Position Paper

Response to second EIOPA discussion paper on methodological principles of insurance stress testing

Our reference:	ECO-SLV-20-217	Date:	15 October 2020
Referring to:	EIOPA's Second Discussion Paper on Methodological Principles of Insurance Stress Testing		
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Pages:	24	**Transparency Register ID**	33213703459-54

Section 1 - Climate Change stress test

General messages on insurance stress testing

- The objective must be clearly defined and articulated.
- All results should continue, as in previous years, to be published at aggregate level.
- The calculation of a post-stress SCR is not necessary to achieve EIOPA's financial stability mandate and– given that Solvency II is already a stress-test based framework – it would result in a stress on a stress and would wrongly imply capital needs far in excess of the 1 in 200. Publication of post-stress SCR, even on an aggregate basis, would create significant confusion and must be avoided.
- The approach, scope and specifications of any exercise should be proportionate to its objectives.
- The scheduling and permitted timescales of future exercises should be improved to facilitate implementation.
- Data collection and validation should be standardised and consistent.
- Communication on the stress testing should ensure that the design, limitations and results of any exercise are appropriately communicated and well understood.

Key messages on climate change

- Insurance Europe recognises that appropriately designed climate stress tests can provide information to help assess industry exposures.
- However, given the difficulties in designing appropriate testing, the first climate change stress tests should be explorative. A step-by-step approach to the development of future stress tests is needed.
- A long-term horizon (between 20 and 30 years) could be appropriate since physical risks in particular will only materialise over a longer period. However, the significance of a stress test result that models the changes in a current portfolio over the medium to long term needs further assessment. If a very long horizon is chosen, Insurance Europe would suggest keeping assessments on a qualitative level against the background of increasing complexity and uncertainty.

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- Reinsurance should be recognised as an assessment of the financial position of the insurer net of reinsurance is the most relevant one for stress test results.

Q1. *What are your views on the main climate change related risks and transmission channels? Are there any other climate change related risks or transmission channels that should be considered?*

Insurance Europe shares the view on the main climate change related risks and the transmission channels laid down in the discussion paper. These channels are widely recognized in science and practice. Moreover, they affect both sides of the balance sheet and will materialise through established risk categories as shown in table 1-2.

Q2. *What are your views on the objectives of a climate change ST? Should any additional objectives be considered?*

Insurance Europe recognises that appropriately designed climate stress tests can provide information to help assess industry exposures.

It agrees with EIOPA's assessment that, given the complexities and uncertainties of such an exercise, it is necessary for the first (and likely further) climate change stress test(s)/assessments to be explorative. A step-by-step approach is supported.

The exploratory objective is extremely important, as the resulting financial consequences of climate change and climate policy for specific industries /companies are not yet fully clear. The results should not be judged by the standards of existing stress tests, given that climate risk assessment is new and evolving. At the present stage of discussion, the results can only give indications for relevant issues and further work.

Climate risks are global in nature and require globally coordinated supervisory and regulatory responses. Insurance Europe acknowledges the need to develop thought-leadership in understanding the financial risks from climate change. At the same time, it urges central banks and supervisors to align their approaches and avoid fragmentation.

Regarding macroprudential objectives, the focus should be on assessing potential vulnerabilities and the resilience of the insurance sector. At this stage, care must be taken not to overload the stress testing framework by including other macroprudential objectives.

Clear macro scenarios that are aligned across jurisdictions are crucial to understanding the resilience of business models to the physical and transition risks from climate change, while also enabling stakeholders to compare the results of scenario analyses more easily and identify risks and transmission channels from the macro environment to the micro business model. In this regard, an approach to 'build on' reference scenarios currently under development by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) is encouraged.

The first climate stress test exercise may also be an opportunity to carry out a new type of reflection on the projection assumptions that may increase insurer's awareness of the effect of climate change.

Q3. Are there any other scenario narratives that should be considered as part of a climate change stress test exercise?

Insurance Europe supports a limited set of scenarios (ie business as usual, disorderly transition and too little too late scenario) or four scenarios ("physical" and "transition" in two variations each). The scenarios should be kept bold and simple.

Q4. *What is your view on the appropriate scenario specification granularity? Would the proposed granularity be compatible with your modelling to calculate the stressed impact?*

It seems necessary to include an analysis by economic sector in order to understand the transition risk, even if, there is still a lot of uncertainty about the transition risk for each economic sector.

A more granular analysis (at company level) is not suitable for a stress test exercise because it is too complicated to implement. EIOPA could carry out this work independently as it has access to all the information on the assets, and would be in continuity with the work already carried out (see EIOPA-BoS-19-571, 16 12 2019 "Discussion paper: Insurance sector climate-related transition risks").

Q5. *What is your view on the appropriate time horizon for a climate change ST?*

Insurance Europe agrees that short to medium term time horizons could be used to assess the impact of extreme climate events and transition risk.

It also agrees that a long-term horizon (between 20 and 30 years) is necessary to assess physical risks which will only materialise over a longer period.

The assessment of long-term physical risks should be based primarily on qualitative analysis at present. Quantitative modelling of long-term horizons is very complex due to interdependencies between environmental and socio-economic and other influencing factors and would require extensive development of insurers' existing tools and processes.

Q6. *What is your view on modelling the long-term shocks on a fixed reference date balance sheet (without reactive management actions)? Would this approach strike a right balance between allowing an assessment of the potential risk, modelling feasibility, complexity and comparability?*

The application of long-term shocks to a fixed balance sheet without reactive management actions would not result in a realistic outcome, given that (re)insurers will be able to react to any observed trends affecting investments and liabilities.

The inherent difficulty of utilising a dynamic balance sheet is recognised, but the limitations of a fixed balance sheet should also be acknowledged, including in terms of the potential for overstating impacts that may not reflect risk mitigating measures that could be developed over time.

As such, for any long-term assessment the emphasis should be on qualitative analysis. This may provide more realistic insights in comparison to abstract quantitative models.

It is also imperative that a proportionality principle is introduced so that non-material balance sheet/P&L items or items not relevant to the stress scenario can be projected in a highly simplified way

Q7. *What is your view on having a separate forward-looking to assess reactive management actions, implications for business models and potential spill-over effects?*

Any forward-looking assessment must avoid unnecessary complexity and too far reaching interpretations.

Meaningful conclusions regarding potential spill-overs to other sectors or the future availability or affordability of insurance cover seem hardly possible as this will also depend on wider societal adaptation measures and policy responses which are outside the influence of the participants.

Q8. What are your views on the different modelling approaches presented? Are there any other modelling approaches for transition risk that should be considered?

Insurance Europe generally agrees with the presented modelling approaches.

The only way to derive the probability of default of a state from the changing gross value added is to take into account other factors. At present, no approach appears to adequately reflects this. Results would therefore excessively overestimate the realistically expected impacts and may lead to false conclusions. If sovereigns

are to be subject of the climate ST at all then it is of utmost importance to be too clear about the limited significance of the results.

Furthermore, CARIMA is not an optimal starting point for a stress test because asset prices at that time were formed by assumptions of market participants and the carbon factor was probably not that significant 20 years ago.

Insurance Europe agrees with the limitation of the PACTA model underlined in the paper on the low coverage of this model.

Q9. Are there particular external sources to calibrate transition risks for assets that should be considered?

Some suggested sources for consideration are detailed below, although Insurance Europe does not at this stage explicitly support the calibrations within any of these sources.

- https://www.esrb.europa.eu/pub/pdf/asc/Reports_ASC_6_1602.pdf
- https://bankunderground.co.uk/2017/01/23/the-tip-of-the-iceberg-the-implications-of-climate-change-on-financial-markets/
- https://publications.banque-france.fr/en/climate-related-scenarios-financial-stability-assessment-application-france
- MSCI

Q10. Do you agree that windstorm, floods, heatwaves, wildfires and droughts are the more material perils amplified by climate change which are relevant for non-life risks?

Yes, windstorm and floods are material perils that might be amplified by climate change, as well as hurricanes and others wind-related events.

Thunder (hail) storm should be included as a separate risk category. Likewise, subsidence through drought is an important peril in some European geographies (especially in France) and could be assessed as a specific peril.

It is also advisable to check the emergence of new (material) risks from time to time.

Q11. *Do you agree that prescribing changes to frequency, severity and correlation of specific perils linked to climate change evidence (but not prescribing the specific events) should be the preferred approach? Would this type of specification allow you to calculate the stressed impact for your portfolio?*

The approach appears to be reasonable on first assessment, but further work is needed to assess if it is proportionate to the objectives and expected outcomes.

Due consideration must be given to how the approach would be implemented for both IM users and SF users, dependant on the scope of the exercise.

Q12. *Would you have suggestions of a methodology to define the changes to frequency, severity and correlation of specific perils in light of climate change? Are there particular external sources to calibrate physical risk impacts on insurance liabilities should be considered when calibrating the scenario variables?*

Reinsurance companies gather global loss data which are being used for establishing the insurance premia. Though this source is backward looking, locally increasing volatility in one region could be used as a scenario calibration for other regions. Furthermore, insurers undertake significant efforts to implement forward looking climate modelling.

Also the UN's work on this issue could be considered:
https://www.unepfi.org/news/industries/insurance/unep-fi-working-with-16-global-insurers-to-better-understand-risk-implement-tcfd-recommendations/

Other sources include:

- WRI Aqueduct
- World Bank CCKP

However, Insurance Europe notes that it is very problematic to define a methodology to appropriately calibrate the frequency, severity and correlation ST factors due to divergent outcomes from different models assessing the regional impact of the climate change.

Q13. *Do you agree that heatwaves, floods, droughts, fires and vector-borne diseases are the more material perils amplified by climate change which are relevant for life and health risks?*

Insurance Europe does not fundamentally disagree. However, the effect will be marginal compared to the other risks like lapse, interest rate, or other market risks.

Moreover, there are some criticisms on describing physical climate stress for life and health insurers. Climate change may have an impact on health and mortality but since it can be assumed that the climate will gradually change, any changes that may occur in health insurance will be cushioned by premium adjustment, for example, and it would be particularly overstated for a fixed-balance sheet approach.

Generally speaking, the principle of proportionality must be taken into account by the consideration of such climate related shocks (heath waves, floods, droughts, hurricanes etc) for life and health insurers.

Q14. *Do you agree that shocking mortality and morbidity rates as part of a climate stress test is relevant? Are there further risks beyond mortality and morbidity that should be specified as part of climate change ST?*

There are many other aspects besides climate change that influence mortality and morbidity rates. Therefore, shocking these rates seems to be largely spurious.

Q15. *Could you suggest a methodology to calibrate such a shock?*

N/A

Q16. *What are your views on the risk posed by physical risk on your assets and investments?*

Insurance Europe agrees with EIOPA that the impact of physical risk on asset valuation should not be very different depending on the scenario chosen (RCP 2,6, RCP 4,5 or RCP 8,5), up to 30-year time horizons. As noted by EIOPA, further work is needed in this area before it can be incorporated into a stress test.

Q17. *Are you already trying to assess impact on assets from physical risk? Do you have any other indicators or methodologies to do so?*

N/A

Q18. *Do you have a methodology to disentangle physical and transition risk on the asset side?*

N/A

Q19. *What are your views on the proposed specification of the shocks? Do you foresee any challenges regarding the proposed specification of the variables for your modelling of the impact?*

The gross impact (without reinsurance) is not relevant.

A key aspect of the insurance process is reinsuring risks that could deplete buffers. Reinsurers benefit from pooling risks and in case of extreme weather events, which are always local, diversification works well. It therefore makes no sense to assume the default of the largest reinsurer.

Note also that non-life cat risk is included in the SCR, so climate risks are already considered in the capital requirements. Specifying even more extreme cat events could be interesting for some climate experts but it is only interesting for insurers if the SCR calibration was too optimistic.

Moreover, regarding the key variables in Table 1-12 (BoS-20/341) related to physical risks, it is difficult to translate temperature pathways into specific model parameters for the ST. EIOPA should "translate" the relevant pathways into concrete parameters/factors. For transition risks, such a relationship to model variables is even less obvious.

As long as concrete ST scenarios are not specified yet, it is hard to tell whether any challenges for modelling of the impact might emerge.

Q20. What are your views on the application of shocks? Do you foresee any challenges regarding the proposed treatment of reinsurance and nat-cat schemes?

If the physical and transition shocks are sufficiently well and clearly defined in terms of model parameters, it should be feasible to quantify the effects separately or combined.

Insurance Europe does not support the notion that reinsurance recoverable should be stressed in a climate change scenario as there is no evidence suggesting that reinsurers would be at greater risk of failure than in the status quo.

In general, the proposed models/methodologies for the ST should be as clear and simple as possible. However, modelling P&L and balance sheet over such long-time horizons is a new exercise for insurers. The models used will certainly not be at the same granularity as those used for ORSA projections for example. Therefore, the technical specifications will have to be very precise to ensure consistent results across participants.

The recognition of positive marginal impacts is supported.

Q21. *Are there alternative approaches to capturing the interactions between physical and transition risks in climate change scenarios?*

N/A

Q22. *What are views on the treatment of Nat-Cat schemes?*

Nat-Cat schemes should be considered fully.

Q23. *Do you agree that the preferable indicators should be the ones based on the balance sheet information and that no information on SCR post stress should be requested in the context of a climate stress test exercise?*

No information on SCR post stress should be requested.

Indicators should be limited to those reported in the QRTs. These can be determined with reasonable effort. Anything beyond this requires a great deal of effort, as they cannot be determined using standard processes/technology/methods etc. This is especially true for the key figures listed in the Table 1-15 starting with "return period of gross losses".

Q24. Are there any technical indicators that you might not be able to provide?

No, in theory, but it would depend on the complexity of the exercise and if those metrics are easily calculated under the scenarios. See answer to Q23.

Insurance Europe proposes that excess of assets over liabilities should be the main indicator. Profit & loss (P&L) indicators seem strange in an instantaneous shock scenario with a horizon of 30 years. One can assume a fixed BS and compare the BS beforehand with BS afterwards, but P&L is about flows. After a BS shock the insurer will adapt: eg by increasing its premiums or reinsuring more risks and thereby restoring its profits. Projecting 30 years ahead also need specifications about those flows.

Q25. *Which are, in your view, the more significant technical indicators in the context of a climate stress test exercise?*

A priori it is difficult to provide a concrete view. Currently a more concrete specification of "technical indicators" is lacking.

The more significant technical indicators in the context of climate stress test exercise are expected to be:

- Excess of asset over liabilities (change of).
- Relative changes in portfolio market value from an asset-side perspective.

Splitting losses into expected and tail losses make sense, as for some perils expected changes will be different across return periods.

Q26. *Are you able to provide information on the exposures for other perils (not included in the Standard formula calculation) split by countries or geographical areas? Are there any relevant information that you think could be useful in order to analyse and validate the results?*

In order to meet the supervisory requirements of the standard formula, many companies put a great deal of effort into collecting information on the exposures for those perils included in the standard formula calculation. Collecting any information on perils beyond the standard formula will increase workload which in light of the uncertainties in the research on climate change should kept to a proportionate level at this stage.

Additionally, it is hard to identify the right exposure (Total sum insured? By regions?), which (at least in principle) could be targeted if the new perils are not modelled within the standard formula.

Without any models/methodology provided it will be even harder to quantify the impact of drought/heatwave scenarios on the loss side.

Q27. *Are there any other indicators you would suggest to include?*

An example would be the percentage of assets subject to transition risks and indicators reflecting the adaptive capabilities of an insurer and its investments.

Q28. *Do you consider that the proposed forward-looking information gathering exercise will help shed light on potential second-round effects of climate change, such as the issues of availability and affordability and the protection gap in insurance?*

Yes, to some degree, but such an exercise should be kept as simple as possible.

Care must be taken not to overload the stress testing framework when assessing second-round effects like changes in the availability and affordability of insurance cover and the insurance protection gap.

Future market and policy developments are highly uncertain and depend on many influencing factors. Any forward-looking information gathering exercise of the kind considered by EIOPA would be difficult to aggregate and interpret. Due to its necessarily selective nature it could even result in misleading conclusions, eg by

neglecting the close interaction between risk prevention and insurance cover. What is more, country-specific approaches to insurance gaps play an important role.

Q29. *Do you agree that a qualitative questionnaire, with some quantitative elements, is a good option to assess post-reactive and preventive management actions within a climate change ST scenario?*

Yes, but this should be kept as simple as possible.

Q30. *Do you agree on the quantitative metrics proposed or are there other relevant indicators that you would include?*

The scope of quantitative metrics should be kept to a minimum.

Q31. *Do you agree on the type of questions asked with regards to the level of integration of climate change risks in business models and risk management strategies?*

In principle the type of questions is, in Insurance Europe's view, not generally problematic. The recommendations of the TCFD provide a widely accepted standard to describe the management and integration of climate risk and the questions should be aligned to the recommendations as much as possible. This would allow insurers to leverage existing disclosure work and reduce effort.

However, questions with regards to the level of integration of climate change risks in business models and risk management strategies only if climate change risks are material from the undertakings individual risk management perspective should be included. The level of integration of climate change risks in undertakings risk management, strategy and overall business model should be primarily defined by materiality of the risks.

Q32. *Do you agree on the scope intended for the information gathering exercise?*

Although a limited information gathering exercise may be helpful to shed light on potential second round effects, it would be burdensome, and the benefits are highly uncertain (see answer to Q28). Therefore, any additional information gathering should be limited to a minimum.

Q33. *Do you have any other concerns related to the proposed exercise?*

EIOPA has already raised the most relevant concerns in Table 1-16 of the discussion paper.

Regarding the two-stage process discussed in para. 152, Insurance Europe agrees that it would have a detrimental impact on the duration of the ST exercise and the level of resources required.

Do you have general comments, remarks, suggestion on Section 1?

Insurance Europe encourages EIOPA to use its thought-leadership to work towards a globally consistent approach to climate STs with consistent parameters/scenarios.

Given the time horizon of climate stress tests, it is necessary that management actions are reflected to ensure that they remain realistic and relevant.

On the assets side, insurers have a certain exposure to banks. If climate stress tests are used to investigate possible infections or second-round effects that emanate from banks with high exposure to climate risk, we need meaningful information on the banks' exposure to climate change risks and assumptions on how to deal with these risks.

It should also be noted that in a climate stress test with many assumptions and a long-time horizon, spurious accuracy should be avoided.

Section 2 - Liquidity stress tests

Key messages on liquidity stress testing

- Liquidity risk is important for insurers, but it is well managed due to the business model, existing regulatory provisions and insurers' integrated approach to liquidity and risk management.
- Liquidity stress testing is already undertaken by companies as part of their existing liquidity and risk management processes and widely reported upon within the ORSA.
- EU-wide, standardised liquidity stress tests are not expected to provide significant additional value or insights to the data which is already available to supervisors and regulators.
- If an EU-wide liquidity stress test is undertaken, it is necessary for the following aspects to be taken into consideration:
  - Only liquidity indicators which combine both liquidity needs and all available liquidity sources are meaningful.
  - All available sources of liquidity should be included in the assessment and not only the liquid assets.
  - The bucketing of asset exposures is a reasonable approach to assess their liquidity, provided it is adapted to reflect insurers' investment strategies and behaviours including appropriate recognition of pooled funds. Care must be taken to use appropriate haircuts and avoid inappropriate generalisations.
  - The categorisation of the liquidity of liabilities based on their contractual specifications is not desirable and should be avoided. Instead, an approach which assesses the liquidity of the liabilities by considering the impact of liquidity-relevant stresses on cashflows should be used.
  - Appropriate calibration of the stresses is a key consideration.

Q34. *Do you agree with the advantages and disadvantages on groups and solos proposed in Table 2 2?*

The advantages and disadvantages appear to be broadly reasonable but there are some important omissions from the solo disadvantages (see Q35).

For groups, it is not clear why the use of D&A methodology of group aggregation is listed as a disadvantage. Parts of groups using this methodology could still be included in liquidity assessments.

Q35. *Which additional advantages and disadvantages do you consider relevant?*

Solo analysis will over-estimate any liquidity concerns that may be found because groups will almost always have excess liquidity both from other solo entities and from group level resources. This should be included as a disadvantage.

Any prescriptive approach from supervisors to companies' individual liquidity frameworks could have detrimental effects and should be avoided. The current supervisory approach allows companies for which liquidity is a relevant risk to develop sophisticated and highly integrated internal models for measuring and managing liquidity risk reflecting risk appetite and their relevant liquidity risks.

Q36. *Do you consider the intra-group support a key part of the liquidity assessment? If yes how can this be included in the design of a Stress Test?*

Yes, intra-group support is a very important aspect of a liquidity analysis.

At solo level (because of the business model and because it will be managed), liquidity will rarely be a material source of concern. However, it is possible that there are situations which create a localised shortfall in liquidity within a solo entity. Groups with such a potential exposure will be aware of this but also aware of excess liquidity in other solo entities and at group holding level.

Groups may also manage liquidity explicitly at group rather than solo level.

Therefore, a liquidity stress test can only deliver reasonable results if it is conducted on the level on which liquidity is actually managed.

The value of an approach based on solo submissions where, under a corporate structure, there is a reliance on group actions and support in a stress situation is questionable. This approach would introduce additional cost, complexity and inconsistencies, and could underestimate the benefit of intra-group support, ultimately giving an incomplete view of scenario impacts.

Q37. *Do you consider the list of the liquidity exposures exhaustive? If not please elaborate on the missing elements.*

The discussion in section 2.1.3 on sources of liquidity risk discusses both events which can cause a need for liquid funds (eg exposure to cat events, mass lapses) and concerns that some sources to mitigate liquidity risk (eg re-insurer counterparty risk and funding risk) may not be available when needed. There are important sources of liquidity/mitigants for liquidity risks which are missing (and are not included in the later section on liquidity sources, which focuses only in liquidity of investment assets).

For a correct and complete analysis there should first be an identification of the events/situations which could lead to a need for liquidity and then an assessment of the sources of liquidity/mitigants for liquidity risk.

The sources of liquidity risk are well covered but are better summarised in Table 2-12.

However, there is no similar and complete assessment of sources for liquidity/mitigations. There should be a dedicated section for this and a summary table similar to Table 2-12. This would include, for example, the following:

- Cash
- Re-insurance
- Income from investments (rent, coupons, dividends) and maturing bonds
- Liquid assets/investments
- Premiums
- Intra-group transfers
- Pre-arranged and potential bank/credit lines

Existing (NSA supported) powers to prevent mass lapse.

Q38. *Do you consider the description of the exposures appropriate? If not please provide suggestions*

The descriptions are considered to be broadly appropriate. However, the descriptions give no indication of the actual level of risk or concern in practice. Due to the insurance business model and the regulatory framework already in place, liquidity risk exposure of the insurance industry is very moderate, and situations of systemic liquidity risk are extremely unlikely.

For example, for the German life insurance market, historical lapse data show that lapse rates tend to be very stable and hardly fluctuate in stressed market conditions, such as the financial crisis in 2008.

- Regarding policyholder behaviour and lapses, it should be noted that immediate payment to the insured is not always required (eg it can take up to several months) which allows the insurer time to update its liquidity planning.
- Regarding off-balance sheet exposures, it is important to highlight that insurers are restricted in their use of derivative instruments insofar as they contribute to a reduction of risks or facilitate efficient portfolio management by Article 132 of the Solvency II Directive (Prudent Person Principle). Coupled with the fact that derivative usage by insurers is also very limited at EU level (the ESRB reports that 80% of notional exposures was held by only 30 undertakings), the prominence of this risk in the discussion appears to be disproportionate.

- Regarding intra group-exposures, it is important to separate those linked to legally binding commitments, where failure could theoretically lead to potential cross-default and therefore accelerate/create liquidity crisis, to those discretionary (eg capital/cash injection into subsidiaries) where consequences are benign or limited.

It is also worthwhile noting that most of the mentioned sources of liquidity risk are also sources of solvency risks (as noted by EIOPA) and are therefore already monitored within Solvency II regulation.

Q39. *Indicators such as the surrender ratio can be based on surrender values or exposures (e.g. best estimates). Which is in your opinion the best option?*

Insurance Europe strongly agrees that only liquidity indicators which combine both liquidity needs and all available liquidity sources are meaningful eg:

$$\text{Liquidity indicator} = \frac{\text{Liquidity sources}}{\text{liquidity needs}}$$

However, **this is only of use and relevance if:**

- The liquidity sources include all sources of liquidity and is not only based on liquid investment assets.
- The liquidity needs include the impact of customer penalties and actions, such as powers to prevent mass lapses.
- The timing is taken into account so that it is not assumed that a liquidity need is instantaneous if in fact payment would only have to be made with, for example, within 1 month.

Some companies have set up a comprehensive liquidity risk policy including tailored liquidity indicators, stress test scenarios, asset classification and liquidity needs assessment. Creating a standardised indicator or a standardised approach would be inefficient and even counterproductive for these firms, as it would lead to a substandard version of an existing assessment and may lead to biased results. The results of these liquidity assessments are already monitored by the NCA and communicated in the ORSA report.

Asset liquidity by itself does not appear very useful as it looks at only one source of liquidity. Likewise, Liability liquidity which will not indicate liquidity issues.

The surrender ratio indicated also does not in itself appear to be very useful. Instead surrender risk could be included as one of the liquidity needs in the liquidity indicator and the premiums included as one of the liquidity sources. In such a case, the surrender values appear to be of relevance as this is what would impact the amount that would have to be paid out at short notice.

If a surrender ratio is considered to be a necessary metric for liquidity purposes, it should build on the definition that companies use for deriving the best estimate assumptions for their cash flow projections. The influence on the cash flow is the relevant aspect for liquidity purposes. That definition might, for example, build on surrender values or number of surrendered policies. A liquidity stress test should be flexible in this regard to allow companies to use the most adequate definition for their portfolio and to minimise costs by using the definitions that are already in place.

Q40. *Which other liquidity indicators do you consider to be relevant especially in the context of a ST?*

As noted in Q39, Insurance Europe considers only meaningful liquidity indicators in the context of a stress tests must combine both liquidity needs and all sources of available liquidity.

Liquidity also has a temporal element which should be considered as part of a stress testing exercise: eg daily collateral margining process needs cash like assets that can be transformed into cash very quickly, while other liquidity stresses are less demanding.

Q41. *Which classification do you consider as the most appropriate between the ESRB and the IAIS?*

Insurance Europe does not consider either the ESRB or IAIS bucketing of assets to be fully appropriate for the purposes of insurance stress testing as they reflect a banking regulation and do not sufficiently consider the characteristics of insurance business.

Furthermore, as noted by EIOPA, it is important that haircuts to asset values reflect the ST's time horizon. This is not the case of the ESRB classification.

Insurance Europe does not agree with EIOPA's assessment (outlined in para. 201) that "instruments issued by other financial institutions should generally not be considered as liquid, except for deposits". This would appear to prohibit financial institution securities (eg bonds) and certain money market instruments (eg commercial paper) from being eligible as liquid resources and would represent a major divergence from typical liquidity frameworks.

Regarding the IAIS classification:

- The high granularity of the IAIS' classification in terms of ratings would increase complexity. In a systemic crisis in particular, ratings are likely to change, making the IAIS classification impractical.
- The classification of covered bonds fits better to the liquidity we observed in markets during financial crisis, where the liquidity of covered bonds (German Pfandbrief) proved to be even more robust than those of senior unsecured bonds.
- Ratings specifications should be switched to CQS for consistency with Solvency II.
- Regarding the ESRB classification:
    - Haircuts seem to be calibrated to bonds with long time to maturity and high CQS and this is too conservative for large parts of insurance portfolio.
    - Bonds with CQS >= 2 form an important part of insurers' portfolios and should be more differentiated.

Allocating all financial bonds to the lowest bucket irrespective of their quality overly conservative and not appropriate.

Q42. *Which other methods to classify assets according to their liquidity do you consider to be relevant?*

N/A

Q43. *Please provide your view on the exemplificative calibration of the haircuts presented in the IAIS and ESRB example. Do you have other suggestions for the calibration?*

Haircuts should reflect the loss in value that would be incurred when an investment is sold. There are two drivers of the loss in value:

- Loss in value due to market conditions at the moment the sale occurs. In a stress test exercise, this is governed by the scenario specifications and within Pillar 1 and Solvency II framework this is governed by the SCR.
- The discount that is needed to ensure the assets can be sold quickly. The time period is the key parameter of the scenario which affects this driver. The general market sentiment in the stress scenario will also be a driver.

Therefore, Insurance Europe is of the view that

- In the baseline, haircuts should be very small given insurers typical investment portfolio. There would have no impact from the first driver and only marginal impacts on some asset classes from the second driver. Notably, large and deep equity and bond markets should have a 0% haircut.
- In the stress scenario, the strength of the haircuts depends primarily on the design of the scenario including the time period involved. If the scenario affects the entire market in a short time horizon (eg global financial crisis), high haircuts may be appropriate. If the scenario focuses on liquidity

requirements arising from liabilities changes (eg localised lapses), which only apply to a limited number of insurers, low haircuts or no haircuts would be expected.

In general terms, categorisation of assets and haircuts should strictly follow economic criteria. For example, under the ESRB classification, EU sovereigns belong the highest liquidity bucket (no haircut) whereas US treasuries are not explicitly mentioned and to our understanding thus qualify only for the second bucket (non-financial with CQS 0 or 1) and therefore have a haircut of 15% which is not expected to reflect economic reality.

Insurance Europe notes that the IAIS does not prescribe haircuts but indicates that haircuts should differ per stress horizon.

Q44. *Could you please confirm the relevance of the classification of insurance products according to their sensitivity to lapses by a liquidity perspective?*

The categorisation of the liquidity of liabilities based on their contractual specifications is not desirable and should be avoided.

To date, only low or no sensitivity of the lapse rate to capital market movements has been observed for classic insurance products. Therefore, endowments and annuities in deferral phase – from a theoretical point of view – have at most a medium sensitivity of the lapse rate to capital market movements. From a practical point of view, only a low or no sensitivity can be observed. In addition to the loss of biometric protection, the negative tax effects of a cancellation must also be taken into account in the valuation.

In general, lapse sensitivity in insurance is very low. Rates are normally even decreasing in times of stress. Lapse rates are mainly driven by life events like moving to a new house, changing jobs, getting divorce, retiring, and so on. EIOPA should base their classification proposal on experience, evidence and usefulness rather than taking an overly theoretical approach.

Q45. *How much time and effort would be required to set up a classification of your product portfolio according to lapse sensitivity criteria (as proposed by Table 2 8 or by your answer to Q 44) and to implement such a product classification in your projection models for running a liquidity stress scenario as outlined in section 2.3?*

Insurance Europe considers the illiquidity metric method appropriate and does not consider this proposed classification of products by the lapse sensitivity to be appropriate.

Q46. *Do you consider the relevance of the classification of insurance products according to their sensitivity to penalties such as tax incentives relevant for a liquidity perspective? Please elaborate.*

Insurance Europe agrees that penalties are factors which impact lapse risk, but such penalties are only one aspect that affects the sensitivity of the lapse rate.

Insurance Europe does not consider this proposed classification of products by the embedded types of penalties to be appropriate.

Q47. *How much time and effort would be required to set up a classification of your product portfolio according to lapse penalties criteria (as proposed by Table 2 9 or by your answer to Q 46) and to implement such a product classification in your projection models for running a liquidity stress scenario as outlined in section 2.3?*

Insurance Europe does not consider the proposed classification of products by the embedded types of penalties to be appropriate.

Q48. *Which other methods to classify liabilities according to their liquidity do you consider to be relevant?*

The illiquidity metric method seems reasonable and has the advantage of a continuous method compared to bucketing methods with few buckets.

The key issue in this approach is the definition and calibration of the relevant stresses to cover the undertaking's individual risk.

In addition, it is important to stress that assets are not the only source of liquidity. For the other sources of liquidity, timing can also have an impact; the investment income and premiums received during a month or week can provide meaningful sources of liquidity.

Q49. *Do you agree with the proposed approach and its foreseen evolutions?*

Yes, the concept of comparing cashflows that would need to be paid under stressed conditions with all the liquidity resources available within that timeframe, appears to have potential as part of a liquidity assessment.

With regard to the ESRB proposal, Insurance Europe agrees that premium inflows and all other available liquidity sources must be included. However, the 75% cap to premium inflows does not appear to have any economic justification.

Q50. *Are you already using similar method to assess your liquidity?*

Insurers already must fulfil the requirements of investments in liquidity classes and have similar methods for the liability side already in place. Likewise, some methods are applied to fulfil the requirements of the risk management measures regarding the volatility assumption for our Solvency II calculations.

One company noted using stress testing techniques at Group level, using its own internal model. Key principles and calibration assumptions, including haircuts, are defined as part of the Group Risk Policy, including Risk Appetite and Tolerance levels. Key legal entities have developed liquidity management policies that include stress testing in most cases. Limits are set locally by the local Board of Directors and monitored by management on a regular basis. Liquidity is a key dimension of ORSAs at both the Group and Legal Entity level. Another company followed a similar approach but based on the liquidity indicator proposed in Q39.

Q51. *Could you please explain the conceptual and practical gaps between the proposed analysis and the tools/approaches you are actually using?*

Liquidity risk is an important consideration for insurers, but it is already a carefully managed risk, with requirements on assessing and stressing liquidity set internally and by local regulators. The requirements around liquidity stress should reflect this and not be onerous or overly complex.

Q52. *Could you please explain the conceptual and practical gaps between the proposed analysis and the tools/approaches you are actually using?*

The availability of data for calibration might be challenging with regard to a very short time horizon.

Q53. *Could you please explain the conceptual and practical gaps between the proposed analysis and the tools/approaches you are actually using?*

Repeat question – see Q52.

Q54. Do you think that relevant events or shocks are missing? If yes, please elaborate.

Table 2-12 contains many theoretical events and sources that in practice are very unlikely or even impossible. For example, an insurance run has never happened in Europe.

Also, a fire sale is not a triggering event, it is a possible subsequent action of liquidising assets in response to another event.

Q55. Do you think that the proposed sources / events and shocks are plausible for a scenario that evolves over 5 days?

The scenario narrative appears to be plausible.

However, as noted above, fire sales are a result of lack of liquidity and should not be considered to be a triggering event. Therefore, balance sheet exposures are not a standalone source of risk because they are not per se causing a fire sale. They become a source of risk if liquid assets saleable without substantial price impact are not sufficient to cover liquidity needs in a stress scenario.

***Q56.** Do you think that the indication of the calibration of the shocks is plausible?*

The calibration of the shocks appears to be extreme although without concrete calibrations and specifications it is not possible to provide a conclusive assessment.

For example, the application of high haircuts to high quality assets appears unjustified, even in an extreme situation.

***Q57.** Is the liquidity risk profile of insurers exposed to other shocks in the short time?*

Liquidity needs stemming from stresses to the liabilities should not be included in the short time horizon.

The effects of political decisions could possibly result in capital flow restrictions: eg a consequence of Brexit could be to trap collateral overnight.

***Q58.** Do you think that the proposed sources / events and shocks are plausible for a scenario that evolves over 30 days?*

No. The suggested triggering events do not seem plausible. In light of the comprehensive regulatory framework for insurance intermediation and the safeguards in place, a systemic mis-selling scandal in the life insurance industry is extremely unlikely.

An increase in funding costs is not a liquidity stress but a capital stress. It should be removed from the list. Insurers usually do not typically depend on short-term funding so that the described short-term consequences of rating downgrades appear exaggerated.

Non-renewals and reduction of new business happen gradually over time and are unlikely to have a significant impact over a 30-day period.

Also, regarding balance sheet exposures, please see response to Q55.

***Q59.** Do you think that the indication of the calibration of the shocks is plausible?*

The calibration of the shocks appears to be overly onerous in some cases although without concrete calibrations and specifications it is not possible to provide a conclusive assessment.

For example, the severity of non-renewal and reductions in new business over a 30-day period appears unrealistic.

Q60. *Is the liquidity risk profile of insurers exposed to other shocks in the medium run?*

See answer to question 54.

Q61. *Do you think that the proposed sources / events and shocks are plausible for a scenario that evolves over 6 months?*

The six-month scenario is considered to be too extreme and unsuitable for a liquidity analysis. Liquidity risks are mainly short-term.

A six-month period is more dependent on the capital strength of a company than on the availability of sufficient liquid funds. With regard to the available liquidity within six months, a great many assumptions would have to be made and changes would have to be included, so that the results would not be meaningful. In particular, mitigating actions would need to be included. Therefore, the longer the time horizon chosen for a liquidity scenario, the more the results lose relevance.

See previous questions for comments on balance sheet exposures, renewals, new business and ratings-downgrades.

Q62. *Do you think that the indication of the calibration of the shocks is plausible?*

Without concrete calibrations and specifications, it is not possible to provide a conclusive assessment. However, it is important that any stresses over a six-month period must consider possible mitigating actions which would demonstrate a lower risk.

Q63. *Is the liquidity risk profile of insurers exposed to other shocks in the long run?*

See answer to question 54.

Q64. *Do you think that the proposed approach provides meaningful information on the liquidity position of an insurer under adverse scenarios? Which other approaches could be considered?*

Insurance Europe does not support EU-wide standardised liquidity stress tests.

If such an exercise is foreseen, the proposed approach seems meaningful from first assessment. However, translating long-term stresses into instantaneous ones ignores the normal ALM process of anticipating and reacting to liquidity stresses that emerge (like premiums developing differently as planned). These mid and long-term stresses would therefore almost certainly overstate the liquidity gap, if present.

Q65. *What is you view on the instantaneous nature of the shocks? What are the major limitations brought by this approach?*

If the time horizons are assumed up to six months in the calibration, but the application of the shocks is instantaneous, it has to be considered that results of the stress test could be significantly overstated.

Liquidity risk is a short-term risk. If it persists, any liquidity risk evolves into an ALM risk which is managed by insurers on an ongoing basis. Translating longer horizons into instantaneous stresses ignores current and well developed ALM practices and should be treated with appropriate caution.

The restrictions on reactive management actions for the longer-term scenario could also create a false assessment of the liquidity position.

Q66. *Do you think that the exposures and the shocks proposed (please refer also to Annex 4.3.1) include the most relevant ones to assess the liquidity of an insurer?*

The most relevant shock to investigate is the interest rate up-shock causing massive margin calls exceeding insurers capacity to liquidise assets within one working day. Available cash and efficacy of repo-lines and credit facilities will be the key determinants of sufficient liquidity.

Q67. *Are there any additional exposures or shocks you consider relevant to be assessed in a potential first liquidity ST?*

N/A

Q68. *Do you consider the proposed "mixed" approach as a viable solution from an operational perspective?*

Depending on the exact design of the scenarios and the timelines provided for the ST exercise, the proposed approach appears to be viable. However, the questionnaire means a lot of manual effort and should be very limited or avoided.

Furthermore, the reporting template should be communicated well in advance to reduce the operational burden on participating firms.

Q69. *What question would you include in the quali-quantitative questionnaire to assess potential spill-over effects?*

Concerning type and amount of security sold, the questionnaire should allow for the fact that answers depend much on the specific situation of a company at a precise point of time. For instance, an undertaking with unrealised gains on a specific asset category may sell in priority this category even if this category has to be sold with a discount. Similarly, the sequence and timing as well as channels of the sales depend on the specific situation of a company. Ideally EIOPA would gather some perspectives about the situation of the company and the reasons for selecting a given option among others.

In assessing spill over effects, firms should provide an indication of their reliance on repo and bank committed facilities.

Q70. *What are the main limitation you foresee in the proposed analysis?*

If an EU-wide liquidity stress test exercise is foreseen, there should be careful expectation management on the meaningfulness of the results. It should be considered if the aggregated publication of the results is necessary for the first exercise.

In particular, the lack of clarity on the objectives creates a high risk of not meeting stakeholder expectations and not providing useful information to manage the relevant risks.

Experience has shown that an exercise designed and with finalized specifications in advance will help the market to properly prepare the exercise.

Q71. *Do you have suggestions for additional analysis to be performed?*

No

Q72. What is your view on the alternative approach?

Any alternative is likely to be substantially more complex, provide even less insight, and result in even greater costs.

***Q73.** What potential main limitations do you foresee in this technique?*

Using a banking style approach is likely to be disproportionate to the risk for insurance companies.

Insurers' business models differ fundamentally from banks' business models. In maturity and liquidity transformation, for instance, insurers and banks usually take offsetting positions. Insurers provide liquidity to the markets by transforming longer term and less liquid liabilities into shorter term and more liquid assets. Banks are heavily connected through the interbank market – which in the past often was the source of strain – while insurers operate much more on a standalone basis

In the banking sector, there are more short-term fluctuations in liabilities and cash flows. Insurance entities have longer term liabilities, and they take a broader approach to providing a stressed liquidity perspective at group level.

Do you have general comments, remarks, suggestion on Section 2?

- Liquidity risk is important for insurers, but it is well managed due to the business model, existing regulatory provisions and insurers' integrated approach to liquidity and risk management.
- Liquidity stress testing is already undertaken by companies as part of their existing liquidity and risk management processes and widely reported upon within the ORSA.
- EU-wide, standardised liquidity stress tests are not expected to provide significant additional value or insights to the data which is already available to supervisors and regulators.
- If an EU-wide liquidity stress test is undertaken, it is necessary for the following aspects to be taken into consideration:
    - Only liquidity indicators which combine both liquidity needs and all available liquidity sources are meaningful.
    - All available sources of liquidity should be included in the assessment and not only the liquid assets.
    - The bucketing of asset exposures is a reasonable approach to assess their liquidity, provided it is adapted to reflect insurers' investment strategies and behaviours including appropriate recognition of pooled funds. Care must be taken to use appropriate haircuts and avoid inappropriate generalisations.
    - The categorisation of the liquidity of liabilities based on their contractual specifications is not desirable and should be avoided. Instead, an approach which assesses the liquidity of the liabilities by considering the impact of liquidity-relevant stresses on cashflows should be used.

Appropriate calibration of the stresses is a key consideration.

Section 3- - Multi-period stress tests

Key messages on multi-period stress tests

- Insurance Europe takes the view that multi-period stress tests are too complicated and costly to be taken forward.
- Although there are theoretical benefits of multi-period stress tests, particularly from a macroeconomic perspective, the operational challenges, calculation burden and resource requirements would be very high, both for participants and supervisors.
- Some of the key information can be obtained through questions added to simpler single period stress tests.
- From a technical perspective, both management actions and new business projections would have to be included for a multi-period stress test to be meaningful.
- EIOPA would need to provide a much clearer set of objectives and full cost-benefit analysis (as it has itself noted) prior to the development and implementation of such an approach.

Q74. *Besides the potential operational challenges for the technical implementation of a multi-period (baseline or stress) scenario: do you consider the list of risk drivers to be specified over the time horizon of the scenario as comprehensive enough? If no, which further data would be required in which granularity?*

The parameters in paragraph 285 appear to be a sensible basis for constructing a multi-year stress.

Q75. *Which information on the assumed temporal development of implied volatilities would be precisely required from your perspective?*

The implied volatilities would need to be specified or an appropriate interpolation procedure defined. For example, the volatilities on a reference date could be interpolated taking into account the five-year average.

Q76. *Do you agree with the presented advantages and disadvantages of the discussed alternative approaches for future new business assumptions?*

The presented advantages and disadvantages appear broadly reasonable.

For any multi-period stress test to be realistic, it must include new business projections.

A constrained approach is equivalent to a run-off assumption which is not expected to provide a realistic reflection of the company's exposures. The lack of realism in the projections is unlikely to provide useful comparability within a multi-period framework and should be avoided.

Any recalculation of the baseline position should also be avoided to reduce resource requirements.

Q77. *Do you have further methodological proposals for the specification of future new business assumptions in the context of a multi-period exercise?*

To keep it as simple as possible.

Q78. *Do you have a preference for a specific approach? If so, please elaborate on the reasons for your preference, with a specific focus on conceptual, technical and operational aspects.*

The individual approach is expected to be most valuable for supervisors and companies as it would allow for the most realistic evaluation of multi-period stresses and their impact on companies. However, if well-designed and calibrated, the intermediate approach based on scaling or mapping techniques could also be relevant for multi-period stress tests.

An approach which does not account for new business would significantly reduce the informative value of the stress test and should be avoided. In particular, for non-life portfolios, disregarding new business would shrink the balance sheet considerably due to the short duration and the expected effects could therefore no longer be examined.

Q79. *Do you have a preference for a specific approach for the projection of the risk margin? If so, please elaborate on the reasons for your preference, with a specific focus on conceptual, technical and operational aspects.*

Any approach chosen should respect the proportionality principle.

One approach could be a roll-forward approach that adjusts for changes in interest rates and currency movements.

Many companies have pre-existing ORSA approaches for the projection of the risk margin in a multi-year environment which could also be leveraged.

Q80. *Do you have a preference for a specific approach for the projection of DTA and DTL positions in the baseline and in the stress scenario? If so, please elaborate on the reasons for your preference, with a specific focus on conceptual, technical and operational aspects.*

Depending on the company, deferred taxes have a different weighting within the solvency balance sheet. The proportionality principle should therefore be applied so that, for example, ORSA approaches already developed by undertakings can be reused to project deferred taxes.

In addition, LAC DT recognition requires a stress test proving that future profits can be utilised. So, if a multi period stress test plays out, LAC DT should be recognised and therefore projected DTA and DTL positions should consider gross ST losses.

Q81. *Which criteria would be applicable from your perspective for the recognition of projected DTA positions?*

Projected DTA positions should be consistent with the companies' individual business plan.

Q82. *Do you agree with the presented advantages and disadvantages of the discussed alternative approaches for the application of reactive management actions?*

Embedded and reactive management reactions are needed for making scenarios realistic, particularly in the multi-period stress-test. Without them, stress tests provide only limited insights.

For the constrained approach, running any projection on a multitude of non-economic assumptions different to the business plan (for example, constraining management actions) will be unrealistic, and not reflect what is expected to happen.

Q83. *Do you have further methodological proposals regarding the allowance for reactive management actions in the context of a multi-period exercise?*

There is no point in stressing a fixed balance sheet without considering management actions in a multi-period stress test.

Q84. *Do you have a preference for a specific approach? If so, please elaborate on the reasons for your preference, with a specific focus on conceptual, technical and operational aspects.*

If a multi-period stress test was foreseen, the individual approach would be preferable. The non-reaction of the management in the event of stress shock is unrealistic. Instead, a stress test should rather show which management rules are possible and what their effects are.

In non-life, the premiums are adjusted annually by management decision, for example to reflect annual inflation. This is a standard process. If this were not allowed in a projection over several years, then even with very low annual inflation the combined ratio would deteriorate significantly, with a corresponding negative impact on equity and solvency. Even without a further shock, solvency would thus be significantly negatively affected. It would then no longer be possible to make statements about the effect of another shock to be considered in the stress test.

Q85. *What is your view on the potential requirement to project the SCR in the baseline and / or in the stress scenario? Please elaborate on conceptual, technical and operational aspects regarding such a projection*

Insurance Europe does not support the recalculation of post-stress SCR.

It also does not consider it worthwhile to recalculate the baseline SCR over future years as it would be expected to remain broadly the same and therefore not provide any valuable insights.

Q86. Do you think that a multi-period stress test exercise can run relying on the same process applied so far for the instantaneous shock based exercise?

No, a revised process would be needed which would likely result in significant additional costs and complexity which have, as yet, not been properly assessed or justified.

Q87. *What is your view on the proposed approach based on iterative calculation / validation process?*

At present, there is not enough information to provide a concrete view on possible approaches. A more detailed consideration of the process would be needed in due course if EIOPA were to take multi-period stress tests forward.

Q88. *What is your view on the proposed timeline?*

Even with a January start date, to run a multi-period stress test within the proposed timeline would remain very challenging.

As with any stress test exercise, care should be taken to avoid a double strain on the same resources (eg by avoiding overlap with preparation of annual reporting etc).

Q89. *Do you have different proposal on the operationalization of multi-period a stress test exercise?*

N/A

Do you have general comments, remarks, suggestion on Section 3?

Insurance Europe takes the view that multi-period stress tests are too complicated and costly to be taken forward.

Insurance Europe recognises the potential theoretical benefits of a multi-year stress test. However, the operational challenges, calculation burden and resource requirements would be very high, both for participants and supervisors.

Currently the aims of multi-year stress testing are highly unclear and without defined purpose. This risks creating significant overheads while clouding insight on areas of regulatory concern, and at worst providing false comfort.

Complexity could very easily grow exponentially in terms of the effort required and implied cost. Industry would need to be very clear on the purpose of the exercise – it cannot simply be a "catch-all" approach. Pragmatism is required in terms of granularity and simplifying assumptions.

Key considerations which need to be left to individual companies to decide on are the new business levels and the management actions over the period considered by the stress: these should be recognised and permitted in the calculations.

The desire for comparability between insurance companies should not drive decisions on how granular assumptions are specified, or else the results will not be reflective of reality. Once the right balance has been struck, the remaining main concerns are the cost, systems and resources implications of the new stress testing process. And the highly iterative nature of the process.

Insurance Europe does not support the calculation of post-shock SCR and does not foresee much value in the calculation of the SCR in baseline projections.

Insurance Europe is the European insurance and reinsurance federation. Through its 37 member bodies — the national insurance associations — Insurance Europe represents all types of insurance and reinsurance undertakings, eg pan-European companies, monoliners, mutuals and SMEs. Insurance Europe, which is based in Brussels, represents undertakings that account for around 95% of total European premium income. Insurance makes a major contribution to Europe's economic growth and development. European insurers generate premium income of more than €1 300bn, directly employ over 900 000 people and invest nearly €10 200bn in the economy.