	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:	**Association of British Insurers (ABI)**	
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	The ABI welcomes EIOPA's review of the Solvency II Delegated Regulation and the Solvency Capital Requirement Standard Formula. We see this review as a timely opportunity to improve upon the regime following its implementation, to achieve a simpler, more workable outcome for standard formula users. There are three areas in particular to which we would like to draw EIOPA's attention:	

Area 19 Risk Margin

We believe that the current specification of the risk margin is inappropriate, in particular for long-term life insurance business. This has been especially evident in the current low interest rate environment, where changes in interest rates have caused excessive balance sheet volatility, which we believe was unintended. Our detailed comments outline proposed changes to the calculation of the Cost of Capital rate, and also more general changes that may be made to the Risk Margin calculation.

Area 18 Loss Absorbing Capacity of Deferred Taxes (LACoDT)

Our response is aligned with the CRO Forum paper (http://www.thecroforum.org/dta-in-scr/), which developed best practice for recoverability testing of DTA in the SCR.

We consider that the calculation of deferred tax liabilities (DTL) and deferred tax assets (DTA) is a straightforward application of the principles contained in IAS 12. The calculation of LACoDT needs to reflect the particular circumstances of the relevant entity and the tax rules of the territories in which the entity operates. This reflects the normal on-going management of an entity's tax position. We do not believe that this introduces any unnecessary subjectivity in the calculation of LACoDT, and do not consider that any additional regulation, guidance or simplification is required. We consider that the suggested simplifications (in particular the suggestion that LACoDT should be limited to the amount of the net deferred tax liability) are wholly inappropriate. They do not reflect the reality of a strong, diverse and resilient UK and European insurance industry that has amply demonstrated its ability to withstand and adapt to substantial stresses (not least in the recent credit crisis in the banking sector).

Area 10 Mortality and longevity risk

We welcome the fact 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. Instead of applying an instantaneous and uniform shock, we propose a change based on the future mortality trend (e.g. an increase/decrease of 2%pa over the run-off period) which more closely captures the underlying risk.

	We think that a more granular approach for longevity and mortality risks would add unnecessary complexity. Full or partial internal models are the most appropriate means to capture longevity and mortality risks in a more granular way where this is required. **Other areas of focus** We have provided responses to the majority of the 196 questions listed in this discussion paper, and we would emphasise the importance of addressing concerns that we highlight in the following areas of the Discussion Paper: 1. Simplified calculations 2. Reducing reliance on external credit ratings 15. Currency risk at group level 17. Interest rate risk 20. Comparison of own funds in insurance and banking sectors 21. Capital instruments eligible as Tier 1 Operational Risk is not included within the scope of this review; however, we would emphasise the need for EIOPA to review its treatment under the standard formula. The current approach is volatile, not risk sensitive, and does not take sufficient account of a firm's investment in risk management systems, processes and training. It also penalises insurers (such as bulk annuity writers) who write "lumpy" business. More generally, we believe that as EIOPA is now in possession of data regarding Solvency II, it must analyse this database and rid the standard formula of 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.	
Q1.1	We have encountered no significant challenges when carrying out the evaluation of errors introduced into the results of the simplified calculations, other than the interpretation of what constitutes a legally binding contract, which does not appear to be consistent across regulatory regimes. In this case a contract should be defined as legally obliged once the policy holder has	

	formally accepted the offer of a contract from the insurer.	
Q1.2	In calculating the capital requirement for the non-life premium and reserve risk, we do not believe that the level of reduction the factor provides appropriately reflects the reduction in the risk as a result of writing business in differing geographical areas. Further to this, the diversification benefit from writing business from different countries within regions, e.g. Western Europe, is not properly taken into account. It is challenging to recognise risk mitigation techniques under the non-life premium and reserve risk sub-module, due to its factor-based nature. In particular we note the following issues in relation to the recognition of reinsurance: 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 recognised 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 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, 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.	
Q1.3	The diversification benefit from writing business from different countries within regions, e.g. Western Europe, is material, and is not properly taken into account.	
Q1.4	Regarding the interpretation issue noted under Q1.2, a contract should be defined as legally obliged once the policy holder has formally accepted the offer of a contract from the insurer. Regarding the recognition of reinsurance noted under Q1.2: 1) **Recognition of reinsurance in the first year after inception**: This could be addressed by improving the definition of the volume measures for premium risk (see Q5.5). 2) **Recognition of any other type of reinsurance**: The standard formula for non-life underwriting risk (Art 115 Delegated Regulations) could be extended to adjust for the risk mitigating impact of any reinsurance that cannot currently 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 the Life and the Non-Life Cat module). We think that the calculations to be performed for RM_{other} are no more complex than other calculations required under the standard formula. The amended premium and reserve risk calculation would be as follows: $SCR_{nl\ prem\ res} = 3\ \sigma_{nl}\ V_{nl}$ - $\boldsymbol{RM_{other}}$ **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, excluding reinsurance premiums referred to in Article 116(5)(a) and that otherwise have not been reflected in the standard formula. It should be calculated as the risk mitigating impact of the reinsurance on a change in basic own funds that would result from an instantaneous loss of $3 \cdot \sigma_{nl} \cdot V_{nl}$ (the 200-year loss for premium and reserve risk as defined under the	

	standard formula). In accordance with Article 109, 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 (Article 101(3)). Such an approach would also make the methodology of the standard formula more consistent between life and non-life. 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. 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 and 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.	
Q1.5	We believe 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. The main issue with regard to the non-life lapse risk relates to the calculation of the loss given lapse. As a minimum, more guidance could be given here, as currently it is left open to interpretation. As an example, it is unclear what the assumptions regarding cancellation fees are. In this case, the assumption should be that all cancellation fees recoverable under the contract are recovered from the policy holder in the event of a cancellation.	

Q1.6	EIOPA should consider removing the non-life underwriting lapse risk sub-module from the standard formula, as this risk is completely immaterial for the majority of non-life undertakings.	
Q1.7		
Q1.8		
Q1.9		
Q1.10	We have encountered no significant challenges when calculating the capital requirement for the NSLT premium and reserve risk.	
Q1.11	As per our answer to Q1.2.	
Q1.12		
Q1.13	As per our answer to Q1.5.	
Q1.14		
Q1.15		
Q1.16		
Q1.17		
Q1.18		
Q1.19	We do not think that specific measures for captives are required. However, we do consider that simplifications should be available for all undertakings that pass the proportionality test.	
Q1.20	We do not think that specific measures for captives are required. However, we do consider that simplifications should be available for all undertakings that pass the proportionality test.	
Q1.21	The relevant data is available. For certain securities, e.g. structured securities, this will depend on the effective duration and not on the modified duration. We 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 appropriate risk measure.	
Q1.22		
Q1.23		
Q1.24		

Q1.25		
Q1.26	Under Article 109 of the Directive, firms should have clear options to simplify their calculations where this is justified by the nature, scale and complexity of the risks they face, and as part of the application of the proportionality principle. However, in practice, the implementation of the simplified calculations imposes a significant documentation burden on firms, adding to the governance and compliance costs arising out of Solvency II.	
Q2.1	The wording of Article 4 of the Delegated Regulation could be improved to explicitly state that, when an internal rating is available, but no suitable ECAI rating is available, the internal rating should be used. This would reduce reliance on external credit rating providers in certain cases, albeit with the possible additional burden of assurances that the internal ratings are comparable. Currently, internal ratings can only be used where they lead to a higher capital requirement than an external credit rating, which discourages their use. This would need to change if there is to be a significant change in the use of external credit ratings. We consider that the option of using external ratings should remain, as internal ratings analysis may not be achievable or economical for smaller firms to undertake, and any changes to Article 4 would need to avoid penalising firms that have to rely on external credit ratings.	
Q2.2	The mapping of credit quality steps (CQS) could be improved by expressing the mapping in terms of upper bounds for Probability of Default (PoD) and with a single Loss Given Default (LGD) assumption, as pairs of PoD and LGD upper bounds.	
Q2.3	The general requirement in relation to credit ratings in Article 4 of the Delegated Regulation stipulates that internal credit rating models can only be used if they are more onerous than external credit ratings. This requirement should be removed as it discourages the use of internal models, despite such assessments giving firms an enhanced understanding of their risk exposure.	
Q2.4	A key concern with the reliance on external credit ratings in the standard formula is the capacity for changes in external ratings to encourage herd behaviour and procyclicality. Therefore, to ensure that the level of protection of policy holders is equivalent, any proposed criteria or requirements for the development of internal ratings need to avoid simply re-creating the	

	potential for herd behaviour by being overly-restrictive.	
Q2.5	We do not consider that a methodology based on market-implied ratings should be used in the standard formula. In our opinion, formulaic market-based ratings would not move based solely on forward looking changes to creditworthiness and so would be pro-cyclical. The methodology would have to balance various perspectives on risk and include counter-cyclical adjustments similar to the equity adjustment in the Solvency II framework.	
Q2.6	We do not consider that a methodology based on accountancy-based measures should be used in the standard formula. In our opinion solely accounting-based ratings would not move based solely on forward looking changes to creditworthiness and so would be less useful than the existing ratings.	
Q2.7	Alternative measures could be considered as part of a comprehensive credit assessment approach, which should allow for relevant interactions, similarities, discrepancies between alternatives to be appropriately identified and used to improve the calibration of the alternative measures. The appropriateness of formulaic market-implied ratings would need to be carefully considered, as they would not move based solely on forward looking changes to creditworthiness and so may be pro-cyclical.	
Q2.8	We would support the ability of certain third parties to apply for approval and provide ratings. However, any alternative approaches for use in the standard formula must not limit insurers' ability to use external credit ratings; rather the use of alternative approaches should be encouraged. Care must also be taken that alternatives do not impose significant costs on insurers.	
Q2.9	A particular area of disproportionality arising out of the use of external ratings is the case of securitised positions. Article 6 of the Delegated Regulation requires a double credit rating for securitised positions, with exposures attracting a 100% risk factor if only one external rating is available. This significantly increases the reliance on external ratings. More broadly, the use of external ratings in the standard formula creates a bias in insurers' investment activity toward investments with (multiple) external credit ratings. Allowing alternative approaches to external credit ratings would make a wider range of investments	

	available to insurers, improving prospects for diversification. The ongoing reporting of external ratings represents a significant cost for insurers, and particularly so for smaller firms. Since assets are reported in regulatory returns, the onus should be on the regulator to have systems to look up ECAI ratings for these assets as required. This would limit the need for every undertaking to pay for external licences.	
Q2.10	With regard to securitised positions, we acknowledge the reasons behind the double credit rating requirement, but suggest that both need not be external credit ratings. With regard to the reporting of external ratings, the requirement to report should be imposed proportionately. We propose that the option to exempt undertakings from particularly burdensome reporting requirements on grounds of proportionality in Article 35(6) and (7) of the Directive be made mandatory instead of optional, so that member states are forced to include it in their national legislation.	
Q3.1	We do not consider that the current differences between the Delegated Regulation and the CRR are justified. Guarantees issued by RGLAs should be recognised similarly under both frameworks, as the risk associated with the guarantee is the same regardless of whether the exposure is held by a bank or an insurer.	
Q3.2	The recognition of guarantees under Solvency II should be modified and expanded; see the discussion in Q3.8 below.	
Q3.3	The risk mitigating effect of a partial guarantee should be able to be recognised in the SCR standard formula calculations. Although there is a cost associated with splitting the exposure into guaranteed and non-guaranteed portions, insurers should have the choice to recognise partial-guarantees, otherwise legitimate risk management techniques are being ignored, and insurers may become disinclined to pay for the partial guarantee if the exposure is treated as not guaranteed for capital purposes.	
Q3.4		
Q3.5		
Q3.6	We consider that Member States' central government guarantees should be treated in a	

	consistent manner, and should be extended also for type 2 exposures.	
Q3.7		
Q3.8	Guarantees issued by RGLA should be treated similarly to guarantees issued by the central government in which they are established. This would better enable insurers' role as long-term investors, by reducing regulatory barriers to insurers' ability to invest in socially useful infrastructure projects. Currently, these assets are treated as corporate debt, but the capital charges associated with these assets should be reduced to be commensurate with their risk. Guarantees may also be provided by entities that are not RGLAs themselves, but borrow on behalf of RGLAs, such as the UK Municipal Bond Agency. NSAs should have scope to be able to recognise guarantees from such institutions as guarantees from RGLAs. Furthermore, the fact that a counterparty is of strategic importance for a sovereign/RGLA (e.g. public service, funding from State budget, no profitability aim) should be considered even when no explicit guarantee is given.	
Q3.9		
Q3.10	Although there are important differences between the business models of the two sectors, this does not justify the differences between Solvency II and CRR with regard to the treatment of exposures to RGLA. The risks associated with an exposure to RGLA are the same whether they are held by a bank or an insurer.	
Q3.11	Exposures to RGLA which fulfil the requirements should be treated like exposures to the central government. There should be no intermediate treatment.	
Q3.12	Aligning the treatment of RGLA exposures in Solvency II to the treatment in the banking regulation would result in a better alignment of the capital requirements with the risk of the exposures. As this is likely to reduce the capital charge, insurers and reinsurers may adjust their investment strategy in favour of RGLAs.	
Q4.1	**Longevity risk** Longevity swaps and longevity risk transfer/reinsurance are particularly relevant as risk mitigation techniques. Longevity reinsurance benefits both cedants and reinsurers under Solvency II.	

	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. Reinsurers are motivated to engage in longevity transactions due to the diversification with mortality exposure. It is appropriate that, under Solvency II, the risk mitigation impact of reinsurance may be taken into account under the scenario based approach for longevity risk. The volume of such longevity solutions has grown recently, although much of the market is heading out of the EU, as Solvency II capital charges are perceived as penal. EIOPA should avoid writing any further hurdles into the regulations that might accelerate this process. **Reserve Risk** There are also trends affecting non-life reinsurance not sufficiently considered under the standard formula. There is increasing interest in solutions mitigating reserving risk, as this has become a major contributor to the overall required risk capital under Solvency II's risk based regime compared to Solvency I. In particular, Adverse Development Cover (ADC) transfers reserving risk, allowing companies to effectively manage the risk while maintaining liquidity and diversification. However, the risk mitigating impact of an ADC is not recognised under the standard formula, and has therefore largely been implemented only by companies using an internal model. This particularly affects smaller and medium sized companies that usually have a larger need for runoff portfolio / reserve risk solutions. Thus the standard formula only supports the less-effective risk management and policyholder protection solutions, e.g. runoff portfolio transfers.	
Q4.2	If new developments in risk management techniques are not recognised, insurers may find they incur risks which they cannot subsequently hedge if needed. As a result, insurers may decide against providing new products, stifling innovation. **Credit Risk**	

- The current Standard Formula approach to credit risk mitigants (Article 179 of the Delegated Act), such as credit derivatives, is quite onerous, and 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 being doubly hit for trying to implement a strategy to reduce risk and does not incentivise risk mitigation.

Basis Risk

- The requirement around basis risk is also 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.

Adverse Development Cover (ADC)

- ADC is 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 insurers' reserve risk mitigation needs while maintaining non-life claims reserves on their balance sheets for liquidity and diversification reasons.
- According to EIOPA's report on QIS5, more than 50% of the non-life provisions of non-life undertakings relate to Motor third party liability and General Liability, which might, after diversification, make up approximately 30% of the SCR for premium and reserve risk. Indeed, these segments typically make up a higher portion for many smaller insurers, which would largely benefit from proper recognition of ADCs as an effective risk

mitigation on reserve risk.

- ADCs comply with the qualitative requirements for risk mitigation. However, the risk mitigating impact of ADCs cannot be adequately reflected within the structure of the standard formula. The volume measure for reserve risk as defined under Article 116(6) of the Delegated Act 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 Q11.5 ("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.
- Alternatively, Article 117 of the Delegated Act could be amended to address the

	recognition of ADC transactions by adding the following paragraph: *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	Although the proposed change to the definition of $FP_{(future,s)}$ addresses an inconsistency with recognition of future premium, we do not believe the change should be made, as this would lead to an inappropriate asymmetric treatment of capital requirements (>1 year time horizon) and future profit recognition (1 year time horizon). We consider that the treatment of both should be the same. The SCR is defined as "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". Thus, the SCR reflects the change in the own funds and thus the balance sheet over the year. It is accepted that a full year's premium for policies incepted over the year do attract risk for the full period of exposure. However, we note that the risk associated with events and new information in year N+2 (for example an adaptation to the pricing strategy before accepting new business or renewals) will manifest in year N+2 and thus would not impact the balance sheet at the end of year N+1. Thus, incorporating this risk in the calculation would be overstating the SCR.	
Q5.2	Any proposed alternative for the definition of the premium risk volume measure (set out in Article	

	116 of the Delegated Regulations) should correctly reflect Level 1 regulation and respect the 1-year time horizon, and ensure that future premium is considered in a consistent manner for the purpose of defining the volume measure for premium risk used for the calculation of the SCR, and for the future premiums recognised in the calculation of own funds. Under EIOPA's proposal, the additional premium from future business would be counted for the premium risk volume measure, but not included in the calculation of expected profit from future premium. The calibrated factors would also need to be materially reduced.	
Q5.3	The impact of the change in the volume measure would be a c. 20% increase in the premium risk SCR and a c. 15% increase in the reserve risk SCR. The extent of the impact will largely depend on the company and its written business. Companies with a higher share of motor business in their portfolios will generally be more affected, as they are likely to have mostly short-term contracts, and changes have a more significant impact on short contract lifetimes than multiyear contracts.	
Q5.4	We agree that the example does suggest a revision of the premium risk would be appropriate, i.e. to adjust the calibrated factors or the final SCR results to allow for the adequacy/profitability of premiums charged. However, any adjustments could very quickly lead to additional complexity, and/or increase the risk of the standard formula not being appropriate for some insurers. If an adequacy adjustment is incorporated, it is not clear how this could be introduced without the potential risk of including subjectivity in determination of the future premium adequacy, e.g. optimism in plans. For example, this may require future business plans, or aspects thereof, to become auditable for use in the standard formula SCR calculations. As a more objective alternative, we propose that the historic performance of a class is used to adjust the premium adequacy, e.g. last 5 year combined operating ratios (CORs); however, this would not reflect any recent changes to pricing strategies.	
Q5.5	The volume measure in Article 116 of the Delegated Regulation is based on the larger of the last 12 and the 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, for example, of quota share reinsurance.	

	We do not think that this disallowance for reinsurance was intended when the volume measure was designed, and propose a clarification through an amendment to Article 116(5) to ensure that the last 12 and the future 12 months of NEP are compared on a like-for-like basis**:** *Where $P_{(last,\ s)}$ is higher than P_s 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.*	
Q5.6	The size of the impact on the SCR from changing the volume measure would depend on the adjustment made, but all standard formula users extending their reinsurance cover might be affected. The 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 to use the standard formula. The impact for an individual cedant can be quantified by multiplying the cession rate of the new quota share with the volume measure for any segment covered under the reinsurance.	
Q6.1	We are not aware of any issues with the standard parameters, and would question whether sufficient evidence is available to justify their recalibration so soon after Solvency II implementation. However, we would hope that any review of the standard parameters of other lines of business would result in a calibration that better reflect insurers' profitability than the current parameters.	
Q7.1	The natural catastrophe risk specifications may be burdensome, in particular for smaller entities, where the added granularity may not be material. However, Solvency II should promote risk management in addition to maintaining solvency, and insurers should be aware of where risks underwritten are located. There is scope for aggregating zones where these zones are exposed to similar levels of risk. However, any changes should be carefully reviewed to ensure that they do not unintentionally bring additional complexity or cost for (re)insurers, or reduce the usability or reliability of the standard formula.	

	The guidance that EIOPA has provided on the application of outwards reinsurance by users of the standard formula is valuable, and we generally support defining gross scenarios in the Delegated Acts and detailing application of the reinsurance in EIOPA's guidelines. We support the scenario based approach and general structure (perils that have been identified) in the gross scenarios in the Delegated Acts. However, the guidelines should be reviewed and updated to reflect issues that have arisen in the first year of Solvency II. In particular, we have observed inconsistent application of the "spread method" described in EIOPA's Guideline 8. While 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, 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 any more 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.	
Q7.2	We would support an optional rather than a mandatory simplification of the natural catastrophe risk sub-module. Simplifications may be reasonable for smaller insurance entities on materiality grounds. Grouping of currently existing zones would be more transparent from a reinsurance perspective as opposed to calculating SCRs by region. A factor-based approach could be considered for smaller entities.	

Q7.3	In terms of calculating the windstorm risk sub-module, splitting exposure into the relevant zones can be a time- and resource-consuming process. The treatment of non-EEA entities (i.e. by a factor based approach) is onerous. We suggest the sub-module might benefit from a scenario approach (based on factors) or by splitting territories such as Canada into smaller regions.	
Q7.4	See our answer to Q7.3.	
Q7.5	See our answer to Q7.3.	
Q7.6	See our answer to Q7.3.	
Q7.7	See our answer to Q7.3.	
Q7.8		
Q7.9	We have no evidence that average contractual limits per country and per peril have changed since 2010.	
Q7.10	Natural catastrophe events have been limited in number in recent times, and have certainly not been of sufficient frequency and magnitude in the UK to provide conclusive evidence of windstorm clustering. Recent low intensity storm clusters have mainly resulted in flood losses as opposed to windstorm damage.	
Q7.11	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 the reinsurance treaty, for example.	
Q7.12	Vendor models suggest that windstorm clustering is a material risk at the European level.	
Q7.13		
Q8.1	When calculating the motor vehicle liability risk sub-module, the split by sum insured limits (in Euros) adds extra complexity, but does not materially affect the result.	
Q8.2		
Q8.3	We find that the aviation risk module has a simple approach proportionate with materiality. We do not suggest any changes to this risk module.	
Q8.4	The main challenge when calculating the fire risk sub-module lies in determining the 200m radius that captures the greatest fire risk concentration, often leading to approximations that reduce the	

	risk sensitivity of the calculation. Restricting this to a single building or using exposure in a postcode as an exposure measure may be more practical.	
Q8.5	For the liability risk sub-module, the data requirements are relatively straightforward. No simplifications are required.	
Q8.6		
Q8.7	We do not consider that the SCR for man-made catastrophe risk is appropriately calibrated. See our answer to Q8.9. We are also concerned that recession risk cannot simply be separated from the premium and reserve risk as suggested by the standard formula. Company defaults cannot be classified as recession-driven versus otherwise-occurring default. 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	The revised approach to calculating man-made catastrophe risk better reflects the risk and is welcome. The approach requires more data and may be slightly more computationally complex, but not prohibitively so. It is not expected that the change would be material. 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 exposures are not reinsured to the same degree. In our view, Articles 130-132 are not clear in this respect. For example Article 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.	
Q8.9	We do 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 actually used by undertakings in their underwriting process.	

	We consider that the man made catastrophe risk charge produces losses higher than would be expected at a 1-in-200 year return period. This is based on discussion with underwriters, who believe that if there were to be a bomb blast in a built up area, there would be significant shielding by neighbouring buildings and that the radius of the damage would not extend to 200m, nor result in losses of the total sum insured amount.	
Q8.10	We would support a change in the impact radius or modifying the loss as a percentage of sum insured, or a combination of the two.	
Q8.11	The introduction of a Possible Maximum Loss (PML) or Expected Maximum Loss (EML) approach introduces a material element of subjectivity to the calculations that would not be appropriate for a prescriptive standard formula calculation. It also introduces the potential to reward underestimation of risk, as low PMLs will translate to lower capital requirements.	
Q8.12	Following on from earlier comments, the calculation of the fire risk sub-module could be simplified in terms of the definition of the loss scenario. Maximum exposure in all possible 200m radiuses is often difficult to determine.	
Q9.1	Recent catastrophe events may suggest a review of the calibration of the mass accident catastrophe charge may be appropriate.	
Q9.2	Recent attacks such as those in France suggest that the current mass accident risk scenario is appropriate, although the return period of such an event is likely to be far less than the Solvency II stipulated 1-in-200. A possible modification could be to allow for multiple events as witnessed in Paris on 13 November 2015.	
Q9.3	When calculating the mass accident risk sub-module, it can be challenging to estimate the benefits payable under events, particularly where these benefits are recurring and depend on the duration of the injury.	
Q9.4	When calculating the accident concentration risk sub-module, (and similar to the mass accident health catastrophe sub-module), there are difficulties estimating the benefits payable under events where these benefits depend on the duration of the injury. In addition, for some Group policies, it is not always known how many insureds will be in force over the following 12 months.	
Q9.5		

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q10.1	We welcome the fact 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. However, no single model captures the risk – including the model risk. For example, the Lee-Carter model fails to explicitly take into account the cohort effect, and exhibits lack of fit for small populations.	
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 judgement on scenarios can be used to supplement or challenge the calibration of statistical models.	
Q10.4		
Q10.5	Undertaking Specific Parameters should be available so that, for those insurers for whom longevity risk or mortality risk is material, this can be modelled appropriately.	
Q10.6	We think that a more granular approach for longevity and mortality risks 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 granular way.	
Q10.7	A benefit of the current formulation is that it is simple; however, it does not properly reflect the duration of the liabilities.	
Q10.8	The level of granularity obtained using a model point approach per LoB would have the benefit of achieving greater accuracy without imposing too great a burden, assuming that policies were grouped appropriately, capturing the characteristics and risks of the underlying data.	
Q10.9	Although the SCR mortality and longevity are expressed in terms of "loss in basic own funds", the longevity/mortality shock has to 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. We note for that matter, that the sensitivity of own funds to interest rates can be managed (for example, using traditional asset liability management techniques) with which life insurers are familiar.	
Q10.10	The current capital requirement for longevity risk (equal to the loss in basic own funds that would	

	result from an instantaneous permanent decrease of 20% in the mortality rates used for the calculation of technical provisions) is already far too high, and does not need additional strengthening. Instead of applying an instantaneous and uniform shock, we propose a change based on the future mortality trend (e.g. an increase/decrease of 2%pa over the run-off period) which more closely captures the underlying risk.	
Q11.1		
Q11.2	We recommend that an option be introduced to allow firms to use USPs for correlations in general. As an example, this would help firms address the lack of geographical diversification for GI underwriting within regions; in addition it would allow correlations between classes of business on the GI side (these are issues highlighted elsewhere in this response). Other standard parameters that could be considered to be replaced by USPs are the risk factors Q per peril and region in the Natural Catastrophe sub-module (refer to Annex VI to IX of the Delegated Regulation).	
Q11.3	We do not consider that there should be a prescribed method for the application of USPs, as this would undermine the value of the USP. A set of criteria could be worked out for the assessment of whether a method is a standardised one, but otherwise firms should be able to produce methods and assumptions that best reflect their risk profile.	
Q11.4	The data criteria in the Delegated Regulation restrict firms in the set-up of USPs where the data are not complete for the use of a prescribed method. The requirements could be improved by accepting expert judgment in such a situation, for example selection of a different range for the data, appropriate assumptions, and/or statistical or actuarial methods. Simplification of the USP application process would also be welcome, by replacing the upfront regulatory review process with a requirement for confirmation from an internal validation team, or an internal or external audit review, that Article 219 of the Delegated Regulation is met. Furthermore, section 2 of the Delegated Regulation is very prescriptive on the data quality	

	standard, which could limit or discourage the use of USPs. The burden of the data quality standard could be reduced by relaxing it where it pertains to a segment or LoB that is not material to the undertaking.	
Q11.5	Non-proportional reinsurance is a major risk mitigation instrument for Non-life; it accounts for more than 50% of total non-life reinsurance premiums in major European markets. Its importance as a risk mitigation instrument becomes even clearer when considering its impact in a 1 in 200 year event, where the risk mitigating impact (relative to the reinsurance premium) of a typical non-proportional cover is much higher than for a proportional cover, perhaps even 10 times higher relative to the reinsurance premium from an economic perspective. The standard formula does not recognize this difference, and 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 current adjustment factors for non-proportional reinsurance (defined as 80% for only three lines of business) are not appropriate as 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 do not serve as a solution for the adequate recognition of non-proportional reinsurance. We support USPs as one way of improving the recognition of non-life non-proportional reinsurance. However, the current design of USPs makes them unattractive and hence they are not widely used. We consider this is primarily because their current scope is limited to certain types of non-proportional reinsurance; other types of cover such as stop loss, reserve risk, facultative covers, and any non-proportional reinsurance with a specific structure are not recognised excess of loss reinsurance under Article 218 of the Delegated Act. The use of USPs also imposes onerous data requirements in terms of quality and quantity of data to make them effective, and the supervisory approval process is also a disincentive to use USPs. The 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 (as proposed in a joint letter from Insurance Europe and the Reinsurance Advisory Board to the European Commission on 22 June 2012). However, the limitations with respect to any other type of non-proportional reinsurance would remain and this gap needs to be addressed as well.

Therefore, we think that other steps are also needed, and would support EIOPA's consideration of a solution to more comprehensively address the issues with recognition of non-proportional reinsurance under the standard formula.

A solution could be achieved in a simple and straightforward way by introducing one single adjustment to the SCR for premium and reserve risk, which we call "***RM_other***". 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 using a scenario based approach, using the same method already applied to the scenario based calculations for the Life and the Non-Life Cat modules.

With this alternative approach, non-proportional reinsurance should provide the same capital relief as proportional reinsurance, if the undertaking can demonstrate that the economic risk transfer to the reinsurer is identical for the scenarios defined under the standard formula.

The amended formula for the SCR for premium and reserve risk in Article 116 of the Delegated Act would be:

$$SCR_{nl\ prem\ res} = 3 \cdot \sigma_{nl} \cdot V_{nl} - \boldsymbol{RM_{other}}$$

where $\boldsymbol{RM_{other}}$ *denotes the risk mitigating effect on premium and reserve risk of reinsurance arrangements that meet the requirements of Articles 209, 210, 211 and 213, 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 should be calculated as*

	the risk mitigating impact of the reinsurance on a change in basic own funds that would result from an instantaneous loss of $3 \cdot \sigma_{nl} \cdot V_{nl}$. We think that the calculations to be performed for RM_{other} are no more complex than other calculations required under the standard formula.	
Q11.6	**Stop Loss Reinsurance** We propose using solutions as presented in our response to Q11.5. **Finite Reinsurance** The IAIS' 2012 report on reinsurance and financial stability identifies risk transfer transactions, typically known as "finite reinsurance", as "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 does not appropriately recognise the potential risk mitigating impact of finite reinsurance contracts. Finite reinsurance contracts should not be systematically excluded from being recognisable 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. To this end, we propose the following adjustment to Article 208(2) of the Delegated Act: *"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.*~~"	
Q11.7	The possibility of developing and using group specific parameters (GSP) is even more limited than for USPs. Group-specific modifications of the methods, or alternative group-specific methods to calculate GSPs, should be allowed for.	
Q11.8		
Q11.9		
Q12.1	The current regulation is difficult to interpret, and poses ambiguities as to whether an exposure should be treated in the counterparty default risk module or the market risk module.	
Q12.2		
Q12.3	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	
Q12.4	We consider that the counterparty default risk module is disproportionately complex, relative to its impact on the SCR. Although we would generally support efforts to simplify the standard formula, we would caution against any changes that could create perverse risk management incentives. For example, simplified calculations should not increase the weighting on the number of counterparties, because it would ignore the fact that highly rated, well diversified counterparties have much lower credit risk than lower rated counterparties. For example, 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%).	

	We support the calculation of the counterparty default risk charge based on the loss given default considering the recovery rate as applied under the Solvency II Directive.	
Q12.5	We would support simplification of the counterparty default risk module by grouping of single name exposures, i.e. consistent with Article 110 of the Delegated Act.	
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 that belong to three rating classes. Using the simplified approach, instead of 10 additional SCR calculations, only 3 SCR calculations would be required. This would save considerable time and 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.	
Q13.1		
Q13.2		
Q13.3		
Q13.4		
Q13.5	There is currently no interaction between EMIR and the Solvency II Delegated Regulations with respect to the treatment of derivatives and associated capital charges for counterparty default risk. EIOPA should consider how this can be rectified. Under Solvency II, the adjusted value of collateral is used to derive the value of the actual exposure, upon which the capital charge is calculated. The adjustment is based on a stress calibrated to 99.5% over 1 year. Under EMIR, the haircut on collateral is calibrated at 99%, over a maximum of 10 days. The Solvency II approach appears very punitive, overstating the actual risk by providing for multiple defaults within 1 year.	
Q13.6		
Q14.1	We do not see any ambiguities in the scope of the market risk concentration sub-module.	
Q14.2	Regarding the applicability to single name exposures, difficulties in relation to the interpretation	

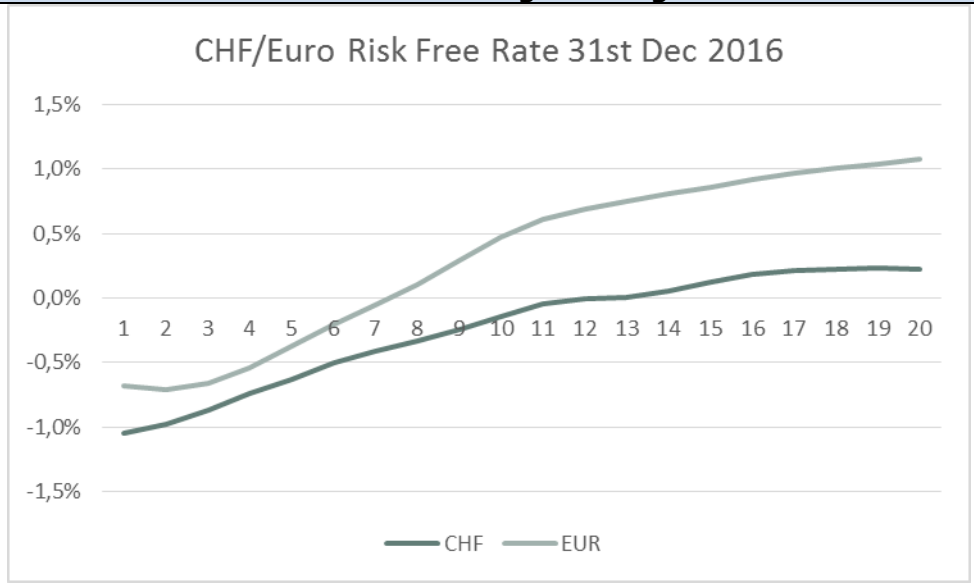
	of single name exposures can be seen when some single name exposures include at the same time insurance undertakings, credit institutions, or other financial institutions. A weighted average approach is used when applying Articles 186(2) to 186(5) of the Delegated Regulations. For cases where no ECAI 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		
Q14.4	We do not expect that firms will make different assumptions when calculating the market risk concentration sub-module and the counterparty default risk module.	
Q14.5		
Q14.6		
Q14.7		
Q14.8	Generally the look-through approach is not possible for unit-linked funds which are excluded from the Concentration module.	
Q14.9	We are not aware of any assets where the value of the exposure does not equal the value of the asset.	
Q14.10	In calculating the capital requirement for market risk concentration, we expect 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	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	Regarding the determination of the calculation base as referred to in Article 184(1) of the Delegated Regulations, we would expect single name derivatives to be included and index based derivatives to be excluded.	
Q15.1	We do consider the “FX translation risk” to be a real risk; there is a real risk to the balance sheet	

	from FX movements. However, the current calibration is excessive, treating an insurer backing its local solvency capital requirement with assets in the local currency as taking FX translation risk, which creates the wrong incentives with respect to risk management and policyholder protection. See our response to Q15.4.	
Q15.2	We do not consider that there should be restrictions on the availability of own funds at the level of the group. However, note that this comment relates only to FX translation risk, rather than any fungibility adjustments (e.g. pension risks).	
Q15.3	We consider own funds across the group to be fungible, and FX translation risk should not impact the assessment of fungible own funds. In a situation of stress, FX translation risk capital will address the issue of potential changes in FX impeding the transfer of funds.	
Q15.4	We do not consider the treatment of currency risk arising at the level of the group to be appropriate under the standard formula. We believe that the Standard Formula leads to an excessive level of capital held for "translation risk" where material Own Funds are held in local currency by subsidiaries and/or there are multiple currencies involved. Furthermore, this excessive level of capital can incentivise poor risk management practices: • At the Group level, such as over-hedging FX risk (compared to the real economic risk) and so creating real economic cost/risk for shareholders (and indirectly for policyholders). • At the local entity level (as capital allocation, used for management of the portfolio of businesses, would naturally allocate such capital to the originator – i.e. the overseas subsidiaries) as an entity may choose to hedge out this risk, creating real economic risk for local policyholders. There are 3 elements which we believe lead to this overstatement of capital requirements: a) "translation risk" is applied to unstressed own funds – we believe it should be assessed against the residual local Own Funds after the application of other stresses; b) the implied correlations between different FX rates (being 100% correlated in the most onerous direction for each currency);	

	c) The positive correlations between translation risks and other (market) risks are overstated. These points combined indicate that the current treatment of "translation risk" leads to an overstatement of the capital required for 99.5% confidence over a 1 year period, and therefore the quantification needs to be adjusted to satisfy Article 101 of the Solvency II Directive. The treatment should result in the spreading of excess assets into different foreign currencies where the (re)insurer has exposure, or encourage the holding of assets to meet local solvency requirements in the local currency, and any excess above this in the group reporting currency.	
Q16.1	Look-through to related undertakings should not be limited to particular legal structures as it is at present; instead the proper identification of related undertakings used as investment vehicles could be based on the existence of specific investment mandates.	
Q16.2	If the adoption of a look-through calculation is on an optional basis, the requirement should also refer to appropriateness of the Standard Formula to capture the impact of the risks appropriately and the risk evaluation used for any such undertakings for ORSA purposes being taken into account where firms do not adopt the look-through approach. If the requirement for the look-through approach were to be made mandatory instead, this should be subject to materiality.	
Q16.3	We would expect benefits to outweigh costs if a look-through approach was mandatory for investment related undertakings, by achieving an SCR that more appropriately captures the real risks. The look-through approach should have the widest scope possible. Look-through to related undertakings should not be limited to particular legal structures as it is at present; instead the proper identification of related undertakings used as investment vehicles could be based on the existence of specific investment mandates. The risk of the investment vehicle could be modelled based on the underlying securities. We would not support a proposal for the look-through approach to be routinely optional. While we agree that proportionality and materiality should always be taken into account, if the look-through approach is not mandatory this could encourage arbitrage, as firms could use the related	

	undertaking to invest material amounts of more riskier assets whilst incurring a low capital charge. Optionality in applying the look-through should be considered only in the following cases: • 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. However, we would note that it can be difficult (or in some cases not legally possible) for firms to look through certain investment vehicles – investment trusts are a prime example. EIOPA would need to consider which classes of investment vehicles might need exemptions. This is probably more of an issue for Pillar 3 look through (and the frequency with which it is required) rather than the Pillar 1 look through needed to calculate the SCR, nevertheless it is an important point to consider.	
Q16.4	If the 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.	
Q16.5	Look through to investment related undertakings would only be appropriate if such undertakings were materially significant and had a suitable investment mandate.	
Q16.6	The 20% threshold established by Article 84(3) is based on a percentage of the balance sheet; it is not reflective of the risk or materiality. We would argue for a risk-based approach that takes account of the contribution of the assets to the SCR, in order to enable greater scope to apply a simplified look-through approach to unit-linked businesses. However, we note that, for some insurers, a risk-based percentage may be more difficult and burdensome to implement.	
Q16.7	For unit-linked and index-linked products where the investment risk is borne by the policyholder, we would consider applying a scalar adjustment to the unit-linked and participating business assets contribution to the calculation against the 20% threshold based on the level of residual shareholder exposure.	
Q16.8	The current look-through approach for investments backing unit-linked and index-linked products is not justified.	
Q16.9	The cost of application of the look through approach to unit linked funds is particularly	

	burdensome compared to the SCR impact – these would include absolute return funds and hedge funds. This is especially true where proprietary / sensitive investment holdings force delayed delivery of look through information.	
Q17.1	Interest rates have moved significantly since the interest rate risk sub-module was calibrated in 2009. Historically, interest rate volatility has tended to be proportional to the rate level. But 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.	



The current relative approach is no longer appropriate with low/negative rates – intrinsically the current Standard Formula model cannot be adequately recalibrated. However, we believe that using a fixed shock rather than relative shock would tend to overestimate interest rate risk (although we recognise it may be reasonable to impose a fixed minimum on the shocks to ensure that this approach is prudent in a low yield environment).

When considering any change to the methodology, it should be recognised that the current methodology does not necessarily lead to an underestimation interest risk, as the interest risk exposure may already be exaggerated in the base case. Care must be taken that any change to the methodology improves accuracy, rather than further exaggerates the interest risk.

Q17.2	A defined minimum upward/downward shock could serve as a temporary, pragmatic solution to the problem with the calibration of the model, but it is not a desirable permanent feature	

	because of its subjective and somewhat spurious nature, and would need to be reviewed on a regular basis. Nonetheless, without a minimum downward shock, the asymmetries lead to counter-intuitive outcomes. Such a shock should be calibrated based on the historical relationship between interest rate levels and volatilities, which will indicate a 'base' level of volatility that exists even at extremely low rates.	
Q17.3	The main interest rate risks are due to the excess of investment assets over insurance liabilities. Insurers are able to match insurance liability cash flows using liquid securities, so the primary risk is increasing interest rates to the extent that excess assets are invested in fixed income securities. At the same time, now that interest rates have gone negative; they are more likely to do so in the future. This is a significant risk, as many products have implicit 0% guarantees. Future calibrations should recognise the probability of negative rates. The choice of a floor to negative rates is a key assumption.	
Q17.4	EIOPA should use a wider range of data to adequately capture the 1:200 events that are relevant to periods where current monetary policy was followed. The initial calibration was done on a limited scope of data and without sufficient scenarios being considered. A new dataset 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. We agree with the period chosen for GBP. We suggest considering historical German government yield curves (Bundesbank), which are closer proxies of historical EUR risk free curves, and USD Government history, another high quality long term series. Given the size of the USD market, and given that it is the primary world currency, it is a good systematic indicator.	
Q17.5	The daily EIOPA risk-free rate curves would require cleaning for spurious or outlying data before they could be used to calibrate the interest rate stress factors. Use of daily curves is generally a disproportionate approach, especially because of possible autocorrelation and complicated time-series modelling with temporal aggregation to generate annual stresses. Monthly generally suffices.	

	It is inappropriate to calibrate to extrapolated curves using Smith-Wilson, as the extrapolated component is often highly correlated to the last point on the curve. The reversion to the UFR, where long durations are missing, dampens variance (shocks) in the extrapolated part of the curve, and is an undesirable outcome. It would be more appropriate to calibrate the model to richer, longer duration data over a more recent, shorter period and resolve parameters for the relatively higher historical standard deviation, over a longer history (using government experience). Using all data even beyond the LLP, especially for EUR, is necessary in case the LLP moves out.	
Q17.6	We see the use of government USD curves as a good indicator of systematic risk.	
Q17.7	Pragmatically, calibrations should be performed on derived spot curves (or forward curves, which tend to have theoretical advantages). Par Yields on swaps are market quotes and inherently not perfectly smooth due to lower LLPs (e.g. 16-19 years) or rounding conventions. It is also preferable to be consistent with the use of ZCB curves for government bond data; calibrating directly to government bonds is non-trivial as constituent data continually changes, and yields aren't perfectly smooth. Hence we prefer clean spot or ZCB curves, with the shock derived using that convention.	
Q17.8	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	Principal Components Analysis (PCA) is a sensible approach. Transforming the data for normality, and stationary prior to PCA, will allow more flexibility and give more intuitive results. A change to more thorough statistical methods makes sense to decrease dependency on data.	
Q17.10	A quarterly or 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	Given that negative interest rates are now observable, an additive element is mathematically and economically reasonable. The choice then becomes one of displacement log changes versus purely additive changes. The calibration would need to be regularly reviewed to maintain	

	appropriateness under different market environments and to avoid generating too much volatility. We propose that this should be done annually.	
Q17.12	A displacement log change approach is a necessary compromise; however, it requires the calibration of the displacement rate. This approach restricts the downside from very negative rates and maintains some skew towards rates rising.	
Q17.13	The interest intensity-based approach described is just an additive version of continuously compounded rates. It is a reasonable approach to derive the shocked risk-free curves, as it leads to a linear approach which will be recalibrated on a frequent basis.	
Q17.14	The interest intensity-based approach holds little theoretical benefit over a simple additive approach. Frequent updates would be required, as per the yield curve.	
Q17.15	A calibration approach that uses absolute (relative) changes in a low (high) interest rate environment (i.e. relative when high and additive when low) feels more reasonable. As rates have gone negative, the relative approach cannot be calibrated, so a compromise displacement model is more reasonable. A shift of 1-2% of the rate would be the minimum.	
Q17.16	A few alternative approaches can be investigated, including: • Stresses that are dependent on the level of interest rates. An additive stress factor that is applied can then be scaled up for up-stresses when rates are low, and vice-versa. • Having the same stress factor, but different dynamic probability weightings is useful from a pragmatic perspective. • Having a dynamic stress factor that depends on duration and the level of interest rates, is 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	We agree 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 Act. Article 207 does not limit the loss absorbency of deferred tax, nor should it.	

	The LACoDT 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. We consider that the calculation of deferred tax liabilities (DTL) and deferred tax assets (DTA) in the SII balance sheet is a straightforward application of the principles contained in IAS 12. Our experience is that although the size of the adjustments between the accounting and Solvency II balance sheets can be very large, in general there is no particular difficulty in determining the temporary differences on which DTLs and DTAs will arise under IAS 12. However, it has been observed that approaches regarding tax modelling, recoverability testing and treatment of tax groups and fiscal unities differ substantially; this is an issue for multinational companies. With respect to the LACoDT, the shock loss will give rise to a trading loss. In the UK there is no time limit for the expiry of losses, and hence the offsetting of the shock loss (applying the relevant UK tax rules relating to the offset of losses) against DTLs is possible. Although Solvency II applies a going concern test, the recognition of a DTA for the shock loss on the basis of the continuation of the underlying business is more difficult. However, we strongly believe that DTA should be recognised in all cases where there is evidence of future profits, in line with an economic valuation.	
Q18.2	A recent CRO Forum paper (available here: http://www.thecroforum.org/dta-in-scr/) sets out sound general principles for the treatment of deferred taxes under Solvency II. It provides good practice standards for the recoverability testing of the LACoDT, with a view to creating a level playing field within the industry. We support such a framework, provided that it recognizes the differences in tax legislation across the various Member States. Given that the returns on assets and liabilities are different in each insurance undertaking, there is no reason to harmonise on this issue. To account for uncertainty in the asset and liability returns of the LACoDT; a prudential reduction could be applied to projected taxable income beyond the normal business planning horizon of the company, as per the CRO Forum paper.	

	Pillar 1 calculations, and best estimate values of future cash flows and future asset returns are inherently uncertain. Requiring undertakings to capture additional uncertainty in the context of LACoDT would lead to an inappropriate level of prudence in the calculations. See also our answer to Q18.3.	
Q18.3	EIOPA's discussion paper acknowledges the uncertainty involved in the returns used in the projections. We agree that this uncertainty is an issue, and would be supportive of EIOPA's proposal to address this by taking an average of the valuation in a pessimistic and optimistic scenario. The Solvency II balance sheet is calculated on a market consistent basis. 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. We do not consider that it would be appropriate to limit the expected return to the shocked risk free rates.	
Q18.4	The calculation of LACoDT is based on the future tax position of the business in question. Therefore, we consider that projections should be based on fiscal profits and losses. In calculating the fiscal result, assumptions will need to be made of the fiscal impact of Solvency II impacts (and in particular in respect of the impact of stress losses). This does not affect the underlying assumption that projections should be based on fiscal results.	
Q18.5	Potential sources of profit that should be considered when justifying the recoverability of deferred tax assets (in the base and SCR stress) include: • risk premiums on assets and full earnings on surplus (which are not valued on the Solvency II balance sheet but will emerge as future profit); • expected economic recovery from stressed conditions over the business planning horizon and beyond; • release of the Risk Margin (see our answer to Q18.14.); • cash flows not taken into account on the Solvency II balance sheet (e.g. because of	

	contract boundaries); and • expected future taxable profits on expected future new business over a reasonable time period. When allowing for the profit expected to be generated from future new business, consideration should be given as to the volume and profitability of new business that would be written post-stress scenario, taking into account the going concern principle underlying the SCR calculation. DTA recognition under IAS12 would include assessment of the items set out above, provided it could be demonstrated that there were reliable calculations that supported the overall position. It is assumed that the calculations would be based on the Solvency II balance sheet numbers, including a Risk Margin for new business. 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). We expect that insurance businesses in [Europe/the EU] would take appropriate management actions (including if necessary recapitalisation) following a shock loss. We do 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 – an assumption of no new business would be unrealistic.	
Q18.6	We believe that the topics listed on page 10 of the CRO Forum paper should be considered when assessing recoverability based on taxable income from new business: • Going concern assumption; • Strategic plan / central plan estimates; • Projection horizon;	

	• Shock impact per risk source and recovery patterns. In order to avoid overly optimistic assumptions, for each default a company might only take as much new business into account as it was able to generate in the previous few years (or provide a justification for using a higher new business margin figure).	
Q18.7	We consider 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. We do not consider that it would be appropriate to impose an arbitrary limit on the time horizon used.	
Q18.8	Any limitation of the time horizon would be arbitrary, and cause a systematic distortion of the results. We also consider that this would be contrary to the requirements of the Directive. Note that the UK Government proposes to restrict the amount of profit that can be offset by carried-forward losses to 50% from 1 April 2017; this may have an unintended adverse impact on insurers' capital positions. It will effectively double the time period over which the projections will need to be considered. Given the impending arrival of this restriction, we expect firms to continue to refine their DTA/DTL modelling, and look to make further use of group relief. However, we recognise that uncertainty increases the longer the time horizon used, and therefore would suggest that the amount of future taxable profits in later years should be reduced to reflect that uncertainty. In particular, we consider that this would be appropriate in assessing the future profitability of new business. In the case of returns on existing assets and liabilities, we consider that these can be projected using the methodology set out in Section 18.2 of EIOPA-CP-16/008 for the projected life of the existing book. Regarding mean reversion assumptions, it is demonstrably the case that equity markets recover, in time, to above pre-shock levels and bond markets nearly always pull back to par. We do not necessarily suggest that it would be acceptable to assume a full pull-back of the investment stress; however, a partial reversion should not be ruled out if there are strong grounds to support it.	

	See also our comments in Q18.2.	
Q18.9	Setting the LACoDT to the amount of the net DTL is uneconomic; it effectively assumes that no future returns on assets and liabilities would be earned, and no future new business would be written by the business in question. For these reasons we do not consider that these are appropriate assumptions. In addition, the net DTL may reflect DTAs that will reverse in the future without negatively impacting future taxable income (e.g. risk margin and credit spreads). Hence the net DTL does not reflect the true future taxable income against which the shock loss can be offset. However, in the spirit of simplification, we propose that firms should be given the option to set LACoDT to the amount of net DTL, where the amount is immaterial.	
Q18.10	We do not consider that it is appropriate to set the LACoDT to the amount of net DTL, unless the amounts are immaterial. See our answer to Q18.9.	
Q18.11	Calculation of the full balance sheet immediately after a shock loss may be burdensome, and should not be a default requirement – it should only be required where the scale of the shock would merit such a recalculation. We note that this is something that internal model firms do already; however, the standard formula is by design not intended to be as onerous in this respect.	
Q18.12	We 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. We would also point out that the intention of the current review is to simplify the standard formula where possible, whereas this proposal would bring in a significant extra degree of complexity. Additionally, compliance with MCR / SCR requirements should not play a role in the calculation of LACoDT, as they are a given for a going concern. We believe that linking MCR / SCR to the recognition of future taxable income in a post shock scenario would introduce undesirable elements of recursion and procyclicality. Specifically: • The SCR post shock would in turn be linked to the LACoDT, which is calculated assuming	

	that the loss defined in Article 207 of the Delegated Act would exist for two consecutive periods (recursion); • There may be situations where unfavourable economic conditions reduce the excess of capital sufficiently to the level of the BSCR net of the losses deriving from the TP. This may actually result in an increase of the SCR in a post-shock scenario, because of the reduction in the LACoDT component.	
Q18.13	We do not see a need for consideration of recapitalisation and/or calling ancillary own funds. As for Q18.12 above, in our view it should not be necessary to consider these second order impacts for LACoDT, since these are not general requirements of the standard formula under Solvency II. As with Q18.12, we would point out that the intention of the current review is to simplify the standard formula where possible, whereas this proposal would bring in a significant extra degree of complexity.	
Q18.14	**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, we 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. We accept that a calculation of group relief could add additional complexity, but we do not think that it should be ruled out solely for that reason. We 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.	
Q18.15	We consider that the CRO Forum paper (available here: http://www.thecroforum.org/dta-in-scr/) sets out a balanced approach (see our response to Q18.2).	
Q18.16	The calculation of the LACoDT introduces procyclicality because of the volatility of the differences between the market value of assets and liabilities, and the corresponding values that are recognized for tax purposes (which are more often linked to historical/acquisition or amortized cost). It is important to avoid introducing rigid methodologies or requirements that could amplify this procyclical effect.	
Q19.1	***Overview*** We do not consider the methods and assumptions for the Risk Margin calculation to be fit for purpose, in particular for long term life business. The sensitivity of the Risk Margin to interest rate movements, the difficulty in hedging it, and its excessive size, are unintended consequences of the current design. This makes the writing of new business, in particular annuities and other long-term guarantee-based products, unattractive to firms and therefore products less affordable for customers.	

Additionally, the current impact of the Risk Margin undermines the important role that insurers can play to ensure members of the public can access a financially sustainable retirement, thereby reducing the need for government support. For example, we note the aggregate pension scheme deficit of UK corporates was estimated at £710bn in PwC's August 2016 Skyval index. Insurers can and should play an important role in addressing the challenge this creates for government, companies and their employees. To do this requires a well-functioning and competitive market for longevity insurance – but this is being hindered in part by the Risk Margin.

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, we see 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. We address this in more detail in the answer to Q19.3.

- ***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.

The impact of the Risk Margin on UK firms

For some ABI members, the size of the Risk Margin as a proportion of total Technical Provisions (total value of liabilities) ranges up to 50%. This contrasts with a figure of below 10% in the industry-wide quantitative impact studies (QIS) used to inform the design and calibration of Solvency II.

Our analysis suggests that the aggregate Risk Margin is comparable in size with the aggregate solvency surplus for the UK Life insurance sector – far larger than it was intended to be.

The sensitivity of the Risk Margin to movements in interest rates is a particular concern, and as a result of this a static Transitional Measure on Technical Provisions (TMTP) is not having the effect it was designed to have. For some UK firms, the Risk Margin typically moves by between 10-15% on a quarterly basis. For the UK Life insurance sector, in the nine months between end Q4 2015 and end Q3 2016, increases of c. 40% in the size of the Risk Margin were typical.

	Proposed modifications We set out a number of proposed modifications for EIOPA to address current limitations in the design of the Risk Margin. In our answers to Q19.2 and Q19.3, we set out proposals for changes to the Cost-of-Capital (CoC) rate and proposals that take account of risk dependence over time. In our answer to Q19.4, we set out some other suggestions for changes to the Risk Margin.	
Q19.2	***Overview*** We believe that a fixed Cost-of-Capital (CoC) rate can result in a volatile Risk Margin; below we set out some alternatives for how the CoC could be calculated. It is important to stress that any such alternatives need to ensure that the Risk Margin does not exhibit excessive volatility as a result of short-term market changes. If the CoC rate were to move in line with market conditions, it would need to be adjusted according to the level of the risk-free rate in order to avoid volatility (see Proposal 2 below). Care would be required as to the choice of market instrument with which it should move. For example, it should not vary with BBB-rated corporate bond spreads, as this would increase the credit spread risk in a way that could not be sensibly hedged for risk management purposes. There is a further possibility – the CoC rate could vary based on long-term average levels of market rates. ***Proposal – Formal periodic review*** EIOPA could undertake a formal regular periodic review of the CoC rate, taking into account changes in the interest rate environment. This is in line with Article 77(5) of the Solvency II Directive, which states that the Cost-of-Capital rate *"shall be reviewed periodically"*. Regulators may also want to consider capping how much the CoC rate can change following a review, in order that it remains relatively stable over time. ***Proposal – Vary the CoC in line with interest rates***	

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

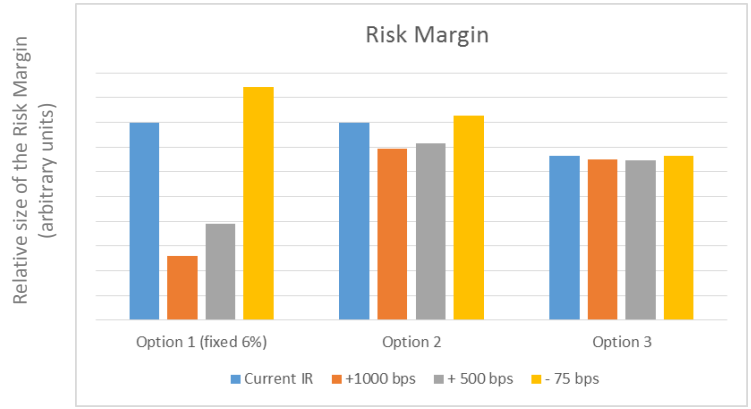
In making the CoC rate a function of the level of interest rates, we would reflect that in a low interest rate environment, we might expect market risk premiums to reduce as demand for higher yielding assets increases. Such a link between the CoC rate and interest rates is also considered and discussed in more detail under the context of frictional market effects in a previous CRO report (http://www.thecroforum.org/wp-content/uploads/2012/10/croforummvlpaperjuly2008.pdf). 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 linking interest rates to the CoC rate 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, we would recommend using long term interest rates as a benchmark (e.g. 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. In this context, as with the other Proposal above, regulators may also want to consider capping how much the CoC rate can change following a review, in order that it remains relatively stable over time.

An ABI member has performed a sensitivity analysis, which compares the impact of using fixed and variable CoC rates in the Risk Margin calculation, where the CoC rate is defined as [X% * 10 year reference risk free rate + Y% fixed addition]. Three different interest rate scenarios were considered, involving parallel shifts of the current term structure by +1000bps; +500bps; and -75bps. It should be noted that these reflect different interest rate environments and not one off shocks:

- Sensitivity Analysis 1 – fixed 6% CoC rate (status quo).
- Sensitivity Analysis 2 – the CoC rate is set at 6% as of 1 January 2016 (the Solvency II implementation date), and then varies with changes of the risk free rate.
- Sensitivity Analysis 3 – the CoC rate is set at 6% as of 1 January 2004 (when the Risk Margin methodology and parameterisation was originally conceived), and then varies with changes of the risk free rate.

The change in the Risk Margin for each of these three scenarios is shown in the graph below:



This sensitivity analysis demonstrates that a variable Risk Margin has the potential to dampen volatility under changing interest rate environments, subject to an appropriate calibration.

	There are different options for the 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 how interest rate changes). By way of illustration for the current Risk Margin calculation, the anchor point is set at 6% and the application ratio is set at 0%. We consider that both the anchor point and the application ratio are inappropriate for the current Risk Margin calculation.	
Q19.3	***Overview*** Material changes in the balance sheet as a result of Risk Margin are discussed in our answer to Q19.1, where we set out how the current low interest rate environment has clearly demonstrated that the calculation of the Risk Margin is inappropriate and has introduced excessive balance sheet volatility. ***Lines of Business affected*** The Risk Margin particularly impacts long-term insurance business that offers guarantees; in the UK, this is mostly annuity business. As a consequence of the increasing burden of the Risk Margin, firms are moving away from annuities and into business lines (such as unit-linked) that do not attract the same level of Risk Margin, and do not pose the same artificial challenges to the Risk Management function that the Risk Margin has introduced. Since 2014, seven UK firms have withdrawn completely from the UK open annuity market, citing in part the capital requirements and risk management challenges of Solvency II. This has reduced competition in the market place, and reduced choice for consumers. 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.

In order to overcome these issues, we propose the following solutions:

- Derive a more appropriate (lower) cost of capital rate that recognises that insurance risks should be expected to have a low beta
- Take into account risk dependence over time by introducing time dependent scaling factor to the Cost-of-Capital calculation

These proposals will result in a more appropriate Risk Margin and will reduce the volatility of the Risk Margin to interest rates. We outline each proposal below.

Proposal – Take account of insurance risk beta

This proposal involves deriving a more appropriate CoC rate, which recognises that insurance risks should be expected to have a low beta (i.e. a low volatility and correlation in comparison to the market as a whole).

Consider the following: 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, we 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 non-hedgeable capital requirement (SCR_i) on an insurance risk (i). In return, they expect to receive SCR_i scaled up by the risk-free rate (r_f), i.e. $SCR_i(1 + r_f)$. This however, is a risky payment and hence gets discounted at the risk-free rate (r_f) plus a premium (s_i). Due to the higher discount rate applied, the present value of this risky payment (PV_i) will be lower than SCR_i, and the difference between the two is then the Risk Margin (RM_i):

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

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

One approach is to consider this equation in the context of the Capital Asset Pricing Model (CAPM) framework. Under this 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 β_i 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 Acts, is as follows:

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

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

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

Replacing s_i with equation (2):

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

And solving for CoC:

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

For example, we can see that, for an asset with a zero beta, the cost of capital will be zero, and hence the Risk Margin will also equate to zero. Conversely, if we were to assume a market beta of 1 for insurance risk, we would recover a cost of capital rate consistent with discounting the risky payment at the full market risk premium.

We consider 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 (http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html) found an unlevered beta (i.e. the beta of a company without any debt) for insurance companies of c. 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 we were to consider the beta value of

insurance risk only, this would naturally be lower, and likely significantly lower. Hence, we consider an assumption of 0.5 for the insurance risk beta 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 (http://www.thecroforum.org/wp-content/uploads/2012/10/croforummvlpaperjuly2008.pdf).

- We also need to consider an appropriate value for the global market portfolio risk premium. 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, available here: https://www.jpmorgan.com/jpmpdf/1320675769380.pdf, or a more recent 2013 report from Ibbotson, available here: http://www.healthinquiry.net/Public%20Submissions/Netcare%20Ex%20GH-75%20Ibbotson.pdf. This can be seen as an upper bound for a global market portfolio which also contains bonds and potentially property. On this basis, we can assume a market risk premium of 6%. We believe that this assumption contains a material degree of prudence; our 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 assumptions together (a market risk premium of 6% and an insurance risk beta of 0.5) will yield a cost of capital parameter of 3%, 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 CFO Forum paper.

It is important to note that the beta of 0.5 and the CoC rate of 3% relate to the funding of non-hedgeable risk only, in line with Article 38(5) of the Delegated Acts 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. We also note that, working backwards, the existing Solvency II CoC rate of 6% would

imply a beta for insurance risk of 1, which is clearly excessive.

Proposal – Allow for risk dependence over time

This proposal takes into account risk dependence over time by introducing a time-dependent scaling factor into the 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.

In our view, SCR capital requirements are not independent (e.g. 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, we propose that 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 Acts as such:

$$\mathrm{RM} = \mathrm{CoC} \cdot \sum_{t \geq 0} \frac{\lambda^t \mathrm{SCR}(t)}{\left(1 + r(t+1)\right)^{t+1}}$$

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. We consider 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 we believe is not unreasonable.	
Q19.4	In this section we set out some other suggestions for changes to the Risk Margin that EIOPA could consider. ***<u>Smoothing the Risk Margin over time</u>*** Using the advice given by EIOPA (then CEIOPS) to take a "through the cycle" approach to avoid pro-cyclicality, we would argue that (as is already the case with the Matching Adjustment) the value of the Risk Margin could be deliberately smoothed over time, given the long-term nature of much Life insurance business. In particular: • Annuities are sold as long-term contracts, and risks (such as longevity) emerge in the long-term rather than short term. • In times of market stress, there is no rationale for firms to eliminate their longevity risk, especially if a new risk transfer would be priced using existing, temporary market assumptions. • The Risk Margin (which reflects the price at which longevity risk may be transferred) need not reflect exactly these existing 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. ***<u>Allowance for diversification between business lines at group level</u>*** The current Solvency II framework does not make sufficient allowance for diversification between risks within an insurance company: • ***Diversification between life and non-life –*** in accordance with Article 74 of the Solvency II	

Directive, when calculating the Risk Margin an assumption is made that the life and non-life insurance obligations are taken over by two separate reference undertakings. This implies that no diversification benefit can be assumed between life and non-life insurance portfolios. We would propose that this arbitrary separation of obligations is removed, such that insurers are able to properly take into account insurance risk diversification effects when calculating their Risk Margin.

- ***Group diversification –*** The Risk Margin at group level is calculated as the sum of the Risk Margins of the undertakings of the group. This implies that no diversification benefit can be assumed between different entities of a group. We would propose that this arbitrary separation of obligations is removed from the calculation, such that insurers are able to properly take into account group diversification effects when calculating their risk margin.

The above changes would be consistent with the reality of how insurance groups are managed in practice and the SCR treatment of diversification. They are also consistent with the assumption adopted by IAIS in the most recent ICS specifications that have been tested. The excessively onerous Solvency 2 approach creates unintended incentives for the industry to restructure their organisations in order to enable appropriate diversification and overcome artificial constraints.

Allowance for longevity reinsurance

Given the recent longevity risk transfer activity since the finalisation of the Solvency II text, we consider the assumption that no longevity risk can be transferred throughout the period of run-off to be unreasonable. In line with the Delegated Act, the management actions undertaken by the reference undertaking to minimise its SCR should be extended to include the ability to hedge longevity risk.

Allow for recalculation following stress

According to Article 83.1.a. of the Delegated Act, the Risk Margin should be assumed to be

	unchanged in the scenario based standard formula SCR calculations: *"the scenario does not change the amount of the risk margin included in technical provisions"*. However, for many SCR stress scenarios (e.g. the mass lapse stress) it is likely that the Risk Margin would be substantially affected. A mass lapse could lead to a substantial reduction of (profitable) contracts, with a corresponding decrease in the Risk Margin. A full recalculation of the Risk Margin after a stress would potentially be cumbersome, but prudent simplifications could be allowed for.	
Q20.1	We make the following comments arising from the analysis of differences: 1. Solvency II rT1, page 81 of EIOPA-CP-16/008: "No dividend pusher allowed for mandatory cancellations of coupon payments." Solvency II rT1 instruments require full discretion over distributions, therefore pushers of any form (even if only for *optional* cancellation) should not be permitted. 2. 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. 3. There is significant risk that the insurance PLAM leads to a reduction of the SCR ratio. 4. There is a greater recognition of the hierarchy of capital in banking regulation. 5. Solvency II lacks a systematic and meaningful definition of "loss" which would assist in the understanding of "loss absorbency". 6. The triggers for insolvency are significantly tighter under the Delegated Regulation than the CRR. 7. We would support temporary relief from tiering limits to reduce cliff effects arising from market volatility.	
Q20.2	The other material and non-justified difference between the banking and insurance sectors is the difference identified on page 85 of EIOPA-CP-16/008. Under CRR, banks have the possibility of special event (tax, regulatory) redemption prior to year 5, without funding it from the proceeds of the issuance of an own-fund item of at least the same quality, if they can "demonstrate … the own funds would exceed the capital requirement … by a sufficient margin". We consider that there should not be a general prohibition on calls without replacement in cases where the regulator and issuer agree that a replacement is not necessary.	
Q20.3	We would suggest providing the same flexibility to Solvency II undertakings as is available to	

	banks; not just for changes to applicable tax rules but also for regulatory events. If there is a tax or a regulatory event it will be preferable for the undertaking to redeem the instrument in question. However, the entity may not require the current level of capital if it is already comfortably within the capital risk appetite. Being obliged to replace the redeemed instrument in order to maintain the previous (excessive) capital level would be inefficient, and incur unnecessary cost. It may also be that market conditions are not receptive, and the entity could be forced to issue a non-economically priced replacement instrument in order to remove an inefficient/redundant instrument. Indeed, if conditions were particularly challenging, it would not be able to replace the instrument and so it would not be able to redeem the redundant instrument. If the Solvency II rules were changed to align with those available to banks, any decision as to whether or not a redemption requires pre-financing would be subject to prior supervisory approval, so ensuring a sufficiently high quality of own funds can be maintained. Current Solvency II requirements do not give regulators this authority/flexibility.	
Q20.4	On the PLAM application in the two sectors, we note the following: • PLAM is not required by Basel III for equity accounted bank AT1. • Banking and insurance PLAMs are largely identical, but lead to different consequences. • The consequences of banking and insurance PLAMs for solvency ratios are different due to differences in the scope and level of the trigger and the role of DTA.	
Q20.5	We consider that the differing business models between banking and insurance mean that care must be taken when replicating banking regulation for the insurance sector, for example the applying bank PLAM to the insurance sector potentially reduces the SCR ratio. These differences in business models include: • Banks are 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 (e.g. 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. • Typically insurance undertakings (particularly Life Cos) will have longer term liabilities (e.g. 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 – e.g. 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. Given the difference in the two business models, full consistency between insurance and banking regulation should not be a goal, and we consider the differences in the business models justify the differences in the way the PLAM applies to the two sectors.	
Q20.6	The removal of the PLAM requirement should be considered, as it may lead to unintended consequences, such as worsening a crisis situation.	
Q20.7	We consider it unjustified and wrong to have a difference between the two sectors in respect of changes to applicable tax rules.	

Q20.8	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 our answer to Q20.3.	
Q20.9	The differences described in Q20.7 and Q20.8 are not justified, and the Solvency II regulations should be amended 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. Please see the points made in our answer to Q20.3.	
Q21.1	We would not support the removal of the restriction on the use of transitional own funds as Tier 1 own funds. However, any pro-cyclical consequences of the regulatory limit should be considered.	
Q21.2	If the 20% limit were to be removed, many insurers would not be able to recognise as Tier 1 own funds any transitioned pre-Solvency II capital currently above the 20% limit currently only recognised as Tier 2 own funds.	
Q21.3	The effect on total own funds coverage ratio would be likely to be zero for most undertakings (see our answer to Q21.2).	
Q21.4	We would not support the removal of the 20% limit. However, any procyclical consequences of the limit provisions should be considered, and temporary relief from tiering limits to prevent cliff effects could be considered.	
Q21.5	We would prefer to retain the 20% limit, in this way there is a clearer distinction between the features and pricing of the various forms of own-funds, e.g. Unrestricted Tier 1, Restricted Tier 1 and Tier 2 (and Tier 3).	
Q21.6	**a) Existence of a market** In terms of a market for such instruments, it is hard to say with any precision, given the lack of significant issuance to date. However, we see several problems with such a raised trigger: • the SCR coverage ratio is likely to be very volatile, but it is currently unclear how volatile, so it is impossible to calibrate the trigger to a sensible level which is not certain to be breached in the near future. To be meaningful, there would possibly need to be differences for differing sectors of the insurance industry.	

	• if one RT1 instrument breached a mandatory interest cancellation trigger set at an unfeasibly high level, this would have a negative effect on the market for such instruments in general, not just the insurer whose coupons were cancelled. (NB: coupons on RT1 are *cancelled*, not deferred upon breach of the trigger). • the SCR already includes a substantial buffer over the MCR to a "1 in 200 years" stress – raising the trigger "materially" above the current level would obviously make a breach proportionally more likely, at a level of capitalisation which might well be still comfortable; we note that as at H1 2016, the range of published SCR ratios was very wide, from 126% to 196%. **b) Cost effectiveness** The cost of instruments with such a raised trigger would depend on the perceived risk borne by the holder, but is likely to be high.	
Q21.7	The improvement to the capital quality of RT1 instruments through a longer first call date is questionable. Any redemption is already subject to regulatory approval, which should ensure that the capital position of the issuer is maintained at an appropriate level. An extension of the first call date would restrict the financial flexibility of the issuer.	