposal offers an approach to the calculation of the capital charge for currency exposures within a group which is proportionate to the risk and critically provides incentives for good risk management. Note that the stress factor applied to the currency exposure is consistent with the stress currently applied and continues to assume a conservative 100% correlation across all adverse currency movements. The proposal meets the requirement of Article 101 of the Solvency II Directive as it restricts the capital requirement for FX translation risk to entities which hold foreign currency outside of a corridor in which a range of sensible risk management practices can be justified. A spreadsheet with a number of examples, is under development and will be provided to EIOPA to show how the methodology could work along with comparison with current method. In addition, Insurance Europe recognises the proposal being tested as part of the International Capital	

	Standards (ICS) technical specifications. While the proposal outlined above is more accurate than the proposal tested as part of the ICS technical specifications, the latter has a sounder economic basis and is more appropriate than the existing Solvency II approach.	
Q16.1	**Q16.1: What criteria and elements could be used for the proper identification of related undertakings which are used by insurance and reinsurance undertakings as an investment vehicle?** Insurance Europe agrees that a definition of an "investment related undertaking" for which the look through approach is always possible is needed. The following criteria should be considered as the basis for an appropriate definition: • Undertaking purpose is for holding or managing assets • The (re-)insurance undertaking has control over the related undertaking The application of the look-through-approach should be the standard approach; however there should be the option not to apply the look through in one of the following cases: • When the SCR based on a look through approach is lower than the SCR based on a standard formula approach • When the exposure is not material • When the target underlying asset allocation of the related undertaking is used, in line with article 84(3) of the Delegated Regulation. In order to avoid any misunderstanding, it should be clarified that Alternative Investment Funds, which are established exclusively for institutional investors, are not considered as "investment vehicles". Further comments on the criteria for defining the investment related undertaking: • **Control over the related undertaking**. Control requires exposure or rights to variable returns and the ability to affect those returns through power over the related undertaking. The related undertakings used as investment vehicle are normally under the control of the insurance undertaking and are established with a distinct goal, ie supporting the operations of the insurance undertaking consistent with Ancillary Service Entity but then related to investment activities. • **Strategic participations** should not be excluded from the scope of the investment related undertaking. **Financial leverage** - Insurance Europe would like to note that in many cases the related undertaking can be leveraged and this should not prevent it to qualify for the new definition of investment related undertaking. In terms of valuation, the related undertaking should be valued based on the adjusted equity approach according to article 13(1)(b) of the Delegated Regulation.	

Q16.2	**Q16.2: Do you agree that the elements identified by EIOPA are relevant? How could such elements be integrated in an appropriate definition?** Please refer to the answer to question 16.1 for further detail on elements for the definition.	
Q16.3	**Q16.3: What are the costs and benefits that might be associated to extending the application of the look-through approach to investment related undertakings?** Insurance Europe supports the extension of the application of look through to investment related undertakings, and the clear benefit would be an SCR that more appropriately captures the real risks. In fact, not allowing a look through approach for investment related vehicles results in a deviation from Solvency II fundamental principles and objectives, such as: • applying a risk based approach and so relating risk capital to actual risks • allowing and incentivizing good risk management • allowing optimal investment strategy for customers based on liabilities Insurance Europe would like to make the following notes, which should be taken into consideration in the review of the capital treatment of investment related undertakings: • Where the investment subsidiary represents a material share of the insurer's total assets, an additional capital requirement may be required under the concentration risk sub-module. • The underlying assumption is that the insurer runs a massive credit risk against one counterparty, the subsidiary, while in reality the insurer may have well managed its counterparty and concentration risks through a diversified portfolio of assets within the subsidiary. Moreover, the SCR for concentration risk will be significantly high in case the related undertaking is treated as a non-rated single name exposure. Such a capital requirement for concentration risk would likely not exist in case the look-through approach was used on the underlying portfolio of the investment subsidiary. • By contrast to the calculation of the SCR at the level of the undertaking, the application of the look-through approach to the underlying investments is compulsory for calculating the group SCR. This leads in practice to strange situations where the solo SCR of the insurance company is sometimes much higher than the group SCR, despite often limited differences in scope. In other words, transparency is required from a group perspective but not from a company perspective.	
Q16.4	**Q16.4: How may the extended application of the look-through approach to investment related undertakings impact the SCR calculation?** Insurance Europe believes that if look-through approach were to be extended to investment related undertakings, the impact on the SCR would depend on the nature of the investments and the proportion of assets held by such undertakings. So, the impact will vary from company to company and market to market.	

Extending the look through approach can have the following types of impact on the SCR:

1. The participation will be based on the adjusted equity value. In the adjusted equity value, intragroup transactions are not eliminated. The economic value of any funding will have a constant credit spread in line with article 75 of the Directive 2009/138/EC
   - The intragroup position (funding of the investment related undertaking) will be on the economic balance sheet and will be subject to the scenarios of market risk.

Because the intragroup transaction is not eliminated, there can be a difference between the economic value of the asset on the balance sheet of the insurance undertaking and the economic value of the funding liability within the related undertaking (constant spread). Depending on the size of the credit spread and volatility of the spreads in the market this could increase/decrease own funds on the level of the insurance undertaking.

2. There could also be an impact on the relevant interest rate scenario. Depending on the characteristics of the intragroup asset in relation to the investments in the investment related undertaking the interest sensitivity could change. This would impact the risk profile captured by the SCR and this would differ from the view of the insurance undertaking.

With the application of the look-through approach these effects would disappear. As the entity is under direct control of the insurance undertaking, the information needed for determining the capital requirements is available.

The example below shows the impact on SCR ratios of the look-through of related undertakings. The balance sheet a fictitious insurer is given by:

Corporate debt	€ 40,000.00
Sovereign debt	€ 35,000.00
Resecuritisations	€ 10,000.00
Equity	€ 5,000.00
Property	€ 5,000.00
Cash	€ 5,000.00
Total assets	€ 100,000.00
Technical provisions	€ 90,000.00

The duration and rating of the corporate and sovereign debt portfolio is based on the EUR VA

representative portfolios. The duration of assets equals the duration of technical provisions.

Assume the insurer holds €10,000 of BBB rated resecuritisations through a related undertaking. The related undertaking is solely financed through equity. When a look-through of the related undertaking is applied, a spread shock of 100% applies to the resecuritisations. If no look-through is applied, in line with article 84(4) of the Delegated Regulation, a type 2 equity shock of 49% holds for the related undertaking.

When complying with article 84(4) (no look-through) the undertaking has a SCR ratio > 100%. In reality, when the risks of the underlying portfolio of the related undertaking are considered (look-through) the undertaking is undercapitalized (SCR ratio of 70.28%).

	Look through of the related undertaking	No look through of the related undertaking
Interest rate risk	€ -	€ 58.80
Equity risk	€ 1,950.00	€ 6,491.92
Property risk	€ 1,250.00	€ 1,250.00
Spread	€ 13,387.28	€ 3,387.28
Market risk	€ 15,624.74	€ 10,258.19
Life underwriting	€ 1,200.00	€ 1,200.00
Health underwriting	€ 750.00	€ 750.00
Non-life underwriting	€ 1,900.00	€ 1,900.00
BSCR	€ 16,741.34	€ 11,447.27
Operational	€ 500.00	€ 500.00
LAC TP DT	€ -3,013.44	€ -2,060.51
SCR	€ 14,227.90	€ 9,886.76
SCR ratio	70.28%	101.15%

An example from the ORSA of a Danish insurance company shows that by **not** looking through, the company's SCR is reduced by 9 %.

Q16.5

Q16.5: Under which conditions do you consider that it would be appropriate to apply/allow the look-through approach to investment related undertakings?

The use of look through should be possible for any participation that meets the criteria for an investment related vehicle.

Q16.6	**Q16.6: Do you consider the 20% threshold established by Article 84(3) appropriate?** No, Insurance Europe believes the 20% threshold is not appropriate and requires review. In fact, the 20% threshold is not the only concern that needs to be addressed in Article 84(3). The current wording of Article 84(3) raises the following key concerns: 1. The 20% threshold is too low and should instead be increased to 30%, in line with the definition for detailed list of assets in QRT. 2. The condition of having a target asset allocation, on the sole basis of which investments are performed, is often in practice difficult to fulfil. For example, many collective investment undertakings are managed on the basis of other criteria, such as target volatility, sector exposure, etc. In addition, the application of the simplified approach is particularly difficult for fixed-income funds, which often do not have a target allocation. Improvements in the current wording could be achieved with the following changes and additions in Article 84 (3) of the Delegated Regulation: *[…] For the purposes of that calculation, data groupings may be used, provided they are applied in a prudent manner, and that they do not apply to more than ~~20%~~ 30% of the total value of the assets of the insurance or reinsurance undertaking. Where the underlying target asset allocation is not available, the Solvency Capital Requirement may be calculated on the basis of reporting by data groupings, provided such data grouping are available to the undertaking.* A data-grouping may be based on the last published asset allocation and may, for example, aggregate equity positions or fixed-income securities in an appropriate manner. Insurance Europe notes that, even in cases where the required information is available, the application of the simplified approach in article 84 (3) for UCITs is often burdensome from a cost and time perspective, and is further complicated by the gaps in the information provided by asset managers. From this perspective as well, any further simplifications and ways to make the simplifications workable would be very much welcomed by the industry.	
Q16.7	**Q16.7: Does the threshold allow the application of the simplified approach for investments which are backing unit-linked and index-linked products in an appropriate manner?** No, Insurance Europe believes that the current 20% threshold should not apply to unit- or index-linked products. Insurance Europe highlights that the current 20% applies to the balance sheet value. A more risk-based approach would take into account the contribution of unit-linked backing assets to the total SCR of the undertaking and would, as a consequence, justify an exclusion of unit-linked backing assets from the 20% threshold as these have no contribution to SCR from a market risk perspective.	
Q16.8	**Q16.8: Do you have specific proposals to further simplify the look-through approach for investments which are backing unit-linked and index-linked products?**	

	Yes, Insurance Europe believes the look-through approach for investments backing unit-linked and index-linked products is not justified, not least because it will have only a very limited impact on SCR. Insurance Europe therefore notes that: • Since the impact of unit-linked/index-linked businesses on the SCR is negligible, the 20% threshold should not apply to unit-/index-linked (see response to Q 16.7) • Whenever investments back unit-/index-linked products where there is no guarantee and policyholders take all investment risk, a look-through approach would have almost no impact in terms of contribution to SCR. Against that background, it is justified to exempt assets backing such unit/index-linked contracts from the look-through approach. This would help decrease burden on insurers with no costs from a prudential supervision perspective. • It should be understood that the challenges faced for applying look-through requirements are similar in both pillar I (ie the calculation of capital requirements) and pillar III (ie reporting). As a consequence, recognition of concerns and simplifications should always be considered by having in mind both pillars. Moreover, difficulties are not limited to unit-linked business. Practice shows that in many cases it is very difficult to gain access to all necessary data at the required level of granularity. For example, while the required data for Alternative Investment Funds in most cases is accessible via individual interfaces, the situation for UCITs is different and availability of detailed data for the application of the look-through is lacking.	
Q16.9	**Q16.9: Do you identify specific exposures for which the cost of the application of the look-through approach would be excessively burdensome, compared to its added value in terms of accuracy of risk sensitiveness?** Yes. Two examples include unit-linked/index-linked business and fixed income funds. Insurance Europe believes that for unit-linked business, the application of the look-through approach, even with the given simplifications, is excessively burdensome, as the impact of unit-linked business on the SCR is negligible. Therefore, the look-through-approach should not be required for assets backing unit/index-linked parts of contracts where no guarantee is given by the insurer. In the case of fixed income funds, it is often difficult to apply the look-through approach as key information such as rating and duration of underlying bonds is missing. This in practice leads to the application of a Type 2 equity charge, which is significantly overstating the risk of fixed income funds.	
Q17.1	**Q17.1: Do you think that the relative shock on interest rates is inappropriate to measure the one-year 99.5% Value at Risk in a low yield environment? Please explain if you think that the current relative approach underestimates the interest rate risk.** No, Insurance Europe believes the relative shock is appropriate, at least until the wider 2020 Solvency II Review is undertaken because the current approach, while not perfect, already ensures insurers can cope with extremely low interest rates. Key features were designed within the context of	

	the wider Solvency II framework and should not be considered in isolation. The following aspects of the design and calibration of the interest rate submodule are critical in the consideration of whether to adjust the calculations or calibration of the submodule. • A lower bound on interest rates is economically sensible and must be considered in the calculation. • The magnitude of volatility experienced when interest rates are positive is not an appropriate indicator of the likely magnitude of volatility when interest rates are very low or negative. • Recognition that downside risk is not the same as upside risk and the removal of diminishing capital requirements at lower interest rates would have an unwanted procyclical effect. • The general Solvency II approach is conservative and tends to exaggerate the impact of current low interest rates on insurers, especially for long-term business. • Applying a relative shock to the non-liquid part of the curve is illogical since the UFR is similar before and after the shock. Firstly, any methodology should have an interest floor because in reality insurers would not in any case invest significantly in risk free assets and secondly because they, and all rational market participants, would seek alternatives, for example storing cash, if interest rates became significantly negative for extended periods. The floor would be influenced by the cost of such alternatives. There is economic evidence for a lower bound on interest rates and also academic research from the IMF, amongst others, who have identified that a floor to negative interest rates would exist. (https://blog-imfdirect.imf.org/2016/04/10/the-broader-view-the-positive-effects-of-negative-nominal-interest-rates/). One method for setting a floor would be the cost of storing cash safely. Secondly, it is not plausible that interest rate changes observed at positive interest rate levels would occur in equal measure if rates were at a negative level. Instead of this, in the negative area the actual downward risk substantially shrinks, because more and more market participants would withdraw from such detrimental investments and, eg, hold cash. The resulting thinning out of demand limits any further interest rate decrease. An appropriate modelling of interest rate risk must account for this. Thirdly, the overall "countercyclical" effect of the capital requirement for interest rate risk must be maintained. In fact, in the current negative yield environment, the loss of this sensible effect would even operate in a procyclical manner. Thus, in a low yield or negative yield phase the capital requirement must not be too large but rather be lower than in normal times. Fourthly, the Solvency II valuation methodology leads to an exaggeration of interest rate risk for a number of reasons. 1. Realistic yields on assets are ignored which exaggerates the apparent interest rate mismatch	

	in the base case. Liabilities are generally valued using the risk-free rate plus volatility adjustment which means a discount rate at or close to the risk-free rate. This is very similar to assuming the company invests only in risk free assets and will get no additional yield to help cover its liabilities as the fall due. This is conservative because in practice insurers in almost all cases earn yields above risk free. 2. The Solvency II framework uses the current instantaneous yield curve for 20 years in the case of the EURO, only then starts a slow extrapolation towards the UFR. This is equivalent to assuming that the current low rates will stay for the next 20 years. While this is a possibility that companies should be able to withstand, it is generally considered an unlikely one and already a downside adverse scenario. 3. Insurers must also add the Risk Margin and time value of options to their liability calculation which are notional elements created for Solvency II measurement. They are not expected to be needed to pay claims and therefore are another reason an interest mismatch can appear greater under Solvency II than it is. Finally, as the UFR cannot change from year to year the existing interest rate shocks for longer maturities, detailed in Articles 166 and 167 of the Delegated Regulation, are inconsistent with this approach. This is discussed further in the response to Q17.7. Whilst the analysis provided in the dicussion paper highlights some of the flaws with the current calibration, the interest rate risk submodule is clearly inherently linked to the wider Solvency II framework and approach. Altering the calculation or calibration of this submodule without due consideration of these issues would lead to an inappropriate result. Insurance Europe therefore propose that any changes would be more appropriately considered as part of the 2020 review.	
Q17.2	**Q17.2: Under what conditions and circumstances could the issue be resolved by setting a minimum downward shock? How should this minimum be calibrated?** A minimum downward shock would resolve the issue of having diminishing levels of interest rate shocks as interest rates fall. However, since changes of interest rate will decrease substantially the lower the rates are, using a fixed minimum shock would result in scenarios inconsistent with economic reality. Therefore downward shocks need to remain calibrated as a function of the interest rate level. As there is economic evidence for a lower bound on interest rates, no fixed minimum downward shock in absolute terms can be appropriate because any minimum downward shock could potentially violate this lower bound.	
Q17.3	**Q17.3: Do you have any comment on the main issues identified? What are in your view the**	

	main interest rate risks that insurance undertakings are facing? Insurance Europe does not agree with the assertion that the current stress factors would still underestimate the actual risk even if a minimum shock of 1% was introduced, the factors were applied to negative rates, too, and the factors were recalibrated based on more recent data. The main risk for insurers is that interest rates stay low for longer than expected. Although it is reasonable to assume that interest rates could be negative for a period of time the risk that interest rates reach a realistic floor and remain there permanently is far beyond the 1-in-200 calibration level. Insurance Europe is not aware of any other industry or government taking actions to ensure they could meet all needs in such circumstances. Therefore, even using a floor may lead to excessive scenarios being generated for Solvency II. There should be an assessment of how conservative Solvency II is, compared to a realistic approach, and the impact of making it even more conservative before any changes are considered.	
Q17.4	**Q17.4: Why or why not should EIOPA use different data sets than the ones used for the current calibration rather than only updating the existing data to include the recent years?** If a new method is to be used then updating the existing data sets should be sufficient for any recalibration. Any additional data sets should be sourced from countries and time periods which have analogous monetary policy frameworks and macroeconomic environments to adequately capture the 1-in-200 year level of risk. Historical German government yield curves (Bundesbank) and US government yield curves could considered as another high-quality long-term series. Other global markets such as the Japanese or Swiss Government bond market have the drawback that those economies are not comparable to the eurozone economy and should not be used in the calibration.	
Q17.5	**Q17.5: Do you think that the available historical data set of daily EIOPA risk-free rate curves is suitable to perform the calibration of the interest rate stress factors? If so, would you consider the data to include rates up to the last liquid point or to include the extrapolated part as well? Please explain.** In general, the historical data set of EIOPA risk-free curves is suitable to perform the calibration of the interest rate risk factors as it ensures that the interest rate shocks are calibrated to the same data to which they are to be applied. The EIOPA data set would need to be cleaned of any spurious or outlying data points before they could be used in the calibration.	

	The calibration should not use the extrapolated part of the curve as this is often highly correlated to the last liquid point (LLP) on the curve and the reversion to the UFR dampens variance. However, Insurance Europe believes there is justification to investigating the use of richer, longer duration data; using all data even beyond the LLP, especially for EUR, is necessary to ensure that calibration remains appropriate in case the LLP moves out.	
Q17.6	**Q17.6: Do you consider any other data set suitable for the calibration of the interest rate stress factors? Please explain.** Please refer to response to Q17.4.	
Q17.7	**Q17.7: Do you think it is reasonable from a statistical and economical point of view to shock the input data (eg swap data or zero coupon government bond data) used to derive the smooth risk-free curve instead of shocking the derived risk-free curve? If yes, should the shock factors be also calibrated on the input data? (Please explain)** To ensure consistency, the shock factors should • either both be calibrated and applied to input data (eg swap data or zero coupon government bond data) • or both be calibrated and applied to output data (Solvency II risk free term structure). The design of the interest rate risk sub-module should be consistent with the calculation of own funds and, thus, with the valuation of technical provisions (ie with the definition of the risk-free interest rate term structure). If the assumed interest rate shock is realised, then the own funds of the undertaking would be calculated based on the liquid part of the shocked term structure and its extrapolation to the UFR. This differs from the current design of the interest rate risk sub-module where all tenors are shocked directly by a risk factor, thereby implicitly assuming an UFR shock of roughly 20%. This inconsistency may result in an additional asset liability mismatch, when an undertaking tries to reduce the SCR for the interest rate risk. **To avoid this problem, the interest rate shocks should only be applied to the liquid part of the term structure which afterwards is extrapolated to the UFR.** This approach is further supported by the fact that it would allow interest rate risks on the input side to be directly managed and that external parties are interested in exposure on the input side.	
Q17.8	**Q17.8: Do you have any further comments on the data issues?** The compounding convention for Swap Par Yield fixed legs should be respected when converting to spots. Spurious/illiquid points (11,13,14,16 – 19 years) should be avoided when calibrating spot curves.	

Q17.9	**Q17.9: Given that the shock factors could be derived from different methods (parametric and non-parametric), do you think principal components analysis is useful to derive the shock factors? (Please explain)** Principal Components Analysis (PCA) is a reasonable approach, it has proven a stable description of the distribution of interest rate movements. Transforming the data for normality, and stationary prior to PCA, will allow more flexibility and give more intuitive results.	
Q17.10	**Q17.10: On which time window should the corresponding calibration of the shock factors be based (annually, quarterly, monthly, weekly or daily)?** The time window used for calibration needs to be chosen with care. On one hand, the shorter the time window, the more observations are available. On the other hand, these observations are not independent but highly autocorrelated. It is important that the effect of autocorrelation is properly taken in account by sound statistical methods, parametric or non-parametric (eg bootstrapping). A monthly basis, and to a lesser extent weekly, is a reasonable choice for computing annual shocks. A daily based approach suffers from understating VaR when assuming normality and grossing up by root 260.	
Q17.11	**Q17.11: Do you think the additive approach is a mathematically and economically reasonable approach to derive the shocked risk-free curves? Please explain.** Given that negative interest rates are now observable, an additive element could be considered to be mathematically and economically reasonable. However, this would not be reasonable for all situations. As noted earlier it is not plausible that interest rate changes that were observed at a level of, eg, +5% would occur in equal measure if rates were at a level of –1%. Instead of this, in the negative area downward risk substantially shrinks. The use of a fixed additive shock would also have the drawback that it could potentially violate the lower bound. The magnitude of the shock would therefore have to be recalibrated frequently.	
Q17.12	**Q17.12: Do you have any suggestion to improve this approach?** A displacement log change approach could be a necessary compromise but would require the calibration of the displacement rate. This approach restricts the downside from very negative rates and maintains some skew towards rates rising.	
Q17.13	**Q17.13: Do you think the interest intensity-based approach is a mathematically and economically reasonable approach to derive the shocked risk-free curves? Please explain.** The interest intensity approach described is an additive version using continously compounded	

	interest rates which has little theorectical benefit over a simple additive approach.	
Q17.14	**Q17.14: Do you have any suggestion to improve this approach?** No	
Q17.15	**Q17.15: Would it be worthwhile to consider a calibration approach that uses absolute (relative) changes in a low (high) interest rate environment? What about setting or calibrating a minimum interest rate change (see also Q17.2)? What should be taken into account when pursuing these approaches?** An approach based on absolute changes in a low interest rate environment and relative changes in a high interest rate environment should not be used because it would lead to complex definition issues in both calibration and application. Such an approach is likely to miss the given security level and to result in model instability.	
Q17.16	**Q17.16: Can you propose any other mathematically and economically suitable approaches (eg a relative shock on the unit zero-coupon bond prices)?** Any suitable approach must regard the requirements explained in the comment to Q17.1. As noted in response to Q17.1 any approach to modelling interest rate risk has to account for the fact that in reality many market participants are able to avoid investments with negative rates by switching to other investments or by holding cash. This means that the deeper interest rates dip into the negative area, the more market participants refrain from buying – the demand side thins out increasingly. Thus, it is not plausible to assume that interest rates in the negative area can further go down to the same extent as in the positive area. Instead, a sensible interest rate model must exhibit a clear decrease of downward risk and a floor. Insurance Europe believe that if a new method is to be used, then there are a few alternative approaches which warrant investigation. These include: • Stresses that are dependent on the level of interest rates. An additive stress factor could be scaled up for up-stresses when rates are low, and vice-versa. • Having the same stress factor, but different dynamic probability weightings might be useful from a pragmatic perspective. • Having a dynamic stress factor that depends on duration and the level of interest rates, is likely to be difficult to manage. A simplified version which uses two fixed factors can overcome some of these issues. It is important that any choice is properly back tested against the historical experience of various	

	currencies.	
Q18.1	**Q18.1: Do you recognize specific aspects with regard to the calculation of DTA and DTL on the Solvency II balance sheet that raise an issue in the calculation of LAC DT?** Insurance Europe agrees that (deferred) taxes can have a significant impact on the Solvency Capital Requirement (SCR) and consequently on the solvency ratio. The Loss Absorbing Capacity of Deferred Tax (LACoDT) is an adjustment which can be applied to the SCR as specified in Article 108 of the Solvency II Directive and Article 207 of the Delegated Regulation. Article 207 does not limit the loss absorbency of deferred tax, nor should it. However, some supervisors are limiting the amount of deferred tax that can be considered as loss absorbent on the grounds that approaches for the recoverability assessment (DA article 207(2)) differ widely and imply a certain dose of expert judgement (because they are based on companies' own projections of future profits). Insurance Europe's view is that LAC DT represents in principle the DTA in a post-shock stressed balance sheet. As such the recoverability test of the LAC DT is not different from the recoverability test for the DTA in a Solvency 2 or IFRS balance sheet and the same methodology (IAS 12) should be applied. Specifically, for the LAC DT it is important to consider the economic situation after the stress on the balance sheet items and the underlying assumptions. In line with the above, the recoverability test will be consistent with the company's strategy and projections or business plans approved by the company. Internal documentation already carried out that would justify the projection of future benefits may be used. While this introduces specific considerations, the IAS 12 methodology should remain leading. In line with its response to the EIOPA's guidelines on deferred taxes in 2015, Insurance Europe recommend that EIOPA revisit its view on tax groupings (including Dutch fiscal unity). Insurance Europe members think it is economically realistic to attain value to positions in which an insurance entity has insufficient tax capacity on its own, but can derive additional capacity from taxable losses that can be utilized through group companies and for which the insurance entity is entitled to a benefit in case of utilization. Further Insurance Europe want to recommend as far as a look through approach is being applied in the SCR determination, to allow that the calculation of the LAC DT is based on a consolidated basis assuming the subsidiaries that are considered in the look through/consolidated view belong to the same tax group/fiscal unity.	
Q18.2	**Q18.2: How could the assumptions on the returns on assets and liabilities be more harmonized and less subjective?** Whilst there should be consistency in the methodology for the recoverability test, specific assumptions on the returns on assets and liabilities are by definition undertaking specific and may vary by jurisdiction, undertaking and/or portfolio. Applied assumptions should be consistent with similar assumptions used by the undertaking for other purposes and should reflect the economic reality and consistently assumed action by undertakings and regulators after a shock.	

	Therefore, a harmonization is neither possible nor necessary. The projection of the local GAAP figures used for calculating taxable profits is not risk-neutral. It includes risk premia on assets which the company holds. Furthermore, tax planning must remain company-specific so that tax legislation in place can be reflected appropriately. The October 2016 CRO Forum paper (available here: http://www.thecroforum.org/dta-in-scr/) on the topic (page 4&5 of the paper) proposes principles and guidance regarding the treatment of deferred taxes under Solvency II and the assumptions for the recoverability testing of their loss-absorbing capacity with the view to create a level-playing field within the industry. Insurance Europe would support such an approach, provided that the recognition of the fact that tax legislation varies a lot across countries is maintained.	
Q18.3	**Q18.3: How could the uncertainty in the assets returns be taken into account in the calculation of LAC DT?** There is no bigger problem with uncertainty then in pillar I calculations in general. The best estimate values of future cash flows are inevitably uncertain, too. Hence, there is no need to take uncertainty explicitly into account in the context of LAC DT. Solvency II requires undertakings to capture the best estimate of future asset returns. Over time, economic taxable profits will be realised, which can be used to recover notional deferred taxes. These future profits are expected from earning an investment margin on invested assets over and above the discount rate included in the Solvency II balance sheet and funding costs. Requiring undertakings to additionally capture uncertainty would lead to more prudence in the calculations. Consequently, an unbiased best estimate cannot be captured any longer. Stipulations under IAS rules should not be used to justify any modifications to current Solvency II rules, as the latter intends to capture economic best estimates.	
Q18.4	**Q18.4: Under what conditions and circumstances is a projection of both economic (Solvency II) and fiscal profits and losses required in the calculation of LAC DT? Under what conditions and circumstances would either only economic or only fiscal losses suffice in the calculation of LAC DT and in that case which one of them?** Economic profits and losses and fiscal profits and losses are based on the same cash flow projections. The main difference is timing. Whilst these timing differences and the impact thereof must be reflected by the undertaking, the extent to which this would require separate projections depends on the specific circumstances.	
Q18.5	**Q18.5: What are your considerations to take account of new business in the calculation of LAC DT, given the uncertainty involved after the shock loss?**	

	When taking account of new business in the calculation of the LACoDT, the main consideration is the extent to which the relevant business would be able to recoup the shock loss and hence be able to write new business. This requires consideration of the basis on which the business in question can take management actions to improve its capital position (including whether it can be recapitalised). Insurance Europe expects that insurance businesses in [Europe/the EU] would take appropriate management actions (including if necessary recapitalisation) following a shock loss. Insurance Europe does not consider that it would be appropriate to assume that the whole of the [European/EU] insurance industry would go into run-off and be unable to write any new business. There is empirical evidence available to demonstrate that following large losses, insurance capacity is reduced resulting in increasing premium rates and hence a recovery in insurance profitability. Some level of new business must therefore be assumed. Moreover, in a going concern view, new business is always generated and any assumption of no new business would be completely unrealistic and would distort the results. New business is an economic reality, also after the shock, and should therefore be reflected. It is important to make distinction between different lines of business and different types of insurance products to reflect the different levels of uncertainty. The post-stress insurance risk assumptions applied to the in-force business, may not be suitable for applying to new business written in the wake of the stress. For instance, the entity may take actions in the wake of the stress (such as exiting certain sales channels after a spike in lapses) which would mitigate the impact of the stress on future new business.	
Q18.6	**Q18.6: Which elements, in your opinion, should be considered for the projection of new business?** All elements that reflect the economic reality after the shock following the determined underlying scenarios should be considered for the projection of the new business. The CRO Forum paper list the following elements which Insurance Europe supports: • Going concern assumption, strategic plan estimates, projection horizon, shock per risk source and recovery patterns. • The management of new business planning should be allowed to prove that the DTA is appropriate.	
Q18.7	**Q18.7: What are your considerations regarding the increasing uncertainty with the longer time horizons used in the projection in the calculations of LAC DT?** There is no bigger problem with increasing uncertainty than in the pillar I calculations in general. Uncertainty inevitably increases with longer time horizons. However, future cash flows must be projected far in the future, as it is done in the calculation of best estimates. Trying to capture the uncertainty would lead to a more prudent assessment than in a best estimate consideration. Insurance Europe considers that the time horizons used in calculating the LACoDT should be based on the time horizon appropriate to the underlying business in question. If the business is long-term, the	

	time horizon used should reflect the long-term nature of the business. Insurance Europe do not consider that it would be appropriate to impose an arbitrary limit on the time horizon used. The full run off time horizon of the modelled new business should be considered, within a going concern logic, and national tax regimes should be reflected (eg no expiration of tax assets on losses carried forward). In any case, Insurance Europe would point out that even if projection horizon limits are introduced for prudential reasons, there should also be corrections introduced to avoid double counting when computing the taxable income considered in the ante stress balance sheet. This is true for the deferred taxes identified in the ante stress balance sheet that would reverse beyond the time horizon set for verifying the recoverability in the post stress environment. These would need to be taken out of the computation of the taxable income even in the ante stress environment to ensure consistency between ante and post stress computations.	
Q18.8	**Q18.8: What are your considerations regarding limiting the time horizon for the projections of future taxable profits? Would such a limitation be different for different features, like, for example, new business or returns on assets and liabilities** Any limitation of the time horizon would be arbitrary and artificial and as such would systematically distort the results and, thus, be contradictory to the definition of the SCR in the directive. Therefore, there should be no explicit limitation of the time horizon. In particular, the time horizon used in the projection of future taxable profits depends on the relevant tax regime and there should be no reason to limit the time horizon already established by the relevant tax regime.	
Q18.9	**Q18.9: Under what conditions and circumstances would setting LAC DT to the amount of net DTL be an appropriate simplification, and a sensible reduction in subjectivity of the calculation?** Insurance Europe does not support a default approach wherein LAC DT would be capped at the level of net DTL for all undertakings as it would go against the economic approach underpinning Solvency II. If the undertaking can demonstrate probable future profits, or when the deferred tax assets will reverse in the future without negatively impacting future taxable income, it should be able to use the adjustment of the loss-absorbing capacity of deferred taxes, without any limit to the amount of recoverability. Obviously, the hypotheses and underlying assumptions used to determine the probability of any future profits should be reasonable and valid. Only if the undertaking cannot demonstrate probable future profits, the LAC of DT should be limited to the use of the net amount of deferred tax liabilities on the Solvency II balance sheet.	
Q18.10	**Q18.10: If LAC DT is set to the amount of net DTL, what other issues should be considered?** See response to Q 18.9. Insurance Europe does not consider that it is appropriate to set the LACoDT to the amount of net	

	DTL, unless the amounts are immaterial.	
Q18.11	**Q18.11: Under what conditions or circumstances would you consider it necessary to explicitly calculate the full Solvency II balance sheet immediately after the shock loss?** Insurance Europe does not support a full recalculation immediately after the shock loss. This should not be mandatory. In general, an explicit calculation of the full Solvency II balance sheet is not necessary. Even in cases where the loss is partly absorbed by policyholders (eg bonus rate reduction cases) and only partly absorbed by shareholders (with impact on the tax position of the company) a simple «quota share» approach according to profit participation rules could be used.	
Q18.12	**Q18.12: What role, if any, and under what conditions or circumstances should the compliance with the MCR and SCR play in the calculation of LAC DT?** Insurance Europe do not consider it necessary to calculate a second order impact on LACoDT in respect of subsequent MCR / SCR requirements after a shock loss, since such second order calculations are not a general requirement of the standard formula under Solvency II. Additionally, the compliance with the MCR and SCR should not play a role in the calculation of LAC DT as these are a given for a going concern. Insurance Europe believes that linking SCR and MCR to the recognition of future taxable income in a post shock scenario would introduce in the computation algorithms of the SCR undesirable elements of recursion and procyclicality. Specifically: • The SCR post shock would in turn be linked to the LAC DT which is determined assuming that the loss defined in art 207 of the Delegated regulation would exist for two consecutive periods (recursion) • Situations where unfavourable economic conditions deteriorate the excess of capital sufficiently to equal the BSCR net of the losses deriving from the TP, and actually result in an increase of the SCR in a post-shock scenario because of the reduction in the LAC DT component. •	
Q18.13	**Q18.13: What role, if any, should recapitalisation and/or calling ancillary own funds, including their requirements, play for verifying the compliance with the MCR and SCR in the calculation of LAC DT?** In principle, the requirement to meet SCR and MCR in an after-stress situation, under the same pre-stress conditions and requirements, is not in accordance with the EIOPA guidelines. That said, article 101 of the Framework directive lays down that the calculation of the SCR shall be performed under the presumption of going concern assumption for the undertaking. As such management actions including recapitalization and ancillary own funds should be allowed taking into account after stress conditions.	
Q18.14	**Q18.14: Please provide comments and suggestions on features of LAC DT that would**	

	require additional regulation or guidance by EIOPA or could be simplified. There is enough guidance on the LAC DT but Insurance Europe have important points to make for the following three areas: Risk margin, Group relief, and fiscal unions with an ultimate parent undertaking which is not subject to Solvency II regulation. **Risk Margin** The view that the release of the Risk Margin cannot be considered as a source of future taxable profits is, in our view, not consistent with IAS12 principles. In pricing new business, a margin is built in to cover the Risk Margin. Therefore, the Risk Margin is a component of technical provisions and represents a temporary difference that will be released over time (and be matched against the emerging taxable profit, reducing future tax payable). This approach removes a step of circularity in the tax calculations (as Risk Margin is a function of the capital requirements). It is entirely appropriate to assume release of Risk Margin on in-force business at the date of the shock as this business runs off, because this is a source of profit which occurs as a natural consequence of the way in which the business is conducted. Furthermore, provided that the Risk Margin released is greater than the Risk Margin recognised for new business – then it is not clear why this would not be a valid source of future taxable profits. Not permitting the recognition of the release of the Risk Margin assumes that the volume and mix of new business written is identical to that of the existing business that runs off. In reality, the mix of new business written is likely to be very different from the mix of existing business as firms develop products to meet their customers' changing needs. Instead of a blanket prohibition on recognising the Risk Margin, Insurance Europe believe that the current principles of IAS 12 are sufficient for this purpose. IFRS 4 Phase 2 also recognises Risk Margin as a source of profit. **Group relief** For standard formula firms, EIOPA's current guidance is that there should be no group relief post-stress, in keeping with the desire to maintain simplicity within the standard formula. Insurance Europe accept that a calculation of group relief could add additional complexity, but it does not think that it should be ruled out solely for that reason. Insurance Europe would ask EIOPA to explore simplified approaches, such as using the group biting scenario as a proxy for each solo entity's biting scenario, if they are materially similar. It is necessary to consider the national fiscal conglomerates. This is a real-world assumption that would certainly be maintained also post shock and consequently could allow at least Groups and possibly individual insurers within Groups to obtain higher relief thanks to the support of high profit generators. The rules should be simple and straightforward, allowing within a tax group/subgroup of entities to share any excess of net base DTLs over the ADJ_DT used	

	Fiscal union For firms undergoing fiscal union with an ultimate parent undertaking that is not subject to Solvency II regulation, the ultimate parent undertaking should be viewed as if it was eligible for LACoDT. This would better reflect the similarities and dissimilarities of the risk profiles. In addition, the impacts of a limitation on the current text / formula can be quite significant. Insurance Europe proposes to amend this formula and to authorize at least the sum on the concerned entities as follows: • The difference between the only contributory SCR for gross and net tax • The solo contributory max terminal obtained by summing: -The solo max terminal of the entity (net DTL + adjustment related to the new production), -The difference between the solo DTL and the retired intra-group DTL. The completion of the calculation (eg Full Recovery Test at the consolidated level) carried out at the tax consolidation perimeters.	
Q18.15	**Q18.15: What would be a balanced approach between simplifications, additional restrictions and relaxations in the calculation of LAC DT?** Insurance Europe consider that the CRO Forum paper (available here: http://www.thecroforum.org/dta-in-scr/) sets out a balanced approach (see 18.2). Utilisation test: If there is no tax loss carryforward at the end of the time horizon, the recoverability will be assumed	
Q18.16	**Q18.16: Do you consider LAC DT's procyclicality as an issue? If yes, do you propose any changes to the calculation of LAC DT that would make it less procyclical** Yes, LAC DT's procyclicality is an issue. However, Insurance Europe believe that this is inherent in the framework of Solvency II in general with a market consistent balance sheet and an SCR. Therefore, this is not an issue specific to LAC DT and should therefore also not be addressed separately. To mitigate procyclicality the application of LAC DTA should be possible and not be artificially restricted. The calculation of the LAC DT introduces significant elements of procyclicality because of the volatility of the differences between market value of assets and liabilities and the corresponding values that are recognized for tax purposes and that are more often linked to historical/acquisition or amortized cost. To limit its effect, Insurance Europe believe it is important to avoid introducing methodologies or requirements characterized by rigidity that would amplify the procyclical effect.	
Q19.1	**Q19.1: Do you have any evidence that the methods and assumptions for the risk margin calculations set out in articles 37 to 39 of the Delegated Regulation are not appropriate anymore, in view of a changed market environment? Please describe the changes in the market environment you are referring to. If yes, what are the modifications that you suggest? What would be the impact of the modifications on the risk margin?**	

	Yes, there is evidence that the current method and assumptions for the risk margin are not appropriate because they lead to excessive levels of risk margin and volatility particularly for long-term life insurance business. In some cases the risk margin can exceed the SCR. Insurance Europe considers that the cost of capital parameter was too high from the outset, and the risk margin is sensitive to the risk free rate and therefore, with the low interest environment levels, the risk margin has become a significant issue. *Evidence* 1) Results of a survey carried out by Insurance Europe with its members provides evidence that the risk margin is excessive for certain products. The survey included 7 countries and covered in total data for 8 SII products. Key findings include: • The majority of the companies had a risk margin in the range of 0.1% to 10% (of technical provisions) • Companies reported risk margins up to 100% (of technical provisions) • Showing how variable the Reported risk margin can be. • The majority of the companies reported an SCR in the range of 0.2% to 10% (of technical provisions)with a maximum SCR reported as high as 56%(of technical provisions). • Impact varies significantly by product, the survey supports our concerns that the risk margin within SII liability calculations can be a very significant proportion of the total liabilities and therefore increases overall capital that insurers need to hold significantly. 2) In its Financial Stability Report of November 2016, the Bank of England carried out research on the risk margin which showed that the current methodology for the risk margin results in • Sensitivity to the risk-free rate and created another source of volatility in the Solvency II balance sheet • Procyclical behaviour and barriers to long-term investment • As an example of the impact of the risk margin on insurers, the Bank of England recently published some results which showed that: i. falling interest rates led to a nearly 50% (£14 billion) increase in risk margin for UK life insurers. ii. The UK insurance sector risk margin equals £51 billion, which equals around 50% of the UK industry SCR. Limitations of the Risk Margin • ***Inappropriateness of the design of the Risk Margin –***The limitations in the design of the risk margin have been amplified by the current low interest rate environment. The risk margin is for many firms an unexpectedly and inappropriately large part of its	

	balance sheet, is extremely sensitive to changes in interest rates, and is difficult to hedge. • ***Sensitivity to interest rate movements –*** the risk margin exhibits substantial non-economic volatility in response to market movements. Given the intended function of the risk margin, Insurance Europe sees no justification for this sensitivity based on the historic evidence of the costs of transferring business. • ***Incentives for poor ALM –*** the Risk Margin discourages best practice in the matching of assets and liabilities, since a well-matched balance sheet will still be materially exposed to interest rate fluctuations. This will have a consequential adverse impact on longer-term investments of wider benefit to society. • ***Effects on the supply of critical long-term products –*** firms are encouraged to avoid risks that attract a risk margin altogether, and (for example) move away from annuities and into unit-linked business. Traditional longer-term products (particularly those with guarantees) will be increasingly and unnecessarily expensive to provide, pushing up premiums. • ***Macro-prudential implications*** – the current high level of the risk margin encourages the transfer of risks that attract a substantial risk margin (such as longevity risk) to non-EU jurisdictions which fall outside the remit of Solvency II. The risk margin was designed before there was a market for longevity risk, and is inconsistent with it. The cost of longevity risk implied by the risk margin is excessive, and an effective market in longevity risk is not as volatile as the risk margin implies. • ***Procyclical effects –*** In its *Financial Stability Report of November 2016*, the Bank of England's Financial Policy Committee concluded that the risk margin could encourage pro-cyclicality, in that insurers are encouraged to reinforce falls (rises) in risk-free interest rates by switching into (out of) low-risk assets. In considering appropriate changes, one should not forget that the risk margin was a construct created for Solvency II in order to ensure that, in the case of failure, portfolios could be transfered to a third party. There was and is no evidence, except some theoretical logic, that the methodology produces outcomes reflecting economic reality or actual transactions. A study by the CRO Forum on the calibration of the CoC element of the methodology was not used in the calibration. In light of this background and the problems with the current method Insurance Europe proposes the following changes in order to adequately reflect the risk margin: 1. Change to a more appropriate method for calibrating the CoC (See answers to Q19.2) a. Proposal to take account of the beta value of insurance risk b. Take into account risk dependence over time by introducing time dependent scaling factor to the CoC calculation	

	2. Methodology which reduces or eliminate the volatility created by the risk margin should be considered and any modification that increases the impact of uncertainty and volatility should be avoided. In order to address this Insurance Europe proposes to investigate an approach where the CoC varies with the risk free rate (See answer for Q19.2) Include the VA/MA adjustments in the discount rate used to value the projected RM cashflows, i.e consistent with the discount rate used to value BE liabilities	
Q19.2	**Q19.2: Should the cost of capital rate be a long-term average rate, reflecting both periods of stability and periods of stress, or should it reflect current market conditions? If you think the cost of capital rate should move in-line with the current market conditions, which market instrument should the rate move in-line with? Do you have any evidence of the cost of capital for insurers moving in-line with your chosen market instrument?** Yes, Insurance Europe believes the CoC rate should be based on a long-term "through the cycle" average rate, but the current calibration is unjustified and too high. A 'through the cycle' level of risk margin would be more appropriate because: • Annuities are sold as a long-term contract and risks emerge in the long-term rather than short term eg longevity. • In times of market stress, there is no rationale why firms would seek to eliminate their longevity risk, especially if a new risk transfer would be priced using current market assumptions which may not persist. • There is no market for the risks that drive the RM and so no justification for creating implied volatility. Instead, the value of the risk margin could be deliberately smoothed to reflect the long-term nature of the risk. On the other hand, Insurance Europe does not think that the CoC should move in-line with the current market conditions, unless it is adjusted for RFR to avoid volatility. Against the background of the previously mentioned shortcomings, it is important to improve the current methodology, and in particular Insurance Europe proposes the following alternatives in order to more adequately reflect the risk margin. **1. <u>Change to a more appropriate method for calibrating the CoC</u>** **a) Proposal to take account of the beta value of insurance risk** This proposal involves deriving a more appropriate (ie lower) Cost-of-Capital rate, which recognises that insurance risks should be expected to have a low beta (ie a low volatility in comparison to the market as a whole). Investors provide capital to insurers to cover the required risk and will be expected to impose a cost	

for this in the form of a required spread above risk-free. For simplicity, one should consider this in the context of a one-year risk, although this can be generalised to a multi-year context.

For a one-year risk, investors provide the capital requirement X. In return, they expect to receive X scaled up by the risk-free rate. This however, is a risky payment and hence gets discounted at the risk-free rate r plus a premium s. Due to the higher discount rate applied, the present value of this risky payment will be lower than the SCR capital requirement, and the difference between the two is then the risk margin (RM):

$$RM_i = SCR_i - PV_i \qquad \text{where } PV_i = \frac{SCR_i(1 + r_f)}{(1 + r_f + s_i)} \qquad (1)$$

PV_i is is essentially the price of a risky asset paying $SCR_i(1 + r_f)$ in one year's time. It can be seen that the higher the discount rate ($r_f + s_i$), the higher will be the RM_i .

Under the Capital Asset Pricing Model (CAPM) framework, the discount rate will depend on: (i) the standard deviation of the risky payment; and (ii) the correlation of the risky payment with the market portfolio. Specifically, the discount rate spread s_i will be a function of the market risk premium and the beta of the risky payment:

$$s_i = \beta_i\left(E[r_m] - r_f\right) \qquad (2)$$

where $E[r_m]$ is the expected return on the market portfolio.
The current formula for the risk margin RM_i on a one-year insurance product, as provided in the Delegated regulation, is as follows:

$$RM_i = CoC\frac{SCR_i}{1+r_f} \qquad (3)$$

Putting the above equations together, one can derive the cost of capital parameter for an insurance risk (i). Firstly, one can combine equations (1) and (3):

$$RM_i = SCR_i - \frac{SCR_i(1 + r_f)}{(1 + r_f + s_i)} = CoC\frac{SCR_i}{1 + r_f}$$

Replacing s_i with equation (2):

$$SCR_i - \frac{SCR_i(1 + r_f)}{\left(1 + r_f + \beta_i(E[r_m] - r_f)\right)} = CoC\frac{SCR_i}{1 + r_f}$$

And solving for CoC:

$$CoC = (1 + r_f)\left[1 - \frac{(1 + r_f)}{[1 + r_f + \beta_i(E[r_m] - r_f)]}\right]$$

	For example, one can see that, for an asset with zero correlation to the market, the cost of capital will be zero, and hence the RM will also equate to zero. Conversely, if one were to assume a market beta of 1 for insurance risk, one would recover a cost of capital reflecting the full market risk premium. It is considered that a reasonable CoC rate for insurance risk is around 3% rather than the 6% currently used in Solvency II. This can be demonstrated as follows: • In the context of insurance risks, it is difficult to argue for a high beta value given the low systemic nature of insurance risk. For example, a comprehensive study by NYU Stern (link) found an unlevered beta (ie the beta of a company without any debt) for insurance companies of around 0.65. However, this is influenced by the assets held in each insurer and its franchise value (which will have a high market beta). If only the beta value of insurance risk were to be considered, this would naturally be lower, and likely significantly lower. Hence, an assumption of 0.5 for the insurance risk beta is considered to be prudent. Further background on why the cost of capital for insurance risks is significantly different from the total return required by shareholders is provided in section 3.4 of the CRO forum paper (link). • An appropriate value for the global market portfolio risk premium should be considered. An appropriate upper level of risk premium for a diversified equity portfolio is likely to lie in the region of 5% – 7%. This is discussed in Section D.4. of the 2008 CRO Forum paper. See also a 2008 report by JP Morgan (link), or a more recent 2013 report from Ibbotson, (link). This can be seen as an upper bound for a global market portfolio which also contains bonds and potentially property. On this basis, a market risk premium of 6% can be assumed. One can believe that this assumption contains a material degree of prudence; the estimate of the equity risk premium is conservative and in practice, a global diversified market portfolio will contain assets other than equities, which would reduce the risk premium to a lower level. Putting these observations together (a market risk premium of 6%, an insurance risk beta of 0.5) yields a cost of capital parameter of 3.0%, after rounding up (this holds for all risk-free interest rate assumptions). This assumption of 3% is also consistent with the conclusions of the 2008 CRO Forum paper. It is important to note that the beta of 0.5 and the CoC rate of 3% relates to the funding of insurance risk only, in line with Article 38(5) of the Delegated Regulation which states that the assets held by the reference undertaking will be selected in such a way that they minimise the SCR for market risk. Working backwards, the existing Solvency II CoC rate of 6% would imply a beta for insurance risk of 1 which is clearly excessive. **b) Proposal for the allowance for risk dependence over time**	

	This proposal takes into account risk dependence over time by introducing a time-dependent scaling factor into the Cost-of-Capital calculation. The current approach for calculating the risk margin treats all future capital funding requirements as independent payments and does not take into account any dependency over time. But any economic approach to valuing risky payments would have to take into account the dependence of risks over time to avoid inappropriate conclusions and arbitrage opportunities. Insurance Europe believes SCR capital requirements are not independent (eg a risk may be non-repeatable so if it crystallises in one time period it cannot reoccur, affecting forward SCR capital requirements). This means it is not appropriate to value these as independent payments, which is the assumption implicitly made in the current framework. Instead, when setting the hurdle rate required to finance a liability, an investor will consider the distribution of outcomes at maturity of the liability being financed. An alternative way to also think about this is that beta value of an insurance risk will reduce as a function of time, since the standard deviation of the final payment to investors will be lower than the standard deviation of the sum of equivalent independent payments. In order to take this into account, it is proposed the risk margin calculation is amended to include a tapering parameter with respect to time. This can be incorporated via an amendment to the risk margin formula, provided in Article 37(1) of the Delegated Regulation as such: $$RM = CoC \cdot \sum_{t \geq 0} \frac{\lambda^t SCR(t)}{\left(1 + r(t+1)\right)^{t+1}}$$ where $0<\lambda\leq 1$. In the amended formula, the parameter λ represents the proportion of SCR which is independent so that (1-λ) represents the proportion of the SCR which relates to non-repeatable risk. Insurance Europe considers 0.9 would be an appropriate value to assume for λ. This implies a modest reduction in SCR capital requirements of 10% following a 1-in-200 shock, which Insurance Europe believes is not unreasonable. **2. <u>Methodology reducing or eliminating the volatility created by the risk margin: varying the Cost of Capital with the risk free rate</u>** The volatility of the risk margin could be reduced if the cost of capital rate was varied in line with the risk-free rate. This would be a sensible approach to take in a low interest rate environment, where one would expect market risk premiums to reduce as demand for higher yielding assets increases.	

	The cost of capital formula would be as follows, with a floating interest rate risk element and a fixed credit risk element: Cost of Capital = [X% * risk free rate] + [Y% fixed addition] In making the CoC rate a function of the level of interest rates, it is reflected that in a low interest rate environment, market risk premiums might be expected to reduce as demand for higher yielding assets increases. Such a link between the CoC rate and interest rates is also considered and discussed in more detail under the context of frictional market effects in a previous CRO report (Link) This report found that the relationship between the CoC rate and the risk-free rate was approximately linear, with the CoC rate for a BBB-rated insurer increasing by 0.3%-0.4% for every 1.0% increase in the risk-free rate. The function could either be currency specific or be based on a weighted average of currencies. The second option would be more aligned with letter of Article 77(5) of the Solvency II Directive which states that the Cost-of-Capital rate "shall be the same for all insurance and reinsurance undertakings" but would potentially be less effective at mitigating pro-cyclicality where different currencies' interest rates are not moving in step with each other. Whichever approach is used, Insurance Europe recommends using long term interest rates as a benchmark (eg the last liquid point) and that regulators consider the merits of applying a cap and floor on the overall level of the CoC rate to ensure that movements in it do not end up overcompensating for movements in interest rates.	
Q19.3	**Q19.3: Have you observed material change in the impact in your balance sheet due to the risk margin since the introduction of Solvency II? If so, what is the main cause of the impact and what lines of business are affected by it? How has it impacted your business practice? What amendments should EIOPA consider and why?** Yes, the main cause is the change in interest rate environment. This has introduced excessive balance sheet volatility with respect to interest rates and with the current very low rates is clearly inappropriate, particularly for certain business such as long-term life products. For annuity providers, the longevity risk SCR generated by the annuity business is likely to be the most significant non-hedgeable risk in the risk margin calculation, particularly at long durations where the annuity business is still in force but other lines of business have entirely run-off. It will be particularly sensitive to reductions in the levels of interest rates because: • The longevity risk SCR is based on additional payments to annuitants beyond their best estimate life expectancy, so the stressed liability cash flows occur many years in the future. This means that the longevity SCR has a very long duration. It increases significantly when interest rates fall. • The risk margin is based on projecting the longevity SCR, discounting the values and	

	multiplying by the cost of capital. So when interest rates fall, the increased SCRs are discounted at reduced interest rates. • Hence the risk margin has a double sensitivity to a fall in interest rates.	
Q19.4	**Q19.4: Do you have any other comments or observation EIOPA should consider?** <u>Improving Risk Sensitivity</u> According to Article 83.1.a. of the Delegated Regulation, the risk margin amount is assumed to be unchanged in the scenario based standard formula SCR calculations (ie the scenario does not change the amount of the risk margin included in technical provisions). For many SCR stress scenarios, eg the mass lapse stress, it is likely that the risk margin (in a real scenario) would be substantially affected. That is a mass lapse (at least for Swedish unit-linked contracts) would lead to a substantial reduction of (profitable) contracts, with an expected corresponding decrease of the risk margin. Against this background, 'the possibility to change the amount of the risk margin included in the technical provisions after a stress would be more appropriate', although this could be cumbersome. Allowing for prudent simplifications would address this issue. Furthermore, an undertaking absorbing the insurance liabilities will benefit from other additional diversification effects, due to diversification with its own initial insurance liabilities. Its SCR could thus be lower. For this reason, another metric (e.g linear MCR) could be considered for the calculation of risk margin. <u>Diversification between life and non-life business and at group level</u> Article 38(1)(b) of the Delegated Regulation requires that, when calculating the risk margin, an assumption is made that "the portfolio of insurance obligations relating to life insurance activities and life reinsurance obligations and the portfolio of insurance obligations relating to non-life insurance activities and non-life reinsurance obligations are taken over separately by two different reference undertakings". In addition, when calculating the risk margin of technical provisions at group level an assumption is made that the portfolios of each entity are taken over separately by two different reference undertakings. This implies that no diversification benefit can be assumed between these portfolios. Insurance Europe would propose that this arbitrary separation of obligations is removed from the calculation in order that insurers are able to properly take into account diversification effects in the risk margin calculation. This would be consistent with the assumption that the reference undertaking was a multi-line insurer with the same business profile as the transferring undertaking after the transfer has taken place and the assumption adopted in most recent ICS specifications that have been tested. Recital (130) from the Delegated Regulation requires that, when calculating the risk margin, an assumption is made 'that the transfer of the group's insurance and reinsurance obligations is carried out separately for each insurance and reinsurance undertaking of the group and that the risk margin does not allow for the diversification between the risks of those undertakings.'. Insurance Europe would propose that this arbitrary separation of obligations is removed from the calculation in order	

	that insurers are able to properly take into account diversification effects on group level in the risk margin calculation. Allowance for Matching Adjustment and Volatility Adjustment in the estimation of SCR values used in the risk margin formula Under the current framework, insurers are required to estimate SCRs in the risk margin calculation by discounting liabilities at the basic risk-free rate, without taking into account the Matching Adjustment and Volatility Adjustment. This introduces additional complexity and is operationally burdensome for insurers. Insurance Europe therefore proposes that the process of calculating the risk margin is simplified by removing this requirement and allowing the risk margin calculation to be based on a consistent valuation basis as the best estimate liabilities. Further Observations Insurance Europe notes that the current use of the discount rate of the local currency prevents an undertaking from achieving at the same time a state of risk mitigation to both interest rates and currency rate. While the aim of using the risk free rate is reaching solvency ratio stability. In order to reduce volatility of the solvency ratio of the undertaking and safeguard the assets to ensure payment of the liabilities to the policyholders, prudent risk management would imply that the assets backing the risk margin would be invested in the same currencies as the underlying policy cash flows. However, to do so creates an interest rate mismatch which then introduces additional volatility to the solvency ratio.	
Q20.1	**Q20.1: Do you have any comments on the analysis of differences presented above?** Yes, while the analysis of the different regulatory texts is thorough, it should be put into context of the broader regulation. Hence, the following important aspects should also be noted: • **There is a significant risk that the insurance Principal Loss Absorbency Mechanism ("PLAM") leads to a reduction of the SCR ratio.** The insurance PLAM may not cure the trigger breach. In fact, both write-down and conversion can lead to a reduction of the SCR ratio under certain circumstances. Please refer to the answer to Q20.4 for a more detailed explanation. • **Bank regulators increasingly understand the importance of the hierarchy of capital:** Bank regulators appreciate that not only equity, but also bank Additional Tier 1 ("AT1") are sensitive instruments that signal strength or weakness to investors. While bank regulators want to ensure early loss absorbency, they want to do it constructively by eg considering the hierarchy of capital with respect to distributions (AT1 coupons are to be preferred to equity dividends). Keeping this in mind, Insurance Europe believes a desirable insurance PLAM not only achieves loss absorbency, but respects the hierarchy of capital, and does not worsen the SCR ratio.	

	• **Insolvency:** The Delegated Regulation ("DR") effectively stipulates significantly tighter insolvency triggers than the Capital Requirements Regulation ("CRR"). For example, the DR requires that all of Restricted Tier 1 ("RT1"), Tier 2 ("T2") and Tier 3 ("T3") contain a mandatory coupon deferral (T2, T3) or cancellation (RT1) trigger as well as a mandatory redemption deferral (or prohibition of early calls) to avoid insolvency due to illiquidity or breach of the asset-liability test (where applicable). The CRR does not require any such triggers for Tier 2 or AT1, and only requires AT1 to be treated as equity for purposes of the asset-liability test. • **Absence of a meaningful and systematic definition of "loss":** While principal and coupon "loss absorbency" are key requirements for Solvency II own funds instruments, there is no explicit definition of "loss". A "loss" that triggers PLAM, for example, occurs when capital requirements exceed own funds. However, this may occur at a time when no loss in its classical sense (eg under local GAAP or IFRS) has occurred. Similarly, it cannot be ruled out that such accounting profits coincide with a breach of the SCR/MCR ratio. Solvency II does not provide for a "market based" profit and loss account (only a Market Value Balance Sheet ("MVBS")), and a "loss" derived from such a profit and loss statement would not be a sufficient "loss" concept either as it only explains a reduction of own funds, while own funds may fall even though the ratio increases (via an over-compensating reduction of the SCR/MCR). Accounting losses do play a role for RT1 coupon cancellation (available distributable items) and the write-up. In case of write-up, there is a clear asymmetry to the write-down which solely depends on a Solvency II ratio breach. Insurance Europe questions whether a sensible PLAM can be designed in the absence of a clear concept of "loss" – as well as a clear view on what "loss absorbency" really aims to achieve. In this context, there should be a clarification that the concept of "loss absorbency" does not refer to accounting losses but undercapitalisation. • **Temporary relief from Tiering limits to prevent cliff effects:** The current limit of RT1 at 20% of eligible Tier 1 can have adverse amplification effects for insurers which can be meaningful due to the combination of significant investment portfolios and a substantially mark-to-market regulatory regime. Resulting problems can be resolved by (i) raising the RT1 limit, and/or (ii) explicitly allowing the limit to be breached during periods of elevated market volatility as such periods can impact insurers' own funds, and consequently the RT1 allowance, negatively. This would be in line with recent recommendations from the EBA with respect to the increased market volatility introduced by the new minimum requirements for own funds and liabilities eligible for bail-in (MREL). The comments in the final MREL Report regarding potentially negative consequences of coupon suspension also strongly support our view that the Solvency II coupon suspension trigger should not be raised. • Solvency II Tier 2, page 86 of EIOPA-CP-16/008: "Payment cancellation in case of breach of SCR…". This should be payment deferral rather than cancellation. • Currently, most of subordinated debts issued are not Tier 1 compliant. When there is a real	

	capacity of the insurance company not to redeem in case of a non-respect of the SCR and when it is consistent with the internal strategy (eg it could be taken into account in internal policies), the debt instrument should be eligible as tier 1 capital. • Bank and Insurance Solvency Ratios have the following characteristics: - Bank Capital regulation focuses on Core Tier 1, whereas current Insurance regulation focuses on Total Capital - Bank Capital Requirement ratio is based on accounting framework with prudential filters whereas the insurance solvency ratio is based on a fair value approach which can significantly differ from the accounting framework (although also reflecting some accounting elements) - Insurance Solvency 2 ratio tends to be more volatile than Bank capital ratio - Different levels of intervention between banks and insurance undertakings.	
Q20.2	**Q20.2: Besides the specific issues discussed in Section 20.3, which of the differences do you think is material and/or not justified by the differences in the business models between the banking and insurance sectors?** 1. <u>Insurance own funds instruments are characterised by contractual provisions which add considerable cost and risk of adverse unintended consequences for little regulatory benefit</u>. Examples include the following: **Prohibition of extraordinary call rights in years 1-5 without replacement:** all early calls require prior regulatory approval. It does not make sense to generally prohibit calls without replacement in cases where both regulator and issuer agree that a replacement is not necessary. Please refer to the response to Q20.7–Q20.9 for further information. 2. **First Call right – appropriate margin (RT1 – DR Art. 71(1)(g)):** The age of an instrument should be irrelevant for the decision whether or not it is appropriate to call it. Art. 71(1)(g) DR should be replaced with more generally applicable approval EIOPA (Level 3) guidelines for regulators which could reference the respective issuer's level of the solvency ratio as well as its capital policy and plans. <u>Insurance Europe also suggest improved wording of some clauses in Art. 71, 73:</u> • Redundancy of the redemption waiver in Art. 71 (1) (k) (and identical provisions for Tier 2 and Tier 3) in view of Art. 71 (2). • The wording of Art. 73(4) (step-up), even though it is based on the UK's Genpru rulebook, is unnecessarily complicated and lengthy. • Unclear terms / clauses such as repurchase, redemption, and repayment should not be used synonymously as they have differing economic consequences for the insurer. The terms should be clearly differentiated and be defined in a consistent and clear way without changing the regulatory intent of the relevant articles in the Delegated Regulation.	
Q20.3	**Q20.3: For the differences identified in the question above, what changes in regulation**	

	would you suggest? Please explain why consistency would be desirable and why changing the Solvency II Delegated Regulation would continue to ensure a high quality of own funds. Insurance Europe believes that extraordinary call rights should in principle be possible for RT1, T2 and T3 without replacement at all times (incl. first five years), subject to prior regulatory approval. Where necessary, issuers may obtain approval to call only based on the condition of prior replacement (of course with own funds of appropriate – potentially even higher – quality) Art. 71(1)(g) of the Delegated Regulation should be replaced with more generally applicable EIOPA (Level 3) guidelines based on which regulators should grant approvals.	
Q20.4	**Q20.4: Do you have any comments on the analysis of the way the PLAM applies in the two regulations?** Yes, Insurance Europe has the following remarks concerning the PLAM application in the two regulations: • **PLAM is not required by Basel 3 for equity accounted bank AT1:** While the CRR requires PLAM for European bank AT1, PLAM is not required in many non-European jurisdictions, notably the USA. The original Basel 3 paper only requires PLAM for IFRS debt accounted AT1 instruments (Basel Committee on Banking Supervision, "Strengthening the resilience of the banking sector", No. 89, criterion 11, December 2009). • **The banking and insurance PLAM are actually identical:** The bank and insurance PLAM mechanics as defined by the CRR and DR both allow (or do not prohibit) a choice between temporary or permanent write-down and conversion. Both should lead to the same consequences (see Art. 54 No. 1(d) CRR which requires the reduction of (i) distributions, (ii) claim in liquidation and (iii) redemption amount for the banking PLAM). However, in practice, bank and insurance PLAM lead to rather different consequences. • **The consequence of bank and insurance PLAM are different due to a combination of factors:** Despite identical mechanisms the PLAM impacts bank solvency ratios very differently to insurance ratios. This is mainly due to the following reasons: 1. <u>Scope of trigger – justifiable difference, but need to consider consequences for the insurance PLAM:</u> Banking uses a Core Equity Tier 1 ("CET1") trigger (CET1 / Risk Weighted Assets ("RWA")), insurance uses a total capital trigger ((Unrestricted Tier 1 ("UT1") + RT1 + T2 + T3) / SCR). The bank (CET1) trigger ratio will always improve due to the PLAM. In insurance, the PLAM will always increase the amount of UT1 capital, too. In insurance, however, the key regulatory ratio is the SCR (total capital) ratio. Therefore, the insurance PLAM trigger is rightly based on the SCR (total capital) ratio. However, this trigger ratio can either improve, remain unchanged or even fall upon application of the PLAM (which is explained further below). Bank AT1 allows the mathematical limitation of the write-down	

	amount to the amount needed to cure the trigger breach. This is not possible in insurance. The need for multiple (group and solo, SCR and MCR) triggers makes it possible that the PLAM does improve one or more of the trigger ratios, but actually leads to the deterioration of one or more of the other trigger ratios at the same time, thus possibly even leading to an additional trigger breach. **The differing scope of triggers in banking and insurance is justified by the different business models and the differing regulatory regimes. However, it cannot be justified that, as a result of applying the bank PLAM without adjustments, the insurance PLAM may possibly not lead to a cure of the trigger ratio, it could therefore be unlimited and could even result in the breach of other ratios defined by the trigger.** 2. <u>Role of DTA – justifiable difference, but need to consider consequences for the insurance PLAM:</u> Both known PLAM mechanisms (write-down and conversion) can lead to adverse tax effects, ie profits from PLAM can lead to (i) a reduction of DTA (and reduction of UT1/CET1), (ii) an increase of DTL (and reduction of UT1/CET1), or (iii) (least likely) an immediate tax expense (and reduction of UT1/CET1). Both bank and insurance regulation require the deduction of net DTA from the highest quality of own funds (ie from CET1 or UT1 respectively). With the following difference for insurance: net DTA can be added back to own funds as Tier 3, subject to a limit (15% of the SCR). The MVBS requires that all balance sheet line items are marked-to-market. Consequently, the MVBS is very sensitive to such market changes, and therefore the inclusion of DTA as Tier 3 own funds (up to a limit) is both important and sensible. Net DTAs are a welcome volatility dampener of insurance solvency ratios, which are nevertheless significantly more volatile than those of banks. In our opinion, **the different treatment of DTA in banking and insurance is justified**. However, the different role of DTAs (T3) in the banking and insurance regimes does mean that the impact of PLAM differs, too. Assume that a PLAM results in a fall of DTA (and thus in an identical reduction of the insurer's reconciliation reserve or – in case of a bank – retained earnings). The reduction of the reconciliation reserves or retained earnings that results from tax on PLAM "profits" does not impact the amount of eligible UT1 and eligible CET1 since the amount of DTA that needs to be deducted from UT1/CET1 has also fallen. Therefore, if the tax on the profit resulting from the application of the PLAM "only" reduces DTA, the PLAM cannot lead to a reduction of a bank total capital ratio. Contrary to this, in insurance a PLAM that reduces DTA may result in a reduction of eligible Tier 3, thus leading to a fall of the total capital ratio**. It cannot be justified that the insurance PLAM can result in unintended consequences for the key Solvency II ratio, whereas the key solvency ratio for banks (CET1) always increases due to the bank PLAM.** **The difference in how and to what extent the DTA is recognised as capital, its implications, including concerning PLAM, should be further assessed. As a general point, the allowance for DTA as capital may be somewhat higher under Solvency II - however it is only admitted within the lowest quality of capital for**	

	insurers, whereas it may be recognised as the highest quality of capital for banks. In contrast, the role DTA has is arguably more important for insurers than for banks. 3. Level of Trigger – difference not justifiable: Coupon cancellation for bank AT1 is triggered upon breach of the so-called combined buffer, ie typically when the CET1 ratio falls below ca. 10%. Even this AT1 coupon cancellation trigger is considered more like a gone-concern trigger (ie within the lowest quartile of the buffer). In insurance, the DR foresees cancellation of equity dividends at the same time as cancellation of RT1 coupons (SCR breach), whereas in banking the prioritisation of AT1 coupons is now foreseen by the draft CRR. Also note that bank Tier 2 is non-deferrable, whereas insurance Tier 2 requires deferral upon the same trigger level as RT1 coupon cancellation. The bank PLAM trigger is breached when the CET1 ratio falls below 5.125% and is therefore generally considered a "gone concern" trigger. Even before a bank's CET1 capital ratio falls below the trigger ratio, it will be perceived to be non-viable. The corresponding "gone concern" trigger of insurers would arguably be the MCR rather than the SCR. Instead, the insurance PLAM is essentially triggered simultaneously with RT1 coupon cancellation (and even Tier 2 coupon deferral), leaving aside the three months' cure period for the PLAM trigger. **There is no reason why the insurance PLAM should apply so much earlier than the banking PLAM.** 4. Regulation on the Minimum Policyholders' Dividend: A specific regulation for German life insurers on minimum policyholders' dividends (Mindestzuführungsverordnung) could even further reduce the total capital ratio and increase the volatility of the SCR ratio of life insurers. In case of a trigger breach, the write down would result in other income that has to be distributed 50:50 to the company and policyholders. The portion for policyholders is either attributed to a fixed reserve for premium refunds (Rückstellung für Beitragsrückerstattung, RfB) or to a free part of these reserves that can be assumed only partly as own funds (paragraph 93 section 1 VAG). The allocation to the free or fixed part of RfB is company specific and can change from one year to next. As a consequence of the allocation to RfB the total capital ratio would not only decrease further for life insurers as a result of the write down but the volatility would also increase significantly. Hence, the write down instrument would not be feasible for German life insurers.	
Q20.5	**Q20.5: Do you think that the differences between the PLAM in the two regulations, in particular the fact that under Solvency II it will not usually solve the breach to the SCR, are material and/or not justified by the differences in the business models between the banking and insurance sectors?** Insurance Europe believes full alignment between insurance and banking regulations is not a goal in itself as differences in business models between insurance and banking exist. These differences should be adequately reflected, which justifies certain differences in both regulatory regimes. In Insurance Europe's view the (i) different scope of triggers and (ii) the different role of DTA is	

	justifiable. However, these differences mean that copying the bank PLAM to insurance regulation does lead to unintended consequences (potential **reduction** of SCR ratio), which should certainly be avoided. The following paragraph identifies the main differences in the two business models: **Banks:** ▪ Very reliant on continued access to liquidity, given that their business model typically uses shorter-term liabilities to finance longer-term assets. It will therefore be important to be seen to swiftly remedy any perceived capital shortfall to prevent any negative impact on liquidity access. ▪ Banks will have a significantly greater amount of debt on their balance sheet (both subordinated and unsubordinated) than insurers. Standard leverage measures (ratio of debt to equity) are not a key consideration or constraint, therefore identifying the proportion of higher quality capital (eg through the CET1 ratio) is important. Given this necessary differentiation between the various levels of capital, the Principal Loss Absorbency Mechanism (PLAM) has an immediate impact for banks' solvency ratios. **Insurance undertakings:** ▪ Typically, insurance undertakings (particularly Life Cos) will have longer term liabilities (eg annuity and pension liabilities) backed by more liquid assets. Even if there is a capital shortfall, the insurance entity is likely to still be able to meet immediate obligations to policy holders. Given liquidity is not as critical a concern as it is for banks, insurers are under less time pressure to be seen to return to the required solvency level immediately, and therefore have time to undertake the necessary management actions to recover, as pre-agreed with their regulators. ▪ Unlike banks, insurers do not typically have a significant amount of debt (subordinated or unsubordinated) on their balance sheets. An insurer's leverage ratio (ratio of debt to equity) is relevant for investors and analysts and there will be negative impacts on ratings and share price if an insurer is considered too highly levered. Insurer subordinated debt issuance is also further constrained by the capacity limits set by regulations – eg an insurer cannot flatter the overall solvency cover ratio through issuance of unlimited lower quality capital. These two constraints ensure that an insurer's own funds are of suitable quality. Differentiation between the various levels of capital is not relevant for insurers as this is already controlled through the capacity limits. Insurance Europe notes that some stakeholders prefer a full (100%) write-down or conversion for insurance RT1, although this is not required for bank AT1 and it is not justified by the impact on the Solvency II ratio. Insurance Europe believes that such a difference between bank and insurance PLAM cannot be justified. For the following reasons: • the fact that the trigger level itself is higher in Solvency II than for AT1 adds to the argument that the triggering mechanism (ie full vs limited write-down) should not be more conservative under SII; • It would maximise the potential reduction of the SCR ratio in many jurisdictions (See	

	response to Q20.4); • and it would turn the hierarchy of capital upside down (PLAM benefits equity investors at the expense of RT1 investors), even though the insurer could still be viewed as "going concern", this would add up to the problems with respect to investor hierarchy already present in Solvency II, in isolation as well as relative to AT1. Bank regulation increasingly reflects the importance of maintaining the hierarchy of capital, and insurance regulation should not explicitly disregard the hierarchy of capital either.	
Q20.6	**Q20.6: If you consider the differences to not be justified, what changes in the regulation regarding the PLAM would you suggest? Please explain why consistency would be desirable and why changing the Solvency II Delegated Regulation would continue to ensure a high quality of own funds.** • Insurance PLAM applies much earlier and has a much higher risk of worsening a crisis than its bank counterpart. Insurance regulation should avoid the flaws of both the current banking and insurance PLAM. • **Insurance Europe suggests to follow the lead of non-European bank regulators to delete the PLAM requirement altogether. PLAM may well lead to unintended consequences and is not necessary, as even 100% loss absorbency could be achieved without it.** • Insurance Europe notes that the deletion of the PLAM is a **long-term solution,** which is unlikely to be implemented in the near future given the outlined timeframe for reviewing Solvency II. Therefore, **two short term solutions** are provided below aiming at minimising the risk of unintended consequences of the insurance PLAM. **Also**, an alternative loss absorbency mechanism other than PLAM is suggested, that could be implemented **in the long term**. • First, though, Insurance Europe highlights some additional points and weaknesses of the current system: 1. <u>PLAM is not necessary for instruments to absorb losses</u>: Its strong resemblance to equity allows RT1 to impose 100% losses on investors without application of the PLAM: RT1 allows issuers to impose a stop on (i) any repayment of the principal amount (RT1 criterion perpetuity) and (ii) any coupon payments (RT1 criterion full coupon discretion). The value of the instrument for investors falls to zero (100% loss absorbency) upon such an announcement. Regulators have all means necessary to force issuers to make use of these rights. 2. <u>Principal loss absorbency is complex, error prone and can lead to unintended consequences</u>: It is not straightforward to design loss absorbency mechanisms that (i) work under all conceivable scenarios and (ii) treat investors fairly. In particular M&A scenarios may imply that PLAM does not work as intended (eg what happens if an issuer with conversion instruments is merged into another issuer that does not have listed shares). For perpetual instruments, it is unlikely that the terms and conditions can	

	foresee all potential scenarios over the life of the instrument. Equally, the hierarchy of capital should not be undermined by the PLAM. Contrary to equity, RT1 does not provide any upside for its investors as the maximum coupon is contractually fixed, while equity dividends are not. The issuer call right at par limits the upside of market value. To compensate for this, investors in RT1 must therefore be protected in the downside scenario (equity must be "wiped out" before RT1). However, in case of write-down instruments, the hierarchy of capital is typically turned upside down as the profit resulting from the write-down benefits equity investors (increase in retained earnings), whereas RT1 investors lose out. Therefore, in banking, the solution to such weaknesses of the PLAM is that the PLAM only applies in a gone concern scenario. • Short term solutions (minimising the risk of unintended consequences from current PLAM): 1. **Where a write-down reduces a relevant ratio (eg the group SCR ratio), the write-down should be limited to the absolute possible minimum.** In order to meet the formal requirement of a PLAM in the current DR, only a limited write-down of eg [5–10%] of the nominal amount should be required. Where the write-down does not improve the trigger ratio, it would improve the UT1 ratio at the expense of the RT1 ratio. However, as mentioned above, the bank mechanism to mathematically limit the write-down amount would not work (no cure of trigger breach possible). In view of the hierarchy of capital a 100% write-down would not be justified either. It is therefore suggested to equally limit the write-down in this case by a specific percentage (eg [5–10%]). There is no straightforward comparable solution for conversion RT1, as typically 100% of the principal amount is converted. In jurisdictions where conversion can lead to a reduction of the SCR ratio, conversion therefore maximises the risk of an SCR reduction. 2. **PLAM as well as the cancellation trigger could be set at much lower levels (margin to MCR) rather than at the SCR.** This would not change the fundamental concerns with the PLAM, but would reduce the risk of unintended consequences. It would thereby also bring the insurance regulation closer in line with that of banking. • Long term solutions (deleting PLAM and using other LAMs to avoid unintended consequences): • An alternative to PLAM that would (i) avoid a reduction of the SCR ratio, (ii) impose losses on investors, and (iii) be very simple would be to **automatically require the cancellation of eg [2–3] years' worth of coupons upon trigger breach.** As a rule of thumb, for an assumed coupon level of 6%–7% this mechanism would imply a permanent loss to investors worth ca. [15–20%] of the original principal amount – a meaningful, substantial and true amount of "loss absorbency" by investors. It would mean that Art. 71 (7) would have to be abolished as it would focus on loss imposition via coupon cancellation. It would, however, acknowledge that coupon cancellation (and prohibition of repayment) is the simplest way to impose even a complete (100%) loss on investors in perpetual instruments – and without any of the negative consequences of the current insurance or bank PLAM. It would further acknowledge that RT1 investors incur losses in a way that shareholders never do as equity dividends cannot economically be	

	cancelled (only deferred). Insurance Europe sees such coupon cancellation as a sensible and much simpler regulation than that for banking. • Designing a sensible PLAM or an alternative to it is very complex. The discussion would greatly benefit from an exchange of views with all relevant stakeholders including lawyers and banks with in-depth structuring and market experience.	
Q20.7	**Q20.7: Do you have any comment on the comparison of the insurance and banking regulations with regard to changes to applicable tax rules?** Insurance Europe considers it unjustified and wrong to have a difference between the two sectors in respect of changes to applicable tax rules. Please see the points made in answer to Q20.3. **Insurance** - prohibition of extraordinary call rights in years 1–5 without replacement: All calls require prior regulatory approval. It does not make sense to generally prohibit early calls without replacement – there may well be cases where both regulator and issuer agree that a replacement is not necessary. This prohibition may mean that a costly and inefficient instrument must be kept for years (ie until the five-year period has expired) even in cases where total own funds are high). While an open market repurchase may still be allowed (subject to prior approval), it is typically costlier than the exercise of a call right, and repurchases (unlike calls) very rarely allow the issuer to extinguish the entire principal amount. Equity can be reduced at all times, in some jurisdictions even without prior regulatory approval. Equity is viewed as "permanent" nevertheless, simply because there is never an obligation to repurchase equity. Similarly, call rights do not create an obligation to make use of this right – early call rights will only be used when it is economically preferable to do so. Therefore no reason is seen why exercising a call right should be prohibited without prior replacement particularly when regulators have to approve it in any case.	
Q20.8	**Q20.8: Do you think that the differences between treatment of a change in applicable tax rules in the two regulations is material and/or not justified by the differences in the business models between the banking and insurance sectors?** This difference in treatment of a change in applicable tax rules is material and is not justified by the differences between the two business models. Please see the points made in answer to Q20.3. The difference in call rights is not justified by the different business models of banks and insurers. The limitations in both regimes are generally viewed as a burden that – given the obligation to obtain prior regulatory approval for any call – adds no regulatory benefit, but may cause unnecessary costs to insurers or banks.	
Q20.9	**Q20.9: If you consider the differences not to be justified, what changes in the regulation regarding the treatment of changes to applicable tax rules would you suggest? Please explain why consistency would be desirable and why changing the Solvency II Delegated Regulation would continue to ensure a high quality of own funds.**	

	Insurance Europe believes full alignment between insurance and banking regulations is not a goal in itself as differences in business models between insurance and banking exist. Therefore the differences regarding PLAM between the two sectors is justified, however the unintended consequences for the write down/conversion mechanism should be addressed. On the other hand, Insurance Europe is of the opinion that the difference in treatment of applicable tax rules is not justified, early call rights should be subject to prior regulatory approval however there should be no limitation of call rights. Insurance Europe believes that the Solvency II regulations should be amended for certain aspects to be consistent with those that apply to banks – not just for changes to applicable tax rules but also for regulatory events. The Insurance regulators should be given the same authority/flexibility as bank regulators. All early call rights should be subject to prior regulatory approval. A categorical but temporary prohibition to call without replacement is not sensible and should be deleted. In fact Insurance Europe does not see a reason why regulation should protect investor rights in this respect. Non-binding guidelines that support regulators when assessing the merits of calls requiring higher minimum limits (so called margins) in case of no replacement may be helpful. Insurance Europe believes that so-called "make whole" prices for early calls (make whole is typically the higher of par and the remaining cash flows discounted with a contractually agreed discount rate) could be prohibited. All early calls should be priced at par (plus accrued interest).	
Q21.1	**Q21.1: If the 20% limit for restricted Tier 1 instruments were removed, do you think that a restriction should be retained on the use of lower quality transitional own funds (ie pre-solvency II capital) as Tier 1 own funds? If so, how would you suggest achieving this, bearing in mind that the use of quantitative limits may not be the preferred approach, and that the scope of the advice is limited to requirements in the Delegated Regulation? For insurance and reinsurance undertakings within the scope of the Solvency II Directive only:** First of all, RT1 is of weaker quality than UT1 and should therefore remain limited. A removal of the limit would make the term "Restricted" Tier 1 meaningless. Secondly, Insurance Europe members are questioning the practicability of "improving" the quality of "R"T1. Adding more onerous requirements is likely to effectively prohibit most insurers from issuing Tier 1 in the form of subordinated debt (market acceptance). At least, it would increase the cost of such instruments. **Effectively, such a change to "R"T1 criteria would imply a significant ex post subsidy to those insurers that have large amounts of transitional RT1 outstanding, which would undermine the level playing field concept.** If the 20% limit was to be removed, transitional RT1 would arguably have to be reclassified as Tier 2, which would cause significant challenges for a	

	number of insurers. From a legalistic point of view, if the 20% limit for restricted Tier 1 instruments were removed, a restriction should not be retained on the use of lower quality transitional own funds since it would conflict with the Omnibus II Directive and change dramatically the global picture, bearing in mind that there is no proven capital markets access to the new Restricted Tier1 instrument.	
Q21.2	**Q21.2: If the 20% limit were removed, would your undertaking or group be able to recognise as Tier 1 own funds any transitioned pre-Solvency II capital currently above the 20% limit, and thus which are currently only recognised as Tier 2 own funds?** Feedback from our members diverge and therefore Insurance Europe cannot provide a definite answer.	
Q21.3	**Q21.3: Would this have any effect on your total own funds coverage ratio? If so please describe the effect.** Feedback from our members diverge and therefore Insurance Europe cannot provide a definite answer (see 21.2). The effect on total own funds coverage ratio could be zero (see our answer to Q21.2) in some member state, while in others, it implies relatively higher capacity in Tier 2 (elimination of possible overflow restricted tier 1 to Tier 2), and hence also more capacity in sum of Tier1 and Tier3.	
Q21.4	**Q21.4: If the 20% limit is removed, how could the features in Article 71 of the Delegated Regulation be amended to ensure that the quality of Tier 1 own funds is maintained?** Insurance Europe would not support the removal of the 20% limit. The restricted tier 1 market is not on a developed level currently. Furthermore, Insurance Europe is sceptical about the ability to define sensible features to make Tier 1 in the form of subordinated debt even more akin to equity. RT1 as currently foreseen is already riskier than equity in several aspects because of the inversion of the hierarchy of capital. The proposed "improvements" only make the occurrence of unintended consequences more likely. Also, they will occur at an earlier stage of a crisis, and arguably will make it even more difficult – if not impossible – for all but the strongest insurers to issue Tier 1 in the form of subordinated debt in the capital market	
Q21.5	**Q21.5: Would you prefer the quality of Tier 1 capital to be maintained by retaining the 20% limit or strengthening the Tier 1 features? Please explain your answer.** Retaining the 20% limit looks more relevant since: (i) the combination of the complexity / volatility of Solvency II Pilar 1 and (ii) the existing required features to qualify as Restricted Tier1 have prevented the insurance sector to launch a Euro benchmark Restricted Tier1 in the capital markets. Strengthening the RT1 features would make even more challenging a market access that is virtually non-existent in the first place and therefore is not desirable.	

	What is more, retaining the 20% limit achieves a clearer distinction between the features and pricing of the various forms of own-funds, eg Unrestricted Tier 1, Restricted Tier 1 and Tier 2 (and Tier 3). Insurance Europe therefore does not see any reason for removing the limit and cannot see a sensible way to improve the quality of RT1 further via additional (contractually fixed) requirements	
Q21.6	**Q21.6: If the 20% limit is removed, and if the mandatory trigger set out in Article 71(1)(e) of the Delegated Regulation were raised to a level materially above that of substantial breach of the SCR (in order to improve the quality of own funds that it applied to):** **a) would there be a market for such instruments?** **b) would it be cost effective to issue such instruments?** See answer to question 21.4. Given the absence of meaningful amounts of issuance of restricted tier 1 based on current criteria, it is not possible to make any reliable statements on the potential marketability (or market cost) of restricted tier 1 instruments after the contemplated criteria changes. It is nevertheless conceivable, given the current low yield environment, that some investors could buy such instruments, irrespective of any potential unintended consequences. It goes without saying that such an artificial demand for the instrument poses significant risks of its own kind. However, SCR is already a high trigger compared to MCR. Higher trigger would imply more limited market access for a number of issuers. The market for restricted Tier 1 instruments is virtually non-existent. The increase of the trigger to a level significantly above that of non-compliance with the SCR would (1) entail an additional cost for the issuer while (2) increasing the risk of unintended consequences (worsening of the SCR ratio) and thus arguably reducing the quality of its own funds. A higher trigger for PLAM (100%) would lead to an inversion in the ranking in respect of equity capital; in fact, the RT1 bondholders would start to suffer losses before the equity investors and as a result the cost would be materially higher and might also exceed return on equity	
Q21.7	**Q21.7: If the 20% limit is removed, and if the first call (redemption or repurchase) date as set out in Article 71(1)(g) of the Delegated Regulation were set further from issuance date (in order to improve the quality of own funds that it applies to):** **a) would there be a market for such instruments?** **b) would it be cost effective to issue such instruments?** The Restricted Tier 1 call right is certainly not an obligation to call. The call right allows insurers to replace the instrument with an otherwise identical, but lower cost, instrument. Hence, setting the call right further from the issuance date reduces the quality of this own funds item as it reduces the instrument's flexibility. Therefore, preventing such a replacement for 10 years rather than only 5 cannot be viewed an "improvement" of the instrument's quality. In this context, Insurance Europe reiterates that all call rights are contingent on the prior approval from the regulator.	

	In addition, extending the first call date beyond five years would create an unjustifiable difference to bank AT1, where ordinary calls are allowed after five years. In any case, all calls are subject to the approval of the supervisory authority. It therefore does not seem appropriate to extend this first date of call. Furthermore, if the first call for repayment or redemption were set further 5 or 10 years after the date for issuance, the issue of this type of capital items would be hardly feasible in practice.	