	Comments Template on Consultation Paper on EIOPA's second set of advice to the European Commission on specific items in the Solvency II Delegated Regulation	**Deadline 5 January 2018 23:59 CET**
Name of Company:	CRO Forum and CFO Forum	
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-17-006@eiopa.europa.eu** **Our IT tool does not allow processing of any other formats.** **The numbering of the reference refers to the sections** of the consultation paper on EIOPA's second set of advice to the European Commission on specific items in the Solvency II Delegated Regulation. Please indicate to which paragraph(s) your comment refers to.	
Reference	**Comment**	
General Comment	In the sections that follow you will find a joint response from both the CRO Forum and CFO Forum. Please see brief outlines of our responses on the Risk Margin and Loss Absorbing Capacity of Deferred Taxes sections, followed by a list of the other topics on which we provided a response.	

	Risk Margin The current level of the risk margin is excessive as a result of the cost of capital rate being too high and flaws in the general design of its calculation. This causes excessive balance sheet volatility and harms consumers by inappropriately increasing premiums and reducing access to insurance products. Analysis from the CRO-CFO Forum illustrates that, rather than 6%, a value of 3% for the Solvency II CoC rate would be more appropriate, whilst still remaining prudent. The current 6% level of the Solvency II cost of capital rate is excessive because: - It was calibrated based on backward-looking equity risk premiums, rather than forward looking market risk premium, which introduces an upward bias; - It was calibrated based on a 100% equity funding assumption but with the use of a levered beta (which is inconsistent), and without adjusting the beta for the run off of pure insurance and asset risk. This leads to a level of the Risk Margin which is too volatile and does not seem reasonable within the Solvency II framework. If EIOPA continue with an assumption of pure equity funding then the Solvency II CoC rate from the standard CAPM methodology should be derived in the following way: CoC rate = (1-x)β.[Market risk premium] Where: Market risk premium represents the expected return above the risk-free rate that	

	investors would require in order to hold a global diversified portfolio containing all market assets, including equities and bonds, on a forward looking basis. β is the unlevered beta of the insurance sector. x is the adjustment required to derive a beta for pure insurance risks – i.e. excluding the impact of franchise risk and assets held by insurers (which are more correlated to the rest of the market). In our response to the EIOPA consultation paper, we derive reasonable ranges for these parameters supported by further analysis, and taken together these produce a Solvency II CoC rate of around 2%-3%. Therefore, setting this to 3% would be appropriate yet would remain prudent. We would also urge EIOPA to re-consider key elements of the general design of the risk margin to address the current flaws including its inappropriate sensitivity to interest rates and lack of allowance for risk dependence over time. In this regard we remain committed to working with EIOPA to improve the Risk Margin design and calibration including potentially providing additional analysis if required in order to ensure that it meets its intended purpose. *Loss Absorbing Capacity of Deferred Taxes (LACDT)* The CFOF/CROF welcomes the inclusion of the proportionality principle in the considerations on LACDT (paragraph 1266). If (Re)insurance entities have capabilities to support more complex modelling, more refined approaches to address uncertainty should be acceptable than the rather rough measures proposed in the consultation paper. Whilst for those (re-) insurers that want to use less sophisticated methodologies in line with their nature, scale and complexity the proposed simplifications may be helpful, it is not appropriate to mandate	

	simplifications (on future profits from in force and projection horizons) for all (re-) insurers. In respect of future management actions, any recapitalisation assumption does need to be considered on a fact specific basis. We do not consider that the application of article 23 should be used to prevent a recapitalisation assumption. We agree that there should be an appropriate level of governance over the LAC DT calculation. Our members already have processes in place (as part of the calculation of the overall SII numbers) to ensure that LAC DT calculations assumptions and calculations are reviewed. We do not agree that in practice that LAC DT assumptions will be subject to less governance than assumptions in the calculations of technical provisions We agree that appropriate reporting of the LAC DT calculation is important. This, however, depends on the materiality of the (components of the) LAC DT in the solvency position of the relevant undertaking. The disclosure proposed is very extensive and we consider that this will only be appropriate in cases where (components of) LAC DT form a very material part of the solvency position. *Other topics on which the CRO Forum and CFO Forum provided a response* - Volume measure for premium risk - Recalibration of mortality and longevity risks - Man-made catastrophe risk - Interest rate risk - Comparison of own funds in insurance and banking sectors - Capital instruments only eligible as tier 1 up to 20% of total tier 1	

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2.1	**General Comments** We appreciate EIOPA's decision to further analyse the recognition of certain non-proportional reinsurance covers as set out in in EIOPA's first set of advice as of 30 October 2017. For a solution, we think that it is of utmost importance that its is implemented within the standard formula to support the recognition of the risk	

	mitigation impact of covers with significant impact on the risk profile of ceding companies. In this respect we have proposed a simple extension of the standard formula for premium and reserve risk by "RM_other". This is in our view the only way to support a more comprehensive improvement of the standard formula wrt. recognition of non-proportional reinsurance for reserves, eventually subject to guidance around the covers for which it may be used and on proper calculation methods (similar to EIOPA's guidelines on application of outwards reinsurance arrangements to the non-life underwriting risk sub-module).	
2.2		
2.3	EIOPA advocates that undertakings should inform the supervisor and demonstrate effectiveness of control about any increase of cession including new reinsurance as a requirement for recognition of the risk mitigating impact. This will be the consequence if the application of Articles 116(4) or 147 (4) becomes the standard way for the recognition of new reinsurance. We think that this is disproportionate and might be not the intention of these articles. In our understanding Articles 116(4) and 147(4) refer to situations where undertakings make a significant change in their business plan. In this case, demonstrating control around the implementation of the business plan and informing the supervisor might make sense, e.g. to avoid wrong incentives about overly frequent changes to the plan. However for a reinsurance which complies with Articles 210ff of the Delegated Regulation, e.g. is effective for the following 12 months, we believe that there is no need to demonstrate any additional controls as asked for in Art. 116(4) and 147(4). Additional requirements would be also disproportionate because Solvency II in general does not require undertakings to notify supervisors before concluding reinsurance. We believe the following observations address EIOPA's concern about our proposal to allow undertakings to replace (under certain conditions) last year's NEP figure with a recalculated figure, i.e. last year's gross earned premium	

adjusted for the impact of the new reinsurance structure:

- First, the proposal is prudent because it prevents incentives for an overly conservative estimation of earned premiums for the forthcoming years.
- Second, the method is simple and transparent. It can be verified based on gross premium figures and detailed information on each reinsurance contract as included in S II reporting.

Risk-sensitivity of the volume measure

In the paragraph 109 and 110 EIOPA considers that methods which proposed adjustment of volume measure with different ratios as not appropriate because expected losses and profits are not to be recognised under the standard formula and they will make the calculations *more complex* and EIOPA also states that adjusting the volume measure with future estimates or replacing premiums as volume measure changes the volume measure which was used for calibration. EIOPA considers proposed methods as methods which *require the recalibration* of the standard parameters used in standard formula.

We consider that in many cases the EIOPA answer to the proposals are not substantiated enough. In particular we refer to all the proposals put forward on the volume measure for premium and reserve risk that are disregarded with the only justification of adding complexity. In most of the proposals the complexity added is very limited compared to the risk sensitivity gained.In fact loss ratio figures is a commonly available in systems of most undertakings. Indeed a default option (e.g. including loss ratio=100%) is also possible. In these cases complexity would only be added for those undertakings that are willing to go for a different loss ratio approach.

	With regard to the need to recalibrate the parameters, the loss ratio was already the basis for the calibration of the factors so a new calibration process is not needed (e.g. see para 57 of https://eiopa.europa.eu/Publications/Reports/EIOPA-11-163-A-Report_JWG_on_NL_and_Health_non-SLT_Calibration.pdf).	
2.4.1		
2.4.2		
2.4.3	We thank EIOPA for the clarification provided as far as the exposures to the different components of the non life underwriting premium risk are concerned. This is indeed helpful and appreciated. Nevertheless, we feel that the neither of the 2 proposals can be accepted because: - Both overestimate the Premium SCR - Neither of them is technically justified option 1 introduces a gap in the premium volume that is highly questionable in terms of risk. option 1 intends to capture the 99.5th quantile of the risk on a sum of subsequent years as the sum of the 99.5th quantiles of the risk on subsequent years, which clearly overestimate the return period. option 2 excludes a part of the underlying premium volumes from the relevant reduction factor without any dedicated calibration. The EIOPA consultation introduces the split between UR1 and UR2. With the	

same notations, considering that UR2 does not apply beyond N+1, therefore reduction factors should be applied to both FP-Future and FP-Existing with a view to withdraw the UR2 part of the risk included in the "sigma" calibration from the risk basis after N+1.

The model we propose consists in taking full consideration of the 99.5^{th} quantile of the losses distribution on the first year, and adding a charge that depends on the run-off volume of the portfolio. The additional charge should be calibrated in a conservative approach, with a view to globally enable the fit between the model and the quantile estimation.

First, let's define $\mathbf{FP_s}$ as the expected present value of premiums to be earned by the insurance and reinsurance undertaking in the segment s for contracts which cover begins either before closure date, or in the 12 months following closure date, but excluding the premiums to be earned during the 12 months following closure date. Let's note that, in consistency with the "EIOPA Consultation Paper" notations,

$$\mathbf{FP_s = FP_{(existing,s)} + FP_{(future,s)}}$$

$\mathbf{FP_s}$ can be split into $\mathbf{FP_{Year\ 1}}$ (defined as the expected present value of premiums to be earned during the 12 months following the 12 months following closure date and belonging to FP_s) and $\mathbf{FP_{Following}}$ (defined as FP_s - $FP_{Year\ 1}$).

To avoid making any change on the "Premium and Reserve risk sub-module" structure, we could integrate keep estimating the premium risk capital charge per LoB as:

$$\mathbf{3 \cdot \sigma_{LoB} \cdot V_{(prem,s)}}$$

With:

$$\mathbf{V_{(prem,s)} = \max(P_s, P_{last}) + \alpha \cdot FP_{Year\ 1} + \beta \cdot FP_{Following}}$$

P_s and P_{last} definitions would remain defined as in the "EIOPA Consultation Model".

Considering results shown below, **α could be set to 30%** and **β could be set to 15%**.

If necessary, this model could be simplified by using a unique parameter **α'**. Then we would set:

$$V_{(prem,s)} = \max(P_s, P_{last}) + \alpha' \cdot FP_s$$

Considering results shown below, **α'could be set to 30%** at most. This model would be easier to figure, but also less precise.
Both models would be very simple to manage.

<u>Option 1:</u> Two factors depending on the horizon of FP premiums.
Following graphs and table show that the "Proposed Model" provides an estimate that is

- much closer to the actual amount at risk than the "EIOPA Consultation Paper" model
- conservative on most perimeters.

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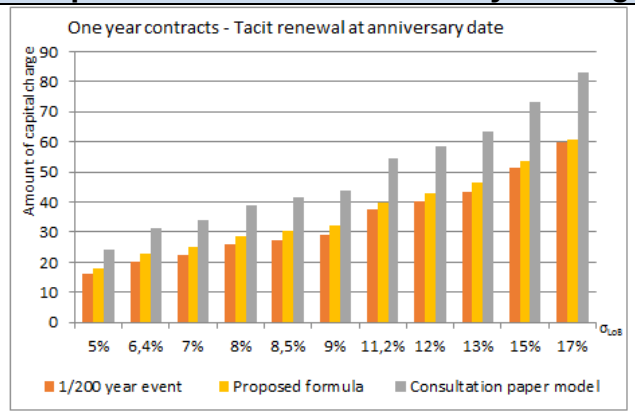
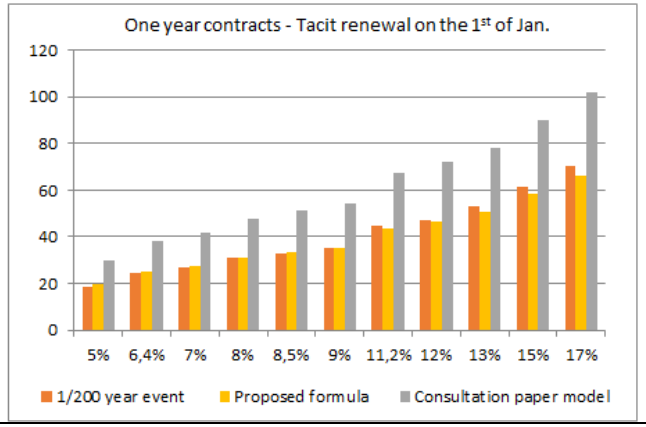
Contractual policy feature			One year contract Tacit renewal at anniversary date					One year contract Tacit renewal on the 1st of Jan.					5 years contract No tacit renewal					10 years contract No tacit renewal				
Prudential duration			1,6					2,0					3,4					5,9				
		Std. Formula Std. Deviation	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model
Shock on the first run-off year					30%					30%					30%					30%		
Shock on following premiums					15%					15%					15%					15%		
H-NSLT	Medex	5,0%	16	24	18	53%	12%	19	30	20	59%	4%	21	51	23	142%	8%	27	88	28	229%	5%
NL	Fire & oth. damage	6,4%	20	31	23	53%	12%	24	38	25	58%	3%	27	65	29	139%	7%	35	113	36	223%	3%
NL	Legal expenses	7,0%	23	34	25	51%	10%	27	42	27	55%	1%	30	71	32	140%	7%	38	123	40	225%	4%
H-NSLT NL NL	Workers' Comp Motor liability Motor others	8,0%	26	39	29	49%	9%	31	48	31	54%	0%	34	81	36	135%	5%	44	141	45	223%	3%
H-NSLT	Inc. Prot.	8,5%	27	41	30	51%	10%	33	51	33	55%	0%	36	86	38	138%	6%	47	150	48	219%	2%
NL	Assistance	9,0%	29	44	32	51%	10%	35	54	35	53%	-1%	39	91	41	133%	4%	49	159	51	222%	3%
NL	Third party liability	11,2%	38	55	40	45%	6%	45	67	44	50%	-2%	49	113	51	132%	3%	62	197	63	218%	2%
NL	Credit & Suretyship	12,0%	40	59	43	45%	6%	47	72	47	52%	-1%	53	122	54	130%	3%	66	212	68	218%	2%
NL	Miscallaneous	13,0%	44	63	46	46%	6%	53	78	51	48%	-4%	57	132	59	131%	3%	73	229	73	213%	0%
NL	MAT	15,0%	52	73	53	42%	4%	61	90	59	47%	-5%	67	152	68	128%	2%	84	264	85	213%	0%
H-NSLT NL NL NL	Non Prop. NP property NP casualty NP MAT	17,0%	60	83	61	39%	1%	70	102	66	46%	-5%	77	172	77	124%	0%	96	300	96	211%	0%


One year contracts - Tacit renewal at anniversary date
Amount of capital charge
90
80
70
60
50
40
30
20
10
0
5%
6,4%
7%
8%
8,5%
9%
11,2%
12%
13%
15%
17%
σLoB
1/200 year event
Proposed formula
Consultation paper model


One year contracts - Tacit renewal on the 1st of Jan.
120
100
80
60
40
20
0
5%
6,4%
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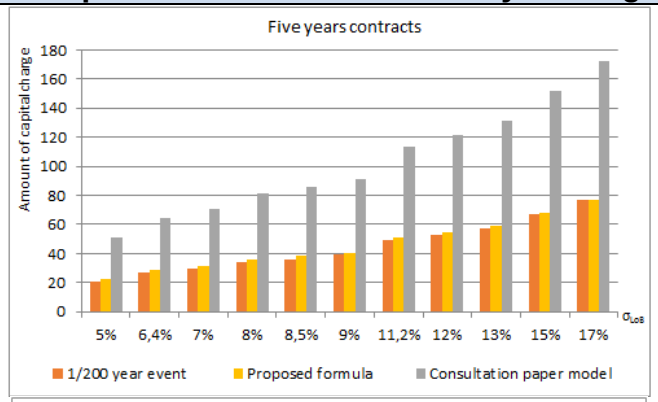

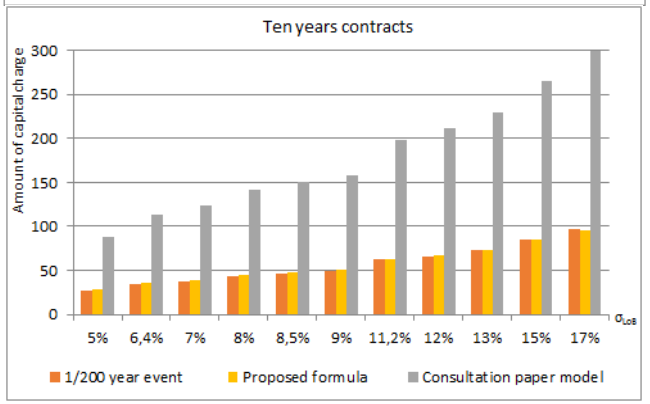

<u>Option 2:</u> Unique factor set equal to 30%.

Following graphs and table show that the "Proposed Model" provides an estimate that is

- much closer to the actual amount at risk than the standard formula
- conservative on most perimeters

- still too conservative on multiannual business.

Contractual policy feature		One year contract Tacit renewal at anniversary date					One year contract Tacit renewal on the 1st of Jan.					5 years contract No tacit renewal					10 years contract No tacit renewal				
Prudential duration		1,6					2,0					3,4					5,9				
	Std. Formula Std. Deviation	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model	1/200 year event impact	Consultation paper model	Proposed Model	Prudency margin of the consultat° paper model	Prudency margin of the Proposed Model
Shock on FP				30%					30%					30%					30%		
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H-NSLT Workers' Comp NL Motor liability NL Motor others	8,0%	26	39	29	49%	9%	31	48	31	54%	0%	34	81	41	135%	19%	44	141	59	223%	35%
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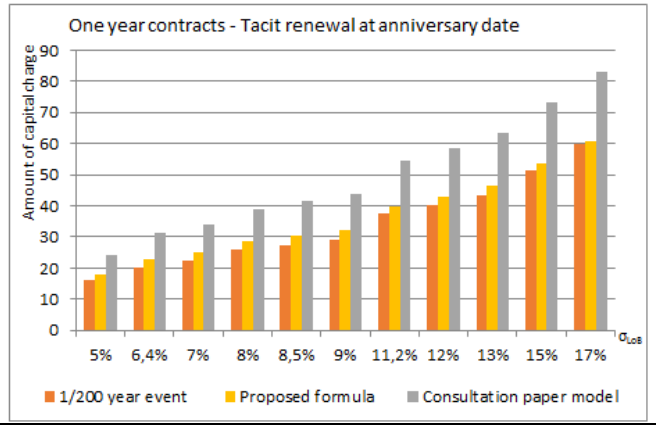

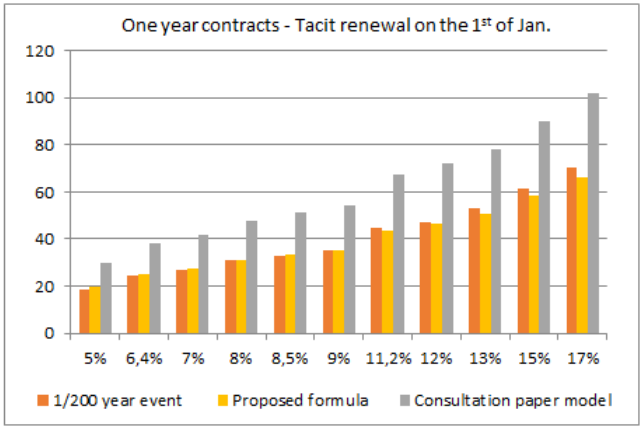
One year contracts - Tacit renewal on the 1st of Jan.
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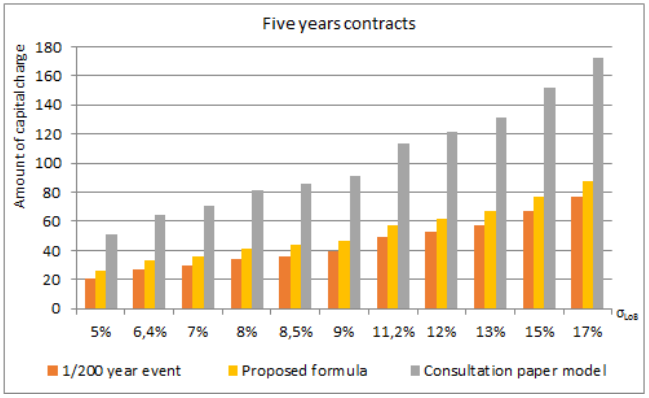
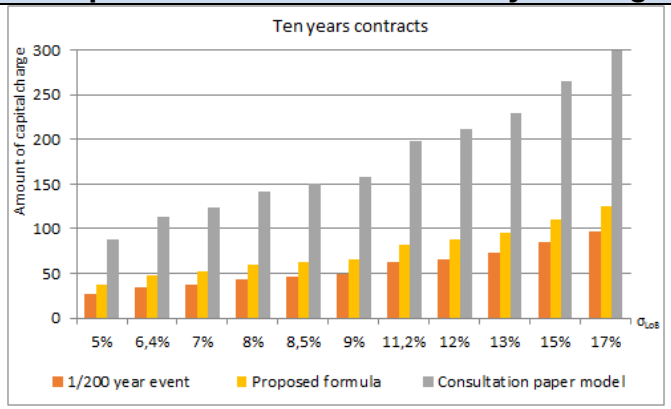
1/200 year event
Proposed formula
Consultation paper model


Five years contracts
Amount of capital charge
180
160
140
120
100
80
60
40
20
0
5%
6,4%
7%
8%
8,5%
9%
11,2%
12%
13%
15%
17%
1/200 year event
Proposed formula
Consultation paper model



When considering the insurer's ability to adapt new business tariffs to UR1 as defined by EIOPA, the formula could be simplified for one-year renewable contracts :

i) $V_{PREM,s} = Max[P(s); P(last, s)]$

Indeed we consider that UR1 as defined by EIOPA are predictable events.

Therefore FP(future,s) in the formula is equal to zero, which is already the case for FP(existing,s).

3.1	Although, the CFOF-CROF believes that the high level choices of EIOPA regarding the methodology make sense, it does note that there seems to be an issue around the modelling of the mortality shock specifically that may lead to overstated shock levels for certain products. The major shortcoming in the analysis is that, because uncertainty increases over time, modelling expectation of life and translating the changes in expectation of life	

	into instantaneous level shocks will overstate the level shocks at shorter durations. This overstates the charge for contracts with significantly shorter terms than whole of life such as shorter duration life protection contracts.	
3.2		
3.3		
3.4.1		
3.4.2	The CFOF-CROF fully agrees to use Lee Carter or CBD models. In addition, we also agree that the HMD database will be used by EIOPA. Furthermore, as we believe that it is difficult to capture the basis risk, we understand the assumption to consider that insured mortality equals to general population mortality. Finally, we agree with the use of St Momo R package, the closure table with a kannisto methodology (simple but robust) and the 5000 simulations. However, on a more detailed level we question the suggested shocks are suitable for the full range of mortality and longevity products. This is less of a problem for the longevity shocks which seem confirmed by EIOPA at the current prudent level and where age bucket differences are generally dealt with via internal models, but does pose issues for shorter duration mortality products with regard to the new proposed shock level. On the latter, we observe that the sensitivity of liability valuation to age generally does not go through life expectancies. Currently, each possible future age is presumed to contribute equally to the risk of a product of a particular client. This is likely misleading for various mortality products where duration rather than age may be a more important driver. In this context we also observe that in the life expectancy approach suggested, mortality stresses may be more suitably calibrated at a lower age as longevity stress, since average age at exposure is lower. Figure 3.1 suggest that this implies a higher risk (longer life expectations),	

however, life protection products typically have much shorter duration, pointing towards lower risk.

Finally, we have a couple of other observations on several components within the paper:

1. On Page 53 the 7 countries, which are used for the analysis, are presented. However, no substantiation is provided on why these countries are selected. It would be good if EIOPA presents information on why this is a good representation in order to calculate a Standard Formula shock.

2. It is mentioned on page 53 that the HMD database is used. As a result of this, data from more recent periods are ignored (depending on the country it can be that data for 2013-2017 is not taken into account). We wonder whether in this case EIOPA considered to add the statistics from Eurostat to the HMD (although we note the different underlying methodologies to the data that may create issues). Alternatively, is EIOPA aware of work that aims to develop algorithms to update HMD data and does EIOPA monitor this?

3. When calculating and considering a shock it is important to also take into account the Best Estimate. In case a certain methodology results in a (substantially) higher Best Estimate, it could be justified to have a lower shock since the Best Estimate already accounts for future improvement. This is relevant to ensure that different models are treated equally (having a lower BE for the CBD model (assuming that is the case) and equal relative shock for a CBD and LC model results in both a lower BE and a lower shock with a CBD model). This point is also important to ensure a level playing field between companies using a CBD model and those using a LC

	model. 4. We lack some clarity on how the parameters referred to in paragraph 217 were estimated and over what estimation period. 5. It is unclear to us how the optimization within paragraph 225 is executed. It seems as if the function h(x) is optimised over different future (t) since otherwise no optimization would be necessary. However, in the case that an optimization is executed over different (t) it is unclear how many (t) are used. In addition, given the use of 5000 simulations, using future (t) in the optimization of the h(x) is likely to result in an overstatement of the shock (since the path up to a future (t) already includes simulation uncertainty while the BE should be followed). Overall, it is unclear why future (t) are included in the calculation of h(x) anyway since the resulting shock will be applied at t=0.	
3.4.3		
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5.7.1		
5.7.2.1		
5.7.2.2		
5.7.2.3	We support EIOPA's proposal for identification of the largest risk exposures within the Marine, Fire and Aviation risk sub-modules "net of reinsurance", where that reinsurance cover alters the relative ranking of the exposure within the undertaking's portfolio. The change makes the standard formula more risk sensitive without increasing complexity, in particular because the major difference may be attributed to additional consideration of Facultative covers per risk.	
6.1		
6.2		
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7.3	**The CROF-CFOF are of the opinion that the UFR should not be shocked,** from first principles perspective. Either it is a stable ultimate rate, or it is not. As an ultimate rate, the rate of change on that ultimate rate does **not occur** in a 1 year event. It is also unclear what database was used to retrieve the historical 90Y rates on which the 20% shock is justified on. The risk-free curve referred to in the Delegated Acts is the liability curve; there are no historical data on CRA/UFR. If the UFR is shocked, there will be a mismatch between own funds and the SCR calculation. This is fundamentally incorrect since the SCR should reflect the actual movements in own funds and as such is derived from this. Given the relative importance of this module, we do not agree the operational argument should be of a critical weight in making the "shock the UFR" decision. If	

	own fund movements are not accounting for these changes, the SCR interest rate risk measure equally should not account for it.	
7.4.1		
7.4.2	**<u>Shifted Approach</u>** It is not clear what the underlying distribution of the shocks are, e.g. are they fit to a normal distribution? It is important to understand the extraction of 1-in-200 point and therefore the observations that follow. Furthermore, if in the view of EIOPA the shifted approach is not severe enough, we wonder why EIOPA did not consider adding a floor as is done with proposal A and B to correct for such a perceived deficiency. It signals a double standard when comparing (and dismissing) the various approaches and that the shifted approach is disregarded unjustifiably. Overall, **the CFOF-CROF does not understand why the shifted approach is being discarded by EIOPA**, especially as it would be easy to fix the backtesting (e.g. by increasing the estimated volatilities). This would be much easier than to introduce artificial floors. Furthermore, a shifted model would much better reflect historical observations: o Using shifted model is a market standard used by many insurance companies and banks o The model would be similar to the current approach, the only difference is that the relative factors are applied to a shifted rate o The model would be much simpler and easier to understand. o The model would reflect historical IR movements where shocks would decrease with lower rates though remain at a size-able level, in contrast with the current model.	

	○ The model would not be pro-cyclical, since the IR shocks decrease when rates decrease (offsetting a part of the higher IR sensitivities). Therefore, IR SCR would remain more stable when rates decrease. The model is a de facto industry standard for internal models due to the reasons set out above. **Proposal A** This approach and resulting shocks are not realistic. Especially, the 200bp floor is too excessive and seems to be arbitrarily set. **Proposal B** There is some merit to this approach, though it is rather complex because of the mixture applied. Furthermore, we do not subscribe to the advantages set out in paragraph 521. The proposal also has several important shortcomings: • The model does not reflect that the historical IR variations (in bps) are lower when rates are low. • The model is pro-cyclical, i.e. IR SCR will strongly increase when rates decrease (as long as the floor is not activated) as the IR sensitivity of liabilities increases when rates are getting low (mainly for life business). • The calibration of the IR shocks will lead to strange and economically irrational investment decision if a company is willing to minimize the IR SCR. • Keeping the UFR stable under shocks is not considered, which creates a mismatch between IR SCR and the true evolution of own funds.	

	Overall, the proposal is very complex and lacks an economic rational. The minimum shocks and floors seem arbitrary. Regarding both proposals A and B, it is not clear whether the grading post 20 years was EUR specific, or would essentially be based on the LLP of the respective currency.	
7.4.3	The CFOF-CROF have the following key observations: 522: we agree that the downward shocks are not appropriate currently. 523: we don't think we have seen enough evidence to discard the shifted approach; We believe that overall a shifted approach would be much better. As such, we do not understand why it is discarded by EIOPA, especially as it would be easy to fix the backtesting (e.g. by increasing the estimated volatilities). This would be much easier than to introduce artificial floors. 524: we agree proposal A is simple. Though it is too simple and will yield incentives that won't result in good risk nor business decisions for an insurance company. 525: we absolutely do not think proposal A is approrpiate; furthermore we need more evidence and clarity on how proposal B's distribution form is described. The shifted approach still carries our preference as the more appropriate approach overall, and as such, we would like to see a better justification why shifted approach was not considered as the basis for a "combined" approach especially since both proposals suggested by EIOPA rely on the inclusion of artificial floors to achieve 'acceptable' shock levels. The consequences of the methodologies proposed (2% minimum stress and combined stress) lead to unrealistic scenarios of negative rates for a long period	

	and it is a non-sense to apply them for interest rate risk submodule. Moreover such negative rates environment for a long period would lead to changes in insurers investment profiles; it is not appropriate to make proposals on the sole interest rate risk sub module without reflecting also on all market risks submodules and on correlation factors. The calibration of the interest rate risk depends on the calibration of the risk free rate curve and long term countercyclical measures. Therefore it is very important to have a global reflection on many other SII components beyond market risk before changing the interest rate risk sub module. The need for a more global analysis of the issue is all the more important that the impact of the interest rate shock proposals is paramount on insurers solvency ratio. All in all, we suggest postponing the revision of the interest rate shock to the revision of SII Directive in 2020/2021 after analyzing more widely the impacts and interdependencies of EIOPA proposals.	
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15.4.4	The new article proposed in paragraph 1222 should be deleted because it would be necessary in order to produce quantitative or qualitative analysis to apply the look-through approach. Therefore it would be useless to apply the simplified approach (data grouping or 49% default stress). Moreover the 49% default stress is a prudent stress that should not require any justification. This new article is not a simplification and it introduces operational difficulties in order to produce those analyses that will be very costly.	
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17.1	**GENERAL COMMENT** • In Paragraph 1261, EIOPA states that LAC DT differences due to differences in tax regimes, risk profiles, length and duration of assets and liabilities are justified. Indeed, Figure 7 of the previous consultation paper (EIOPA-CP-17-004) confirms that future profits are more heavily drawn upon in those countries that have historical based tax systems and less or no transitional measures, since the combination of these factors will lead to net DTAs, all else being equal. This is also confirmed in Paragraphs 1291-1293 of this Consultation Paper. • Hence, given the differences in tax regimes and effect of (different) regulatory practices (or Member state options) (transitional measures), diverging practices on the inclusion and level of scrutiny of future profits are to be expected, and should be allowed for. The CRO/CFO Forum therefore believes that a principle-based approach is preferable. A test on availability of sufficient taxable profits to absorb the 1:200 shock involves appreciation for tax rules as they are, including allowance for related management actions (in line with IAS 12).	
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17.4.1	Paragraph 1287: In respect of the timing of reversal of DTLs and DTAs, It should be assumed that management is able to manage taxable temporary differences in the Solvency II balance sheet, which provides the possibility to make the timing of the reversal match.	

17.4.2	**<u>COMPLIANCE WITH MCR/SCR</u>** **Key principle 1 (Role of compliance with the MCR and SCR after shock loss)** • Paragraphs 1296-1299 – The CRO/CFO Forum agree that MCR compliance is a factor in determining the likelihood of future profits. However: ○ As part of the going concern principle of SII, recovery (as part of the management actions) should be allowed for. Applying the management actions as specified in the Recovery Plan of an undertaking will by definition help in preventing breaches, ensuring MCR/SCR compliance, and increasing the likelihood of future profits. ○ In addition, ad 1298 – A breach of SCR does not necessarily lead to higher lapses. If this relates to negative effects from the economic environment, it might be a sector-wide issue and lapse may then not be beneficial to the policyholder. ○ If management actions are expected to be taken in the event of an SCR (or MCR) breach, the expected consequences of these management actions on future taxable results are to be taken into account • Paragraph 1300 – The CRO/CFO Forum does not agree with the formulaic approach as proposed in this paragraph. While we understand the application of zero new business after an actual breach of MCR (based on key principle 1 and a withdrawal of license), we find the approach for the other situations arbitrary, especially given the going concern argument for the application of recovery measures to prevent actual breaches.	

NEW BUSINESS

Key principle 2, 3 and 4 (New business – projection assumptions and horizons)

- Paragraphs 1308 to 1311 – The CRO/CFO Forum recognizes and appreciates that MCVNB should be valued in a SII environment, and that fiscal timing of profits should play a role. However, we support an approach that is proportionate to the importance of MCVNB as a source to substantiate LACDT. A simplified approach could be to treat MCVNB as taxable profit.
- Paragraphs 1314 and 1315 – The CRO/CFO Forum agrees that uncertainty should be factored into the projection of new business.
- Paragraph 1316 and 1317 – EIOPA considers to limit future profits underlying a single MCVNB valuation to 50% of the smaller of the historically realized MCVNB and the MCVNB within the MTP. CRO/CFO Forum believes this approach is arbitrary and overly prudent, since a haircut on MCVNB to factor in uncertainty is already covered in Key principle 4 (haircut after MTP period), see also paragraph 1325 below.
- Paragraph 1322 – EIOPA proposes to limit the horizon to that used in the business plans.
  Note that, if companies would feel incentivized to lengthen the planning horizon, the AMSB approval (as EIOPA mentions as a pro in Paragraph 1323), and governance around MTP processes in general, should function as a gatekeeper and would hence prevent unjustified horizons.
- Paragraph 1325 – CRO/CFO Forum believes that an alternative of the EIOPA proposal in paragraph 1325 would work well. Aligning with the proposal of the CRO forum paper (DTA in SCR, October 2016) and

applying a suitable haircut for years after the official planning horizon should adequately take into account the uncertainty resulting from longer time horizons. This would strike a good balance between EIOPA concerns, current practices in the industry and leaving room for supervisory scrutiny if a horizon beyond the BMTP period would be chosen.

- The setting of a maximum horizon to take profits from new business into account should be seen separately from the question whether or not contract renewals should be assumed. For non-life business with a short contract duration, it seems obvious to assume continuing contract renewals if those can be supported by historical evidence. Consequentially, these renewals will result in an (almost) constant level of SCR, own funds, technical provision and risk margin when considering future profits. For life business, if contract renewals are not frequent, it seems logical to assume a run-off portfolio and hence a declining SCR, own funds, technical provision and risk margin. These basic assumptions should be set at the start of the LAC DT recoverability test.

FUTURE PROFITS FROM ASSETS

Key principle 5 (Future profits stemming from return on assets)

- Paragraph 1326 – CRO/CFO Forum does not agree that return on assets should be limited to the excess of assets over TP. We believe that all general account invested assets, in relation to the inforce portfolio and to own funds, generate future profits (excess returns when it relates to in force and full returns on own funds).
- Paragraph 1335 – CRO/CFO Forum believe it would not be proportionate to prescribe risk free returns for all entities, including sizeable entities that

already have complex internal models involving a high degree of supervisory scrutiny. We therefore welcome the statements in Paragraph 1335 and Paragraph 1266 that the proportionality principle should play an important role. If (Re)insurance entities have capabilities to support more complex modelling, more refined approaches to address uncertainty should be acceptable than the rather rough measures proposed in the consultation paper. Whilst for those (re-) insurers that want to use less sophisticated methodologies in line with their nature, scale and complexity the proposed simplifications may be helpful, it is not appropriate to mandate these simplifications for all (re-) insurers.

- Paragraphs 1331 to 1333 –
  - CRO/CFO Forum does not believe that limiting excess returns to risk free rates is a proper reflection of reality:
    - Limiting excess return to the risk free rate would ignore the reality that tax systems are based upon the taxation of real world investment returns. Given the fact that most tax regimes are based on historical cost prices, a shock would only lead to losses for tax purposes when the portfolio would be sold. Hence, in reality, assets would not be sold and the unwind of an economic shock in the tax accounts should be considered, including allowance for real world returns.
    - The (life) insurance industry mostly uses buy-and-hold portfolios. These type of portfolios inherently experience a pull-to-par effect. This effect occurred even in the recent financial crisis. We therefore believe that this effect should be allowed for in the substantiation of LAC DT. Most noticeworthy, the credit risk shock on assets (not the default part of that shock) will be reversed over time irrespective of

	whether markets recover. In addition, this is in accordance with IAS 12 which states (at para 29A) "The estimate of probable future taxable profits may include the recovery of some of an entity's assets for more than their carrying amount if there is sufficient evidence that it is probable that the entity will achieve this. ○ We believe that the reference to GL 9 in Paragraph 1333 supports this view, since it would fully align with asset valuation. Asset valuation is based on real world returns (including various risk premia), which are discounted at a risk-discount rate to arrive at observed market values (as shown in the insurers SII balance sheet). To put it differently, when selling assets instantly, you would be charged for the market view on risks embedded in the instrument (factored in at the market value), and when holding the assets to maturity you will earn (the larger part of) that real world return (e.g. illiquidity premiums). ○ We believe setting the returns on assets in future profit projections equal to the forward rates derived from the relevant post-shock risk-free interest rate term structure does not comply with GL 9: When fair valuing the assets for the Solvency II balance sheet, the future cash flow projection would encompass the full asset cash flow and will not be limited to risk free. This is also the case for other projections used (e.g. budgeting). EIOPA's suggestion for limiting asset returns is derived from SCR determination and not (as required by GL 9) from the Solvency 2 balance sheet valuation of assets. • In Paragraph 1265, EIOPA states that this chapter is not about offsetting differences in tax regimes, and in Paragraph 1261 EIOPA states that the tax regimes are treated as given. The consideration of limiting future profits	

from in force to risk free rate would contradict these statements, since this would not respect tax regimes as they are, and would imply that tax regimes are harmonised towards market value based valuations and that the insurance industry pays (volatile) taxes based on a market value balance sheet.

- To conclude, also looking at paragraph 1335 and 1266, the CRO/CFO forum , strongly believes that, while involving a higher level of NSA scrutiny, broader principle based approaches should be allowed for.

Key principle 6 (Future profits stemming from return on assets, projection horizon)

- Paragraph 1336-1337 – CRO/CFO Forum notes that only future profits on assets in excess of assets over liabilities are mentioned. We repeat that we believe that there are excess returns on inforce (general account) as well, and that that these should be allowed for in the substantiation of the LAC DT.
- Paragraphs 1338-1341
    - CRO/CFO Forum welcomes the approach as suggested in Paragraph 1340 to allow for higher level of local supervisory scrutiny, and for a wider range of projection horizons. If insurance entities have capabilities to support more complex modelling, more refined approaches to address uncertainty should be acceptable than the rather rough measures proposed in the consultation paper. Whilst for those (re-) insurers that want to use less sophisticated methodologies in line with their nature, scale and complexity the proposed simplifications may be helpful, it is not appropriate to

	mandate these simplifications for all (re-) insurers. ○ We believe that an a priori limitation to BMTP periods (and a maximum of 5 years) is too restrictive, thereby ignoring the principle of proportionality (a basis principle in the SII regulations), and ignoring the SII requirements to maintain at least prescribed SCR compliant levels of Own Funds during the run-off of existing business. It does also not acknowledge the general accepted use of IAS12 (in IFRS under audited environment), in which entities model future profits in line with tax regimes' carry forward mechanisms and the characteristics of the portfolio. ○ Also here (see key principle 5 for more background) it is important to realize that economically suffering an (instantaneous) loss is something else than the actual unwind of that loss in tax regimes, where, accepting those regimes as they are (paragraph 1261/1265), losses will be carried forward and profits will be used over the time horizon allowed for by the tax regime. ○ The uncertainty on profits, purely related to horizons becoming large, should be factored in, in an integral manner with the size/pattern of those profits subject to the scrutiny of the supervisor, where the concept of proportionality should play it's role (relative to the size of the entity, the capacity to create complex models, and the level/capacity of NSA involvement and the applicable NSA scrutiny). ○ We believe that post-shock run-off patterns of technical provisions, related own funds, investments and DTA should be consistent. Therefore, any limit on only the projection horizon used for LAC DT recoverability testing is inappropriate. **<u>FUTURE MANAGEMENT ACTIONS</u>**	

Key principle 7: Future Management Actions

We note EIOPA's comments relating to future management actions. We would expect that management actions that have a material impact on the calculation of LAC DT will already be covered in the consideration of management actions.

Paragraphs 1346 – 1351

We also note EIOPA's comments on any recapitalisation assumption and agree that any such assumption does need to take account of the specific circumstances of the undertaking concerned (and therefore may differ between a solo undertaking and a member of a group).

Any recapitalisation assumption does need to be considered on a fact specific basis. We do not consider that the application of regulation 23 should be used to prevent a recapitalisation assumption. This needs to be considered on the basis of the specific circumstance of the undertaking concerned and we would expect that there will be many cases where recapitalisation can be justified.

For example, undertakings which are Globally Systemically Important Insurers are already required to produce plans demonstrating how they would respond to particular stress scenarios including the management actions that would be taken. These plans are required to be discussed and agreed with National Supervisors and the relevant college of regulators. Assumptions based on these plans and management actions (including if appropriate recapitalisation assumptions) should be allowed.

	In addition, SII applies on a going concern basis and it would not be appropriate to assume that recapitalisation would never take place. There are many examples where companies have raised additional capital in order to deal with stressed balance sheets. Although a 1 in 200 stress would be expected to have an impact on investment markets, we would still expect that there will be many cases where a recapitalisation can be justified. There will also be undertakings that historically have had a strong capital position and therefore have not needed to undertake a recapitalisation, and therefore cannot point to examples where recapitalisation has taken place (whereas some companies might be able to give examples based on their specific circumstances). This strong historical capital position is indicative that recapitalisation is possible. Such companies will have a proven track record which will be attractive to investors and therefore make it more likely to attract the required funds for a recapitalisation. Ad 1349-1350 – de-risking measures and change in portfolio mix should be allowed as exactly in crisis situations such decisions are often made. In normal circumstances some undertakings accept writing less profitable business e.g. to increase market share. In case of crisis such business would not be written anymore. **ROLE OF SYSTEM OF GOVERNANCE IN LAC DT CALCULATION.** **Key principle 8: role of system of governance.** Paragraphs 1352 - 1353	

We agree that there should be an appropriate level of governance over the LAC DT calculation. Our members already have processes in place (as part of the calculation of the overall SII numbers) to ensure that LAC DT calculations assumptions and calculations are reviewed. We do not agree that in practice that LAC DT assumptions will be subject to less governance than assumptions in the calculations of technical provisions.

Paragraphs 1354 - 1364

We do not agree with all of the proposals made in the paper. In particular:

- For the reasons stated above, we do not agree with the assumption that new business profits post-stress will be less than 50% of past profits or those assumed in the business plans. It is not therefore appropriate to use this as the basis for considering the amount of LAC DT assumed.

- EIOPA assumes that LAC DT is always a material item. This will not always be the case. In addition the calculation of LAC DT is fundamentally based on the tax rules applying in the relevant territory and the specific circumstances of the individual undertaking. The CRO/CFO Forum believes that a principle based approach is appropriate.

SUPERVISORY REPORTING AND PUBLIC DISCLOSURE REGARDING LAC DT CALCULATION

	Key principle 9: Supervisory reporting and disclosure Paragraphs 1365 to 1367 We agree that appropriate reporting of the LAC DT calculation is important. This, however, depends on the materiality of the (components of the) LAC DT in the solvency position of the relevant undertaking. Paragraphs 1368 The disclosure proposed is very extensive and we consider that this will only be appropriate in exceptional cases where LAC DT forms a very material part of the solvency position. The disclosure proposal also covers the position of deferred tax assets pre stress. These are already disclosed in the SFCR and required to be reconciled to the position shown in the undertakings published accounts. In the case of the undertakings which apply international accounting standards, the proposed disclosures exceed the disclosure requirements under IAS 12 (the international accounting standard on Income Taxes). Deferred tax assets in Own Funds are Tier 3 capital and are already subject to a limitation of 15%, and on this basis are not likely to account for a material part of the overall solvency position. EIOPA has been asked to consider the position relating to LAC DT and we consider that the proposed requirements relating to the pre-stress position in Own Funds go beyond the remit of what EIOPA has been asked to consider.	

	POSSIBLE SIMPLIFIED CALCULATION OF LAC DT **Paragraphs 1369 to 1378** We do not agree with the proposed simplified calculation of LAC DT. The proposals adopt all of the most restrictive assumptions set out under the key principles raised by EIOPA. For the reasons already given we do not consider that these assumptions are appropriate. The underlying tax rules applying in the individual territories are fundamental to the calculation of LAC DT in the specific circumstances of individual undertakings. Therefore we consider that National Supervisors should have the main role in reviewing LAC DT.	
17.4.3	O/S (to be completed following agreement of earlier comments)	
18.1	For the entire industry, according to EIOPA figures, the total RM was €210bn in Q3 2016, out of which €150bn stems from life and composite insurance undertakings and represents more than 45% of the life insurance industry SCR. The **excessive size** of the RM represents **a pan-European issue**, of importance to (re)insurance undertakings across EEA jurisdictions. For example, EIOPA's data for Life business shows very clearly that the RM is higher than 50% of SCR in 4 EEA jurisdictions and between 40-50% in 10 EEA jurisdictions. The amount of RM in absolute and relative terms can be very significant for some (re)insurance groups, representing over 40% or even 50% of their SCR. In some cases, the RM represents 65% to 85% of their SCR. For certain products - typically long-term - such as funeral insurance, **the RM can reach up to 110% of**	

	SCR and can sometimes be significant compared to best estimates, in a proportion which we believe that, at an overall level, was not anticipated in the initial impact assessment from EIOPA. The excessive level of the CoC rate leads to the unnecessary immobilization of capital by the industry. This capital could be invested elsewhere to finance the European economy. Besides, the Capital Market Union initiative is also intended to make financing cheaper in the European Union (which should reduce the Cost of capital in general). The European Commission 2016 call for evidence on the EU regulatory framework for financial services, which aimed at ensuring "that the balance is right and that rules do not unduly discourage long-term investment and sustainable economic growth", focusing in particular on rules giving "rise to unintended consequences such as regulatory arbitrage" and on objectives like maximizing the benefits of the financial system to the economy and promoting the competitiveness of the EU economy. The excessive size of the risk margin and the current inappropriate specification also has a detrimental effect on the **volatility** of insurance firms' balance sheets. For example, as we discuss further below, we estimate that a 1% decrease in interest rates can result in an increase in the risk margin of more than 20% for longer duration portfolios. Given the excessive size of the risk margin, this can represent an extreme change and will impact negatively on insurance firms' solvency ratios. This is not reflective of the behaviour of transfer pricing in the market which takes into account a longer-term view of the risks involved and is much less sensitive to current discount rates. The excessive size and volatility of the risk margin also creates a **un-level playing field** between European (re)insurers and (re)insurers domiciled elsewhere and so encourages the take-up of reinsurance in non-EEA jurisdictions, outside direct oversight of European policymakers. For example, most of the jurisdictions outside	

	the European Union do not require a RM (e.g. the US), whereas EU groups have to hold a RM even for the business written outside the EU. Furthermore, the **level and uncertainty of the risk margin will lower appetite for the selling of products that suffer most from this (e.g. long term retirement products)**, and **reduces the capacity for insurers to invest in long term finance opportunities**. This ultimately harms consumers as it results either in **consumers no longer being able to purchase particular insurance products or having to pay too much for insurance cover**. It also runs contrary to the Commission's aim that the Solvency II framework should ensure that the rules do not unduly discourage long-term investment and sustainable economic growth, and should not give rise to **unintended consequences such as regulatory arbitrage**. Furthermore, although SII is intended as a prudential framework, added prudence should not be done throughout the framework. Especially the economic balance sheet should not be distorted. Prudence can be much better dealt with within the SCR and therefore the SII capital requirement have been prudently set at the 99.5th percentile. Most insurers operate on a level that is even much higher than this target already, completely negating the need for the additional prudence in items such as the risk margin. **The current methodology for calculating the RM has led to an excessive level and volatility of the risk margin** that are the result of a hedgeable risk (interest rates) which the risk margin is not intending to cover. The excessive level of the RM also tends to incentivize firms to de-risk as interest rates fall. This trend, as well as the excessive volatility of the RM to interest rates, clearly highlights that the current calibration of the RM is not consistent with economic reality and this fact is **underlined by the economic conditions as reflected in the current low interest environment**.	

18.2	The CFOF-CROF notes that the referred to legal extracts do not cover all elements of the relevant regulations, whereas the questions posed by the EC do not preclude a review of the lacking elements. For example, the reference undertaking assumptions are set out in the Delegated Regulations and as such should be in the scope of the current review. The elements that are not reviewed, as a result, include the overall design of the Risk Margin calculation and key elements that may help address the noted issues with regard to the excessive size and volatility of the risk margin. For example: • the highly formalistic non-diversification assumption, • the lack of recognition of the non-independence of risks (i.e. non-repeatability of certain risks), • in the EIOPA guidelines, the inability to apply (consistently with the SCR framework) the MA and VA measures within the calculation of the risk margin. Therefore, we believe this section of the consultation paper unduly limits the review and therefore the effectiveness of the advice of EIOPA to address the key issues around the risk margin.	
18.3	The level of the CoC rate is excessively high, and its impact is exacerbated in the current interest rate environment. This leads to a Risk Margin which does not reflect the realities of the transfer market and is unduly sensitive to changes in interest rates. This harms consumers by inappropriately increasing premiums and reducing access to insurance products. As discussed above, this is particularly evident in the current low-interest rate	

environment.

An appropriate beta value of insurance risk should be used in the cost of capital approach along with a reasonable forward looking market risk premium.
In addition, insurers should be allowed to take into account risk dependency over time in the forward SCR projections when calculating the Risk Margin.

On particular points raised by the EIOPA consultation paper, please see our responses below.

Capital structure

- The use of debt funding will tend to lower the cost of financing, and hence disregarding this will lead to an overestimate of the true weighted average cost of capital.

Sensitivity of the cost of capital to interest rates

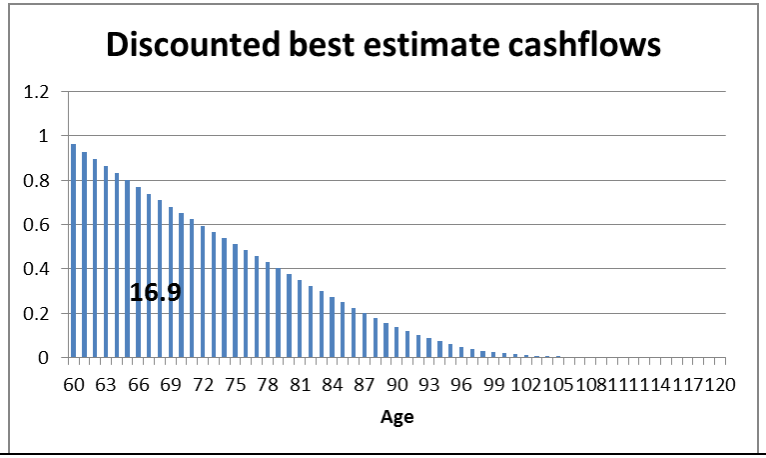
The lack of the CoC rate's sensitvity to interest rates is a major drawback of the current CoC rate because it ignores the fact that in a low interest rate environment, market risk premiums might be expected to reduce as demand for higher yielding assets increases. Such a link between the CoC rate and interest rates is also considered and discussed in more detail under the context of frictional market effects in the CRO paper (2008). 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.

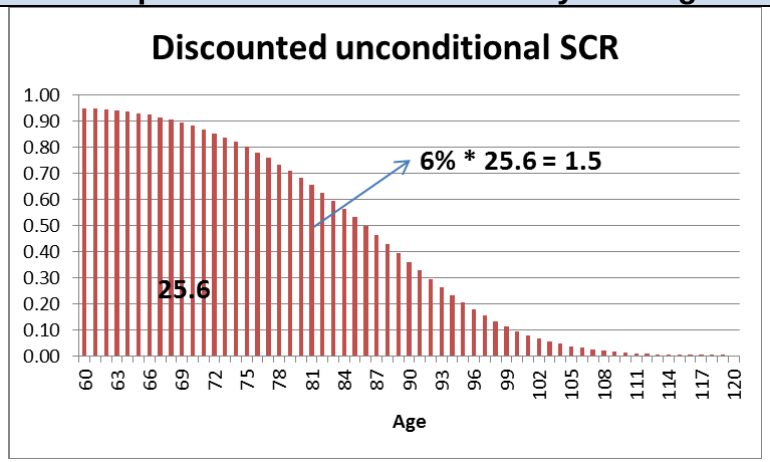
Such a relationship is economically justified based on double taxation costs, which

	correspond to the compensation for corporate tax incurred on the base cost of capital. Investors ask for risk free return (RF) plus a spread. When investing into an insurance company, double taxation arises because the companies' return is subject to corporate taxes. Therefore the return should allow for the corporate tax rate for the purpose of determining an appropriate CoC rate. We understand that EIOPA/CEIOPS has assumed an average tax rate and calibrated the CoC margin at the prevailing risk free rate in 2007. We think that under this assumption, the current risk margin should be lowered to adequately reflect changes in the risk free rate since then which would also address current issues with hedging which are a consequence of the failure of the CoC rate to recognise interest rate sensitivity. **Calculation of the risk margin – allowance for diversification** Consistent with previous CROF work* in 2008 on properly taking into account diversification effects, the assumption set out in the Level II text on the need to break up groups with life and non-life obligations prior to sale is not borne out by actual experience, leading to an unnecessarily conservative assumption in the risk margin calculation for groups. Examples where groups, including all subsidiaries, have been subject to a takeover are Resolution (purchased by Pearl Group), Friends Life Group (purchased by Aviva), Delta Lloyd (merged with NN) and AIA (aborted purchase by Prudential plc). (*see https://www.thecroforum.org/wp-content/uploads/2012/10/croforummvlpaperjuly2008-2.pdf).	

	Calculation of the risk margin – allowance for hedgeability of longevity risk In summary, the proposal for allowing for the hedgeability of longevity risk in the Risk Margin calculation involves an insurer approving a management action that provides that it would seek reinsurance to cover certain liabilities in specifically defined circumstances, namely when it de-risks its assets – not necessarily that the reference undertaking should apply more (or less) risk-mitigation than the original undertaking, as stated in the EIOPA consultation document. Due to the operation of certain assumptions in the legislation for the calculation of the Risk Margin, those defined circumstances would be deemed to occur upon any transfer to a transferee insurer and therefore the transferee insurer can be treated (for the purposes of the Risk Margin calculation) as having put in place longevity reinsurance in line with the management action. That management action would be reflected in determining the transferee insurer's SCR for the purposes of calculating the Risk Margin with appropriate assumptions made with respect to availability and price of the reinsurance. **Calculation of the risk margin – allowance for time scaling factor to reduce SCR projected** Any economic approach to valuing risky payments would have to take into account the dependence of risks over time to avoid inappropriate conclusions. In our view, SCR capital requirements are not independent – some non-hedgeable risks (such as mortality/longevity risk and lapse risk) may be non-repeatable, so if they crystallise in one time period they cannot reoccur. This will have a downward impact on the calculation of forward SCR capital requirements. By not recognising this, the current Risk Margin calculation can result in arbitrage and imply that more capital is required to withstand even the worst possible event (e.g. more than 100% of policyholders lapsing over the lifetime of the liabilities, or in the case of annuities more capital required than even if policyholders were to live forever).	

Consider a simple illustrative example – a policyholder aged 60 with the IML00 base mortality table, a constant mortality improvement assumption of 1.8%, and a constant interest rate of 3%. This produces a best estimate annuity value of 16.9 (arbitrary units) and a Risk Margin of 1.5 (assuming Standard Formula stresses):

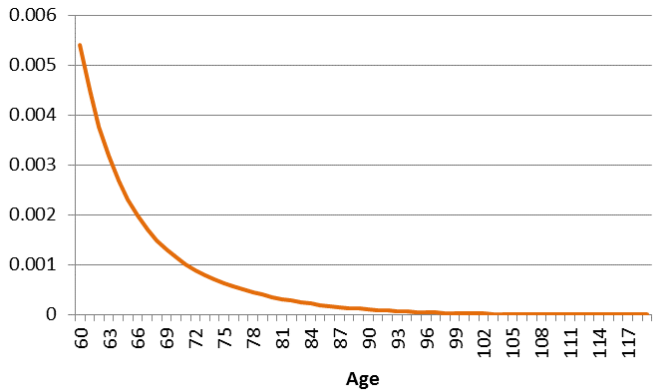




The current approach for calculating the Risk Margin implies that the total amount of capital that is required to be funded at CoC plus risk-free over the lifetime of this policyholder is 25.6 (i.e. sum of discounted forward unconditional SCRs). However, if this policyholder were to live forever, the total cost would be 33.3 (i.e. a perpetual bond whose value is 1/0.03 = 33.3), implying a total loss in this case of 16.4. This means that the current Risk Margin would require firms to fund at CoC plus risk-free more notional capital than even the worst case scenario of this policyholder living forever, which is clearly wrong. In fact, the worst possible case for the investor corresponds to a 1-in-200 shock in each and every year, which yields a lower loss than 16.4. Therefore, any capital raised above this level the investor will receive back with certainty – and hence will not charge a premium above risk-free for this (i.e. **this component of the total capital raised requires a corresponding Risk Margin of zero**).

The current approach also assumes that the future SCR being funded is based on

the unconditional 1-in-200 shocks. However, a significant proportion of longevity risk is non-repeatable (e.g. cancer can only be cured once). Ignoring risk dependency over time results in implausible mortality rates – for example, for this 60 year-old policyholder, if we apply the Standard Formula stress of a 20% reduction in mortality rates every year, this results in mortality rates which are effectively zero after the age of 90:



Historically, mortality rates have always increased with age. Therefore, the resulting mortality rates from applying the same unconditional shock year after year are completely implausible when viewed from a historic context and clearly not realistic – this is something that the use of a conditional stress (i.e. allowing for time dependency) would address.

We now illustrate how arbitrage opportunities can arise under the current application of the Risk Margin formula with a simple example of earthquake insurance (assuming a risk-free rate of zero for simplicity):

	- Suppose that a government purchases earthquake insurance for a period of five years from two different entities. The first entity offers insurance with a compensation cap of 100 (the 1-in-200 year annual loss), while the second entity offers a product with no such cap. For both products, the sum of forward unconditional SCRs is 500 (corresponding to an unconditional SCR of 100 in each period), implying a Risk Margin of 30 (=6% * 500) for each. Therefore, each entity charges the government a premium to cover the BEL (which will be lower in the first case) and the Risk Margin of 30. - In this case, an investor can buy the reference undertaking with exposure to the product with capped losses for an outlay of 100 (which covers the SCR in each time period and the maximum possible loss). In addition, the investor would invest a further 400 at the risk-free rate. Then, that same investor can short sell the other reference undertaking with exposure to the uncapped product and receive 500 (which covers the SCR in each time period and the maximum possible loss). These values (100 and 500) also correspond to the amount that an investor would expect to receive back after five years in each case (in addition to the Risk Margin). - Following these transactions (i.e. purchase of the undertaking with the capped risk exposure and purchase of a risk-free security, at the same time short-selling the undertaking with the five-year uncapped risk exposure), the net outlay is therefore zero. - However, the net amount received at the end of the product's life is always greater than or equal to zero – giving rise to the possibility of unlimited arbitrage profit. The table below gives the cash flows that would arise in each period (a positive X represents a loss):	

	Short-sell reference undertaking with uncapped product	Buy reference undertaking with capped product	Invest in risk-free	Net cash flow
t = 0 (start)	+500	-100	-400	0
t = 5 (end)	-(500-X+30)	100-min(X, 100)+30	+400	$0 \leq X - \min(X, 100) \leq 400$

Given this, it is clear that the Risk Margin calculation should allow for diversification over time, taking this example, the capped product is clearly less risky than the uncapped product – and hence investors would require a lower amount of compensation in order to commit the capital required to support this product over its lifetime. This applies more generally – **where risk dependence exists which lowers the risk of the ultimate surplus remaining in the reference undertaking at the maturity of the liabilities, the risk margin should be lower in accordance with this reduction in ultimate risk.**

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The use of a time scaling factor would be the simplest way to achieve this in the Standard Formula, and would be applied as such:

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

where $SCR(t)=\lambda t SCR'(t)$ and $SCR'(t)$ denotes the unconditional SCR at time t.

In this context, λ represents an estimate of the degree to which the ultimate risk

	reduces relative to a series of independent risks, and is linked to the reduction in size of future 1-in-200 risks following a 1-in-200 loss in previous periods. This could be set at different levels for each line of business following a calibration exercise or a single λ of for example 0.9 could be applied to all lines of business to take account of risk dependency over time.	
18.4.1	Previous CEIOPS advice states that "*In order to account for the fact that a key source of return that exists for going concerns (the so called franchise value related to expected profit from new business) may not be demanded by capital providers in a transfer context, a downward adjustment is needed*", and hence a downward adjustment is applied. However, no explicit allowance seems to have been made for asset risk i.e. the fact that risky assets are held by the insurer (which are more correlated to the rest of the market). Moreover, the analysis uses as a starting point the level of the equity risk premium derived from equity price models without the use of an unlevered beta. This is flawed because, as discussed above, this does not take into account the financing structure of insurance firms, which includes cheaper forms of funding in the form of debt. Should EIOPA persist with this particular methodology, it is essential that an unlevered beta is used. Furthermore, the use of a backward-looking equity risk premium is biased upwards due to survivorship bias (i.e. excludes returns from weaker firms which do not survive). Both these points mean that previous CEIOPS analysis was flawed and hence resulted in a CoC rate which was overly excessive. Due to this, we believe that after making appropriate yet prudent adjustments for franchise and asset risk (i.e. the risk inherent in an insurance firm's business model and the risk from assets held in the balance sheet), a more appropriate range for the CoC rate would be	

	2%-3%, and so a value of 3% would represent an appropriate yet prudent CoC rate. A level of 3% also consistent with previous CROF work on this in 2008 which argued, in response to the original CEIOPS advice, that a range of 2.5%-4.5% would be more appropriate than the CoC rate of 6% recommended by CEIOPS (see https://www.thecroforum.org/wp-content/uploads/2012/10/croforummvlpaperjuly2008-2.pdf).	
18.4.2	**Size of the risk margin** **Diverging figures create some uncertainty on the actual total amount of risk margin (RM) in the EEA.** According to EIOPA solo balance sheet statistics, the RM amounted to EUR 179 bn Q3 2016 and to 161 EUR bn at the end of 2016. However, EIOPA background note for the 23 of May 2017 roundtable on SCR review discloses a total of RM of EUR 210bn Q3 2010, which probably includes groups[1], and out of which €150bn stems from life and composite insurance undertakings. As discussed in our response above, the excessive size of the risk margin represents a pan-European with material socio-economic and competition implications (see response to 18.1 for more details). • **The progressive end of the transitional measures will also exacerbate the concerns with the current design of the RM.** - For the companies using the transitional measures on technical provisions (TTPs), the benefit of this measure on business written before the introduction of Solvency II has offset in large proportion the aggregate RM at the inception of Solvency II[2]. If a regulator allows to recalculate the	

[1] Part of difference in both figures seems to stem from the difference in UK RM, which equals €28,6bn based on EEA balance sheet figures from Q3 2016 equals whereas EIOPA mentions a total UK RM of EUR 58,9 bn. EIOPA has not yet published group statistics.
[2] EIOPA 2016 Report on long-term guarantees measures (EIOPA-BoS-16/279 -16 Dec. 2016) shows that the TTP is applied by 154 undertakings from 12 countries (AT, BE, BG, DE, ES, FI, FR, GR, LI, NO, PT and UK). The TPs of undertakings applying the TTP represent 24.1% of the total amount of TPs in the EEA.

TMTPs following a change in interest rates, as the PRA allowed in the first half of 2016, it can help offsetting the change in the RM.

- Based on data from EIOPA's 2016 insurance stress tests, at EEA level, by removing the TTP the financial position of the (re)insurance undertakings using that measure would show a decrease of the SCR ratio from 183% to 115%[3]. As not all Member States and undertakings benefit from the TTP in the same way, they do not mitigate in the same way the impact of the RM, so that there is no level playing field in the EU with regard to this impact.
- Furthermore, the level of TPs is currently further reduced by the widespread use of the transitional measure on the volatility adjustment (VA). Based on data from EIOPA's 2016 insurance stress tests, removing the VA would result in an average increase of TPs by 0.8% at EEA level and in an average reduction of the SCR ratio of 34 percentage points[4].

- One of the risky scenarios envisaged by supervisors is a "low for long situation" where interest rates would stay at extremely low levels for a long time, a scenario which has the potential by itself to create solvency issues for some companies over the years. The impact of the RM calibration coupled with the run-off of the transitional measures would exacerbate this risk.

The implementation of Solvency II provides insight in the concrete negative effects of the current calibration of the RM, in a context of a prolonged period of low interest rates. The 2018 review of Solvency II is an opportunity to amend the RM without waiting further.

General approach to the review of the CoC rate

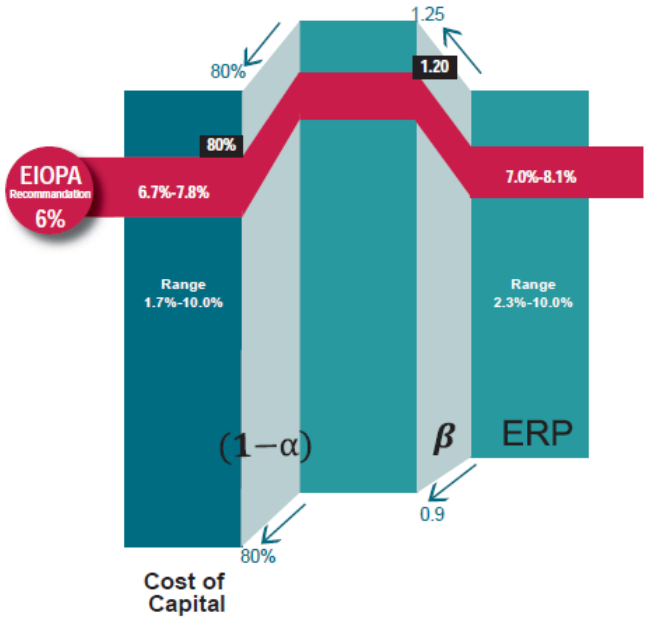
[3] The average change in SCR ratios is the highest for undertakings in Germany, France, Belgium and Austria. At the EEA level, removing the TTP would result on average in a decrease of the SCR ratio by 22 percentage points.

[4] In UK and Spain, the matching adjustment is also used and contributes to reduce further the level of technical provisions for a transitional period.

| | The CROF acknowledges the efforts of EIOPA in reviewing the calibration of the CoC rate. However, the CROF considers that the information and sources used to derive the CoC of 6% which are presented in the report tend to include an upward bias. Furthermore, EIOPA have made very conservative choices for parameters and estimates to derive the CoC rate from these sources, as indicated in the diagram below: | |

RISK MARGIN COST OF CAPITAL BASED ON CORRELATION WITH MARKET RETURNS

$$CoC^{RM} = (1-\alpha) * \beta * ERP$$



Source: Formula and data updated values to 2016 from EIOPA-CP-17-006 Consultation paper on EIOPA's second set of Advice to the European Commission on specific items in the Solvency II Delegated Regulation.

From a methodological perspective, the calibration of the CoC rate should consist in identifying realistic ranges for the different parameters and deriving a central value for these parameters and the resulting CoC rate. The impact of the CoC rate is direct on the RM - considering the amounts at stake, the calibration cannot be based on maximizing all inputs instead of determining realistic values for these

inputs. The CoC rate is a financial parameter and not a prudence margin in itself.

Cost of debt (Paragraphs 1409 to 1412)

EIOPA refers to CEIOPS approach which "assigned 0% to the weight of debt by way of simplification" because "based on QIS 4 results …debt funding cannot constitute more than 6 – 8% of the capital base". EIOPA considers that "the situation has not significantly changed since QIS4" and "the weight of debt is … still assumed to be nill"[5].

- **This approach is flawed as it proposes to use a classic model but truncates this models with regard to the debt financing part, thus ignoring its impact on the CoC rate.**

- The average share of eligible debt instruments in eligible own funds (EOF) in the EEA is not a comprehensive indicator for estimating the share of debt financing for deriving the CoC rate with a WACC approach. Indeed, the EEA average reflects a situation which is biased by including all entities, as insurance mutual companies, which do not rely highly on external financing. In addition, important disparities exist between Member States in terms of the use of subordinated companies by insurance companies.
- **Debt instruments represent a significant share of the eligible own funds of large insurance and reinsurance groups which hold very material amounts of RM.**
- As the WACC derivation of the CoC rate refers to the Cost of equity derived from the CAPM and an average beta of listed insurance companies, the share of debt should be assessed on a sample of listed companies. Otherwise, this would lead to overestimate the Cost of capital rate.

[5] In the feedback statement (18.3), EIOPA considers also that "the universe of investment grade instruments will contain senior debt which does not count as regulatory capital under SII. It therefore may not be appropriate to reflect yields on senior debt when deriving the CoC".

- The share of eligible debt instruments in the EOFs of significant listed European insurance groups is clearly significant and cannot be considered at all to be nil. The following table indicates the share of debt instruments in EOFs (excluding others sectors and D&A) for 18 significant EEA insurance groups, which concentrates a material amount of the total EEA RM. Their average share of debt financing is c. 25%[6].

Share of debt instruments in eligible own funds (excluding others sectors and D&A) for some significant EEA (re)insurance groups			
AEGON N.V.	39%	Mapfre, S.A.	8%
Ageas SA/NV	29%	NN Group N.V.	24%
Allianz SE	21%	Old Mutual plc	46%
Assicurazioni Generali S.p.A.	23%	Phoenix Group Holdings	9%
Aviva plc	34%	Prudential plc	24%
AXA SA	36%	RSA Insurance Group plc	40%
CNP Assurances SA	29%	Talanx AG	11%
Delta Lloyd NV	46%	Unipol Gruppo Finanziario S.p.A.	32%
Legal & General Group Plc	20%	Vienna Insurance Group AG	16%
Total of debt instruments in EOF / total EOF for these 18 groups			*25%*

Source : SFCR reports YE 2016

- **Using the share of debt instruments in total EOFs (and not in the SCR) is**

[6] The estimate is not expected to be materially different for the 66 listed European companies considered by EIOPA. Currently, this situation reflects the effect of transitory measures but there is no reason to assume that the share of debt financing will not be replaced in the future by Solvency II compliant instruments.

conservative when estimating the potential impact of debt financing on the Cost of capital rate for the RM. The RM is indeed the cost of providing capital for covering the SCR and the share of debt financing is a lot higher if expressed as a percentage of the SCR. As far as compliance with the SCR is concerned, insurers are authorized to use subordinated liabilities up to 60% of their SCR, depending on the structure by tiers of their capital[7].

- **The impact of the use of debt financing on reducing the CoC rate depends on the relative cost of debt to the cost of equity and on the benefit of the tax deductibility of interest payments which depends on the tax rate.**

- Significant cost-differences exist between equity and debt funding and tax relief on debt payments contributes to reducing further the effective cost of debt financing compared to equity financing. The average corporate tax rate has tended to decrease in the European Union between 2010 and 2017 but continues to be relatively high (around 22%). The cost of debt financing is currently very low (c. 250 bps over the risk free rate) and it is usually materially lower than the cost of equity (for instance, around 200 bps lower or more since 2012).

- **No company will leverage its balance sheet when debt financing cost is higher than cost of equity.** It can happen, as it was the case in 2008 / 2009 over a few months that the secondary corporate debt spreads levels reached levels higher than the CAPM cost of equity. However, in 2008 / 2009, these levels were not reflecting financing conditions as there was no effective transaction during this period. According to financial theory, the main reason to raise hybrid capital is for insurers to leverage financial resources / capital at a

[7] As far as compliance with the SCR is concerned, the eligible amount of Tier 1 items shall be at least one half of the SCR and the sum of the eligible amounts of Tier 2 and Tier 3 items shall not exceed 50 % of the SCR; subordinated liabilities are limited to 20 % of the total amount of Tier 1 items (Art. 82 of the delegated regulation).

cheaper cost to improve ROE. When an 'insurance undertaking raises hybrid debt, the cost is locked at a fixed rate for a long-period of time (usual 5 to 10 years).

Assuming a 25% weight of debt and an average corporate tax rate of 22%, the WACC cost of capital would instantly be materially lower.

Equity risk premium (Paragraphs 1415 to 1435)

a. Historical return model

Concerning the equity risk premium (ERP), EIOPA focuses on the historical return model[8] and the dividend discount model, describes the pros and cons of both methods and suggests to use only historic return models to ensure methodological consistency, stronger stability and lower dependence on assumptions.

In the consultation paper, the table comparing the pros and cons of dividend discount models and the historical return model (backward-looking ERP) is very one sided.

The paper "The Cost of Capital: the Swiss Army Knife of Finance" by Damodaran which EIOPA references in paragraph 1422 of the consultation paper articulates the limitations of the historical return approach. This paper states regarding backward looking ERPs: *"Not only are they backward looking, by construct, and subject to manipulation, with very different values for the premium based upon what period of history you look at, whether you use T.Bills or T.Bonds as your risk free rate and how you compute averages. Not surprisingly, analysts use this to advantage and pick equity risk premiums that reflect their valuation biases, pushing towards the higher numbers [...], if their bias is towards lower values, and the lower numbers to justify higher values*".

[8] The historical return model was used in the initial calibration, leading to an ERP estimate of 7.81% derived from the return of US stocks from 1926 to 2006.

- **Historical return models can introduce a strong bias as they are backward-looking and depend strongly on the time period chosen.**

EIOPA considers that the backward-looking ERP is less volatile than the forward-looking one. However, the backward-looking ERP is extremely volatile.

Even when calculated over very long time horizons, it displays a very significant standard deviation: approximately 20%. (See: Norges Bank (2016) « The Equity Risk Premium »). The Shiller dataset covering 1871-2012 produces a 17.7% standard deviation, while Damodoran's one covering 1928-2015 yields a 20.1% standard deviation.

This means that the calculated backward-looking ERP estimates have a very wide confidence margin. As a consequence, researchers using the same data but calculating equity returns over different periods, will obtain widely differing estimates of the ERP. There is no evidence that dividend models are more volatile.

There is considerable scientific evidence that the backward-looking ERP is an upward biased estimate of the true theoretical ERP, which is forward-looking by virtue of the CAPM definition[9].

Ibbotson and Chen (2003) show that after accounting for unexpected capital gains, the ERP for the USA is reduced significantly, by 2%. In a similar vein Fama and French (2002) show that the backward-looking ERP over 1951 and 2002 was 2% higher than the forward-looking one.

- **The ERP based on historical return models requires certainly fewer**

[9] The consultation claims also that the backward-looking ERP is consistent with beta calculations because the latter are backward-looking too. But the RFR interest rate subtracted from the ERP is also a forward looking variable, telling how much one will get in the future by investing one unit of an asset today.

assumptions to be calculated. However, if using an historical return ERP, it is essential to address its upward bias, by making a -2% correction.

CEIOPS' advice was based on time series of US stocks since 1926. EIOPA considers that "a calibration on European stocks appears preferable" and complements the initial estimate of the ERP on European data from 1975 to 2006 (9.24%) with Eurostoxx 600 returns till 2016 and get an average ERP of 8.09%. EIOPA also complements for comparison the calibration based on US stocks since 1926 with S&P 500 data after 2006 and get an ERP of 7.54%. As a validation, EIOPA uses an approach developed by Damodaran and uses the S&P 500 market risk premium (apparently 6%), computes country risk premiums using Moody's ratings for European countries and obtains the weighted average (7.02%) depending on GDPs of the country ERPs. In its calibration of the CoC rate, EIOPA finally retains 7,02% and 8,09% as the two ERP values for deriving the range of the CoC rate.

- **EIOPA's backward looking [7,02% - 8,09%] range is too conservative and too narrow, and based on specific data sets and periods to support it, in particular the Eurostoxx 600 gathering the largest, most successful European listed companies. The CROF considers that an ERP of 7- 8% is clearly not a central value.**
  - **Going too far back to calibrate the market risk premium (as when EIOPA uses data starting in 1926 for the US case) tends to increase it artificially.**
  - EIOPA reasonably underlines in the consultation paper that "*the inclusion of the World War II period and the following economic recovery in the US time series may be considered questionable, because that economic situation is not comparable with today*".

	○ Similarly, a data set starting more than 40 years ago in 1975 for the European case when the economic environment and growth perspective was different from today might also lead to an upward bias (and the backward looking approach introduces anyway an upward bias). ▪ **The approach of calculating the country risk premiums by adding an adjusted sovereign spread is the most conservative of the options listed in the Damodaran paper.** ○ The first option in the Damodaran paper is simply to assume that country risk is diversifiable and therefore not deserving of additional risk premia. EIOPA has not considered this further which lends to a one sided presentation of the Damodaran analysis. There is a risk that this approach based on country risk premiums in the context of the CAPM is not consistent with the use of the beta for the European sector, which might already reflect the impact of country risk. ○ The result stems from a weighted average of European country ERPs with GDP weights for these 26 countries, which seems overly complex and not reliable as a method of validation. Besides, this validation starts with an excessively high ERP (6%), which introduces a bias in the results. ▪ **A more appropriate validation would be to consider independent academic views on the equity risk premium.** • Dimson, Marsh and Staunton conducted a benchmark study of ERPs in their 2003 paper[10] which analyses historical equity risk premia and	

[10] Dimson, Elroy and Marsh, Paul and Staunton, Mike, Global Evidence on the Equity Risk Premium (August 1, 2003). Journal of Applied Corporate Finance, Vol 15, No 4, pages 27–34; https://ssrn.com/abstract=431901.

concluded that[11] "***when developing forecasts for the future, investors and managers should adjust historical risk premiums downward for the impact of these factors.*** *This suggests that a plausible, forward-looking risk premium for the world's major markets would be in the order of* ***3% on a geometric mean basis, while the corresponding arithmetic mean risk premium would be around 5%.*** *These estimates are lower than the historical premiums quoted in most textbooks or cited in surveys of finance academics. They represent our best estimate of the equity risk premium for corporate capital budgeting and valuation applications."*

- In a 2011 update[12] they conclude that they "*infer that investors expect a long-run equity premium (relative to bills) of around 3%–3½% on a geometric mean basis and, by implication,* ***an arithmetic mean premium for the world index of approximately 4½%–5%.*** *From a long-term historical and global perspective, the equity premium is smaller than was once thought*."
- Damodaran shows a range of historic ERPs from 2.3% to 7.96% depending on the choices made (table 4) and a range for Europe of 3.1% to 5.1% and 3.2% to 5.6% for the world (table 6)[13]. The consultation is therefore very selective when retaining a figure of 6.05% based on table 1 on page 11 of the Damodaran report.
- The Norges bank note "The equity risk premium" (2016) concludes that "*The average World ERP based on data from 1970 to 2015 is 6.4 percent.*

[11] "*More fundamentally, however, we have argued that* ***past returns have been advantaged*** *by a re-rating due to a general decline in the risk faced by investors as the scope for diversification has increased. We have illustrated one approach that can be used to obtain an estimate of the amount by which the required rate of return has fallen. In addition, we have argued that* ***past returns have also been inflated by the impact of good luck****. Since the middle of the last century, equity cash flows have almost certainly exceeded expectations. Stock markets have therefore risen for reasons that are unlikely to be repeated."*

[12] Dimson, Elroy and Marsh, Paul and Staunton, Mike, Equity Premia Around the World (October 7, 2011). https://ssrn.com/abstract=1940165.

[13] Damodaran, Aswath, "Equity Risk Premiums (ERP): Determinants, Estimation and Implication"s – The 2017 Edition (March 27, 2017). https://ssrn.com/abstract=2947861.

Adjusting the average for repricing over the period lowers the average to 3.9 percent".

- **A realistic range for the backward looking ERP is rather [5%-7%], which translates into a [4%-6%] range when adjusting the bias of a backward looking measure. The CROF recommends 5% as a central value for the ERP.**

b. Dividend discount model (DDM)

With regard to the dividend discount model, EIOPA has used the Damodaran method based on the Eurostoxx 600 data, a 5,5% dividend growth assumption for the first 5 years, and a share buyback contribution. They get an average ERP estimate of c. 6% and indicate various sensitivities and different results based on different models, notably a range from 2,3% to 8.7% for Europe.

Although EIOPA does not deny that DDMs tend in general to a lower ERP, correcting the bias linked to historic models, they do not retain any adjustment when using the historical return model.

EIOPA obtains an ERP smoothed estimate of 6% derived using the Damodaran method[14] over a ten year period, based on the Eurostoxx 600 index (share price) with the following assumptions:

- Dividend growth of 5.5% for the first five years of the projection.
- compensation grows at the risk free rate after the first 5 years;
- Use of the 10-year rate for the Euro Area (OECD data) of 0.93%.
- Share buy-backs included with an uplift factor of 143% to dividends[15].

[14] The Damodaran method projects future compensation, and derives the ERP from the discount rate that gives these future cash flows a present value equal to the current share price (Damodaran, The Cost of Capital: The Swiss Army Knife of Finance, 2016).

	EIOPA indicates that the retained ten years includes a period where the ERP increases abnormally because of the latest financial crisis (The drop in share prices will tend to inflate mechanically the ERP if expected cash flows do not decrease similarly). Averaging the point-in-time results is insofar not enough. The period is not well chosen or the impact of the crisis should be accounted for and the resulting ERP would be lower. **The 5,5% dividend growth assumption is not appropriate when calculating a rolling ERP.** This assumption has a strong impact on the result. It is likely too optimistic if including also a significant uplift factor applied to dividends to allow for share buybacks. Applying the last 5 year dividend growth rate assumption without adjustment or justification lacks rigour. This is particularly the case as the 10 year average dividend growth of the Eurostoxx 600 was 0%, demonstrating that the assumption is highly sensitive to the time period chosen in the analysis. A more considered analysis is required, and the Damadoran report provides this. The ERP for a given year should be based on a specific estimate of the dividend growth potential, based on analyst estimates of earnings growth, rather than historic figures. In its report (pages 83 onwards), Damodaran derives the forward looking equity risk premia based on the S&P 500 from 2008 to 2017, including the contribution of share buy-backs (S&P figures are used by EIOPA for deriving the historical return ERP so that it is consistent to use it also to derive the forward looking ERP). The average of the ERPs calculated for this 10 year period is c. 5%. **ERPs calculated by Damodaran based on S&P**	

[15] The % corresponds to 1/(1-0.3) as share buy backs represented c30% of shareholders' total remuneration over the last ten years.

500 figures[16]

2008	4,46%	2013	5,78 %
2009	6,43%	2014	4,96 %
2010	4,36%	2015	5,78 %
2011	5,20%	2016	5,16 %
2012	6,01%	2017	4,50 %

- The Norges bank note "The equity risk premium" (2016) indicates that "*The average World ERP estimate from various dividend discount models is 5.9 percent. These estimates may be affected by recent data bias. Cash flow growth has been exceptionally large since the end of the Global Financial Crisis in 2009, which in turn may bias upward expectations of future cash flow growth when extrapolated from historical data. In a below-average cash flow growth scenario, the estimated World ERP is 3.7 percent. Estimates of the expected ERP are also affected by the choice of proxy for the future risk-free rate. The current near-zero short-term interest rates may be a poor proxy for future short-term rates if the market expects rate increases in the future.* ***The expected World ERP from the discount models may be closer to 4 percent if expectations of interest rate normalisation are taken into account. Estimates from cross-sectional and time-series models also suggest an expected World ERP of 3 to 4 percent."***

[16] It can be noted that the 2016 FL ERP calculated by Damodaran in its 2017 report (5,16%, pages 91-92) revises the figure presented in its 2016 report (6,12%) which appears in the consultation paper on page 282 in the extract from the Damodaran paper.

- **A realistic range for the forward looking World ERP is in the range of [4 – 6%]. The expected ERP, which is the most appropriate theoretically for the CAPM, is lower than the historical ERP. It is necessary to correct the upward bias of backward looking ERPs if using the latter to derive the Cost of capital rate.**

Beta factor (Paragraphs 1436 to 1440)

EIOPA indicates that "it is not useful to derive separate beta factors for life and non-life undertakings because the Solvency II Directive stipulates that the same CoC rate is applied for all undertakings. It is therefore more appropriate to directly derive a beta for an average undertaking"[17].

This significant change of approach shows that the initial range derived by CEIOPS for the CoC, which was corresponding to different beta values for Life and Non Life business, was artificial. The beta used to derive the upper bound of the CoC rate was too high, as not reflecting a beta for an average undertaking.

EIOPA uses a "levered beta", i.e. "the capital structure of insurance companies, reflecting equity and debt, was taken into account" but using a levered beta is not at all consistent with an approach where "the weight of debt is … still assumed to be nill".

If a company is considered as holding no debt, how can its beta factor be considered at all to be levered? The use of a levered beta implies necessarily to account for the impact of debt financing in the WACC approach (in particular if the derived Cost of equity is high). Otherwise, the unlevered beta should be used,

[17] CEIOPS advice was based on a derivation of the beta factor that compared the performance of US stocks with European insurance stocks over a period of nine years. The calculation provided separate beta factors of 1.28 for life insurance and 0.94 for non-life insurance. For the revision of the beta factor the returns of European insurance undertakings are compared with the returns of the European stock market "because the beta factors will be applied to an ERP for the European stock market".

which is generally considered as reflecting more adequately the correlation of a company to the market. The unlevered beta is by nature materially lower than the levered beta[18].

EIOPA derives the beta factor on the basis of a weighted average of the betas for the 66 listed EEA insurance and reinsurance companies and groups, regressed against the Eurostoxx 600. This is not theoretically correct: the beta should be calculated with respect to the global market, simply because the marginal investor can diversify away European-specific risks by investing outside of the EU market (as well as in assets other than equities). This is especially true today with globalized portfolios and capital flows.

Besides, the Insurance beta as calculated by Damodaran is significantly higher in Europe compared to the global and US-specific Insurance beta. This difference comes from higher life insurance betas in Europe than globally and in the US. But the life insurance betas in general are likely related to asset risks that are correlated to the market, which is not relevant when deriving the CoC rate for pure insurance risks (for instance the non life beta is in particular 40% lower than the Life beta globally, despite the fact that even Non life insurers bears some investment risk).

Insurance betas calculated by Damodaran

	Insurance beta (Levered
Europe	**1,12**
World	**0,71**
US	**0,9**

[18] Levered beta = Unlevered beta* (1+(1-tax rate)*(Debt/Equity)). EIOPA notes in a footnote that Damodaran derives an unlevered beta of 0.9. Actually, Damodaran derives an insurance unlevered beta of 0.79 for Europe (and 0.51 globally).

As the RM is not supposed to be held in relation to hedgeable asset risks, it is important to use a beta which is not biased by the impact of asset risk. Otherwise, a very significant adjustment would be needed when using the CAPM to derive the RM (this adjustment should also reflect that the RM is not held in relation to new business).

Considering the global insurance beta is also more in line with the increasingly global insurance market and the specific margin of the RM, there is no reason why European insurance risks would have a higher correlation with the market than global insurance risks, and too much attention should not be placed on the European figures – unless a material adjustment is made to account for the higher level asset risk held.

Paragraph 1438

"Data from companies is aggregated using a weighted average in order to reflect different company sizes and to arrive at an estimate that is sufficient to transfer half of the insurance liabilities in the market" (The weights are based on market capitalization). "It was not considered appropriate to take the simple average of company betas, which results in a beta in the range 0.9-1, and would provide a lower level of protection". The results of the beta calculations for all classes of firm (life and non-life): 1,25 with the Eurostoxx 600 index, 1,19 with local indices and 1,12 with K. French European market returns index. "In view of these results a beta factor of 1.20 is suggested to be used in the calculation of the CAPM."

It is not clear how this estimation is proceeded ("*sufficient to transfer half of the insurance liabilities in the market*") and EIOPA has not shared its data and calculations, so that it is not possible to replicate their analysis.

The weighted average approach based on market capitalization is not justified: it creates a distortion insofar as big caps can have a larger correlation with the

	market and a larger financial component whereas the RM will finance the capital for the run off of pure insurance risks which are not correlated with the market. This implies that the insurance liabilities at larger companies are more strongly correlated with the market (and vice versa for smaller groups) but no justification is provided for this assumption. The CoC rate calibration is proportional to the beta factor so that the calibration will be highly sensitive to different assumptions on this factor: for instance, retaining a beta of 0,9 instead of 1,2 leads to a CoC rate which represents only 75% of the CoC rate suggested by EIOPA. There are no genuine arguments for considering a beta of 1.2, and EIOPA is already conservative on many other aspects, including the ERP, introducing a 2 point upward bias. The amounts at stake are however so large that the calibration cannot be based on including layers of prudence in all inputs. EIOPA provides a range of 0.9 to 1.25 for the beta, but selects 1.2 for its recommendation, which is clearly an upper bound for a levered beta containing franchise and asset risk - the 1,25 figure is derived based on a reference (Eurostoxx) which is theoretically contestable for the intended purpose. In particular, Fama and French data[19], providing the global index, is the reference for academic beta calculations - on the contrary the Eurostoxx 600 is not a correct reference as it does not represent the investment universe available to global investors. A realistic range for the levered insurance beta of European companies is [0,9-1,2] which would lead to consider a levered beta of 1.05 as very prudent. This figure however is biased by the contribution of franchise risk and asset risk exposures of Life insurers.	

[19] http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

In practice, the run off situation reflected by the RM would attract international investors for which the levered beta is likely to be significantly below this figure.

The CROF recommends to consider a levered beta of 0,85 maximum (subject to further adjustments for asset and franchise risk) which corresponds to the central value of a [0,7%-1%] realistic range based on the global situation.

Further adjustments

EIOPA reminds that the CEIOPS initial derivation of the CoC rate CEIOPS "applied further adjustments to allow for economic aspects not reflected in the CAPM estimation of the CoC". EIOPA considers that "As for the initial estimation of the CoC rate it seems hardly possible to quantify the impact of the aspects that the further adjustment reflects" but proposes to "keep the relative adjustment that CEIOPS applied and reduce the result of the CAPM calculation by 20% to determine the CoC rate".

In 2009, CEIOPS has derived from the CAPM a range of [7,5%-10%] for the CoC rate, mentioning downward and upward adjustments and considering finally that a "range for the CoC rate after these adjustments of 6-8 per cent could be deemed as reasonable"[20] (we would reiterate here that the original CROF work proposals on this recommended a cost of capital rate between 2.5% and 4.5%).

CEIOPS mentions in particular that "a key source of return that exists for going concerns (the so called franchise value related to expected profit from new business) may not be demanded by capital providers in a transfer context, a

[20] This range corresponds to an estimated Cost of capital of 7,3% for non life and 10% for life business, based on a market risk premium of 7,81% - based on US stocks - and on respective betas of 0,94 and 1,28 for non life and life business.

downward adjustment is needed" but considers that "no reliable quantitative results are available concerning the size of this adjustment". CEIOPS mentions additional costs "beyond those required to compensate investors for the risk they are assuming" (in particular frictional costs) make an upward adjustment necessary and considers as "unlikely that the downward adjustment outweighs the upward adjustments by a large margin".

As CEIOPS disregards the frictional cost approach to derive the Cost of capital rate, it is not consistent to consider an upward adjustment due to additional costs linked to frictional effects on top of the Cost of capital derived from the CAPM. By definition, the "total return" CAPM cost of capital reflects already all the risks and costs assumed by investors. On the contrary, a downward adjustment is needed because the general CAPM framework is not designed to reflect only the cost of running off pure insurance risks as it is the case with the RM.

In its consultation paper, EIOPA derives a range of 6,7% - 7,8% after taking into account a 20% adjustment[21] which leads to "results of the CoC calculations in the range from 6% to 8%" and the recommendation to maintain the currently applicable CoC rate of 6%.

Cost of equity calibration (CEIOPS and EIOPA)

	Beta	**ERP**	Beta *ERP	**Adjustme**	**Range post**	**Recommended**

[21] This is based on an ERP of 8,09% based on the historical return model on European stocks and 7.02% on US stocks and country factors, with a beta factor of 1,2. The [6%-8%] range indicated by CEIOPS reflects an implicit 20% adjustment compared to the initial [7,5%-10%] range derived from the CAPM. When recommending a CoC rate of 6% at least, corresponding to the lower bound of the suggested range, the total implicit adjustment represents 40% (based on the higher beta retained for life business).

				nt	adjustment	CoC rate
CEIOPS	0,94 (Non Life) & 1,28 (Life)	7,81%	7,34% & 10%	20,00%	6%-8%	6,00%
EIOPA CP	1,2	7,02% & 8,09%	8,42% & 9,71%	20,00%	6%-8%	6,00%

NB : The CoC rate derived by CEIOPS and EIOPA is not a WACC CoC rate (100% equity funding is assumed, which is inconsistent with the use of a levered beta). Applying the WACC approach with a 400 bps Cost of debt assumption would reduce the CoC rate to 5,3%.

The recommendations of CEIOPS and EIOPA, as summed up in this table, are based on beta and ERPs parameters which are at the top of the ranges, coupled extremely conservatively with a limited adjustment and the absence of allowing for any impact of the cost of debt (despite retaining inconsistently a levered beta) and contribution from asset risk. The resulting CoC rate is materially too high and would already be materially reduced by considering the impact of the cost of debt according to the WACC approach referred to by EIOPA.

Although it is complex to quantify precisely the impact, retaining an adjustment of only 20% of the CAPM results is clearly marginal, which would put into question the legitimacy of using the CAPM framework for this purpose, whereas the specific nature of the RM which is related to pure insurance risks and excludes asset and new business risk should lead to a material downward adjustment. This is confirmed by the fact that CEIOPS and EIOPA apply implicitly another adjustment to derive the 6% figure, but this second adjustment is not made explicit and it is

just presented as taking the lower bound of the derived range (the implicit total maximum adjustment applied by CEIOPS is in particular 40% for Life and EIOPA's total maximum adjustement is of a similar magnitude). This process embeds a lot of discretion and subjectivity. Presenting the 6% figure as the lower bound of the realistic range of the CoC rate is artificial. The suggested range presents an upward bias linked to the chosen ERP and Beta and the absence of a material adjustment.

In light of this, the CROF considers that for a central value of the beta, an adjustment of c.30% (applied on an unlevered beta) is more appropriate. The 30% adjustment is likely to be conservative when considered in the context of the risk profiles of life insurers in particular who carry large amounts of asset risk. For example the results of the 2016 EIOPA stress testing exercise in section 2.3.1 on SCR –MCR profile notes that "Market risk accounts for 64% of the net solvency capital requirement before diversification benefits for standard formula users.

The derivation of the CoC rate should be based on consensus-based central values of the ERP and the beta and apply an adjustment which is material enough in relation to the beta estimate. This approach which leads to a WACC CoC rate of 3% as an appropriate yet still prudent CoC rate, is the only way to ensure that the CAPM is legitimate for the purpose of deriving the CoC rate.

Even with parameters which departs from the central values of realistic ranges, the WACC CoC rate stays in a range which is far below 6% and consistent with the range previously indicated by the CROF([2,5%-4,5%]).

	Cost of equity calibration*	WACC CoC rate**

		Levered Beta	**ERP**	**Beta *ERP**	**Adjustment**	**Value or Range post adjustement**	**Cost of debt**	**WACC CoC rate**
	CROF (central values)	0,85	5%	4,3%	30%	3,0%	2,5%	2,7%

** Cost of equity = Levered beta*ERP *(1-Adjustement)*
*** WACC CoC rate = 75%*Cost of equity + 25%*(1-22%)*Cost of debt, assuming a 22% tax rate*

18.4.3

The CROF analysis has confirmed that 3% represents an appropriate yet still prudent estimate for the cost of capital as defined by Solvency II. This is consistent with the CRO-CFO Forum's previous feedabck to CEIOPS on its original advice on the Risk Margin and the CRO-CFO Forum's 2008 paper ("Market value of Liabilities for Insurance Firms"). The weighted average Cost of capital rate cannot be calculated based on the assumption that "the cost of capital is equal to the cost of equity".

The current 6% level of the Solvency II cost of capital rate is excessive because:

- It was calibrated based on backward-looking equity risk premiums, rather than forward looking market risk premium, which introduces a strong upward bias;

	- It was calibrated based on a 100% equity funding assumption but with the use of a levered beta (which is completely inconsistent), and without adjusting the beta for the run off of pure insurance and asset risk. This leads to a level of the Risk Margin which is too volatile and does not seem reasonable within the Solvency II framework. If EIOPA persist with an assumption of pure equity funding then,the Solvency II CoC rate from the standard CAPM methodology should be derived in the following way: **CoC rate = (1-x)β.[Market risk premium]** Where: **Market risk premium** represents the expected return above the risk-free rate that investors would require in order to hold a global diversified portfolio containing all market assets, including equities and bonds, on a forward looking basis. **β** is the unlevered beta of the insurance sector. Using an unlevered beta is consistent with CEIOPS' assumption that firms are 100% funded by equity, which will tend to add a layer of prudence in the calibration of the CoC rate. Not using an unlevered beta in this context would result in an inappropriately high cost-of-capital (alternatively, the use of a levered beta should go along with a Weighted Average Cost of Capital approach which would also lead to lower the final CoC rate – see response to 18.4.2). **x** is the adjustment required to derive a beta for pure insurance risks – i.e. excluding the impact of franchise risk and assets held by insurers (which are more correlated to the rest of the market). Our analysis supports the following ranges of values for the parameters outlined	

above:

x = 30%: this is derived from conservative estimates of the impact of franchise risk, and the impact due to assets held by insurers. This level of adjustment is consistent with the downward adjustment assumed by CEIOPS in its 2009 final advice on the risk margin.

β = 0.65 - 0.8: This represents a prudent range for the unlevered beta for insurers based on a realistic estimate of 0.65 from a comprehensive NYU Stern study. (Alternatively, if not considering the unlevered beta, the Weighted Average Cost of Capital approach would also lead to lower the Cost of capital derived from the CAPM).

Market risk premium = 4-5%: A backward-looking assessment of the risk premium for a diversified world equity portfolio would support a value of around 5%-7%. However, this does not take into account that a global diversified portfolio contains assets other than equities, in particular bonds which have lower risk premiums and does not account for the fact that backward-looking risk premiums contain a strong survivorship bias. Studies support at least a 2% downward adjustment to take account of these effects. This is consistent with average estimates of forward-looking Equity Risk premiums by Thomson Reuters (4.5% worldwide). This is also prudent when additional sources are taken into account – for example, Dimson et al ("Credit Suisse Global Investment Returns Yearbook" (2017 update published in February 2017)) find a world and European equity risk premium of 4.4% with respect to long-term government bonds on a conservative basis (i.e. using an arithmetic mean and not adjusting for survivorship bias).

Taken together, these assumptions produce a Solvency II CoC rate of around 2%-3%.

Therefore, this updated analysis from the CRO-CFO Forum clearly illustrates that

	a value of 3% for the Solvency II CoC rate is appropriate, yet remains significantly prudent. Given this, the CRO-CFO Forum recommends that the Solvency II CoC rate is revised downwards from its current level of 6% to a new level of 3%. This is consistent with the CRO-CFO Forum's previous feedabck to CEIOPS on its original advice on the Risk Margin and the CRO-CFO Forum's 2008 paper ("Market value of Liabilities for Insurance Firms").	
19.1	The **CFOF-CROF** welcomes the Commission's request for EIOPA to investigate the appropriateness of own funds regulation in insurance and banking sectors. For the majority of European insurance companies which are either not listed on a stock exchange and/or are organized as mutual, cooperative or public sector companies, RT1 instruments are the only means to raise Tier 1 own funds externally. Since these insurers do not have the opportunity to increase own funds by capital increases, RT1 instruments have a high significance for the industry. Moreover, also for listed insurers these instruments are important. Therefore, we welcome various key suggestions/observations put forward by EIOPA. We particularly **support the suggestion to avoid a full alignment of bank AT1 with insurance RT1** as this would ignore the differences in both (i) regulatory regimes and (ii) business models. We also fully support the preference for maintaining the **20% limit for RT1**, since the alternative solution – increasing the quality of RT1 – does not work in our eyes, and rather increases the risk of unintended consequences. The CFOF-CROF further welcomes EIOPA's clarification that a **partial write down** instead of a full write down is permissible under certain conditions. Also, we welcome EIOPA's proposal to provide supervisory authorities with **the ability to consider an exceptional waiver on write down**, if the solvency position of the	

	issuer would most likely be significantly weakened as a consequence of the write down. We acknowledge EIOPA's efforts in finding a practicable solution for issuance of RT1 instruments. Finally, the **deletion of replacement requirement for certain early calls** makes sense, as it supports the ability to manage the effectiveness and cost-efficiency of the capital structure of an insurer. All the above suggestions increase the quality of RT1, as they reduce the risk of unintended consequences. Nevertheless, the CFOF-CROF still foresees the functioning of the current RT1 requirements as complex with several unintended consequences still possible for insurers in certain jurisdictions and under certain stressed conditions. As such, we would like to explain potential challenges that could derive from the current proposals and highlight a number of additional concerns. We believe these can be addressed, at least on the medium term, with a couple of relatively small additional changes to either the Delegated Regulation or the EIOPA Guidelines. These changes would, in our eyes, further improve the positive proposals already put forward by EIOPA as noted above. These additional changes are in relation to the following items, which we will explain in more detail in the relevant comment sections below: **(1) The complexity of current own funds regulation is underestimated with notably the danger of trigger inversion at group level** a. To avoid unintended consequences, we propose to extend the ability of regulators to grant an extraordinary PLAM waiver to cases where there	

	is trigger inversion (i.e. breach of Group MCR while the Group SCR is still above 100% or above 75%). b. To minimize the risk of trigger inversion, and noting that a proper revision of the Group MCR concept would require changes to the Solvency II Directive (which we understand are not possible in the near future), we propose to change the Tiering limits for the Group MCR to the best alternative under the current Solvency II Directive (i.e. min. 50% T1 and max. 50% T2 instead of applying the solo MCR limits min. 80% T1/ max. 20%). c. As a minimum, regulators should be able to grant the exceptional PLAM waiver also in case of Group MCR breaches (in particular where trigger inversion applies) d. Trigger inversion is not only relevant for RT1 but also for T2 and T3 in so far as coupon and redemption deferral triggers are also linked to the Group MCR. **(2) The complexity and inherent risks of PLAM are underestimated** a. Conversion can lead to adverse tax effects in certain jurisdictions, too. The extraordinary PLAM waiver should therefore not be restricted to write-down, but should also be available to regulators for conversion RT1. b. PLAM can lead to an increase of one ratio (e.g. Group MCR), but to the simultaneous decrease of another – equally relevant - ratio (e.g. Group SCR). c. In such a case partial write-down should be preferred where it may cure the Group MCR ratio without resulting in a breach of the Group SCR. d. The applicability of an extraordinary PLAM waiver – or the applicability of partial write-down - should be possible to allow regulators to ensure a sensible result from PLAM.	

	(3) The quality of RT1 (excluding PLAM) is underestimated, the benefits of PLAM are unclear a. We are of the opinion that even without PLAM RT1 is formally of at least the same quality as equity b. A going concern PLAM can thus hardly improve the quality of RT1 further, but it can lead to unintended consequences which would instead weaken the quality of RT1. c. We therefore propose to limit PLAM to truly gone concern situations, where PLAM is justifiable vis-à-vis investors, and where we would not expect any unintended consequences. d. Applying PLAM only in gone concern cases would be in line with the current de facto European bank AT1 regime as well as with that for Australian insurance AT1. **(4) A write-up provision is important as long as PLAM continues to apply in going concern** a. In going concern, a write-down risks that the hierarchy of capital turned upside down as it generates a profit to shareholders at the cost of RT1 investors. b. This is economically questionable, in particular if PLAM were to require full and permanent write-down. c. Therefore, clear and simple write-up provisions are a necessary to ensure sensible and coherent insurance capital regulations. d. EIOPA did not mention write-up at all, and it is therefore unclear whether write-up is possible and what exactly would constitute a "hindrance to recapitalization" in EIOPA's view. e. It would be important to understand EIOPA's position before we can provide a concrete and workable suggestions for write-up that is acceptable for EIOPA.	

19.2		
19.2.1		
19.2.2	With regard to the current requirements set out in the Delegated Regulation, we would like to highlight the risk of trigger inversion at the group level and the impact of this on e.g. RT1, T2 and T3. The CFOF-CROF fully recognizes that triggers relating to a gone concern situation make absolute sense, it is important that this gone concern situation is identified correctly. However, the current approach to the floor to the consolidated group SCR (effectively the "group MCR") is too simplistic to be the correct basis in varuous circumstances. In the below we aim to highlight the specific issue and explain that it is not a remote – but unintended - consequences that will not be well-understood or received by investors and will be problematic as well for supervisors in the daily supervision of insurance companies. At the end of the analysis, we provide some proposals for amendments to the Delegated Regulations and/or EIOPA guidelines to mitigate the unintended consequences for the supervisory ladder of intervention. On group level, the MCR can be breached while the Group SCR ratio still exceeds 100%. This stems from the fact that the Group MCR is currently constructed as the simple ***sum of solo MCRs*** with the MCR Tiering Limits applying. The solo MCRs are factor based charges based on technical provisions, premiums and capital at risk, subject to an absolute EUR amount floor, and at solo level should be in the range of 25-45% of the SCR. At solo level, the range ensures a logical ladder of intervention. At group level, however, the range is lacking, and with the simple factor based (rather than risk based) MCR approach that does not include recognition of diversification it may start to interfere with the SCR level. **As a consequence, in certain circumstances, the Group MCR can be breached**	

	even though the Group SCR is still above 100%. **This unintended issue of trigger inversion is a realistic risk for many large insurance groups,** observed on the basis of an analysis of 15 large Solvency II-regulated groups that together are responsible for a large proportion of currently outstanding group *externally* placed subordinated debt. We have calculated the pro forma group SCR ratios (scope includes entities included via internal model or standard formula as well as Other Financial Sector ("OFS") entites and D&A (equivalent) insurers) after a shock to UT1 has been applied that reduces the Group MCR coverage for *each* insurance group to 100%. The scope of the Group MCR ratio only includes entities included via internal model or standard formula. On average, the Group SCR is ca. 96% when Group MCR is just about to be breached (this average would increase to 107% if one assumes that in such a shock, DTA (T3) would increase and fully use the actual remaining T3 headroom of those issuers as per year end 2016). For 5 groups, the resulting pro forma Group SCR ratios would still be above 100% (trigger inversion for all three triggers, i.e. cancellation/deferral, redemption and PLAM; 8 groups would be affected if you allow for the full use of the remaining T3 headroom). The resulting pro forma Group SCR is lower than 75% at Group MCR breach for only two of the 15 groups, and it is only for these two groups where PLAM would be triggered by the 75% SCR trigger rather than the Group MCR trigger. **To avoid confusion, please be aware that the analysis is based on a crucial "all else equal" assumption: only the UT1 capital of the group of insurance entities included via internal model or standard formula is assumed to fall, i.e. despite the significant shock to UT1 required to breach the Group MCR, the group SCR**	

	(and group MCR) were simply left unchanged. Also, other parts of the groups (D&A, OFS), if any, such as the other financial sectors and the D&A entities were left unchanged, since they are not included in the scope of the Group MCR. In practice, this shock – as any other assumed shock scenario – is of course unlikely to materialise in this way. Depending on the shock, the group SCR can increase or decrease. The point here is "only" to point out that trigger inversion is possible, and that the risk of this happening is actually non-negligible in our eyes. We are not aware of a better approach to demonstrate this other than by this simple "shock assumption" that is then consistently applied to all groups. **Why trigger inversion should be avoided?** Trigger inversion is an issue that directly impacts the overall regulatory ladder of intervention. A logically consistent system with a regulatory ladder of intervention should ensure that the Group SCR (100%) is always breached ahead of the Group MCR. In light of this particular review of own funds requirements, there are specific unintended consequencesfor RT1 and T2/T3 instruments. For RT1 instruments, the issue would notably impact a proper functioning of the PLAM due to the current general triggers referenced to the MCR. Effectively, trigger inversion implies that PLAM can be triggered when the group is still very much in a going concern state, i.e. **potentially while** available own funds would still be sufficiently high to withstand an "1-in-200 year event". The consequences for T2 and T3 are also unintentional, as the coupon deferral triggers for T2 can apply simultaneously with RT1 PLAM and RT1 coupon	

cancellation, and even T3 deferral may apply at the same time, too (depending on the trigger inversion issue).

We would like to highlight that within bank regulation such issues do not exist as it foresees a clear logical ***hierarchy of capital***:

1. First step: RT1 coupon cancellation *may* apply (breach of MDA buffer, CET1 ratio >=10%), although banks may be able to prioritise AT1 coupons while "inside" the buffer.
2. Second step: PLAM at a CET1 ratio <=5.125%, in several cases <= 7%.
3. Last step: T2 is not subject to any triggers for coupons or principal. It is only subject to the ultimate risk of bail-in.

We believe it is equally important to secure such a logical hierarchy in the Solvency II regulations. We find it important to point out that - **in today's market** - trigger inversion is only marginally meaningful for the marketability and pricing of ***RT1 (or T2, T3) at issuance***. RT1 can only be sold to investors when investors view a trigger breach as highly unlikely at issuance. Trigger inversion does matter in crisis, however, when regulatory capital instruments should function as intended and when any additional (unintended) negative surprises for issuers, regulators and investors should be avoided.

What could be done in the Delegated Regulation or EIOPA Guidelines to avoid unintended consequences of trigger inversion on RT1 instruments?
A systematic re-design of the Group MCR would require changes to the Solvency II Directive, however, this is not in the scope of the current review. Therefore, we suggest changes to specific elements in the Delegated Regulation and EIOPA Guidelines to address the negative impact on own funds in line with the scope of this review.

	▪ For purposes of the Group MCR, the Solvency II Directive allows coverage of the Group MCR with up to 50% basic T2, and "only" requires a minimum of 50% T1 coverage ▪ This allow the reduction of the risk of trigger inversion occurring via an amendment of the Delegated Regulation either (i) via new articles Art. 331 (5) and Art. 332 (3) clarifying that for purposes of coverage of the Group MCR, Tier 1 must be at least 50% and basic T2 at most 50% of the minimum consolidated group SCR, or alternatively in (ii) a similar claryfing ammendement in a new Delegated Regulation Art. 82 (4) ▪ A potential "quick-fix" which would also reduce the risk of trigger inversion would be to amend the Group Supervision Guideline 16 No. 1.47(d) so as to allow the Group MCR to be met with 50% T2 and 50% T1 (i.e. the maximum T2 tolerance that we believe is allowable according to the Solvency II Directive). ***In the absence of any changes to the Group MCR concept, PLAM as well as the cancellation / deferral triggers for T2 and T3 deferral should possibly not reference the Group MCR at all to avoid unintended consequences – the Group SCR (as well as 75% of Group SCR for PLAM) should always be breached first with a "functioning" ladder of intervention. As a minimum, the proposed waiver for PLAM (write-down) should also be possible in case of a Group MCR breach.***	
19.2.3	**Legal certainty is also required for write-up** ▪ PLAM for Bank AT1 is both partial and temporary. Write-up provisions are reasonably clearly defined (although complicated). ▪ We strongly support the possibility of a write-up, unless PLAM truly only applies in winding up (gone concern) of the group. ▪ We would therefore welcome EIOPA to make a transparent statement on write-	

	up and clarify what exactly EIOPA would deem as a hindrance to recapitalisation. ▪ Without write-up, conversion instruments could be significantly less costly for issuers as investors could at least profit from the upside in the shares held post conversion – in the case of fixed price conversion (e.g. RSA's instruments issued in 2017), there is a non-negligible chance of RT1 investors even making profits upon conversion. In case of permanent write-down, investor losses from write-down would be permanent, the entire nominal could be written-off potentially at rather high group SCR ratios. It is not clear why write-down instruments should be disadvantaged in this way. ▪ If no legal certainty is achieved on write up, the non-listed insurers would find it difficult to issue RT1 instruments at reasonable prices. Conversion instruments are not available for non-listed insurers. In particular insurers in the legal form of a mutual, cooperative or public sector company are dependent on the marketability of a write down instrument for RT1 issuance.	
19.2.4		
19.2.5		
19.2.6		
19.3	**The differences between PLAM for bank AT1 and insurance RT1 are substantial – even when considering the suggested EIOPA changes. Even though we acknowledge that certain differences between bank and insurance instruments make perfect sense, as highlighted in the introductory comments, we do note the following:** ▪ Bank PLAM is triggered in ***gone concern.*** Insurance PLAM is potentially triggered at ***going concern*** SCR levels – and it can be triggered simultaneously with mandatory deferral on T2 (and in case of trigger inversion even simultaneously with mandatory deferral on T3), whereas bank T2 does not require deferral at all.	

	▪ Bank PLAM via W/D can be ***temporary*****.** Write-up is explicitly allowed for bank AT1. EIOPA so far has not commented on write-up, there seems to be a risk that regulators would prefer write-down to be permanent. ▪ Bank PLAM via W/D can be ***partial*** – insurance PLAM is likely to be full, potentially even where the Group SCR is not or only marginally breached(trigger inversion). ▪ Full alignment between bank AT1 and insurance RT1 is not sensible in our eyes where this would lead to adverse consequences under Solvency II. At the ssame time, we note that the expected total issuance of insurance RT1 is much less than that of bank AT1. The marketability of insurance RT1 would therefore certainly benefit from alignment with bank AT1 as far as sensible. ▪ ***We recommend*** **that insurance PLAM should also apply only in a gone concern to align at least in a logical sense with the manner PLAM works within banking regulations, which in tun should be defined by regulators rather than by an automatic reference to the group MCR (avoiding the identified trigger inversion risk in the current regulations).** **Other important differences between bank and insurance own funds regulation include the following:** ▪ **Limit system**: o In some jurisdictions, we understand that there is a "cliff effect" on eligible capital once T1 falls to less than 50% of the SCR, as exisiting T2 and T3 then no longer counts as eligible own funds. In these jurisdictions, the SCR ratio could fall from 101% (with T1 at 51%) to 49% due to a 2% reduction of T1 to 49%. In such a case, EIOPA's suggested linear approach to write-down is not applicable. We are not aware of any similar effects in banking. o There is also a "cliff effect" related to RT1, since its limit is implicitly	

	based on UT1 (the RT1 limit of 20% of total Tier 1 implies that RT1 is limited to 25% of UT1) . If UT1 falls by 100, the maximum eligible amount of RT1 falls by 25. If the T2/T3 headroom is fully exhausted, a loss of 100 reduces total eligible own funds by 125 altogether. There is no such cliff effect with respect to bank AT1. ○ PLAM in insurance can only lead to an improvement of the key regulatory metric (SCR ratio) if it leads to a reversal of a prior cliff effect. In banking, PLAM always increases the key regulatory metric, the CET1 ratio.	
19.4.1	**No. 1454 and No. 1456: The very high quality of RT1 should not be underestimated for the following reasons:** a) The quality of RT1 is *formally* at least as good as that of equity. b) PLAM does *not* increase the quality of own funds in a meaningful way. c) PLAM may reduce the quality of RT1 as it can have adverse effects on the *financial stability* of the undertaking. d) Even without PLAM, RT1 would be much more risky for investors than T2 or T3. ***a) The quality of RT1 is formally at least as good as that of equity*** ▪ Permanence: RT1 is as good as equity ○ Currently issued RT1 instruments are perpetual in nature. Since incentives to redeem are prohibited, market participants regard these issued RT1 as so-called "True Perpetuals". ○ In contrast, perpetuals with a coupon step-up (incentive to redeem) are expected to be called at the step-up date, unless the issuer is in a severe crisis. ○ For True Perpetuals, investors expect a call only when it makes economic sense for the issuer to do so, i.e. when the old bond can be	

replaced at lower cost (or when RT1 exceeds the 20% limit). ***Importantly, we refer to our comment on EIOPA's observations in No. 20.3 (item 1525***). Market data does demonstrate that investors price True Perpetuals like to the next *expected* call date. Given the considerable spread tightening in recent months, the expected call date for many True Perpetuals is actually the next call date. However, this is only true because investors assume that the issuer can, and will, call the old AT1 bond and issue a new ***cheaper cost replacement AT1***. For those bonds where it is not economically attractive to call, investors price the bonds on a "to-perpetuity" basis, i.e. assuming that the instrument will never be called (at least not in the near future).

- As further discussed in our comments below on 20.4.2, the actual history of numerous perpetual instruments with calls without step-ups demonstrates the fact that call dates do not affect the permanence of such capital instruments. Numerous of these instruments, particularly those placed in the non-domestic USD markets, have been outstanding for many years beyond their first call dates without any market reaction.
- From a regulatory perspective, the quality of RT1 is additionally protected as calls are always subject to prior regulatory approval. Note that we understand that a repurchase of equity is not subject to prior regulatory approval in some EEA jurisdictions.
- **Consequently, in terms of quality, True Perpetualsare at least as good as equity.**

- Loss absorbency with respect to distributions: RT1 is of higher quality than equity
  - RT1 distributions (coupons) are fully discretionary. In particular, dividend pushers and dividend stoppers are prohibited by EIOPA Guidelines.

- ***As a result, RT1 investors can be subordinated (!) to equity investors:***
  - An issuer can decide to cancel all RT1 coupons in eternity, irrespective of the issuer's financial health (solvency). The issuer can nonetheless continue to pay equity dividends, or even do share buybacks etc. Solvency II allows issuers to subordinate RT1 investors to equity investors – note that PLAM is not required for this.
  - Importantly though, equity dividends can be seen as effectively ***cumulative***, whereas RT1 distributions are explicitly ***non-cumulative*** (without compensation or other "upside"). Equity dividends can be cancelled, but equity investors can be compensated with higher dividends in the future, and/or recovery/future upside in the shares.
- ***In terms of loss absorbency via cancellation of distributions, RT1 is of higher quality than equity.***
- The same is true for bank AT1. Both bank AT1 and insurance RT1 are high-risk products for investors – only where issuers have an incentive to treat RT1/AT1 investors fairly – and not worse than equity investors - will investors be prepared to invest in such products (the need of an issuer to access the RT1/AT1 bond market in the future is such an incentive to treat RT1/AT1 investors fairly today).
- The current demand for RT1/AT1 is strong despite these risks for RT1 investors. Note that many market observers are not sure whether this favourable demand situation will also prevail in a more normal yield environment.

- Loss absorbency (and subordination) with respect to the principal: RT1 is at

	least as good as equity ○ Both equity and RT1 add to the stack of capital that does not count as a liability in insolvency – they both count as (anti-insolvency) "equity" for purposes of the asset-liability test. ○ The sum of RT1 and equity ("anti-insolvency equity") helps an issuer to withstand unexpected losses as it helps to avoid insolvency due to over-indebtedness (where such a test is relevant under national insolvency law). All RT1 and equity payments are discretionary, and hence cannot cause insolvency due to illiquidity either. ○ Ignoring PLAM, losses do not reduce the accounting value of RT1, only that of equity. While the absence of a reduction of its accounting value does not signal that RT1 is of higher quality than equity, it certainly does not mean that RT1 is any weaker either. ○ PLAM does *not* change the relative quality of equity and RT1 from a ***policyholder perspective*** either, as it leaves the stack of "anti-insolvency equity" unchanged – any increase in equity due to write-down or conversion is compensated by a fall in RT1 (ignoring any potentially adverse tax effect of PLAM). ○ Insurance PLAM occurs before equity is "wiped out", leaving future upside for equity investors, including reduced future RT1 coupon expenses for the benefit of shareholders in a going concern scenario. ○ RT1 can contractually rank senior to equity in insolvency. However, when liabilities exceed assets, the providers of "anti-insolvency equity" cannot receive a liquidation consideration – i.e. effectively, RT1 and equity investors rank pari passu in liquidation. ○ ***In terms of loss absorbency (and subordination) via the principal amount, RT1 can indeed be junior to equity in circumstances that are not entirely unrealistic, causing a "value transfer" from***	

(supposedly) more senior to (supposedly) more junior claimants.

- Consequently, RT1 investors are - formally - exposed to more risk than equity investors in realistic scenarios.

b) PLAM does <u>not</u> increase the quality of own funds in a meaningful way

- PLAM does increase UT1, but only at the expense of falling RT1. PLAM therefore does not increase the amount of capital. Moreover, it also does not *<u>formally</u>* increase the quality of capital:
  - Both UT1 and RT1 allow cancelation of distributions.
  - Both UT1 and RT1 are characterized by utmost permanence.
  - Both UT1 and RT1 add to "anti-insolvency" equity, which for purposes of the asset-liability test does not count as a liability.
- There is no meaningful benefit from PLAM for policyholders, *<u>formally</u>* RT1 is of equal or even higher quality than equity.
- It is true that RT1 creates different investor expectations than equity. RT1 can only be sold to investors if there is a reasonable certainty that RT1 investors will not be subordinated to equity investors. Rather, in practice RT1 investors expect to be treated preferentially to equity investors ***<u>unless the issuer experiences a severe crisis</u>*** .
- To understand what this means for the relative quality of equity and RT1, note that reputational issues and signalling considerations can also impact the "quality" of equity as well. Some insurers may pay equity dividends in order to signal strength, even though prudence would suggest otherwise. However, please also note that insurers are typically much less dependent on capital markets financing than banks are - reputational pressures that may prohibit issuers from cancelling RT1 coupons (or equity dividends) are significantly lower than for banks, where short term refinancing requirements are substantial.

	▪ At the margin, it is still to be expected that cash flows to RT1 investors in forms of distributions will be stopped at a later stage than equity didvidends. ▪ Therefore, and despite the formally very high quality of RT1, we agree with EIOPA that RT1 should be limited (more reasons to limit RT1 are provided in our comment on **20.4.3** below). ▪ The important point to note here is, however, that – ***once a crisis is indeed severe***, i.e. most definitely at times of a PLAM trigger breach – RT1 gives issuers (and, indirectly, regulators) a lot of power to impose losses on investors (through coupon cancellation, potentially in perpetuity) and maintain all funds within the insurer for as long as is deemed necessary. In times of crisis, the quality of RT1 is at least pari passu to equity (if not better as coupons are cancelled vs. dividends that are effectively only deferred (cumulative)). ***c) PLAM may reduce the quality of RT1 as it can have adverse effects on the financial stability of the undertaking*** ▪ No. 1456 states that the primary objective of PLAM is to support ***financial stability*** at times of stress. We think that there is a risk that PLAM will rather harm financial stability than support it: o Financial stability is not supported when PLAM results in the issuance of a potentially large number of shares without increasing own funds by a single Euro. Since the market value of conversion RT1 can be expected to match the value of the delivery shares at the time of conversion, there is – in theory – at least an offset to the share issuance in the sense that liabilities of equal market value are cancelled via conversion. However, to restore a healthy SCR coverage, an additional large scale capital increase may be required, and any additional supply of shares resulting from PLAM is not helpful for this additional capital raising. We are convinced that RT1 offers all necessary rights to impose extensive	

losses on RT1 investors without share issuance – and thus without this potential challenge to recapitalisation.

- As outlined above, PLAM is a contractual subordination of RT1 investors to equity investors. At issuance, RT1 investors effectively ignore this subordination risk as a trigger event is deemed extremely remote. However, when a PLAM trigger event becomes more likely, the inversion of the hierarchy of capital will manifest itself, and investors in conversion RT1 may try to short-sell shares in anticipation of the imminent trigger breach. Such uncoordinated sales will certainly not contribute to orderly trading in the issuer's shares and thus potentially complicate a recapitalization effort.
- Financial stability may be harmed in the worst-case scenario where eligible own funds could even fall in case of adverse tax effects from PLAM in a severe crisis.

d) Even without PLAM, RT1 would be much more risky for investors than T2 or T3

- The combination of true perpetuity and discretionary cancellation makes RT1 significantly more risky than T2 (which can be dated, and does not even require discretionary *deferral*, let alone cancellation).
- Even without PLAM, RT1 allows the insurer to stop all cash flows to RT1 investors and effectively wipe out the investors' claims – while being able to pay equity dividends at the same time. T2 and T3 do not allow this.
- RT1 contains "vulture fund risk" – if a "vulture fund" were to own a small insurer with no need to re-access the capital markets for additional RT1, the vulture fund could stop all payments to RT1 investors in eternity.
- T2 and T3 do not pose anywhere near comparable risks for investors.

	Some regulators (like APRA) do not require going concern insurance PLAM We note that Australian (APRA) rules for subordinated insurance Tier 1 require PLAM (conversion) only at Point Of Non-Viability ("PONV"). At PONV the relevant insurer has become a ***gone* concern**. To our knowledge, PONV is not defined by a particular solvency ratio, but is rather determined by the relevant regulatory bodies. Depending on when PONV occurs, PLAM may of course be justifiable and sensible. Importantly, PLAM at PONV does not have unintended consequences, assuming that both equity and insurance RT1 are "wiped-out" simultaneously (or shareholders before RT1-holders – but not in the inverse sequence). We note further that Basel 3 rules do not require PLAM for equity accounted bank AT1. While European regulation nevertheless requires PLAM for any European bank AT1, other important regulators (e.g. US-regulation) do not – none of the US bank AT1 has been issued with PLAM. APRA does require PLAM for Australian bank AT1 at the earlier of PONV (i.e. as determined by the relevant regulatory body) and a CET1 ratio of 5.125%, whereas insurance AT1 requires PLAM only at PONV (and not at a specific solvency ratio). At the time of drafting bank AT1 rules, a CET1 ratio of 5.125% was viewed as a going concern trigger level (the Basel 3 Pillar 1 minimum for CET1 is 4.5%). Today, however, PONV is generally expected to be reached at much higher CET1 ratios, and consequently the PLAM of European bank AT1 is generally expected to be triggered only in a gone concern situation. ***As we have indicated above, we recommend* that PLAM should only apply in gone concern. RT1 is of comparable formal quality to equity *without* PLAM and PLAM bears the risk of worsening the quality of RT1. The PLAM for bank AT1 is de facto a gone concern trigger, conservative insurance regulators like APRA only require PLAM for Australian insurance RT1 at PONV.** Under Solvency II, the solo MCR and a properly designed Group MCR concept would be	

	the natural attachment points to define when an insurance (group) has become a "gone concern". However today, trigger inversion implies that an automatic link to a Group MCR breach must be avoided, and hence the PLAM trigger must not reference to the Group MCR without the ability of a regulator to grant an exceptional waiver. **No. 1455: It is conceivable that PLAM leads to an increase in the SCR ratio** ▪ A trigger breach most likely coincides with a significant fall of UT1. ▪ Assuming meaningful issuance of RT1, the fall in UT1 can lead to **"cliff effects"** (see our comment on 19.3 above). "Cliff effects" imply that certain capital items are available, but not eligible due to Tiering limit restrictions. ▪ PLAM increases UT1, which in turn can reverse a prior cliff effect. As a consequence, PLAM may potentially lead to an increase in *eligible* own funds. ▪ However, there is no guarantee that this happens. Of course, the currently envisaged criteria do – at the margin – incentivize high levels of T2/T3 as well as RT1, with lower UT1 levels as a likely consequence. This cannot be intended, in our eyes. Also, these instruments may well remain outstanding for many years. Scenarios that may seem remote today might become very real in the potentially very long life of the instruments.	
19.4.2	We support the EIOPA position that there is a stronge case not to align the Principal Loss Absorption Mechanism with the banking regime. First, we note that a UT1 trigger would not solve the fundamental weakness of the insurance PLAM, which is that it typically does not lead to an increase – and may even lead to a decrease – of the key solvency metric for insurers, the SCR ratio. Insurance PLAM also does not increase the quality of capital in crisis, because of the very high quality of RT1 (as outlined extensively in our comment on 19.4.1). Note that in crisis, the high quality of RT1 will come to full force (ability to terminate	

	all cash flows to investors indefinitely) independent of PLAM. Second, our position is also backed by the underlying differences between Bank and Insurance Tier 2 capital securities. In our view there is a higher degree of difference in quality of regulatory capital permanence between Bank Tier 2 and Additional Tier 1 than there is between Insurance Tier 2 and Restricted Tier 1. Hence from a prudential oversight perspective it makes much more sense to arrange for PLAM triggers specifically linked to Tier 1 coverage of risk weighted assets in Bank oversight than it does in relation to the Tier 1 quantum in the capitalization of an Insurance undertaking compared to its capital requirement.	
19.4.3	**<u>We would welcome clarity regarding write-up</u>** We appreciate further guidance on how EIOPA views partial write-down to be implemented. We do however feel that the fact that the consultation paper is silent on write-up is a missed opportunity to provide additional clarity to the regulators and market for capital securities. **We welcome the suggested waiver for write-down ("W/D")** ▪ The waiver can help to avoid the most glaring of the unintended consequences that PLAM may have, namely a reduction of the SCR ratio. However, the way it is currently worded limits its applicability in practice ▪ Given the risk of trigger inversion (see our comment on 19.2.1), there is a reasonable chance that the Group MCR will be breached even though the Group SCR is not. The waiver must not be granted if the group MCR is breached. It can be shown that in this case, the W/D may cure the breach of the Group MCR, but may at the same time result in a breach of the Group SCR. This cannot be an intended consequence of insurance PLAM, in our eyes. **Ideally, the concept of the Group MCR would be amended, but this would require changes to the Solvency II Directive. In the meantime, a**	

breach of the Group MCR in case of trigger inversion should not trigger PLAM. We therefore believe the waiver should be amended accordingly.

- In some jurisdictions, conversion can equally lead to taxable profits and a fall in the SCR ratio (via a reduction in T3 (DTA) or via an increase in tax liabilities and a fall in UT1).
- ***We therefore recommend that*** **the PLAM waiver in L2 Art. 70 bis should therefore equally be possible for conversion – i.e. the trigger meachanism mentioned in Art. 71 (e) (ii) in addition to the currently foreseen write-down and any alternative PLAM.**

Recalculation of SCR and calculation of subsequent write-downs

- Because of its adverse impact on investors, the application of PLAM requires legal certainty. The same is true for mandatory cancellation of RT1 coupons, albeit to a lesser extent, since the overriding risk for investors is the contractual right to cancel coupons on a fully discretionary and non-cumulative basis.
- For PLAM, to avoid litigation risk all trigger ratios (group and/or solo SCR/MCR) must be properly calculated, which requires a fully consolidated MVBS to determine own funds to be used as a basis for the SCR/MCR calculation.
- Even the for large insurance groups, the consolidated MVBS is only established on a quarterly basis, and typically audited only annually. Small and medium sized insurers may prepare a fully fledged MVBS only once a year, suggesting more flexible re-calculation periods may be sensible.
- ***In practice, a trigger breach can therefore be "determined" at best on a quarterly basis in a legally sound way.*** In addition, the result will typically be known only 3-5 weeks after the quarter-end date. More frequent assessments are good approximations only, but arguably not reliable enough from a legal perspective to effect PLAM thereon.
- ***Since all cash flows can be stopped on RT1 at any time, there is no***

	particular need for a fast PLAM anyway. ▪ Most importantly, this means that a meaningful three months cure period as foreseen by DR Art. 71(8)(c) would need to work as follows: o E.g. the issuer announces in May-2027 that the SCR ratio as per Q1-2027 has fallen to, say, 90%. o From this date on, the issuer knows with certainty that a capital increase is required within a short time frame (3 months) – this could be very little time left in case an equity prospectus needs to be prepared for said capital increase, and given any holiday season or black-out periods (no issuance window). o Assume the issuer is fast and raises capital in July 2027. This will only impact the SCR ratio as per Q3-2027, the ratio as per Q2-2027 may still be insufficient. o **In order for the 3-months cure period to be appropriate, a breach of the SCR should be possible for the 6 months period between the two relevant accounting dates (from Q1-2027 to Q3-2027).** o Other than the original 6 months period, we see no reason why further write-downs should not be assessed on a quarter-by-quarter basis thereafter. However, any capital increase that occurrs after the relevant accounting date, but before the figures for the last quarter have been established and published, should reduce (or eliminate) the need for such subsequent write-downs.	
19.4.4	▪ The proposed L2 Art. 71 5bis(a) requires write-down in full rather than allowing partial write-down when the Group MCR is breached o Breach of the Group MCR is arguably intended to reflect an extreme situation where the group may need to be wound down. In such (supposedly) severe circumstances, equity investors should have been effectively wiped out, and RT1 investors should arguably sustain a	

	maximum loss, too (100% "loss absorbency" from an investor perspective). ○ Given the possibility of trigger inversion, the intituive sounding prohibition of partial write-down at breach of the Group MCR may not make sense, however. Own funds may still be sufficient to cover a "1-in-200" year event, i.e. equity would still be valuable, and wiping-out RT1 bondholders would inverse the hierarchy of capital. ○ In case of trigger inversion, it is also possible that a 100% write-down may cure the Group MCR breach, but e.g. because of a reduction of T3 (DTA) may simultaneously lead to a breach of the Group SCR (waiver in Art. 70bis must not be granted if the Group MCR is breached according to the statement in No. 1495). We believe that this cannot be intended either. ○ ***We therefore recommend*** **to allow a PLAM waiver also in case of a group MCR breach, which requires that L2 Art. 5 bis should be chaged to read "trigger event listed in paragraph 8*(a)*-(c)"** ▪ The proposed Art. 71 5bis(a) prohibits a limitation of write-down when Group SCR falls below 75% ○ Similarly, for large insurance groups that are expected to issue the majority of total outstanding RT1, the 75% SCR trigger level is likely to be breached long after the Group MCR has been breached (see trigger inversion comments in 19.2.1. above). This significantly reduces the applicability of the linear write-down mechanism. At the same time, the statement in No. 1495 implies that the waiver in Art. 70bis cannot be granted even if the PLAM would further reduce the SCR ratio at that time. We do not think that further reductions of the SCR ratio due to PLAM are sensible irrespective of the SCR ratio PLAM. The sole exception to this is an insurer that has become a gone concern. In such	

	a situatuation, tax effects (if any) no longer matter and 100% write-off is arguably always justifiable. ○ Please see also our comments to cliff effects under 19.3 "Limit system" that are not known to exist in banking. They are also relevant to this section. ○ ***We therefore recommend*** **to allow a PLAM waiver also in case of a group MCR breach, which requires that L2 Art. 71 5 bis should be chaged to read "trigger event listed in paragraph 8*(a)*-(c)"** ▪ **The three months time frame in Art. 71 5ter may need to be extended to a longer period in order to allow it to be meaningful in practice.** ▪ Please clarify the timing of subsequent write-down in view of our comments in 19.4.3. (Recalculation of SCR and calculation of subsequent write-downs).	
19.5.1	**Important clarification:** PLAM can reduce own funds in some jurisdictions ***not only because it creates a tax liability***, but also because it can, in some jurisdictions, lead to a ***reduction of DTA (T3)***: in case of a trigger breach, the issuer may be subject to high tax losses carried forward, which in turn can be mirrored in a DTA (T3). The profit from PLAM can reduce T3 own funds, or result in a tax liabilitythereby reducing UT1.	
19.5.2	**No. 1485:** It is not just an assumption that Bank AT1 PLAM is indeed triggered at a very low (gone concern) level and thus later than insurance PLAM. As explained in our comment on 19.2.1 above, AT1 PLAM is triggered at a level that – for all practical purposes – must be considered gone concern. RT1, however, is triggered at a level that – within the Solvency II framework – must be considered a going concern level. **No. 1489:** We are not aware of a single EEA jurisdiction where the amount of bank AT1 has actually been subjected to a haircut for potential tax effects in the EEA. We therefore strongly support the currently envisaged EIOPA approach to foresee	

	exceptional waivers instead.	
19.5.3	▪ We fully support the proposition not to apply a haircut, calibrated to the effective tax rate, to the notional of Restricted Tier 1 instruments when considering them as eligible own fund items. ▪ We further comment that the requirement for the forecasts on tax effects to be confirmed by the undertakings auditor might prove problematic. Some members have tested the willingness and ability of auditors to provide written support for the likelihood of adverse tax effects and the quality of underlying assumptions, and received positive feedback. However, we note that this remains untested for the time being. While it is perfectly understood and accepted that regulators would require such comfort to provide a waiver, it must be avoided that this requirement translates into a contractual obligation vis-a-vis investors (it is sufficient to avoid any legal claims from investors if the contract specifies that the waiver is at the discretion of the relevant regulator). ▪ There is no experience with waivers of this kind, and we therefore recommend not to prescribe specific deadlines today. ▪ In case a waiver were to become relevant, the respective regulator would need to decide in reasonably short time to avoid market uncertainty.	
19.5.4	▪ The waiver as worded in Art. 70bis is not excluded for the cases of 75% SCR mandatory nor MCR breach. **We think this is sensible, as we cannot see any level of the SCR where it is in any sense beneficial to policyholders if the SCR ratio is reduced further.** However, the drafting of Art. 70bis (in No. 1496) is not in line with the EIOPA's clear statement in No. 1495. ***We therefore recommend*** **that EIOPA clarifies the extension of the waiver in No. 1495 et al.** ▪ The waiver should also be granted for conversion where necessary (depending on tax jurisdiction). ▪ A waiver should also be possible if the the SCR ratio is less than 75% (or less	

	than 100% for longer than three months), and, given trigger inversion, also when the Group MCR is breached. **We can see no level of the SCR where it is in any sense beneficial to policyholders if the SCR ratio is reduced further.** ▪ ***We therefore recommend to allow a PLAM waiver also in case of a group MCR breach, which requires that L2 Art. 71 5 bis should be chaged to read "trigger event listed in paragraph 8(a)-(c)"*** ▪ Importantly, the SCR ratio may decrease because of a reduction of DTA (via lower tax losses carried forward). ***We therefore recommend to change the wording in Art. 70bis (b)(i) to "tax effects" rather than only refers to tax liabilities and is too narrow in our eyes.***	
19.6.1		
19.6.2		
19.6.3	We would like to point out that the statement in 1504 is not correct. A regulatory call of a capital instrument will not reduce own funds of the undertaking since the security must have been disqualified as an own fund item in the first place in order to trigger a regulatory call.	
19.6.4	**New wording for tax and regulatory calls** ▪ We appreciate that tax and regulatory calls may no longer *automatically* require equivalent replacement irrespective of the issuer's solvency ratio. ▪ Regulators are expected to approve a call without replacement *only* if the post call solvency ratio is sufficiently high, i.e. if there is an "appropriate margin" between the post-call solvency and 100% SCR/MCR. For this, it is irrelevant how old the instrument is – the same regulatory decision is expected for a tax call after three years, or an ordinary call after 15 years – post-call solvency ratios always matter. ▪ At the same time, it is not clear why only tax and regulatory calls should be possible without replacement in the first five years if the issuer's solvency is	

	strong. ▪ **To summarize, all calls are subject to prior approval, and approval to call without replacement can always (including 10+ years post issuance) only be granted if the post call solvency is sufficiently high (i.e. appropriate margin ***concept*** should apply at all times). At the same time, ***all*** extraordinary calls should be possible without replacement at any times as long as solvency remains sufficiently high after a call.** ▪ It should be ensured that necessary grandfathering rules are implemented to further allow considering outstanding SII RT1 / T2 bonds as own funds. ▪ Last but not least, we wonder whether Art. 71 (2) bis (a) (i) will put regulators in a position of conflict? First the regulator will probably have implemented a new interpretation of the regulation that has potentially triggered the regulatory call to arise. Subsequently it needs to make an assessment under this clause to confirm if the regulatory event has occurred. We propose to leave the determination to the issuer.	
19.7	1509 - 1511. Please refer to our comments on 19.2.1 on trigger inversion, why it should be avoided, and what could be done about it. 1513. Please refer to our comments on 19.4.3 (sub-header: Recalculation of SCR and calculation of subsequent write-downs). 1514. "Partial conversion" should be possible to allow insurers to minimize adverse consequences of PLAM. ▪ Partial conversion does make intuitive sense when it is sufficient to restore of the SCR. ▪ Please note further that the negative tax effects that exist in some jurisidctions may mean that the impact of conversion on the SCR ratio may well be better (or less bad) with partial instead of full conversion – the same is true for write-	

	down. The "optimal write-down or conversion amount" can be lower than 100%, depending on the tax jurisdiction and tiering limit effects. ▪ We also disagree with the statement that terms and conditions specifying partial conversion into equity will be challenging from a legal perspective, at least not in theory. ▪ We therefore propose to apply partial conversion using the same proportion as detailed by EIOPA in paragraph 1474, option b. ▪ However, partial conversion is complex, and there is very little (if any) experience with partial conversion in practice. ▪ Instead of adding even more complexity (and room for contractual errors) via partial conversion, *we think it would be more sensible to (i) let PLAM only apply in a true gone concern (when there should be 100% conversion or 100% write-off), and (ii) at a minimum extend the waiver for W/D to conversion in order to avoid the worst case outcome from conversion – a further reduction of solvency ratios.* 1516. Please refer to our comments on 19.4.3. The waiver should also be applicable for conversion instruments, as well in case of a Group MCR breach. Write-up: Please see our comments on 19.2.3.	
20.1		
20.2		
20.3	**No. 1525: We have some misgivings around paragraph 1525, which we believe does not give a fair reflection.** **A higher coupon does not automatically imply lower "permanence"** Consider two instruments, both with a term of five years and no call rights. By definition, the permanence of the two instruments is identical. Assume that the only difference is that instrument A has a fixed rate coupon, and instrument B has	

a floating rate coupon (3-months Euribor plus spread). If – as is typically the case – Euribor (fixed for 3-months) is lower than the risk free rate (fixed for 5 years), the initial coupon of instrument B will be lower than that of instrument A. However, arbitrage ensures that the expected present value of both instruments is identical – the 3-months Euribor is expected to increase over time, which would increase the future coupon of instrument B after the initial 3-months period for which Euribor was fixed. Some market participants will call instrument A "***more expensive***" than instrument B nonetheless, after all, the initial coupon of the fixed rate bond will be higher, and an issuer may have a different expectation with respect to the expected future Euribor rates than the market.***Importantly, though the "permanence" of both instruments is identical by assumption, namely 5 years*****.**

Analysing market data – AT1 and RT1 trade to the *expected* call date, which can be "never" (true perpetuity), but may be the *next* call date

We are not sure based on what market data EIOPA concludes that investors tend to price instruments to the "next call" date. EIOPA's conclusion is only correct for instruments with step-up (incentive to redeem) which cannot qualify as RT1. For True Perpetuals, it is only correct to extent that investors are convinced that issuing replacement AT1 at the next call date would be *cheaper* for the relevant issuer than leaving the existing AT1 bond outstanding instead.

The actual history of numerous perpetual instruments with 5-year calls without step-ups demonstrates the fact that 5-year call dates do not reduce the permanence of capital instruments.

- Numerous perpetual instruments with 5-year call dates ("perpNC5") have been issued into the non-domestic USD market (typically in Tier 2 format), for which perpNC5 is the standard format. No behavioural expectation attaches to the 5-

year first call dates and many of these instruments have remained outstanding many years beyond their first call dates without any market reaction.

- NB: Whilst any RT1 to be issued in the future may not be suitable for all current investors in this market, it would be suitable for a sufficient part of the investor base (current buyers of bank AT1 which permits 5-year calls) to make this market a very interesting potential source of RT1 capital. 5-year first calls are standard in the non-domestic USD market for perpetual instruments. Although no behavioural expectations attach to these call dates (as discussed in the preceding paragraph), we consider that a deviation from the standard terms would impair the marketability of such RT1 instruments – long-standing practice has a strong influence in these markets.

We view permanence as a quality criterion for capital as meaningful only to the extent it protects the issuers' solvency. Where an issuer call right enables the issuer to save money by calling and replacing an exiting instrument with an equivalent lower cost instrument, permanance is not negatively impacted in our eyes despite the potential call/replacement. To be meangfully supportive for the issuer, permanence requires that there is absolutely no need or obligation for the issuer to call an instrument when it would be very expensive or impossible to issue a replacement instrument. Given the impressive tightening of AT1 spreads in recent quarters, the expected reset coupons of exsting AT1 (= risk free rate plus original credit spread) that will apply from the next call date look high compared to the new coupon that the same issuers would have to pay today for a replacement AT1 (risk free rate plus lower current spread). Many AT1 bonds will therefore trade on a "to-call" basis, but only because a call and replacement allows the issuer to save money. **Importantly though, if credit spreads were to increase significantly from today, many of these bonds will start trade on a "to-perpeptuity basis" instead of a "to-next-**

call" basis, i.e. investors would no longer expect the bonds to be called at the next call date.

Market observation – simultaneously launched dual-tranche AT1 trades

The vast majority of bank AT1 and RT1 are issued with a so-called fixed/fixed reset coupon structure which works as in the following example:

- Perpetual bond with issuer call rights every 7 years ("PerpNC7"; "NC7" means not callable for the first seven 7 years).
- Coupon
  - Until first first call date / first seven years: fixed at the 7-year risk free rate at issuance plus "original" credit spread.
  - Thereafter: reset every 7 years to the *then-prevailing* 7-year risk free rate plus "*original*" credit spread.
- Note the following difference:
  - The interest rate risk is limited to *7 years*, because the "risk free rate" component of the bond will be readjusted to the market rate every 7 years.
  - The credit spread is not re-adjusted. It is effectively a premium for "*perpetual* credit risk".

It is challenging to determine whether a particular exisiting AT1 with fixed/fixed reset coupon is likely to be called at the next call date, or not. You need to know the fixed credit spread of the exisiting AT1 bond (this spread is generally available), and you must compare it with the "current market spread" that the same issuer would have to pay today if it wanted to issue an equivalent new AT1 (not directly observable). If the current market spread is lower than the exisiting spread, the issuer will be expected to call the instrument at the next possible call date. If not, the assumption is that the bond is "truly perpetual" and will not be called.

An easier way to test whether bonds are truly priced to expected call rather than always priced to the first/next call is to compare the credit spread of two otherwise identical AT1 trades issued by the same issuer on the same date, where only the time to first call differs. A "perpetual" credit spread would imply that the spreads are identical or not materially different for a non-call period of, say, 10 years and a non-call period of, say, 5 years. If, instead, it can be deemed very likely that issuers will always call the bond at the first call date, the spread should be lower in case of shorter non-call periods.

From the table below, you can see that credit spreads are broadly identical for simultaneously launched tranches, irrespective of the non-call period. The spread for a shorter non-call period can be even higher than that of a longer one, because the option to call is an "issuer option", and having call rights from year 5 on (rather than only from year 10) puts investors at greater risk (issuer call when the old bond's spread is higher than the market spread, so the issuer takes away upside from investors).

USDAT1

Issue Date	Issuer	Curr	Amount	Maturity	Call Date	Structure	Coupon until first call	Coupon thereafter	PLAM type	ISIN
23/09/2014	NORDEA BANK AB	USD	1,000	Perpetual	23/09/2019	PerpNC5	5.500	Swap +356.3bps	TWD	US65557DAM39
23/09/2014	NORDEA BANK AB	USD	500	Perpetual	23/09/2024	PerpNC10	6.125	Swap +338.8bps	TWD	US65557DAL55
17/09/2014	HSBC HOLDINGS PLC	USD	1,500	Perpetual	17/01/2020	PerpNC6	5.625	Swap +362.6bps	EC	US404280AR04
17/09/2014	HSBC HOLDINGS PLC	USD	2,250	Perpetual	17/09/2024	PerpNC10	6.375	Swap +370.5bps	EC	US404280AS86
16/04/2015	ING GROEP NV	USD	1,000	Perpetual	16/04/2020	PerpNC5	6.000	Swap +444.5bps	EC	US456837AE31
16/04/2015	ING GROEP NV	USD	1,250	Perpetual	16/04/2025	PerpNC10	6.500	Swap+ 444.6bps	EC	US456837AF06
10/08/2015	ROYAL BK SCOTLND GRP PLC	USD	2,000	Perpetual	10/08/2020	PerpNC5	7.500	Swap +580bps	EC	US780099CJ48
10/08/2015	ROYAL BK SCOTLND GRP PLC	USD	1,150	Perpetual	10/08/2025	PerpNC10	8.000	Swap +572bps	EC	US780099CK11

Market observation – insurance bonds

Very few RT1 bonds have been issued to date. However, you may want to look

	into the trading performance of the Tier 2 style US$ denominated True Perpetuals issued by several insurers in Q3-2016 (Allianz- ISIN: XS1485742438; Axa - ISIN: XS1489814340; Prudential- ISIN XS1488414464) and Zurich - ISIN: XS1449950663). These bonds were issued in fixed-for-life coupon format, a small niche market that is only rarely accessible. These bonds are very sensitive to changes in interest rates, given the absence of a reset. When US$ interest rates increased significantly from mid-September 2016 on, the prices of these bonds fell dramatically because it "suddenly" looked highly *un*likely to investors that these bonds would be called. It can be shown that these bonds where then traded on a "yield-to-perpetuity" basis, and not on a yield-to-call" basis any longer. **The trading performance of these bonds is strong evidence for the "truly perpetual" nature of these bonds – investors did no longer expect that these bonds will be called on their first call date.** **No. 1522/1526:** The transitional arrangements in Art. 308b of the S2 Directive apply to instruments issued prior to the publication of the DR (January 2015). For the RT1 instruments issued in 2016 and thereafter (e.g. Gjensidige, Protector Forsikring, RSA, a.s.r., or the currently marketed TopDanmark RT1), and for any further transactions issued between today and the implementation date of changes to RT1 criteria (e.g. higher trigger levels), ***transitional arrangements are required for these instruments to continue to qualify as intended*** (risk of relegation into T2 or disqualification from own funds). This is also true in case the contemplated changes to the DR with respect to early calls would lead to a disqualification (not expected), in which case transitional arrangements would be warranted, in our eyes, too.	
20.4.1		
20.4.2	Our comment on 20.4.3 explains why we strongly oppose the removal of a limit for RT1.	

	Our extensive comments on 19.4.1. explain why current RT1 instruments are at least the same quality as equity. It also explains that, **in practice, insurers will treat RT1 investors senior to equity investors as long as the insurer is healthy**, and hence payments to RT1 investors will stop at a later stage than payments to equity investors. While this is a voluntary decision by issuers, which can be prohibited by regulators, we think that RT1 should be limited. ***The following reasons support limiting RT1 despite its very high quality*** ▪ Equity investors are the owners of the insurer, only equity investors have voting rights. In case of a crisis, existing equity investors typically play a crucial role in a recapitalisation exercise. Contrary to this, RT1 investors are passive providers of capital. They take no part in decision making and invest on the premise that the risk of a crisis is highly remote. It is unlikely that RT1 investors would play the same role as equity investors in any recapitalisation – irrespective of whether or not they become equity investors via PLAM. ▪ Equity benefits from a well established statutory legal framework, whereas RT1 and bank AT1 are largely contractually defined. ▪ Equity is tried and tested in crises. Contrary to this, there is only limited experience with bank AT1 and insurance RT1 yet. In their current form, these instruments have only been issued during the last 5-6 years, and absent Banco Popular, no real "test in crisis" has been made with respect to a write-off or conversion of publically placed benchmark AT1. ***With regard to the alternative provided by option 2, i.e. strengthening of the quality of Restricted Tier 1 should the 20% limit be changed we note the following:***	
20.4.3	▪ In our comment on 19.4.1., we explain that the quality of RT1 capital is formally	

	at least as good as that of equity. We question the benefit and justifiability of trying to further strengthen the quality of RT1, and rather see an increased risk of unintended consequences. ▪ In addition, we note the following ○ **1541 b**: does EIOPA imply that if the instrument is not called before year 20, the instrument can never be redeemed? This would be an unprecedented term for a debt security and would simply prohibit the ability of the issuer to replace the instrument with a lower cost alternative. ○ The legal framework for bonds is different from that of ordinary shares. If call rights in perpetual debt instruments were eliminated after year 20, as the text implies, this would restrict the financial flexibility of the issuer to an unacceptable degree - if for example the regulatory requirements for own funds items changed in the future or the circumstances of the issuer changed - and would in our view be a serious dis-incentive for the issue of RT1. ○ **1541 c:** We assume that the disallowance for partial write-down is to be applied mutatis mutandis to conversion instruments? I.e. the full conversion is also proposed with this clause? If so, rather than strengthening the quality of RT1, the consequence of this change could be to maximize any negative tax effects of PLAM.	
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