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:	Intitute and Faculty of Actuaries	
Disclosure of comments:	Please indicate if your comments should be treated as confidential:	~~Confidential~~/Public

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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 Institute and Faculty of Actuaries (IFoA) welcomes the opportunity to respond to EIOPA's discussion paper on the Review of Specific Items in the Solvency II (SII) Delegated Regulation. The IFoA's Life and General Insurance Standards and Consultations Committees and Life Board have led the drafting of this response. Members of this Committee and Board have been heavily involved in the implementation of SII. We have responded to a range of the questions raised in the discussion paper below, focussing on those questions where we felt our views would provide the greatest contribution.	

Template comments

The standard formula Solvency Capital Requirement (SCR) has turned out to be quite a complex calculation with many potential areas for unintentional error by firms as a result. This means that it can be difficult to review, even by experienced auditors and actuaries. A simplification of the calculation could significantly help firms, in particular requiring less extraction of data not used for other purposes.

The timing of any changes to the standard formula SCR should be such that firms then have sufficient time to be able to implement and test the changes. It should also be recognised that if changes are made to the standard formula, then some firms which currently use it may decide that it is no longer appropriate for their business; they may then prefer to use an internal model. The timeline for introducing changes to the standard formula SCR should therefore also give firms sufficient time to be able to:
- understand the changes;
- make their choice;
 - prepare their internal model application; and
- have sufficient time to obtain this model approval before the introduction of the changes.

We would like to emphasise the following key aspects:

Alternative approaches to determine credit quality steps for specified assets and counterparties
There are pros and cons to using market-based or accounting measures to determine credit quality steps (CQS), the framework for which would require a significant amount of development in order to have coverage that is at least as good as the current ratings-based approach.
Internal approaches to determining CQS for counterparties and credit exposures would only make sense if they were already a core part of an entity's business model, and would therefore not require an expense development process and maintenance programme.

The determination of the risk margin
The size and sensitivity of the risk margin in its current form is an issue which is exacerbated by the current low interest rate environment. We would therefore welcome alternatives to the

setting of the Cost of Capital rate that could reduce the size / sensitivity of the risk margin. This would avoid forcing insurers, who may otherwise wish to retain the risk, into reinsuring longevity risk, often to countries outside the SII regime. A further change which would also be helpful would be for longevity risk to be considered to be hedgeable.

Interest rate stress testing
The design of interest rate stresses in the Standard Formula mean that downwards stresses leading to further negative interest rates are not permitted, even though these may be realistic in the current interest rate environment. To reflect the real risk of yield changes in different economic environments, a model should be chosen that is calibrated separately to yield movements in both high and low interest rate environments; with the stress tests potentially changing to reflect the environment that is faced at the time.

It is not straightforward to hedge a stress that differs between an additive shift and a multiplicative shift in interest rates (which occurs when the curve rises above a certain threshold rate). This can cause a dislocation in the sensitivity of the interest rate SCR, and makes hedging this risk significantly harder. An alternative approach could be to have a single method of determining a stress that works well in both low/negative and high rate environments. The approach we suggest does not consider the possibility of a theoretical lower limit of interest rates (which could be negative).

Look-through approaches
Although the current 20% cut-off is a reasonable approach to determining when mandates can be used in place of look-through data, there are more efficient ways of reflecting the underlying asset risks in the Standard Formula.

For example, benchmarks could be used for passively managed funds, instead of look-through data, where there is an immaterial risk of deviations from a benchmark. There are also alternative ways of determining asset risk exposure for the 20% of funds where look-through information is unavailable. This could include a regression exercise to calibrate risk exposure based on previous

Template comments

	fund performance, if this were straightforward to do. Where a firm provides evidence that a fund does not materially change its investment allocation over time, it could be possible to apply the simplified look-through approach to such funds, with them being excluded from the 20% cut-off.	
Q1.1	We believe the effort involved in calculating the error of any simplified calculation in a robust way would be disproportionate to the work saved from doing the calculation correctly. Simplified methods work if: 1. They are assumed by the regulator to produce good enough results without testing. Examples might be some parts of the current SCR calculation (for example correlation matrices rather than copulas). Equally simple qualitative justifications could be useful. 2. The calculation is required many times throughout the year. Many smaller firms have quarterly reporting exemptions, and therefore, only need to calculate the SCR formally on an annual basis. We also note that the SCR does not need recalculating more frequently than annually unless there is likely to be a material change - this is very unlikely for life insurance stresses. If management requires results, simplified results are used but they are not necessarily being tested to the same level as required by the rules. Therefore, most firms have decided that they would rather calculate the SCR on a robust basis when required formally.	
Q1.2		
Q1.3		
Q1.4		
Q1.5		
Q1.6		
Q1.7	The stresses are based on limited evidence. EIOPA could consider a programme of recalibrating the risks based on the results of internal models from larger insurers. The calculations are, for the most part, very simple trend stresses. Simple parameter changes in a valuation program or even	

Template comments

	simultaneously running all the stresses together can solve this.	
Q1.8	The work required is disproportionate to the work saved from using the simplification. Our understanding is the many smaller insurers have ignored these simplifications.	
Q1.9	It could be helpful if the simplified calculations were available without testing for small parts of the insurer's portfolio, where a full SII-compliant model may be disproportionate. This could be limited to, say, no more than 5% or 10% of either the technical provisions or of total benefits provided to policyholders (i.e. not offsetting future premiums).	
Q1.10		
Q1.11		
Q1.12		
Q1.13		
Q1.14		
Q1.15	The morbidity risk stress is based on extremely limited evidence. However, the impact of the stress can be very extreme (doubling of the sickness payment cashflow). A further issue is that the stress has to be converted into sickness intensity rates to allow for appropriate discounting of the sickness payment cashflow. This has required significant effort to convert existing incidence / recovery annuity systems into intensity-based systems. It is simpler to apply the stress to the intensity (e.g. plus x% of all sickness payments). The remaining stresses are simple trend-based stresses.	
Q1.16	The work required is disproportionate to the work saved from using the simplification. Where a full SII-compliant model may be disproportionate it could be helpful if the simplified calculations were available without testing for small parts of the insurer's portfolio. This could be limited to, say, no more than 5% or 10% of either the technical provisions or of total benefits provided to policyholders (i.e. not offsetting future premiums).	
Q1.17	We suggest a simplification to a simple factor based on the amount of health benefits payable in one year could reduce the work involved. However, most firms have set up the software to	

Template comments

	produce the results currently required here.	
Q1.18		
Q1.19		
Q1.20		
Q1.21		
Q1.22		
Q1.23		
Q1.24	The method produces the wrong result compared to previous UK Solvency I Pillar II results. For smaller firms, the method does not capture fixed operational risk elements of operational risk. In addition, the method does not capture (and this is stated in the rules) sales compliance costs, which are major elements in operational risk for many UK-based insurers. The method does not fully allow for unit-linked risks. Direct sales are becoming increasingly common. Given the extremely small probability corresponding to risks at the 99.5% level, there should be some allowance for the possibility of mis-selling, even for firms with a customer-focussed culture and the most compliant of frameworks. We would suggest that simple partial internal models need to be encouraged here to replace the standard formula. Operational risk does not lend itself to complex modelling but more to assessment and review. A simple formulaic approach is a major step back in corporate governance for most UK firms.	
Q1.25		
Q1.26		
Q2.1	Large credit ratings agencies specialise in setting credit ratings (which is central to their business model) and benefit from economies of scale, historical data and extensive in-house expertise. It could be argued that they are generally better-placed than insurers to determine credit ratings.	
Q2.2		
Q2.3		

Template comments

Q2.4	External ratings are sometimes unavailable for alternative asset classes. This means that an internal rating, or a specific rating provided by a specialised analyst / broker would be beneficial to use, rather than just applying as a minimum check given current principles. It would also be helpful to include ratings provided by asset managers. This would be of particular value to small/medium size insurers who are likely to outsource their investment in alternative asset classes. It would make sense to increase the status on internal assessments of credit quality (for all types of exposures) to one that can be justified alongside external ratings - where these can be shown to be determined according to specific objective methodology, that is applied over time and makes sense relative to rating information that is available. Where external firms provide ratings, insurers should be able to evidence their understanding of the rating process as part of their Prudent Person Principle compliance. From a risk management perspective, a robust system of cross-checks on internal/ external ratings is sensible for a material portfolio, but less justifiable otherwise. In order to determine the prudence of the approach objectively, National Supervisory Authorities (NSAs) should consider the need for a rating approval process.	
Q2.5	Market implied ratings, e.g. using Credit Default Swap spread data, are a useful way to use market data to derive credit ratings. However, they would be subject to the vagaries of the market, and therefore could include supply and demand issues (which are arguably unrelated to underlying credit quality). They would also need to be calibrated to ensure they do not introduce a form of bias that departs from 'commonly accepted' default probabilities, for different qualities of bonds in different market sectors. There is also a potential cyclical impact of deriving an internal rating based on market price information. For example, if spreads widened significantly, internal ratings may increase, triggering a sale of assets and resulting in further spread widening.	

Template comments

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q2.6	Accounting-based measures may be a useful way of determining ratings, although they are likely to suffer from lack of data in some cases (either not published or published infrequently). It could be argued that certain accounting measures do not represent a realistic 'economic' measure of value or solvency, which would mean that adjustments to published information would be required. Furthermore, where statistically significant accounting 'predictors' were found and research published, credit rating agencies may incorporate this research into their rating-setting process.	
Q2.7		
Q2.8		
Q2.9		
Q2.10		
Q3.1		
Q3.2		
Q3.3		
Q3.4		
Q3.5		
Q3.6		
Q3.7		
Q3.8		
Q3.9		
Q3.10		
Q3.11		
Q3.12		
Q4.1	There have been developments in the longevity swap market and in final market hedging techniques, for the purposes of managing risk in the SII balance sheet according to the specific	

Template comments

	criteria. In addition, risks such as lapse risk are now reinsurable; they had not been so, previously. Although not actual developments, it is also worth noting that: - Firms would welcome guidance or clarity from EIOPA on how to allow for financial risk mitigation techniques which introduce material basis risk. The lack of such guidance currently impinges on the hedging strategies that can be adopted by firms using the standard formula. - Credit wraps / insurance that might be purchased in relation to debt instruments can sometimes cause issues. Such guarantees are neither structured as a traditional credit derivative, nor are they similar to reinsurance contracts. It can therefore be difficult to categorise such risk mitigation contracts in the existing counterparty default risk module.	
Q4.2		
Q5.1	We agree that amending the wording as set in in Q5.1 would be sensible as some firms have problems understanding the 'gap' in the current premium measure.	
Q5.2		
Q5.3		
Q5.4		
Q5.5		
Q5.6		
Q6.1		
Q7.1		
Q7.2		
Q7.3		
Q7.4		
Q7.5		
Q7.6		

Template comments

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q7.7		
Q7.8		
Q7.9		
Q7.10		
Q7.11		
Q7.12		
Q7.13		
Q8.1		
Q8.2		
Q8.3		
Q8.4		
Q8.5		
Q8.6		
Q8.7		
Q8.8		
Q8.9		
Q8.10		
Q8.11		
Q8.12		
Q9.1		
Q9.2		
Q9.3		
Q9.4		
Q9.5		
Q10.1		
Q10.2		

Template comments

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q10.3	It is a better reflection of mortality risk to consider changes in the level of mortality rates and trend, particularly for annuity longevity assessments. However, the usefulness is questionable as explained in the response to Q10.6 below. In the UK, Continuous Mortality Investigation (CMI) data provides a useful reference point for determining potential changes in the trend over time.	
Q10.4	Office for National Statistics (ONS) and CMI are a useful source of information in the UK, although they are licensed. In addition, the Human Mortality Database has extensive historical deaths data by country, age and gender.	
Q10.5		
Q10.6	Taking into account both the trend and level deviations separately is a better representation of longevity risks, particularly for annuity business, which is material in the UK. Trend is more important for longevity than it is for mortality risk (it is rare to see mortality as opposed to longevity trend included in an internal model). Furthermore, the 2016 Insurance Capital Standard field testing included a trend stress for longevity, but not for mortality. Mortality risks however typically make up a small proportion of overall entity capital requirements (especially for mainly unit-linked companies).	
Q10.7		
Q10.8		
Q10.9	There is the potential for non-linearity between longevity and interest rate stresses, particularly for annuity portfolios. Any approach to capture this is likely to require some calculation of a joint longevity and interest rate stress (e.g. each at 1-in-X) and use this to adjust (e.g. floor) the longevity stress. However this would have knock-on impacts on the aggregation of the stresses. One of the disadvantages of a nested correlation matrix approach to aggregation is that it is difficult to capture non-linearity.	
Q10.10		
Q11.1		
Q11.2		
Q11.3		

Template comments

	Comments Template on **Discussion Paper on the review of specific items in the Solvency II** **Delegated Regulation**	**Deadline** **3 March 2017** **23:59 CET**
Q11.4		
Q11.5		
Q11.6		
Q11.7		
Q11.8		
Q11.9		
Q12.1		
Q12.2		
Q12.3	Firms have generally found that the approach within this module is not well-suited to external fund links (i.e. access to unit-linked funds provided via reinsurance arrangements). This can then lead to disproportionately high capital charges for such funds. We think it is likely that the module has not been drafted with such arrangements in mind, and these appear to be quite a UK-specific issue.	
Q12.4		
Q12.5		
Q12.6		
Q12.7		
Q13.1		
Q13.2		
Q13.3		
Q13.4		
Q13.5		
Q13.6		
Q14.1		
Q14.2		
Q14.3		

Template comments

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q14.4		
Q14.5		
Q14.6		
Q14.7		
Q14.8	The key assumption made is that the assets subject to look-through are sufficiently diversified that they would not be relevant as single name exposures for the concentration risk module. This assumption is generally reasonable: look-through is typically applied to funds managed by specialist asset managers, and which contain a significant number of investment positions. The assumption is a pragmatic approach, required in order to make look-through a reasonable mechanism to reflect the proportionality principle embedded within the SII framework.	
Q14.9		
Q14.10		
Q14.11		
Q14.12		
Q15.1		
Q15.2	The choice of functional currency used for producing consolidated accounts is made as it relates to the currency in which an entity hopes that investors and capital providers will assess the insurer, and be prepared to provide capital to it. Therefore it is a real risk that the insurer needs to manage, to ensure that it is meeting the needs of providers of capital. Conversely, many firms may already have hedging programmes in place through their central / group treasury function to mitigate this risk.	
Q15.3		
Q15.4	Currency translation risk should be adjusted after the determination of fungibility of capital from an entity in the Group. If an entity's capital surplus is not fungible, it is not appropriate to consider currency risk on the surplus in addition to the fungibility haircut applied. The standard formula is open to interpretation for the treatment of entities brought into the	

	calculation using sectoral rules, and those in the case where approval has been gained for Method 2 aggregation. The currency movements are added together with no allowance for diversification between currency pairs. For example, for a EUR reporting currency, falls in GBP may be partially offset by rises in USD.	
Q16.1		
Q16.2		
Q16.3		
Q16.4		
Q16.5		
Q16.6	Yes, it is a generally a proportionate approach that ensures that the SCR calculation is materially correct. However, it may be less appropriate in certain circumstances, such as a fund that is passively managed, or a unit-linked fund with low trading volumes.	
Q16.7	The threshold may be less appropriate in certain circumstances, such as a fund that is passively managed, or a unit-linked fund with low trading volumes. Where there is a lack of data for asset look-through, there is also likely to be a lack of data for alternative information (for example, the management of the underlying assets according to a benchmark).	
Q16.8	It may be more appropriate for passive funds to be eligible for a simplified look-through approach where material trading volumes are not expected over a year. The benchmark portfolio for the fund could be used for the basis of determining the SCR. Such asset holdings could be excluded from the 20% limit when determining the proportion of the insurer's portfolio that applies the simplified look-through approach. The key point is that if funds can demonstrate that its deviation from a benchmark portfolio is immaterial over time, then it may be possible to relax the 20% limit. A further distinction could be made between look-through for linked (unit/ indexed) and non linked products, given the different effective exposures.	

Template comments

Q16.9	If the change in asset allocation within the fund is immaterial in the context of determining the SCR (e.g. asset classification, rating, duration), then it may be appropriate to exclude these holdings when assessing compliance with the 20% limit.	
Q17.1	The current approach does not work particularly well in a negative interest rate environment and understates interest rate risk. The shocks should be calibrated to allow for interest rates to go negative in a low yield environment.	
Q17.2		
Q17.3	A distinction should be made between calibration data when faced with a low yield environment versus a high yield environment, with shocks appropriately calibrated separately for these environments. Interest rate stress sizes could then be adjusted accordingly depending on the difference between current yields and long-term average rates.	
Q17.4		
Q17.5		
Q17.6		
Q17.7	It would arguably be easier to shock the derived risk-free curve. Under the current approach, it is effectively assumed that the Ultimate Forward Rate would not change even in a 1-in-200 year event. However, it is noted that the Ultimate Forward Rate is being reviewed and so there is some possibility that it will change over the medium term.	
Q17.8		
Q17.9	Principal Components Analysis (PCA) may be a useful statistical technique to derive the shock factors. PCA is particularly well-suited to modelling the term structure of the yield curve because of the high correlation between movements at different tenor points.	
Q17.10		
Q17.11		
Q17.12		
Q17.13		
Q17.14		
Q17.15		

Template comments

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Q17.16	Due to the limited historical data under a low yield environment, an alternative approach is to apply a data transformation (e.g. shifted log transform or lambda transform) to the historical interest rate data. With such an approach, no distinction needs to be made between low and high interest rate environments. Furthermore, a blended stress is produced (based on the full historical data and so arguably has greater statistical credibility), which is applied using the inverse of the data transformation. The application of this stress does effectively differ between low and high interest rate environments, but the calibration does not and so can use both parts of the historical data.	
Q18.1		
Q18.2		
Q18.3		
Q18.4		
Q18.5		
Q18.6		
Q18.7		
Q18.8		
Q18.9		
Q18.10		
Q18.11		
Q18.12		
Q18.13		
Q18.14		
Q18.15		
Q18.16		
Q19.1	The risk margin is particularly sensitive to interest rates in the current low interest rate environment, which is unfortunate as it is a notional construct that is not backed by market-specific data. Approaches to reduce its sensitivity to interest rates would be to:	

Template comments

	(a) change the Cost of Capital rate to be proportionate to the level of interest rates instead of a fixed 6% (b) use a Cost of Capital rate that tails off over time to reduce long-term interest rate sensitivity. A further change to the risk margin that would also be helpful would be for longevity risk to be considered to be hedgeable.	
Q19.2		
Q19.3		
Q19.4	The general approach to calculating the risk margin involves projecting forward the SCR and discounting it back. We note that there are two disadvantages of this general approach: there is the need to avoid introducing circularity into the calculation of the SCR; there is also the high degree of uncertainty around projecting forward a 1-in-200 one-year Value at Risk for several years. The risk margin appears excessive for long-duration annuity / protection product liabilities. This is disproportionate to the cost of transferring the liabilities to a third party that would consider a lower 'Cost of Capital' approach in pricing. The risk margin also introduces significant volatility into the balance sheet for such products. Insurer responses to reducing liabilities and or managing balance sheet volatility could therefore be the removal of longevity exposure on balance sheets, which comes at a real cost to an insurer and crystalizes the impact of an otherwise hypothetical construct. Such longevity risk transfers move risk outside of the SII regime to frameworks where no such distortion exists. As a result, they take insurance business outside of Europe, reducing the role of insurers in the economy as employers, investors and taxpayers. They also reduce the competitiveness of European insurers in attracting such business in international markets.	
Q20.1	There is an obvious attraction to harmonisation between the SII and Capital Requirements Regulation (CRR) and definitions/ classifications of Own Funds. It would assist in calibrating the	

Template comments

	two frameworks against each other, reducing regulatory arbitrage in areas of overlap, and it might ease pressures on capital adequacy calculations of financial conglomerates if surplus capital qualifies under both sectors. However, the differences between the two sectors in eligibility are more deep-seated than a simple tier to tier comparison might suggest. Gearing limits on Common Equity Tier 1 (CET1) are not matched by limits on unrestricted Tier 1, and some insurance Tier 3 looks similar to CRR Tier 2. Harmonisation would require a more fundamental revision, which would need strong justification this far into the implementation of SII. Whether harmonisation is needed is debatable - the effectiveness of an instrument in preventing insolvency varies according to the characteristics not only of the instruments but also of the losses. An instrument might be effective for an insurer in difficulties but not for a bank in difficulties. It does appear anomalous that triggering the Principle Loss Absorbency Mechanism (PLAM) does not normally increase the amount of Own Funds under SII, but does under the CRR. That is a function of the different gearing mechanisms in the two sectors, with banking gearing limits applied on CET1, but insurance limits only on total Tier 1. Although the PLAM in SII does not heal the breach in SCR if invoked, unless the instrument has already dropped down into Tier 2, it does have a different function under SII – mitigating a potential barrier to recapitalisation.	
Q20.2		
Q20.3		
Q20.4		
Q20.5		
Q20.6		
Q20.7		
Q20.8		

Template comments

	Comments Template on Discussion Paper on the review of specific items in the Solvency II Delegated Regulation	Deadline 3 March 2017 23:59 CET
Q20.9		
Q21.1	Removing the 20% limit on restricted Tier 1 Own Funds might be welcomed by some stakeholders. However, we do not believe that this can be considered in isolation. Removing the 20% limit would allow more lower-quality capital into Tier 1. Any proposal to amend the definition of Tier 1 Own Funds also needs to consider the interplay with other transitional provisions.	
Q21.2		
Q21.3		
Q21.4		
Q21.5		
Q21.6		
Q21.7		

Template comments