

ESAs Joint Guidelines

to ensure that consistency, long-term considerations and common standards for assessment methodologies are integrated into the stress testing of environmental, social and governance risks pursuant to Article 100(4) of Directive 2013/36/EU and Article 304c(3) of Directive 2009/138/EC

1. Guidelines

Status of these Joint Guidelines

1. This document contains Joint Guidelines issued pursuant to Articles 16 and 56 of Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/78/EC; Regulation (EU) No 1094/2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority); and Regulation (EU) No 1095/2010 establishing a European Supervisory Authority (European Securities and Markets Authority)) - 'the ESAs' Regulations'. In accordance with Article 16(3) of the ESAs' Regulations, competent authorities and financial institutions must make every effort to comply with the Guidelines.
2. Joint Guidelines set out the ESAs' view of appropriate supervisory practices within the European System of Financial Supervision or of how Union law should be applied in a particular area. Competent authorities to whom the Joint Guidelines apply should comply by incorporating them into their supervisory practices as appropriate (e.g. by amending their legal framework or their supervisory processes), including where the Joint Guidelines are directed primarily at financial institutions.

Reporting Requirements

3. In accordance with Article 16(3) of the ESAs' Regulations, competent authorities must notify the respective ESA whether they comply or intend to comply with these Joint Guidelines, or otherwise with reasons for non-compliance, by 31.05.2026 (two months after issuance). In the absence of any notification by this deadline, competent authorities will be considered by the respective ESA to be non-compliant. Notifications should be sent to [compliance@eba.europa.eu, [LINK](#) (EIOPA) and compliance@esma.europa.eu] with the reference 'JC/GL/2025/78'. A template for notifications is available on the ESAs' websites. Notifications should be submitted by persons with appropriate authority to report compliance on behalf of their competent authorities.
4. Notifications will be published on the ESAs' websites.

Title I - Subject matter, scope and definitions

5. These Joint Guidelines aim to clarify how competent authorities should consistently integrate ESG risks into their supervisory stress testing activities.
6. These Joint Guidelines are addressed to competent authorities.
7. Competent authorities should apply these Joint Guidelines when performing supervisory stress tests focusing on ESG risks, either as part of the relevant regulatory framework or as an ad-hoc assessment, in each case only where applicable according to the sectoral legislation.

8. Unless otherwise specified, the terms used in these Joint Guidelines have the same meaning as in the sectoral legislation listed below.
9. In addition, for the purposes of these Joint Guidelines, the following definitions apply:
 - i. 'competent authority' means any of the following:
 - a) the competent authorities identified in Article 4(2), point (i) of Regulation (EU) No 1093/2010 establishing the European Banking Authority ("EBA");
 - b) the competent authorities identified in Article 4(2), point (i) of Regulation (EU) No 1094/2010 establishing the European Insurance and Occupational Pensions Authority ("EIOPA"), namely the supervisory authorities defined in Directive 2009/138/EC on the taking up and pursuit of the business of insurance and reinsurance;
 - ii. 'sectoral legislation' means collectively:
 - (a) Directive 2013/36/EU of the European Parliament and of the Council ⁽¹⁾;
 - (b) Directive 2009/138/EC of the European Parliament and of the Council ⁽²⁾;
 - (c) Regulation (EU) 575/2013 of the European Parliament and of the Council ⁽³⁾.

Title II- Requirements regarding consistency, long-term considerations and common standards for assessment methodologies in stress testing of ESG risks

Objectives

10. Pursuant to the sectoral legislation, competent authorities should implement these Joint Guidelines in accordance with the principle of proportionality⁴.
11. Competent authorities should consider all ESG risks and their potential evolution when designing their framework for supervisory stress testing and keep under review the relevance of ESG risks to such framework, especially while progressing towards gradual extension of the coverage to other ESG factors. Competent authorities should precisely define their objectives when performing ESG stress testing, considering two main types of stress testing exercises:

⁽¹⁾ Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338, ELI: <http://data.europa.eu/eli/dir/2013/36/oj>).

⁽²⁾ Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (OJ L 335, 17.12.2009, p. 1, ELI: <http://data.europa.eu/eli/dir/2009/138/oj>).

⁽³⁾ Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p. 1, ELI: <http://data.europa.eu/eli/reg/2013/575/oj>).

⁴As these guidelines are addressed to competent authorities, the application of proportionality should follow the proportionality requirements laid down in sectoral legislation.

- testing the robustness of capital and liquidity position and the loss-absorption capacity of financial entities in the face of economic and financial shocks linked to all material risks including ESG risks over a short-term horizon (e.g. up to five years);
- testing the resilience of financial entities' strategy and business model to a range of ESG-related scenarios over a long-term (at least 10 years⁵) horizon.

Materiality assessment

12. Competent authorities should adopt a risk-based approach, starting with a materiality assessment to identify the most relevant and impactful risks and determine which of those material risks should be part of a stress test exercise's scope.
13. As part of the materiality assessment, competent authorities should identify which ESG risks are most material to financial entities, considering their business model, portfolios, geographic exposures, and sectoral activities over a short- to long-term horizon. Competent authorities should consider, over the different time horizons, both:
 - the exposure of assets and liabilities to transition risks (for example, based on their carbon footprint) and physical risks (for example, based on their geographical location); and
 - the potential impacts of ESG factors on the traditional categories of financial risks, i.e. market risk, credit risk, counterparty risk, underwriting risk, as well as operational risk, reputational risk and strategic risk through the identification of the main transmission channels.
14. Competent authorities should consider using clear qualitative and/or quantitative criteria and/or thresholds for materiality, leveraging existing regulatory frameworks, industry standards, and supervisory experience. The materiality assessment should allow for adjustments over time as ESG risks evolve, new data becomes available, and financial entities refine their own risk identification processes.

Gradual extension of the scope of ESG factors in ESG stress testing

15. Competent authorities are encouraged to continue their efforts and research to gradually extend the coverage to other ESG factors in the implementation of ESG stress tests, initially prioritising environmental risks. In a first phase, competent authorities should focus on climate and environmental risks, addressing both physical risks (e.g., extreme weather events, biodiversity loss) and transition risks (e.g., policy shifts, market re-pricing) aiming to distinguish impacts, even if indirect, on the main risk exposures.
16. This gradual roll-out should be accompanied by continuous methodological refinement, capacity building, and stakeholder engagement, ensuring that financial entities and competent authorities are adequately prepared for the expanding scope of ESG risk assessments.

⁵ In accordance with the objectives enshrined in the Paris Agreement (2015).

Integration of ESG factors into existing stress testing frameworks

17. Competent authorities should aim to fully integrate ESG factors into overall stress testing framework.
18. Competent authorities should review and reconsider as appropriate the types of ESG risks covered, also based on how the availability of data and the use of models develop over time.

Interconnection/spillover between financial sectors

19. Although these Joint Guidelines do not cover system-wide financial sector stress testing, competent authorities should, where possible, coordinate across financial sectors to ensure a consistent approach to ESG risk assessment and facilitate data sharing where appropriate. The banking, insurance, and securities regulators should collaborate with a view to help identify and model transmission channels (for instance the role of insurance on banks loans collaterals), align scenario assumptions, and prevent regulatory blind spots.
20. Competent authorities should ensure, to the extent possible, that ESG stress tests account for interconnections and spillover effects between financial sectors. They should consider how ESG-related risks can propagate through the financial system, amplifying vulnerabilities across banking, insurance, asset management, and other financial sectors.

Principles and methodological considerations

21. When determining the principles and methodological considerations, competent authorities should decide on the most suitable design and features of the stress test based on its intended objectives.

Scope

22. Competent authorities should clearly define the coverage in terms of portfolios, sectors, geographies, and activities to ensure a balanced and pragmatic approach that reflects the maturity of available methodologies and data.
23. For cross-border financial groups, competent authorities should ensure that all relevant entities are included in the assessment.
24. Based on the objective and the time horizon involved, competent authorities should ensure that the balance between quantitative and qualitative information is adequate for the purpose of the exercise⁶.

Time horizon

25. The choice of the time horizon should be aligned with the intended objective of the exercise:

⁶ Given the assumption needed on the scenario calibration and modelling issues, as a general principle, the longer the time horizon, the higher the reliance on more qualitative rather than quantitative information (e.g., no accurate recalculation of capital and solvency metric is expected on a long-term horizon).

- When assessing financial resilience to adverse but plausible shocks, a short-term horizon (e.g. up to 5 years) should be used, in line with traditional stress testing practices;
- When assessing the resilience of financial entities' business model and strategy a longer-term horizon (at least 10 years, depending on the business activity and in line with financial entities' long-term commitments) should be adopted.

Scenario design

26. Competent authorities should identify and select stress test scenarios based on the objectives of the exercise. They should consider the use of scenarios based on the most recent scientific knowledge and elaborated by widely recognised international or regional organisations⁷They are also encouraged to leverage sectoral and regional trajectories to provide financial entities with an adequate breakdown of macroeconomic variables, while maintaining the overall internal consistency of the scenarios.
27. Wherever possible, competent authorities should consider the integration of compound risks, i.e., the additional impact arising from the simultaneous or successive occurrence of multiple shocks (whether ESG-related or broader macroeconomic shocks). Additionally, and where relevant, they should strive to assess second-round effects, meaning the indirect and amplified consequences that result from the initial ESG shocks, either by incorporating them directly into the scenarios or as a complementary analysis.
28. With the aim of integrating material ESG risks into short-term stress testing exercises, competent authorities should, where feasible and appropriate, build on the scenario design used in traditional stress tests, adapting it to reflect ESG-specific transmission channels and incorporating new variables relevant to ESG risks.
29. When performing longer-term ESG stress testing, competent authorities should consider several distinct scenarios covering the broad spectrum of possible futures and levels of severity (e.g. including tipping points). The reference scenario may draw on the financial entity's own central scenario, which can serve as a benchmark to test the impacts of alternative, materially different trajectories on strategy and business model resilience (e.g., via risk-adjusted profitability estimates).
30. Depending on the sophistication of the approach, scenarios may take the form of simple narratives or more detailed quantitative projections.
31. Competent authorities may decide to apply the same scenarios to all financial entities for comparability or to tailor scenarios to specific categories of financial entities, considering their risk profiles and business models.

⁷ E.g. for climate risks: the Intergovernmental Panel on Climate Change (IPCC), the Network for Greening the Financial System (NGFS), the International Energy Agency (IEA), the United Nations Environment Programme (UNEP), the Joint Research Center of the EU Commission (EU JRC) or national government or non-government bodies;

Top-down vs. bottom-up approaches

32. Competent authorities should assess the merits of a top-down versus bottom-up approach, selecting the most suitable method based on the specific objectives, the maturity of financial entities in ESG stress testing, and the nature of exposures covered by the assessment, taking into account the following considerations:
 - A top-down approach, where competent authorities centrally calculate the impacts of the stress test scenarios, ensures a certain degree of comparability across financial entities and provides competent authorities with stronger control over the process and methodology, reducing the burden for the industry.
 - A bottom-up approach, where financial entities calculate the impact of the stress test scenarios themselves, offers higher level of granularity, allowing to capture idiosyncratic elements specific to some portfolios, counterparties, and exposures. It also fosters greater involvement in the stress testing process and helps enhance financial entities' capacity building.
33. When using a bottom-up approach, competent authorities should establish clear methodological frameworks to ensure consistency and level playing field across financial entities, including proportionality considerations regarding the expectations on the sophistication of their calculation of impact.
34. A hybrid approach could be considered, leveraging the strengths of both methodologies. Competent authorities may decide on the appropriate approach based on data availability and model ownership, taking into account that specific portfolios or activities, such as e.g., underwriting risk, might require more detailed data and modelling than feasible under a top-down approach.

Level of granularity

35. In deciding on the level of granularity, competent authorities should strike an appropriate balance between simplicity and precision, taking into account data availability, quality and methodological maturity. More granular data might be needed to, for example, appropriately capture activity- or entity-level impacts of transition risk or regional/local impacts of physical risks.
36. At a minimum, competent authorities should consider the following granularity dimensions:
 - a. Portfolio level: Differentiation by asset class (e.g., corporate loans, mortgages, sovereign exposures, equity and corporate bond holdings).
 - b. Sectoral level: Classification based on industry sector (e.g., high-carbon industries, energy, real estate, agriculture). For specific sectors a higher granularity may be explored (e.g., electric power, sector impacted by a breakthrough technology, fossil fuel-based industries). For real estate, a distinction between commercial and residential real estate exposures may be explored.
 - c. Geographical level: Distinction by region (e.g. NUTS level 3) to assess exposure to location-specific ESG risks, particularly physical risks.
 - d. Counterparty level: Granularity by individual obligor or groups of obligors where concentration risks are significant.

- e. Risk category: Separate identification of physical risks (acute and chronic climate hazards), transition risks (policy, technology, and market shifts), and other environmental, social, and governance factors (e.g., biodiversity loss, pollution, social and governance risks).
37. Competent authorities should decide on the appropriate level of data granularity depending on the type of asset/portfolio and the objective of the exercise. For example, for sovereign exposures country-level could be sufficient, while for lending or underwriting portfolios at least regional granularity up to geolocation data should be explored to assess physical risk.
 38. For the analysis of funds, competent authorities may consider, when possible and consistent with the applicable sectoral regulation using a look through approach with regard to holdings of funds.

Balance sheet assumptions

39. For ESG stress tests, competent authorities should start by using a static balance sheet approach, which is commonly applied in traditional stress tests. However, they may consider the structural impacts of financial entities' transition plan, where feasible and applicable, depending on the time horizon.
40. For exercises with medium to long term time horizons, a dynamic balance sheet (with or without constraints) approach could be applied to ensure greater realism, potentially focusing on the main balance sheet items, reflecting changes in portfolio composition (evolving exposures, asset reallocations and risk-mitigating actions in response to ESG-related shocks).
41. Given the uncertainties surrounding transition pathways, policy developments, and market reactions, competent authorities should consider requiring financial entities to justify their planned responses, ensuring that balance sheet adjustments — such as portfolio reallocation, changes in lending or underwriting policies, or shifts in funding structures — are realistic and consistent with their publicly disclosed transition strategies.
42. Any management actions recognised by financial entities should be assessed based on their feasibility, timeliness, and potential unintended consequences, avoiding excessive reliance on optimistic assumptions. Competent authorities should ensure that a dynamic balance sheet approach with constraints enhances the realism and forward-looking nature of ESG stress tests through incorporating credible plans and managerial responses, while maintaining minimum safeguards against excessive flexibility in assumptions and enhancing comparability in stress test results.

Sample of financial entities

43. Competent authorities should define the appropriate sample of financial entities to participate in ESG stress testing and/or ESG scenario analysis, ensuring sufficient sectorial/market coverage, taking into account the specified objectives and, in the case of thematic assessments, the focus of the exercise. The design of the stress test should be adapted, where necessary, to reflect the characteristics of different categories of financial entities.
44. Competent authorities should also consider conducting targeted exercises on specific subsets of entities to address particular vulnerabilities or evolving ESG risk trends.

Proportionality

45. Competent authorities should apply proportionality principles, allowing for methodological simplifications in relation to the size, nature, and complexity of financial entities' activities, as well as the materiality of the risks . The proportionality principle should extend to reporting requirements, scenario design, and modelling expectations, ensuring an adequate balance between analytical robustness and practical feasibility.
46. Given the early-stage of development of ESG stress test modelling and data availability, competent authorities may consider limiting the scope of the analysis, ensuring an adequate cost-benefit balance both for competent authorities and the financial entities.

Model limitations

47. Competent authorities should recognise that all models have inherent limitations, and this applies especially to evolving ESG models. In the case of bottom-up stress test, to mitigate these limitations, and to enhance the robustness and credibility of ESG stress testing and resilience analysis, they should employ complementary analysis to cross-validate results and ensure their plausibility, use benchmarking techniques, and cross-validate results with alternative methodologies.

Organisational and governance arrangements

Allocation of resources

48. Competent authorities should ensure that sufficient and adequate human and material resources are allocated to the process. This includes permanent or ad-hoc involvement of staff with expertise in ESG risk assessment, stress testing methodologies, and financial supervision.
49. Competent authorities should have data management and collection capabilities that support access to high-quality ESG data. They should also develop and maintain IT infrastructure that allows for efficient data collection, determining adequate scenario, and result analysis.

Timelines for the exercise

50. Competent authorities should set appropriate timelines for conducting ESG stress tests and scenario analyses, balancing the need for completeness and accuracy with requirements of the decision-making process. Financial entities should be given sufficient preparation time to compile relevant information and conduct their assessments while enabling competent authorities to perform a comprehensive review and ensure accurate reporting.
51. The process should be structured to facilitate efficient analysis, consistent communication of findings, and integration into the broader supervisory framework.

Data collection

52. For top-down exercises, competent authorities should rely, as much as possible, on regulatory reporting and leverage existing disclosure frameworks and external resources where relevant.

They may consider ad-hoc data collections as a necessary complementary source of information. Collected information should be limited to the one used for the analyses and validation.

53. Where data gaps exist, competent authorities should promote the use of reasonable proxies, estimates, and expert judgment, while encouraging financial entities to improve internal data capabilities over time.

Quality assurance process

54. A rigorous quality assurance process should be implemented to verify the accuracy, consistency, and reliability of stress test results. Competent authorities should establish review mechanisms (e.g. benchmarking or peer reviews) to assess data quality, methodology robustness, and, where appropriate, scenario adequacy. Where necessary, expert judgment should complement quantitative findings to mitigate model limitations.

Effective dialogue with financial entities

55. Competent authorities should maintain effective and structured dialogue with financial entities throughout the stress testing process. This includes providing clear guidance on expectations, facilitating engagement at key stages, and ensuring that financial entities have the opportunity to clarify methodological aspects. Regular interaction will enhance the credibility of the exercise and improve financial entities' ability to incorporate ESG risk considerations into their own risk management frameworks.

Cross-border and system-wide coordination

56. Where relevant and possible, competent authorities should coordinate across jurisdictions to allow a harmonised approach to ESG stress testing for cross-border financial groups. This includes collaboration with other supervisory authorities to align methodologies, share best practices, and avoid regulatory fragmentation.
57. When relevant, system-wide coordination should also be pursued to ensure that ESG stress tests account for broader financial stability risks and potential spillover effects across sectors.

Integration into the supervisory process

58. ESG stress test results should be, to the extent possible, integrated into the broader supervisory process. As methodological aspect and availability of data develop over time, competent authorities should use the findings to inform risk assessments, capital adequacy reviews, and/or strategic discussions with financial entities.
59. The results should also guide supervisory follow-up measures and policy recommendations where ESG risks are identified as likely to pose material threats to financial stability.

Public disclosure of information

60. Publication of results should be in line with relevant sectoral regulation and supervisory practice. When choosing to publish results, competent authorities should weigh up the comparative benefits of publishing individual or aggregate results. The level of disclosure should be calibrated based on the reliability of the methodology and the quality of the data. Competent authorities should consider that transparency enhances market discipline, stakeholder confidence, and accountability. They should also ensure that information is interpreted correctly and does not lead to unintended market distortions. Disclosure can increase as results become more robust.

Regular review and evolution of ESG stress testing

61. Given the evolving nature of ESG risks and stress testing methodologies, competent authorities should regularly review and refine their stress testing frameworks. Lessons learned from previous exercises should be incorporated into the following ones, and updates should reflect emerging best practices, new regulatory requirements, and advancements in ESG data and modelling techniques.

Title III- Implementation

62. These Joint Guidelines apply from 1 January 2027