IRSG

INSURANCE AND REINSURANCE STAKEHOLDER GROUP

Advice on the consultation on Joint ESAs Guidelines on integrating ESG risks in stress tests

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European Insurance and Occupational Pensions Authority

Final IRSG advice in response to the Consultation on Joint ESAs Guidelines on integrating ESG risks in stress tests

Summary of key points

We appreciate the effort made by the ESAs to harmonize the baseline principles underlying the Stress Test exercise framework, thereby effectively reflecting sustainability risks, strengthening financial stability, and ensuring consumer protection. There exists broad consensus regarding the significant impacts of sustainability risks on the financial sector, and their integration into the business models of financial market participants necessitates robust cooperation among regulators, industry stakeholders, and academic institutions. However, it is essential to acknowledge the challenges of such exercises, given the inherent unpredictability of climate change evolution and the distinctive characteristics of social and governance risks.

Focusing specifically on environmental sustainability, the evolving regulatory landscape necessitates an increasingly sophisticated approach to sustainability risk assessment, with particular emphasis on evaluating the direct and indirect impacts of climate change. Attention should be paid to the fact that the complex, non-linear nature of climate systems renders traditional risk modelling approaches difficult to use when confronting unprecedented scenarios and tipping points. This uncertainty presents significant challenges, given that basic predictive models and statistical analyses are grounded in historical data.

Concerning social and governance risks, their assessment differs from that of environmental risks in terms of methodology. The principal distinction lies in the quantifiability of these respective risk categories. Environmental risks are typically developed based on robust scientific research findings: the correlation between climate change and greenhouse gas emissions is extensively documented in scientific literature, and climate science provides clear guidance on CO_2 reduction requirements necessary to prevent temperature increases. Conversely, social risks cannot always be grounded in science to the same extent and may require a more qualitative approach.

In conclusion, although we recognize that this consultation seeks to harmonize principles across all financial sector companies, this document presents an important opportunity to emphasize several distinctive characteristics that differentiate the insurance sector from other financial sectors. Unlike banking institutions, insurance companies operate on fundamental principles of risk pooling and transfer, employing business models predicated on the temporal mismatch between premium collection and claims disbursement. The industry's unique dual role as both risk bearer and risk mitigator exposes undertakings to long-term challenges. Concurrently, replicating stress test exercises for insurance companies demands substantial quantitative effort, involving highly complex forecasting of future assets and liabilities across different time horizons.

For this reason, the main comments in the text concern the following aspects:

- Long-term time horizons need to match climate risk reality: it needs to be extended to a longer horizon (e.g., 25 years) when testing the resilience of financial entities' strategy and business model. It should be recognized that a projection of any risk indicator over 25 years (or even longer) cannot be performed under a "ceteris paribus" assumption. Many explicit and implicit assumptions will be necessary for quantitative exercises, and in this case results will be very dependent on these assumptions. At the same time, for the peculiar case of insurance undertakings, such exercises require highly complex projections, producing results that are inherently uncertain and critically dependent upon fundamental assumptions. Simulations extending beyond standard industrial and risk planning horizons (max. 5-10 years) must necessarily be constructed through projection of final-year planning results: such an assumption risks distorting the outcomes of the exercise and impairs comparability between undertakings when using a dynamic balance sheet approach. Therefore, supervisors should be aware of the limits of the exercises when drawing conclusions and look for alternative ways to capture the risks.

- Embedding compound risks (climate and macroeconomic downturns/ geopolitical tensions), spillover effects across financial sectors, and physical risks (such as biodiversity losses) is good. But, supervisors should also work on including tipping points and chronic physical risks, such as sea level rises, temperature rises, change in precipitation patterns (annual average rainfall) and acidification of the ocean, which are severe climate events. Acknowledgement of current scenarios and modelling limitations is a first step. Therefore, a conservative quantitative approach should be chosen regarding data, models and scenarios, and qualitative adjustments should be made to compensate for these limitations. Concerning adjustments, Regulators should work on and publish guidelines to ensure relevance, quality and effectiveness of such adjustments.

- Priority should be given to quality, credibility and relevance of the exercise. Considering limiting the scope of the analysis and accepting scenario limitations during the first years of these stress tests isn't a viable solution to prevent systemic risk arising from climate change taking into account the increasing frequency and severity of sustainability risks. Furthermore, given the complexity of the exercise, it is essential to ensure that it generates reliable and scientifically sound results. Establishing broad consensus and dialogue between authorities and the industry is crucial for its design.

- If used, dynamic balance sheet assumptions should account for systemic risks arising from similar behaviour of financial institutions, as part on top-down exercises, and should be consistent with what institutions have disclosed by the supervisor. In this area, we are aware that the assumptions to simulate the dynamic evolution of insurers' balance sheets can be

extremely complex, as it requires a stochastic projection of the company's assets and liabilities. Moreover, conducting dynamic balance sheet evaluations for insurance undertakings proves particularly challenging, as such assessments should, especially over extended timeframes, incorporate assumptions about changes in insurers' pricing strategies arising from escalating sustainability risks. We therefore urge the authority to pay close attention to the basic assumptions of such exercises.

- System-wide coordination is necessary for the success of supervisory stress test exercises, leading to consistent exercises across the whole financial sector
- Publishing individual results is not the purpose of the exercise. Sharing results based on hypothetical scenarios can impact participants' financial conditions and may drive them to withdraw from high-risk areas or divest from high-emitting industries. Such actions could have an impact on the protection gap and support for high emitters in transitioning their business models.

Question 1 - Please add here any comments on "Title I - Subject matter, scope and definitions"

National insurance supervisors are encouraged and should prioritize their work on integrating ESG risk in their supervisory stress testing activities in accordance with the guidelines, as not done yet. ESG stress testing is important to understand the financial risk on individual insurers and to initiate prevention measures reducing the ESG risks. However, this should not lead to double counting of ESG risks already considered in other risk categories.

However, it should be recognized that the datasets and modelling approaches currently available for assessing biodiversity and deforestation risks are still evolving and, for the time being. Where this does not yet offer a sufficiently robust foundation for conducting quantitative stress tests, qualitative adjustments, based on expert judgement will be required.

Question 2 - Do you agree with the list of objectives? Do you have any additional suggestions (addition, removal, precision, etc.)?

Regarding supervisory stress tests, it's crucial to recognise that **future systemic risks arising from ESG stress events will be influenced by current (non-) actions**. The existing risk management frameworks of financial institutions, which are designed for traditional financial risks with a focus on the short term (less than three years) and based on historical data, may not accurately address

ESG systemic risks. Climate change, for example, can be an irreversible phenomenon; every increase in global temperature will have lasting effects over the next decades (or even centuries). Scientists warn that the most severe impacts of climate change, such as tipping points, are tied to global temperature levels and will significantly alter the liveability and economy of our society. Therefore, regulators and supervisors must evaluate these future impacts based on current balance sheets. If the current balance sheets could translate into systemic risks for the financial sector, mitigation actions must be taken immediately, as it is the only current viable option.

it is pertinent to assess capital and liquidity resilience in the short to medium term, and incorporate potential future long-term extreme events through market price shifts (Minsky moments), Explicitly directing supervisors to concentrate solely on the short to medium term may **result in an understatement of the long-term impacts of ESG risks**.

Regarding business model resilience tests, they should be extended to a longer horizon (e.g., 25 years) with the time horizon of the Paris Agreement. As regards climate-related risks the long-term scenario-based projections, e.g. provided by the IPCC, should be taken into account.

Simultaneously, for insurance undertakings, such exercises require highly complex projections, yielding results that are inherently uncertain and critically dependent on fundamental assumptions. Predicting the evolution of climate change over such prolonged periods poses exceptional forecasting challenges that extend far beyond traditional actuarial modelling.

First, reliance on historical data patterns becomes increasingly problematic when projecting decades into the future, as climate change fundamentally reshapes the statistical foundations on which conventional risk assessment is built. The challenge is further compounded by the need to account for tipping points and non-linear climate responses—phenomena that, by definition, cannot be forecast with precision and therefore will require qualitative adjustments, based on expert judgement.

Second, for insurers, these forecasting challenges permeate every aspect of the business model. The core difficulty lies in the simultaneous need to project three interconnected yet distinct components over multi-decade horizons: asset portfolios, liability structures, and the balance between them. Each of these elements requires assumptions, which can become more uncertain

as the projection horizon lengthens. This uncertainty can be addressed through using qualitative adjustments, based on expert judgement.

Most critically when using a dynamic balance sheet approach, extending simulations over such prolonged periods introduces the substantial risk of generating projections that lack credibility: insurance companies do not usually have industrial and risk management plans that exceed 5-10 years. Simulations extending beyond this time horizon should be derived through continuity with the projections from the last year of the plan, assuming that the underlying assumptions for that year remain valid for subsequent years. Such practice, besides being highly arbitrary, is likely to differ across undertakings, which renders the results of the exercises difficult to compare when using a dynamic balance sheet approach. Therefore, supervisors should be aware of the limits of the exercises when drawing conclusions and look for alternative ways to capture the risks.

Question 3 - Do you have any comment or suggestion on paragraphs 16-18 on "Materiality assessment"?

The planned materiality assessment is positive, but it also needs to cover such impacts as affordability and access. ESAs shall, where appropriate, establish united baseline thresholds to ensure the consistent application of this Regulation and to prevent divergent approaches at the national level. Criteria should reflect social and governance risks from the start and flag disproportionate effects on vulnerable groups. The transparency aspect is very important, authorities should publish summaries of materiality decisions, use prudent assumptions where data is lacking, and set a clear schedule. Early climate-focused tests should also note potential knock-on effects.

Question 4 - Please add here any additional comments on "Title II - Requirements regarding consistency, long-term considerations and common standards for assessment methodologies in stress testing of ESG risks - 3.1 Objectives"

System-wide coordination of the stress test exercises is necessary to ensure a consistent approach, but also to facilitate understanding of the risks throughout the system, and to enable insights into the interconnectedness, possible risk transmission/contagion channels and limit of the financial risk management techniques (such as finding a hedging counterparty once the risks propagate through the system). Spillover effects across financial sectors are material, and their consideration is essential and welcome. For example, when providing credit to the real economy,

the banking sector considers the impact of existing insurance policies on the level of the individual credit risk.

The so called "gradual approach" suggests that 'S' and 'G' are not equally important as 'E'. However, they are interconnected and should not be regarded only separately.

Nevertheless, we are well aware that the study of environmental risks and that of social and governance risks are at two different stages of scientific development.

The relationship between climate change and greenhouse gas concentrations is extensively substantiated by research literature. Climate science provides guidance regarding emission reduction targets necessary to prevent temperature escalation, with pathways such as the 1.5°C target established through comprehensive global scientific assessments. This scientific foundation enables the development of quantitative models with measurable parameters, standardized metrics (such as carbon footprints and emissions scenarios), and internationally recognized frameworks.

Conversely, social risks cannot rely on scientific foundations to the same extent, reflecting fundamental differences in the nature of social phenomena versus physical systems. While academic investigation within social disciplines examines phenomena potentially connected to social risks — such as inequality, labour practices, community impact, and the overall stakeholder engagement — these studies often yield qualitative insights rather than quantifiable metrics, which will also require expert judgement.

Question 5 - Do you have any comment or suggestion on paragraphs 27-28 on "scope" and paragraph 29 on "time horizon"?

The question of means is important, and supervisory exercises should, as much as possible, take into account the current capabilities of the financial sector. Nevertheless, **the priority should be given to the relevance of the exercise**. A simpler exercise which relies on too many approximations would be useless and, in the worst case, could give a false sense of confidence to competent authorities.

When assessing which time horizons should be considered in ESG stress test exercises, regulators should consider the reality of ESG risks and **increase exercise time horizons to better account for ESG long-term risks** (such as climate tipping points). It should be recognized that a projection of any risk indicator over 25 years (or even longer) cannot be performed under a "ceteris paribus" assumption. Many explicit and implicit assumptions will be necessary for quantitative exercises, and in this case results will be very dependent on these assumptions. Therefore, supervisors should be aware of the limits of the exercises when drawing conclusions and look for alternative ways to capture the risks.

Question 6 - Do you have any comment or suggestion on paragraphs 30-33 on scenario design and application?

The requirement for supervisors to enhance widely recognised climate scenarios by **incorporating compound risks** should be mandatory. Moreover, supervisors should also **adjust the scenarios to overcome modelling limitations** (see NGFS' explanatory note from January 2024, *Purpose, use cases and guidance on where institutional adaptations are required*) and account for missing extreme events. Supervisors should **focus on tail risk scenarios** for every time horizon and should **ensure consistency** regarding their implementation within financial institutions, but also avoid double counting of ESG risks already considered in other scenario components. Providing a precise and comprehensive narrative for each scenario helps to adequately implement them. Moreover, scenario narratives should be consistent with other existing sustainability disclosures, such as CSRD and ORSA where relevant.

Supervisory authorities could also consider the results of financial institution's **reverse** stress-testing when building scenarios and for materiality assessment. Reverse stress testing can help identify risks to the financial institutions and the financial system and design scenarios that align with supervisory and macroprudential agency goals. It can also help incorporate economic narratives consistent with policymakers' expectations.

Question 7 - Do you have any comment or suggestion on paragraphs 34-36 on "top-down vs. bottom-up approaches"?

Competent authorities will have to establish clear methodological frameworks and a scenario narrative to enhance consistency and comparability within the results of their exercises. A hybrid approach (bottom-up/top-down) should be considered to account for both global aspects of ESG risks and institutions' business model specificities.

Regarding top-down approaches, the Guidelines should expect NCAs to assess the impact of scenarios on both sides of the balance sheet of insurers. A fatal flaw of past top-down exercises was to consider transition risk impacts only on the asset side.

Question 8 - Do you have any comment or suggestion on paragraphs 37-40 on "level of granularity"?

Supervisors will have to consider a sufficient level of granularity. More granularity can introduce more complexity, which should be balanced with the principle of proportionality. Where possible and proportionate, it is also important that institutions **delve into their counterparty supply chain** to understand their weaknesses and risks arising from ESG severe events.

The current requirement to base stress tests on both static balance sheets and transition plans may be ambitious. Such an approach could rely heavily on subjective assumptions and estimates, which might reduce the management value of the results.

Question 9 - Do you have any comment or suggestion on paragraphs 41-44 on "balance sheet assumptions"?

The use of dynamic balance sheets may be relevant for longer-term horizons but the use of management actions by participants should always remain optional. Nevertheless, **when a dynamic balance sheet assumption is privileged for top-down exercises, it should account for the systemic risk rising from similar behaviour**s of all financial institutions (applying pricing haircuts, etc). Moreover, requirements to validate that the assumptions made by institutions are realistic and maintain safeguards against excessive flexibility in assumptions are essential to ensure the plausibility and robustness of stress tests.

In this context, we would like to draw the attention of the authorities to the fact that the assumptions to simulate the dynamic evolution of insurers' balance sheets can be extremely complex, as it requires, year after year, a stochastic projection of the company's assets and liabilities across extended time horizons where traditional actuarial certainties break down. The complexity stems from the necessity to model multiple interdependent stochastic processes simultaneously. A static balance sheet approach could be used as an alternative, as it may therefore be simpler to implement. This approach will still highlight the risk exposures of the insurer's current situations and allow a clearer understanding of the current situation at sector level. Supervisors should remain aware of the limits of the exercises when drawing conclusions and look for alternative ways to capture the risks.

Asset projections for the dynamic balance sheet approach must incorporate market volatility, interest rate movements, credit risk evolution, and climate-related financial risks, all while accounting for dynamic investment strategies that respond to changing market conditions. Insurance companies must forecast the performance of diverse investment portfolios across decades, incorporating climate-related financial risks that could fundamentally reshape entire asset classes. This includes predicting which sectors will become stranded assets, how transition risks will affect equity valuations, how physical climate risks will impact real estate and infrastructure investments, and how evolving regulatory frameworks will influence bond markets. This uncertainty highlights the need for qualitative adjustments, based on expert judgement.

Concurrently for bottom up exercises, liability projections require modelling policyholder behaviour, claims inflation, demographic shifts, and the emergence of new risk types—each governed by its own set of uncertain parameters that interact in unpredictable ways. Simultaneously, companies must project future claims patterns across their entire product portfolio. For life insurers, this means anticipating how climate change will affect mortality and morbidity rates decades into the future. For non-life insurers, it requires forecasting claim frequency and severity for risks that may be subject to unprecedented physical hazards. Health insurers must consider evolving disease patterns, while pension providers must account for changing longevity trends—all under climate scenarios that have no historical precedent. Running top down exercises could therefore reduce the level of complexity for the industry.

Perhaps most challenging is maintaining the delicate balance between assets and liabilities when both sides of the equation are subject to climate-induced volatility. Climate change could lead to

simultaneous shocks on both fronts: natural disasters that trigger massive claims pay-outs while simultaneously devaluing the investment portfolios intended to fund those payments.

The cumulative effect of these interlocking uncertainties means that for each year of the projections, the insurance balance sheets become heavily dependent on assumption layers that are inherently speculative. Additionally, dynamic balance sheet assessments of insurance undertakings present significant complexities, since these evaluations must assume an evolution in insurer pricing policies in response to mounting sustainability risks, especially across longer time horizons. Therefore, it is important to focus on worst case outcomes to test the resilience of undertakings.

In conclusion, small changes in climate scenario parameters can cascade through all three components, producing dramatically different outcomes that may tell us more about the sensitivity of our models than about actual future risks. To reduce this uncertainty a focus on tail risk is needed. Complexity for the industry can also be reduced by using static balance sheet approaches and qualitative adjustments, based on expert judgement.

Question 10 - Please add here any additional comments on "Title II - Requirements regarding consistency, long-term considerations and common standards for assessment methodologies in stress testing of ESG risks - 4.2 Principles and methodological considerations"

ESG stress test exercises remain at an early stage, which can lead to high quantitative approximation. To maintain robustness in the results, qualitative adjustments should be made regarding the conclusions. **Competent authorities should work on publishing guidelines or Q&As on possible adjustments to overcome current approach limitations**.

Question 11 - Please add here any comments on "Title II - Requirements regarding consistency, long-term considerations and common standards for assessment methodologies in stress testing of ESG risks - 4.3 Organisational and governance arrangements"

The regulators should emphasise the importance of acknowledging the current data quality limitations in ESG stress tests. **Encouraging qualitative adjustments through expert judgement and the use of conservative proxies** is important. Given model limitations highlighted by the ESAs, there

is currently no standard to check the accuracy of the results. However, supervisors can apply the same data quality and credibility checks they apply under current stress testing. Expert judgment should be used to assess the credibility of the supervisory exercise.

Moreover, Cross-border coordination is indeed essential to get a complete view on the risks and their transmission channels. The **integration of the ESG risk stress testing with the broader supervisory process**, incl. "traditional" stress test exercises, should be supported.

It is important that competent authorities make use of existing data to the greatest extent possible. Should ad-hoc data collections be necessary, these should be carried out by the competent authorities themselves, in order to avoid imposing further burdens.

Regarding the disclosure of the results, it is essential to publicly share aggregated results and conclusions. However, it should be specified that such results and conclusions should be first discussed with the participants to solve any potential interpretation issues before going public. Experience shows that this practice of dialogue before publication is very beneficial to the NCAs.

Publishing individual results is not the purpose of the exercise. Sharing results based on hypothetical scenarios can impact participants' financial conditions and may drive them to withdraw from high-risk areas or divest from high-emitting industries. Such actions could have an impact on the protection gap and support high emitters in transitioning their business models.

Through the draft guidelines the ESA do not sufficiently acknowledge the progress made already in stress test modelling and data availability. From a scientific view these models are not "early-stage" (as mentioned in Par. 47). There might be financial institutions that are in early stage, but this is not true for the models and advice from consultants and from academia is available. However, at the same time we agree that there are still many uncertainties regarding methodology and data quality.

Question 12 - Do you have any additional and/or general comments on the Consultation Paper?

☒Yes

☐No

The IRSG supports the inclusion of ESG risks in supervisory stress testing, but recommends extending the analysis to a longer horizon (e.g., 25 years) to capture the long-term implications of climate tipping points and persistent physical risks, taking into account all the issues raised in Q2, Q4 and Q9. Stress scenarios should take into account interconnected risks, cross-sector impacts, and extreme events, but avoid double counting of risks, by applying a prudent quantitative framework complemented by a precise and comprehensive narrative of the scenarios and qualitative judgment in line with clear supervisory guidelines.

The focus should remain on the quality and systemic relevance of the results rather than on ease of execution, with coordinated efforts across the system to ensure consistent, integrated evaluations. Where dynamic balance sheet assumptions are applied, they should reflect collective market behaviors, and the stress testing framework should combine both top-down and bottom-up methodologies with a sufficient level of detail.

In addition, it is important to recognize the interaction between sustainability actions like prevention and the ESG risks.

Question 13 - Do you have any comments on the Impact Assessment?

☒Yes

☐No

The IRSG has concerns that this is not a true impact assessment, because the policy options do not have real alternatives. For policy issue A there is no alternative as the legal background asks for E+S+G stress testing. For policy issue B there do not seem to be real alternative consideration to be made. The IRSG would advise a discussion on the failure to have ESG stress testing by competent authorities in timely and correct manner.

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