	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:	Swiss Re	
Disclosure of comments:	Please indicate if your comments should be treated as confidential:	Public
	Please follow the following instructions for filling in the template: ⇨ Do **not** change the numbering in the column "reference"; if you change numbering, your comment cannot be processed by our IT tool ⇨ Leave the last column empty. ⇨ Please fill in your comment in the relevant row. If you have no comment on a paragraph or a cell, keep the row empty. ⇨ Our IT tool does not allow processing of comments which do not refer to the specific numbers below. **Please send the completed template, in Word Format, to CP-16-008@eiopa.europa.eu** **Our IT tool does not allow processing of any other formats.** The numbering of the questions refers to the discussion paper on the review of specific items in the Solvency II Delegated Regulation.	
Reference	**Comment**	
General Comment	Swiss Re continues to support the Solvency II framework and the overarching principles in the Directive. However, there remain several areas where Solvency II can be technically improved, in particular regarding the recognition of reinsurance as a risk-mitigation technique and the risk margin. 1. **Recognition of reinsurance**: Swiss Re's view is that the Solvency II regime should not only allow for, but also incentivise risk mitigation techniques applied as part of a sound risk management policy. This is consistent with the Solvency II Directive, according to which the economic capital should be calculated on the basis of the true risk profile of those undertakings, taking account of the	

impact of possible risk-mitigation techniques, as well as diversification effects (see recital 64). This should be seen as a guiding principle regardless of whether an internal model or the standard formula is used for the calculation of the SCR. Undertaking Specific Parameters have been introduced to address issues with the recognition of non-life non-proportional reinsurance. However they are unattractive, not only because they are complex and burdensome (wrt. reliance of data and the supervisory approval process), but also because they fail to capture major types of non-proportional reinsurance, like Stop Loss, Reserve risk, or facultative covers. Therefore, alternative options are needed. In our response, we propose a simple and straightforward adjustment to the standard formula for premium and reserve risk that would capture the risk mitigation impact of any non-proportional reinsurance. The calculation would follow a scenario based approach like the one already used for the Life module and the Non-life Cat module. A scenario based approach would also not have the same data demands as deriving undertaking specific parameters. Therefore it would solve the problem regarding reinsurance recognition, while keep the standard formula simple and making it more consistent with other risk modules.

2. **Risk margin**: The calculation of the risk margin (RM) in Solvency II as currently calculated based on a fixed cost of capital rate is difficult to hedge and therefore very volatile. It is also disproportionately high compared to other parts of the balance sheet (BEL, SCR). A firm must project its SCR in respect of non-hedgeable risks and apply a prescribed Cost of Capital Rate (CoCR) of 6% pa. This sensitivity is likely to have significant absolute and hedging costs when there are short-term variations in the risk-free rate (RFR). Our proposal would be to explore options for moving to a variable CoCR.

In other areas we are concerned that a revision of the standard formula could lead to an oversimplification such as in the area of Counterparty default risk where a focus on number of counterparties rather than rating of the counterparty would undermine a risk sensitive approach. Furthermore, we would like to make some smaller comments on other areas, i.e. Non-life Cat, Longevity, and the Interest Rate shock.

	Swiss Re is grateful for the opportunity to reply to EIOPA's discussion paper and lay out further details on the areas which we have indicated above.	
Q1.1		
Q1.2	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. 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. Most major types of reinsurance including proportional and non-proportional covers are affected in some way. For example: 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 of using the future 12 months NEP subject to a cap on earnings is unattractive and something most companies are unwilling to do. 2) **Recognition of non-proportional non-life reinsurance**: Solvency II recognizes NP reinsurance via fixed adjustment factors of 80% only for 3 business segments, i.e. 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 like 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. These major deficiencies of the standard formula 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		
Q1.4	We propose 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 we propose 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 "$\boldsymbol{RM_{other}}$" 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). We think that the calculations to be performed for RM_other are no more complex than other scenario based calculations required under the standard formula. Such calculations would be under the governance of the Actuarial Function, according to which the expected reinsurance cover under stress scenarios must be considered (DAs Art. 272 (7) and Article 48(1)(g) of the S II Directive). The amended premium and reserve risk calculation would be as follows: $SCR_{nl\ prem\ res} = 3\ \sigma_{nl}\ V_{nl} - \boldsymbol{RM_{other}}$ $\boldsymbol{RM_{other}}$ denotes the risk mitigating effect on premium and reserve risk of reinsurance arrangements that meet the requirements of Articles 209, 210, 211 and 213, 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 $3\ \sigma_{nl}\ V_{nl}$ (which is the 200-year loss for premium and 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 recognised elsewhere, and 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 make the reflection of reinsurance much simpler, but it would also make the methodology of the standard formula more consistent between Non-Life and Life.	
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Q4.1	**Longevity solutions** Longevity reinsurance creates benefits for cedants and reinsurers under Solvency II. In fact, longevity is a major risk capital driver under Solvency II, e.g. according to results from QIS 5 it has contributed 36% to the undiversified SCR for life insurance risk. Longevity exposure has also a considerable impact on the risk margin. As a reinsurer, we benefit from diversification with mortality exposure which is our major motivation to engage in longevity transactions. Overall, longevity swaps are in our opinion treated in an appropriate way under Solvency II where the risk mitigation impact of the reinsurance may be taken into account under the scenario based approach for longevity risk. **Reserve Risk Covers** Apart from the life solutions as explicitly mentioned by EIOPA, there are also trends affecting non-life reinsurance which are currently not sufficiently considered under the standard formula. For example, we 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 wrt risk management and policyholder protection, e.g. runoff portfolio transfers.	
Q4.2	**Adverse Development Cover (ADC)** • 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 (i.e., reserve risk). • **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. • 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 (see annex to EIOPA's QIS 5 report), which after diversification makes up around 30% of the 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. • **ADCs meet all qualitative requirements as set out in Articles 208 to 215 of the Delegated Regulation**. 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 Acts 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 taken into account.

- **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 reinsurer:	70%
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, i.e., 51% of reserve risk. This is not recognized under the current standard formula.**

- **Our proposed solution under Q 11.5 supports adequate recognition 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 solution 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 particular 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 %	
Q5.1		
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Q5.3		
Q5.4		
Q5.5	As the standard formula's premium volume measure is based on the larger of the last 12 and future 12 months of net earned premium (NEP), a rigid interpretation would not allow to take into account any new cession or increase in cession, e.g. of quota share reinsurance, in the first year.	

	We do not think that this disallowance for reinsurance was intended when the volume measure was designed. We would therefore propose a simple change to Article 116(5) to include: "***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.***" This will ensure that the last 12 and future 12 months of NEP are compared on a like for like basis.	
Q5.6	The overall EU non-life reinsurance market size is around USD 35 billion. For Swiss Re the proportion of business coming from proportional treaties ranges between 40% - 60%. Proportional business tends to be dominated by mid-sized and smaller companies who are more likely to be 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		
Q7.1	EIOPA's Guidelines on the application of outwards reinsurance are in our opinion highly valuable by providing guidance to users of the standard formula for appropriate application of reinsurance. Given the complexity of the topic and questions that have arisen in the first year of application of Solvency II we recommend to review the guidelines for potential clarifications and would also support the inclusion of additional examples where this could aid understanding. We generally support that gross scenarios are defined in the Delegated Acts while the details of application of the reinsurance are described in EIOPA's guidelines. Regarding the definition of gross scenarios in the Delegated Acts we support the scenario based approach and general structure (perils that have been identified).	

	Regarding EIOPA's reinsurance guidelines, we have observed inconsistent application of the so called spread method which is described in EIOPA's guideline 8 on Disaggregating the gross loss to individual countries or other components. The method allows the application of (certain) reinsurance covers after the allocation of diversification benefits where this is consistent with how the reinsurance works economically. Our understanding of the examples in the technical annex is that these cases apply when companies need to disaggregate gross losses to a finer granularity for the purpose of RI application in order to re-aggregate net losses. For example, in the case of country or business unit specific covers. We agree that companies should have the freedom to choose either method 0 or method 1 for re-aggregation (as described in the annex) provided that the chosen method can be justified. However, we see a risk of the spread method being applied in circumstances which we do not think can be justified on prudential grounds. For example, if the spread method is applied after the capital charges for individual perils have been aggregated, e.g. to the overall Nat Cat capital charge (after diversification) which is then allocated back to the different perils, these capital charges are not anymore 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. We think some confusion also stems from differing interpretations of "aggregate covers" as referred to in the technical annex, which is not clearly defined. Therefore we would support further clarification on the conditions of application of the spread method and in particular with regards to the definition of "aggregate cover" in EIOPA guidelines.	
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Q8.7	In our opinion, recession risk cannot simply be separated from the premium and reserve risk. Company defaults cannot be classified as recession driven versus defaults which would have occurred anyhow. The industry has established risk management processes and tools to deal with recessions (dynamic exposure management), which should be appropriately accounted for in the recession risk charge.	
Q8.8	We agree with EIOPA's findings that if the maximum exposure is determined only with regard to the sum insured gross of reinsurance, it might significantly underestimate the actual risk, e.g. if reinsurance is mainly used for the maximum gross exposure, while other exposure are not reinsured in the same degree. Articles 130-132 are actually not fully clear in this respect. For example 132.3. stipulates that "For the purposes of paragraph 2, the set of buildings may be covered by one or several insurance or reinsurance contracts." This might be interpreted to mean that the effect of the reinsurance should be taken into account for the purpose of identifying the largest concentration.	

	Therefore, we would support clarifying Articles 130-132 in line with a risk sensitive approach as proposed by EIOPA.	
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Q10.1	No single model captures the risk – including the model risk.	
Q10.2	Parameter uncertainty can be evaluated at portfolio level through standard statistical techniques, whereas model risk is harder to evaluate – and requires at least a consideration of different models.	
Q10.3	Expert views on scenarios can be used to supplement or challenge calibration of statistical models.	
Q10.4		
Q10.5		
Q10.6	No. We think this would add unnecessary complexity and think that full or partial internal models are the most appropriate means to capture longevity and mortality risks in a more appropriate way.	
Q10.7	Current formulation is at least simple (albeit it does not reflect durational effect of liabilities).	
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Q10.9		
Q10.10	Instead of applying instantaneous and uniform shocks we propose the application as a change based on future mortality trend (e.g. increase/decrease of 2%pa over run-off)	

	which better captures the underlying risk.	
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Q11.5	**Non-proportional reinsurance accounts for around 50% in total reinsurance premium in Europe**, and we observe a shift from proportional to non-proportional reinsurance in major markets like France and Germany, where it accounts to up to 60%. One reason is that non-proportional reinsurance is particularly effective under extreme loss scenarios such as the 200 year event. Under the 200 year event, the risk mitigation impact of a typical non-proportional cover might be 10 times higher than a proportional cover if shown relative to the reinsurance premium from an economic perspective. By not recognizing non-proportional reinsurance appropriately the standard formula fails to incentivise proper risk management and it puts smaller and medium sized companies who are the more likely users of the standard formula at a disadvantage. The fixed adjustment factors as defined as 80% under the standard formula do not address this issue because they only adjust the calibration for three lines of business for a market average reinsurance impact and are not risk sensitive. We support these adjustments being embedded in the standard formula to ensure an appropriate calibration of non-life premium and reserve risk, but they don't serve as a solution for the adequate recognition of non-proportional reinsurance. While USPs are one option to support improved recognition of non-proportional reinsurance, we would like to highlight that these are quite complex and have several limitations. **Our major concern is that currently the permitted USP methods fail to recognise many types of non-proportional reinsurance that are widely used like Stop Loss, Adverse Development, and Facultative Covers because these are excluded from the scope of "recognisable" excess of loss reinsurance as defined in DA Art. 218 (referring to excess of loss reinsurance).** Furthermore,	

	the use of USPs pose high demands in relation to the availability and quality of data to make them effective, e.g. based on the credibility factor approach, and cause significant burden on companies because of the supervisory approval process. Data issues may be caused if portfolios have not been managed according to Solvency II segments in the past and because of changes to the business. **Additional assessments and documentation for the purpose of the approval process make USPs unattractive for companies.** While we think that reliance on data could be addressed (within the USP method) by allowing the use of standard parameters for average loss ratios and standard deviations which could be calibrated based on market claims statistics without making it less risk sensitive to the reinsurance cover, the limitations wrt any other type of non-proportional reinsurance would remain and this gap needs to be addressed as well. Given above mentioned shortcomings, **we strongly recommend EIOPA to also consider a solution addressing more comprehensively the issues with recognition of non-proportional reinsurance under the standard formula**. This can be done in a simple and straightforward way by introducing one single adjustment to the SCR for premium and reserve risk, which we call "***RM_other***". It would capture the risk mitigation impact of any reinsurance that is currently not taken into account in the premium and reserve risk module or anywhere else without increasing the overall complexity. **This adjustment would be calculated by the undertaking using a scenario based approach**. We should note that this follows the same method which is already applied for the recognition of reinsurance for the scenario based calculations in the Life and the Non-Life Cat module. It would ensure that non-proportional reinsurance provides the same capital relief as proportional reinsurance provided that economic risk transfer is the same. The amended formula for the SCR for premium and reserve risk in Art. 116 of the Delegated Acts would look like:	

	$SCR_{nl\ prem\ res} = 3\ \sigma_{nl}\ V_{nl}$ - ***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 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* σ_{nl} V_{nl}*.* We 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 (DAs Art. 272 and Article 48(1)(g) of the Directive), i.e. 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 because under the scenario based approach the risk mitigation impact of the reinsurance will be assessed in the context of the effect of a well defined scenario on a forward-looking basis.** An alternative would be to extend the adjustment factors that are currently used for three lines of business to all lines of business and make them applicable to all major types of reinsurance depending on application of the reinsurance and subject to calibration. Although this approach would be more risk sensitive than the approach that exists currently, it would be less capable of applying to new types of risk mitigation. There is also the risk that the risk mitigation impact may be over or understated in many cases.	
Q11.6	See our answer on Q 11.5.	

Finite Reinsurance

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", 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.

Therefore, Finite reinsurance contracts should not be systematically excluded from being recognizable 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.

We propose the following adjustment to Art. 208(2) of the Delegated Acts:

> *"Where insurance or reinsurance undertakings transfer underwriting risks using finite reinsurance, as defined in Article 210(3) of Directive 2009/138/EC, that 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 in Articles 116 and 147 of this Regulation*** *only to the extent underwriting risk is transferred to the counterparty of the contract.*

	~~*Notwithstanding the previous sentence, finite reinsurance, or similar arrangements, where the lack of effective risk transfer is comparable to that of finite reinsurance, shall not be taken into account for the purposes of determining the volume measures for premium and reserve risk in accordance with in Articles 116 and 147 of this Regulation, or for the purposes of calculating undertaking-specific parameters in accordance with Section 13 of this Chapter.*~~"	
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Q12.4	We generally support efforts to simplify the standard formula. However, we would caution against any changes that could create the wrong risk management incentives. It is important that the counterparty default risk module preserves the current Solvency II approach to loss given default which considers the recovery rate. We would be concerned if simplified calculations placed too much weight on the number of counterparties as a proxy for risk. Focusing on the number of counterparties would not be risk sensitive as it would ignore the fact that highly rated, well diversified counterparties have much lower credit risk than lower rated counterparties. For example, an AA rating indicates that the probability of failure is 1 in 10,000 or 1 bps (Article 199 of the Delegated Acts). Our own reverse stress testing analysis using our internal model suggests that a scenario that would result in our failure would be in the same order of magnitude. We would not expect lower rated reinsurers to withstand an event of this magnitude and therefore spreading risk between a number of lower rated reinsurers is more likely to increase rather than decrease counterparty credit risk. At the same time, highly rated counterparties have a very high recovery rate (in the region of 90% to 95%).	
Q12.5	We would support a simplified calculation that groups single name exposures, i.e.	

	consistent with Article 110 of the Delegated Acts.	
Q12.6	Under the current standard approach, cedants should calculate the SCR with and without reinsurance for each individual reinsurance counterparty for the purpose of assessing the LGD. An average cedant might have 10 reinsurance counterparties which belong to three rating classes. Instead of 10 additional SCR calculations only 3 SCR calculations would be required which would save considerable time/cost because the calculation of the individual LGDs is the most onerous part of the counterparty default risk module.	
Q12.7	Any simplification should be optional and should not lead to materially lower capital requirements than under a more complex, risk sensitive approach.	
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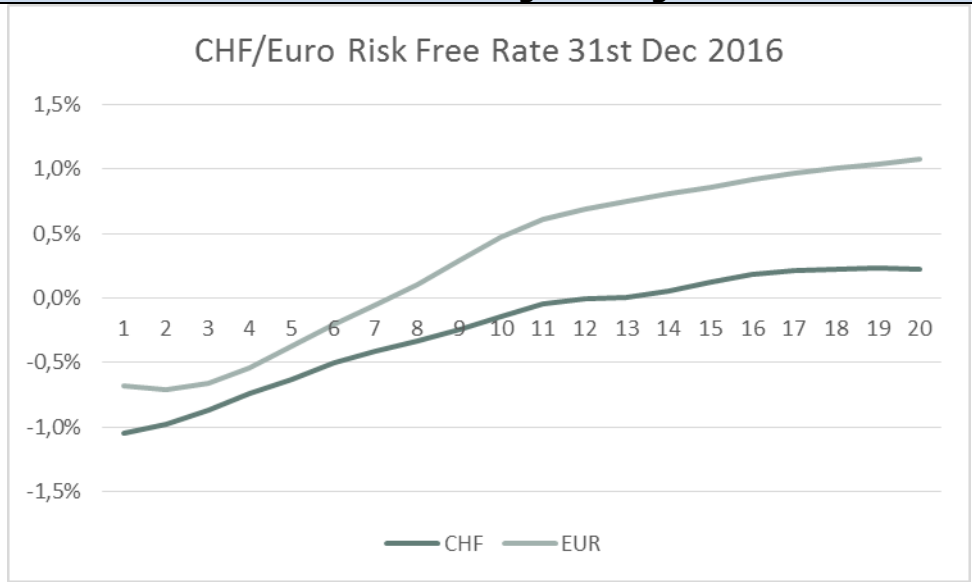
Q17.1	The interest rate shock is inappropriate because it doesn't currently recognize the impact of negative interest rates. We understand that at the time when the interest rate shocks were calibrated the reference data (historic rates) did not include a period with similar low rates like has appeared in recent years. For example when looking at Year end interest rate curve 2016, the CHF shows 12 years and Euro 7 years of negative interest rates. Given that many companies limit the duration of the investment to between 5 and 10 years, the downward shock impact under Solvency II is 0 while the upwards shock is also very small. Therefore, interest rate risk currently creates almost no capital need under Solvency II.	



Q17.2	Any fixed minimum downward shock might either be not effective or not appropriate under certain exceptional market environments. A defined minimum downward shock could serve as a temporary solution, but might need to be reviewed on a regular basis.	
Q17.3		
Q17.4	The initial calibration was done on a limited scope of data and without sufficient scenarios being considered. A new set of data covering a longer period with better segmentation would be appropriate. Data should cover, but not be limited to recent years to capture different phases of the economic cycle.	
Q17.5	We think that the data should reflect all markets situations over at least the last 10 years. The impact of the recalibration on the extrapolation should be taken into account from the beginning.	
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Q17.8		
Q17.9	We would support re-calibration, and therefore a change to more thorough statistical methods makes sense to decrease dependency on data.	
Q17.10	We think that quarterly would be appropriate.	
Q17.11	If an additive approach is chosen, the calibration will require regular review to maintain appropriateness under different market environments and to avoid that it generates too much volatility. We propose that this should be done annually.	
Q17.12	The linear approach implies the need for more frequent calibration of shocks. As an alternative to a pure linear approach, the current approach may be used together with a minimum factor added.	
Q17.13	Yes, because that leads to a linear approach which will be recalibrated on a frequent basis (e.g. yearly).	
Q17.14	Yes, because that leads to a linear approach which will be recalibrated on a frequent basis (e.g. yearly).	
Q17.15	Yes, with a shift of 1 to 2% of the rate as a minimum.	
Q17.16		
Q18.1	We agree that (deferred) taxes can have a significant impact on the Solvency Capital Requirement (SCR) and consequently on the solvency ratio. The LACDT is an adjustment which can be applied to the SCR as specified in Article 108 of the Solvency II Directive and corresponding Delegated Acts. This adjustment reflects the potential compensation of unexpected losses through a simultaneous change in deferred taxes. Nevertheless, insurance undertakings should demonstrate, by assessing their sources of future taxable income, that these deferred taxes are recoverable. Among industry players it has been observed that approaches regarding tax modelling, recoverability testing and treatment of tax groups and fiscal unities differ substantially which is an issue for multinational companies. For further background see the CRO Forum paper "DTA in SCR".	
Q18.2	We refer to the recent CROF paper "DTA in SCR", which sets out some sound general principles for the treatment of deferred taxes under Solvency II. The paper provide good practice standards for the recoverability testing of the LACDT. We support such a framework which recognises also the differences in tax legislation across countries	

	which are the basis for the determination of tax.	
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Q19.1	Results from an industry survey carried out by Insurance Europe provides evidence that the risk margin makes up a disproportionately large part of Solvency II balance sheet. It is also very sensitive to changes in interest rates and difficult to hedge. We can confirm these findings from our own experience with certain portfolios. It is particularly true for certain products, e.g. annuities. For annuity business, the cost of longevity risk implied by the risk margin and the volatility of the price is in our view not consistent with an effective, well-functioning market for longevity risk. In the current low interest rate environment the issue became apparent because while the interest rates are lower the Cost of Capital (CoC) rate has remained at the same level as 2004 when the risk margin methodology and parameterisation were originally conceived. During the time when the rate was set, CEIOPS' advice argued for a 'through the	

cycle' cost of capital rate to avoid pro-cyclicality. However, we are of the view that a 'through the cycle' level of risk margin would be more appropriate for certain lines of business/risks, e.g. in the case of longevity:

- Annuities are sold as a long-term contract and risks emerge in the long-term rather than short term.
- 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.
- The risk margin which reflects the price at which longevity risk may be transferred need not reflect exactly the current market assumptions. Instead, the value of the risk margin could be deliberately smoothed to help firms in providing protection to their policyholders in the long term as intended.

We therefore think that changes to the risk margin methodology are needed to ensure that the risk margin coupled with the best estimate results in a market consistent value of insurance liabilities.

We would like to propose using a "variable cost of capital rate" approach. If the cost of capital rate was variable in line with the level of the risk free rate then this would reduce the volatility of the risk margin. The formula would be: Cost of Capital = x% * reference risk free rate + Y% fixed addition

The level of the CoC rate may be calibrated in a way that the 6% CoC rate would be anchored to the interest rate environment for year end 2004, when the CoC rate was first conceived. This would suggest that the fixed addition "Y%" is lower than 6% under the current interest rate environment.

This would work both ways – cost of capital rate would increase when rates increase, which may avoid the risk margin becoming 'too small' when rates are very high. It would also lead to the desirable outcome of a 'through the cycle' risk margin due to the following reasons:

- When rates are high, investors will seek higher returns from assets which

	increases their tax (taxable profits) • When rates are low, investors are more inclined to invest their capital to receive higher absolute returns. There may be a downward pressure on cost of obtaining capital, and vice versa (the cost of capital might increase if interest rates were as high as 10 %.)	
Q19.2	*Should the Cost-of-Capital rate be a long-term average rate?* • A fixed cost of capital does cause volatility of the risk margin as shown by evidence and in our sensitivity analysis under Q 19.4. • Swiss Re view is that the risk margin as a whole should not be overly volatile to short-term changes in market parameters. We would not want a cost of capital rate varying, for example, with BBB corporate bond spreads. This would increase the credit spread risk in firm's gross capital generation, and this could not easily/sensibly be hedged. *If the cost-of-capital rate should move in-line with the current market conditions, which market instrument should the rate move in-line with?* • Varying only with the level of interest rates in a way which reduces volatility, as suggested above. *Do you have any evidence of the cost of capital for insurers moving in-line with your chosen market instrument?* • The true transfer price of longevity risk (i.e. the price at which transactions between firms actually takes place) is not be as volatile as the risk margin.	
Q19.3	Material change in balance sheet • Swiss Re's UK subsidiary has experienced significant volatility in the value of the risk margin since the introduction of Solvency II. The risk margin increased by 36% between 31 December 2015 and 30 September 2016. The expected run off would be 4% in this period if there was no change in markets, hence the risk margin at 30 September 2016 was 40% higher than expected. Main cause of the impact	

- The chart below shows volatility of the risk margin for Swiss Re's UK subsidiary since the introduction of Solvency II is related to the level of GBP risk-free interest rates, with the most significant increase in the risk margin linked to the Brexit vote.

Month End Date	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16
10 year int rate	1.9%	1.5%	1.2%	1.3%	1.5%	1.4%	0.9%	0.7%	0.6%	0.6%
% change	-	2.7%	4.6%	6.1%	-3.8%	2.4%	14.4%	6.8%	4.4%	-4.8%

Which lines of business are affected?

- The risk margin for our subsidiary relates almost entirely to the significant portfolios of annuities. The longevity risk SCR generated by this business is 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.
- The risk margin of annuity business is particularly sensitive to the reductions in the level 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. The SCR increases significantly when interest rates fall.
    - The risk margin is based on projecting the longevity SCR and 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 is 'doubly' sensitive to a fall in interest rates.

<u>How has this affected business practice?</u>

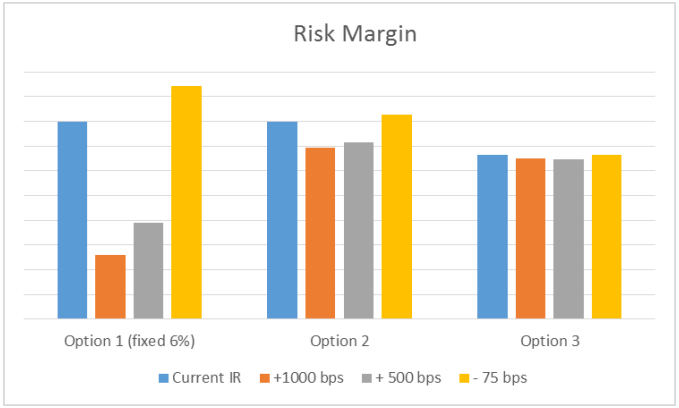
- The prudent person principle implies that technical provisions should be closely matched to technical provisions. The increase in asset duration to match the interest rate sensitivity of the risk margin is significant.
- One of our subsidiaries uses Transitional Measures on Technical Provisions in order to mitigate against significant increases in the risk margin. Maintaining the systems and processes to carry out recalculations is burdensome, and the solvency position may experience a lag between a market event and a recalculation being approved.

<u>What amendments should EIOPA consider?</u>

- We advocate a move to a variable CoC rate linked to the RFR subject to an application ratio. This would be a sensible approach to take in a low interest rate environment, where we would expect market risk premiums to reduce as demand for higher yielding assets increases. For example, the cost of capital formula could be as follows, with a floating interest rate risk element and a fixed credit risk element:

  Cost of Capital rate = [X% * risk free rate] + [Y% fixed addition]

- We have performed a sensitivity analysis which compares the impact on the risk margin (in absolute terms) which is calculated according to different options including fixed and variable CoC rates (being defined as x% * 10 yr. reference risk free rate + Y% fixed addition) under different interest rate scenarios, i.e. assuming a parallel shift of the current term structure by +1000bps, +500bps (increase) and -75bps (decrease). It should be noted that these reflect different interest rate environments and not one off shocks.
  - **Option 1:** fixed 6% CoC rate (status quo)

	○ **Option 2**: the CoC rate is set at 6% as of 1st Jan 2016 and then varies with changes of the risk free rate ○ **Option 3:** the CoC rate is set at 6% as of 1st Jan 2004 and then varies with changes of the risk free rate  • The analysis shows that a variable risk margin has the potential to dampen volatility on the risk margin under changing interest rate environments subject to an appropriate calibration. • There are different options for calibration of a variable risk margin, i.e. by defining an appropriate starting level (anchor point for the CoC rate) and application ratio (setting how it moves depending on interest rate changes). • For the purpose of the calibration we recommend to revisit the current level of the CoC rate which has been set under a different interest rate environment and consider any changes for setting an appropriate anchor point. We think that under the current low interest rate environment, a lower CoC rate would be appropriate.	
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