EUROPEAN INSURANCE AND OCCUPATIONAL PENSIONS AUTHORITY

Comments to the Discussion Paper on Methodological principles of insurance stress testing — 22 July 2019

Responding to this paper

EIOPA welcomes comments on the "Discussion Paper on Methodological principles of insurance stress testing".
Comments are most helpful if they:

- respond to the question stated, where applicable;
- contain a clear rationale; and
- describe any alternatives EIOPA should consider.

Please send your comments to EIOPA in the provided Template for Comments, by email to <**eiopa.stress.test@eiopa.europa.eu**> by **18 October 2019**. Contributions not provided in the template for comments, or sent to a different email address, or after the deadline will not be considered.

Publication of responses

Contributions received will be published on EIOPA's public website unless you request otherwise in the respective field in the template for comments. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.
Please note that EIOPA is subject to Regulation (EC) No 1049/2001 regarding public access to documents[1] and EIOPA's rules on public access to documents[2]. Contributions will be made available at the end of the public consultation period.

Data protection

Please note that personal contact details (such as name of individuals, email addresses and phone numbers) will not be published. They will only be used to request clarifications if necessary on the information supplied. EIOPA, as a European Authority, will process any personal data in line with Regulation (EU) 2018/1725[3] on the protection of the individuals with regards to the processing of personal data by the Union institutions and bodies and on the free movement of such data. More information on data protection can be found at https://eiopa.europa.eu/ under the heading 'Legal notice'.

[1] Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents (OJ L 145, 31.5.2001, p. 43).

[2] Public Access to Documents (See link: https://eiopa.europa.eu/Pages/SearchResults.aspx?k=filename:Public-Access - (EIOPA-MB-11-051).pdf).

[3] Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39).

Disclosure of comments	
EIOPA will make all comments available on its website, except where respondents specifically request that their comments remain confidential. Please indicate if your comments should be treated as confidential, by deleting the word "Public" in the column to the right and leaving only the word "Confidential".	**Public**

Chapter 2		
#	**Question**	**Answer**
Q.1.	What are your views on the presented stress test elements and their relations? Please elaborate on any relevant elements that have not been covered.	As an overall overview of the elements this framework looks adequate. However, it all depends on the purpose of the ST. There might be a feedback loop from "Analysis" back to "Approach", "Scope" and "Scenarios". This loop may reveal that the approach is not optimal or not within scope.
Q.2.	What are your views on the different stress test objectives and the advantages and disadvantages mentioned?	One advantage for the micro approach is that this is what the companies are accustomed to and have systems in place. They are also closer to the actual business and their own risks. In our view the most efficient way without stretching the resources within the insurance companies, is for EIOPA to utilize as far as possible the vast information already embedded in the Solvency II calculations. Possible to then add on stress tests on a micro or macro level. The macroprudential stress test would have to do calculations across the different companies that may have entirely different approaches, risk and management rules yet have to treat them as more or less the same. This

		could lead to a rerun of ST and result in the company having to do both a macro and micro stress test to capture the real underlying risk (high burden on the company). This is mentioned in the last bullet point of the disadvantages in table 2.2, but we think the complexity is higher than it is expressed. Another disadvantage of the micro approach is that it does not consider the macro economic effects that all insurers "think alike" and have similar management rules of behaviour in their models and risk management. This could affect the market as a whole.
Q.3.	What are your views on combining a microprudential stress test with a quantitative assessment of post-stress reactions by insurers to provide additional insight in potential second-round effects?	To avoid too much complexity and to let the insurers, who know their business best, do the actual stress test we think that this may be the best solution. It requires that the microprudential stress tests be set up in a way that will give this additional insight.
Q.4.	What are your views on the definition and recalculation of the baseline for stress test purposes? If a recalculation of the baseline would be requested, what would be the estimated additional resources/costs for this?	Recalculating the base line could be used to do a "what if" analysis and to isolate single effects of the stress. For many scenarios though, it is simply not possible to isolate single effects. It depends heavily on the purpose of this exercise. When looking at a stress after an economic change it could add value. The insurers, true or not, seem to deem their base line as the true best estimate for the current situation. Changing the baseline could indicate that the base line is very uncertain.
Q.5.	What are your views on the different time horizon approaches for stress tests purposes? What would be the most appropriate approach in your view in light of the different stress test objectives?	We agree with the listed advantages and disadvantages. We think that a multi-period stress test, although in theory would give valuable information, is far too complex to design, calculate and interpret. Our suggestion would be of instantaneous shocks combined with specific stretched components but based on the characteristics of the different risks. For example, equity shock is mostly instantaneous and longevity risk mostly stretched. These two risks should have a different time horizon. A risk could also have an instantaneous effect and a longer time horizon for the second order effect.

Q.6.	What are your views on the treatment of management actions in the context of a stress test exercise?	Embedded management actions are a vital part of the risk management of an insurance company and rightly so. This should therefore be a vital part of the stress tests, but only within reason and within the reality of what a management is likely to do in "real life". Embedded or post stress, any management actions must be realistic.
Q.7.	What are your views on requesting post-stress calculations both with and without management actions?	Any stress test scenario not taking management action into account is simply not realistic. We agree that management actions must be a part of the stress test in some shape or form. A stress test without any management actions will not give any real indication of the effect of the stress, unless the purpose is to measure the effect of the management actions itself.
Q.8.	Please provide your view on the distinction and different treatment of embedded management actions and reactive post-stress management actions	Embedded management actions are a vital part of the risk management of an insurance company and must be included to give a realistic picture of the effect of the stress. Embedded management actions would have to be realistic and a part of the day-to-day written guidelines and risk management of the insurance company. With embedded management actions, there should be no doubt that when "A" occurs then the management will act with procedure "B".
Q.9.	Which elements in your view can/should be limited in the embedded management actions to enhance the comparability of the post-stress results?	Any extreme scenario that leads to an "unexpected" management action should not be included as this could undermine the purpose of the stress test. Any management action that is not a day-to-day risk management action should not be included in the embedded management actions.
Q.10.	Please elaborate on the key elements of the technical information that would be required in order to implement potential limitations to embedded actions (content, scope, granularity etc.).	This will differ from company to company and as an association we do not have this overview.

Q.11.	Please elaborate on the feasibility (e.g. time and effort needed for the implementation) of the potential limitation to embedded management actions to calculate post stress positions.	This is hard to answer as we are an actuarial society and not an insurance company and this will vary a lot from company to company. But the time and effort will be high and especially for those companies running an internal model. We think that EIOPA could easily underestimate this
Q.12.	What are your views on the 3 possibilities for future EIOPA stress test exercises summarized in Table 2 8?	No further comments.
Q.13.	Do you have any further considerations regarding the potential evolution of future EIOPA stress test exercises?	Keep it as simple as possible. The insurance companies and their actuarial resources are stretched to the limit, in the light of solvency II reporting and now the preparation for IFRS17. Adding on to this further and introducing more complexity, would probably lead to insurance companies not participating in these stress tests.
	Do you have general comments, remarks, suggestion on Chapter 2?	No further comments.

Chapter 3		
#	**Question**	**Answer**
Q.14.	What is your view on the appropriate scope for a stress test exercise? Do you agree with the advantages and disadvantages of the different approaches?	Agree with the advantages and disadvantages of the different approaches. Believe this table should be considered with each stress test exercise, in order to identify the appropriate scope. Appropriate scope will vary, depending on the test.
Q.15.	What are your views on the metrics to be used for defining the scope for solos and groups, respectively?	Metrics identified are considered key/appropriate. Recommend defining TPs as 'Gross TPs'. Also consider excluding premium components from the TP measure so timing of premium cashflows does not distort TP totals. Also recommend including examples of some of the 'additional metrics in case of a ST based on a specific Risk factor in the table. We believe the option to use additional metrics is very important and often more appropriate.
Q.16.	What are the main challenges (if any) to assess the post-stress position of a synthetic group?	We believe the main challenges are captured in the disadvantages identified in table 3-1.
	Do you have general comments, remarks, suggestion on Chapter 3?	No further comments.

Chapter 4		
#	**Question**	**Answer**
Q.17.	What are your views on the historical versus forward looking approach? Do you envisage additional advantages / disadvantages on top of the ones listed?	Strongly support the view that the most appropriate approach for a ST exercise remains the hybrid approach. Without some reference to the past, it is difficult for the business to define a future scenario (and estimate plausible return periods and impacts). However, the uncertain future state of the market (financial and insurance risks, climate risk) is such that a purely hindsight view would be inappropriate. Emerging risks in particular would not be captured.
Q.18.	What is your view on the consistency of the scenarios with the Solvency II framework versus market compatible scenarios for the purpose of a stress test, in particular for the treatment of the RFR parameters?	Preferable to use the SII framework (for consistency) and only depart under specific circumstances or if the intention of the scenario is to challenge the SII framework. Proposed basis for choosing between option 1 and 2 seems reasonable (should be considered in light of the objective of the exercise).
Q.19.	What are your views on using single risk factors, single scenarios or combined scenarios for the purpose of a stress test?	Strongly support the preference for combined scenarios, provided effects can be isolated and interdependencies are understood, as noted in line 97. Careful definition of these combined scenarios is required, therefore more upfront consideration, however this should be less onerous than running numerous single scenarios and shocks, which usually provide limited insight (more valuable for model validation.)
Q.20.	What are your views on having combined scenarios, but allowing the identification of the single shocks in isolation (for instance impact of market and insurance shocks shown separately)?	Strongly support the preference for combined scenarios, provided effects can be isolated and interdependencies are understood, as noted in line 97. Careful definition of these combined scenarios is required, therefore more upfront consideration, however this should be less onerous than running numerous single scenarios and shocks, which usually provide limited insight (more valuable for model validation.)

Q.21.	What is your view on the bucketing approach for market shocks? Does a bucketing approach reduce the operational burden for the application of the shocks?	May not reduce the operational burden, however bucketing approach is considered appropriate and likely to provide more meaningful insight for a given narrative.
Q.22.	What is your view on the possible approaches to climate stress testing?	A combination of the short-term and long-term approaches should be undertaken. Consider it appropriate for EIOPA to be leading/assisting insurers in defining agreed scenarios and accepted methodology. Before collecting quantitative scenario results, would collecting qualitative responses on the internal approaches to assessing climate risk to underpin a report on best practice.
Q.23.	What would be appropriate metrics to assess transition risk in assets?	A shock to the investment returns per annum, which varies depending on the nature of the underlying asset. Consideration required of the appropriate granularity of the asset sub-groups, for applying such shocks. Requires a measure of sensitivity to climate risk impacts (or at least a high/medium/low).
Q.24.	What level of granularity would be needed in your view (i.e. industry level, underlying technology level, asset level)? Please distinguish between different asset categories if possible (i.e. equities, government bonds, corporate bonds, real estate)	Industry level for physical risks, by SII geographical zone. Asset level, with a high/medium/low for each asset category, for transition risks.
Q.25.	How could climate related shocks be calibrated (please distinguish between physical risks and transition risks in your answer)? What data sources could be considered?	See answer to 22. Requires an initial qualitative survey of market to define a best practice. Agree with comment in the paper that 'No broadly accepted methodology yet available'.
Q.26.	Do you have any further considerations on the inclusion of climate related risks in EIOPA's stress testing framework?	Very important to include. Some feasible combined scenarios of physical risk and transition risk could be presented to the market initially. However, believe a market qualitative survey and some establishment of best practice is required before a framework can be established.
	Do you have general comments, remarks, suggestion on Chapter 4?	No further comments.

Chapter 5		
#	**Question**	**Answer**
Q.27.	What are your views on the calibration and application of the shocks to fixed income assets? Do you think that the proposed specifications are sufficiently detailed? If not please provide suggestion on how to improve the guidance.	The calibration is sufficient for most fixed income assets. Question: What will be charges for Danish covered bonds? The Danish covered bond are residential mortgage-backed securities. The standard formula gives lower charge for this type bonds. The RMBS under category loans and receivables also has a different stress.
Q.28.	With regard to the derivation of the shocks to different maturities do you have different solutions to propose?	We assume the proposal is the shock for yield curve is homogeneous. For bond price, the shock needs to be multipled with maturity.
Q.29.	What are your views on the shocks to equities?	Participations should have lower shock.
Q.30.	What are your views on treating Equity unlisted [R0120] according to the shocks prescribed to listed equities? Do you consider the approximation reasonable?	No comments.
Q.31.	What are your views on the shocks to real estate?	No comments.
Q.32.	What are your views on the treatment of property, plant and equipment held for own use?	Property for own use should have lower shock.
Q.33.	Are RMBS yields the proper index to treat Loans and mortgages ([R0230])? Is an additional granularity needed to treat the sub-items of the loan and mortgages category (i.e. Loans on policies, Loans and mortgages to individuals, Other loans and mortgages)? If yes, please provide suggestions for fitting indices.	No objection to this simplification.

Q.34.	Do you envisage potential constraints in the application of a look-through approach?	For some hedge funds, data for look-through may not be available. Some simplification should be allowed.
Q.35.	What is your view on the shocks to type 1 Exposures? Do you consider the shocks to counterparties sufficiently specified? If not please provide indication on how to improve the specification.	No comments.
Q.36.	What are your views on the calibration and application of the mortality/longevity shocks?	We agree with the calibration and application set out in the table 5-2. Especially the method of different stresses dependent on maturity and age. In Norway, however, most policies have both longevity and mortality risk for the same policy and therefore we would also need some correlation matrix.
Q.37.	Can you suggest any time-series to be used to calibrate the shock to lapse?	
Q.38.	What are your views on the described approaches to the application of the lapse shocks?	
Q.39.	What are the main theoretical and operational issues you envisage in the application of the "standard formula" approach?	
Q.40.	What are the main theoretical and operational issues you envisage in the application of the classification approach based on product characteristics (option 1 in the classification approach)?	
Q.41.	Does the proposed classification approach based on product characteristics fits your liability portfolio? If not please suggest a different classification.	
Q.42.	What are the main theoretical and operational issues you envisage in the application of the classification approach based on guaranteed rate / penalties (option 2 in the classification approach)?	

Q.43.	Is the technical rate a proper reference to assess the level of the guarantee? If not do you have other suggestions?	
Q.44.	What are proper thresholds to be applied to the technical rate?	
Q.45.	What is in your view a proper criteria to classify the penalties?	
Q.46.	Do you have other suggestion to classify the life portfolio in the light of a lapse shock?	
Q.47.	What are your views on the calibration and application of the life expense shock? What data sources could be used to calibrate the shocks?	
Q.48.	What are your views on other life risk shocks, in particular regarding morbidity and disability shocks, revision shocks and/or pandemic shocks in a stress test? What data sources could be used to calibrate the shocks?	
Q.49.	What is your view on the Scenario based approach versus the Standard formula based approach?	Preference for Scenario based approach - agree that the Standard formula approach has limited value.
Q.50.	What is your view on the approach to the application of the Shocks: A) claim disbursement; B) full reserve presented on the claim disbursement?	Gross impact - Claim disbursement is much more straightforward to compute, therefore less onerous on the business as a scenario and more consistent as a scenario. If anything, should be more conservative that a full reserve, as a shock to the business. However, does require definition of assets to be utilised and consideration of liquidity of assets. For those companies with complex reinsurance recoveries and potential bad debt risk, option A may not capture the risk sufficiently. Therefore, would suggest option B if net losses are the focus of the test or scope is 'businesses with high reinsurance levels'.
Q.51.	What is your view on the options presented on the treatment of the reinsurance recoverables?	Delay to receipt of reinsurance recoverables should be factored into the scenario. For option B, this can be factored in, consistent with assumed TP payment patterns. For option A, a factor should be required for

		potential delay in receipt of funds (in addition to bad debt) where material.
Q.52.	Do you have suggestions on the treatment of the post-stress DTA/DTL and on potential controls to be applied?	Full re-valuation is considered ok, as long as the shocks are realistic for both asset and liabilities, and the valuation for tax regime is consistent. Where there is a large difference in valuation, some of the results will be unreasonable.
Q.53.	Do you consider the information provided sufficient for a revaluation of the post stress position on derivatives? If not please provide indications on the missing information.	Questions: Must we reprice all derivatives? Can we use the delta?
Q.54.	What are your views on the general approach to simplifications and the materiality criteria?	For companies with internal models, simplification must be allowed. Re-parametrisation of the model for the stress parameters is very time consuming and may not provide any more accurate results. Many assumptions are required for a new run of the model.
Q.55.	What are your views on the proposed simplifications for the post-stress LACDT? Do you agree with the rough assessment of the post-stress LACDT with the pre-stress net DTL? If not please provide different approach to identify potential miscalculations of the LACDT	No comments.
Q.56.	What are your views on the possible simplifications for the use of regression techniques post-stress? In your answer please clearly distinguish between theoretical principles and the viable (in terms of feasibility) solutions in the context of a Stress Test exercise.	No comments.
Q.57.	In case of a scaling approach what are the proper parameters to estimate the post-stress loss distributions?	No comments.
Q.58.	In case of a full recalibration of the regression techniques against stressed conditions what are the parameters you may need as an input? Would the addition of other price categories in the list of asset shocks and the volatility surface reassessment under stressed situation be enough to	No comments. This will be specific for each internal model.

	re-calibrate your different tools?	
Q.59.	What are your views on the extra resources required to achieve a full and complete recalibration? Please quantify the amount of days involved and how important the expert judgement is.	At least 2 months. Heavily depend on expert judgment.
Q.60.	What are your views on the proposed simplifications for the use of LTG and transitional measures post-stress?	No comments.
Q.61.	What are your views on the proposed simplifications for the calculation of the post-stress risk margin?	Reasonable.
Q.62.	What are your views on the group consolidated based approach? Do you agree with the drawbacks presented on the group consolidated based approach? If not can you provide ideas on how to allow a proper validation of the results?	No comments.
Q.63.	What would be in your view a proper approach to define model points? (please provide concrete examples)	No comments.
Q.64.	What would be in your view a proper approach to validate the best estimate produced via model points? (please provide concrete examples)	No comments.
Q.65.	Do you envisage any other approach to simplify the consolidation at group level?	No comments.
	Do you have general comments, remarks, suggestion on Chapter 5?	No further comments.

Chapter 6		
#	**Question**	**Answer**
Q.66.	What is your view on the overall approach of validation and the different types of validations?	
Q.67.	What is your view on the approach used for the validation of the Best Estimate under stressed situation using cash flow values and their evolution under stressed situation? Which additional parameters would you suggest to improve the framework?	
Q.68.	What is your view on a common approach for the Risk Margin estimation even used in Baseline calculations? Which drawback would you envisage if a "Base RM" is used as a control variable?	
Q.69.	Do you have any further considerations on validations which could improve the level playing field?	
	Do you have general comments, remarks, suggestion on Chapter 6?	We ran a bit out of time in the working group and did not have time for all the questions. We have therefore left 37-48 and 66-69 open.