

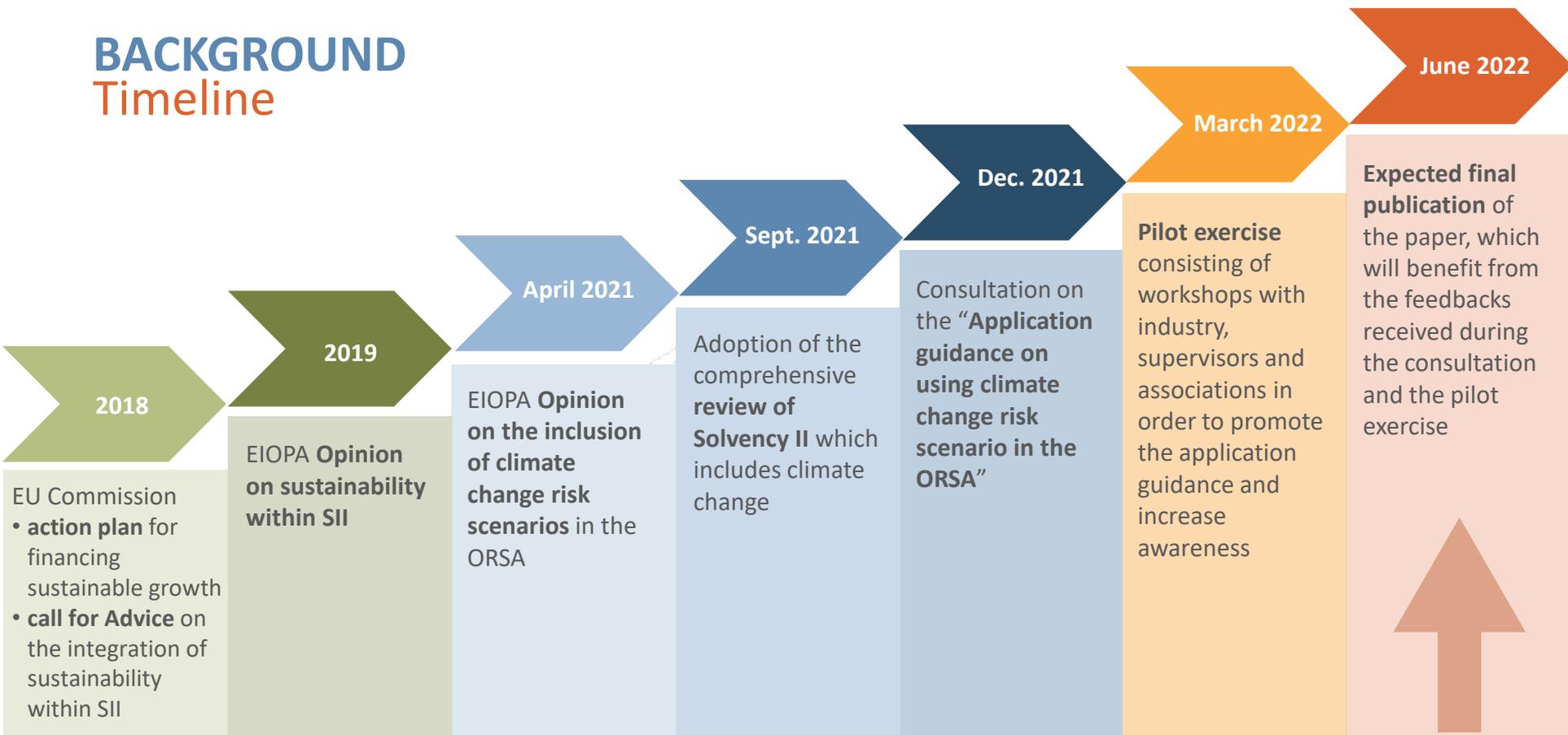
Practical implementation of climate change-related scenario analysis in the ORSA

EIOPA application guidance for small and medium undertakings

EIOPA Sustainable Finance Roundtable – 7 December 2021

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BACKGROUND Timeline



EIOPA Opinion Expectations

Expectations

ASSESS CLIMATE CHANGE RISK

Insurers are expected to assess climate change risk in the ORSA:

- both in the **short and in the long term**;
- covering both **transition and physical risk**;
- the Opinion contains a breakdown and definitions of transition and physical risks as well as a **mapping of these risk drivers** to traditional prudential risk categories

TWO LONG TERM CLIMATE SCENARIOS

Subject material climate change risks to **at least two long-term climate scenarios**

- a climate change risk scenario where the global temperature increase remains **below 2°C**, preferably no more than 1.5°C, in line with the EU commitments; and
- a climate change risk scenario where the global temperature increase **exceeds 2°C**;

RISK IDENTIFICATION

Identify material climate change risks for their business through a combination of qualitative and quantitative analyses

ALLOWING FOR FLEXIBILITY

- Long-term scenarios **do not have to be updated every year**,
- Insurers could start in a **qualitative way**

APPLICATION GUIDANCE

Structure

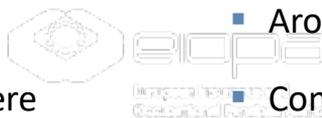
The application guidance will facilitate the implementation of climate risk reporting and contribute to lowering related costs for insurance undertakings, in particular for SMEs;

High level reader section



- Around 25 pages;
- Sections in the ORSA where undertakings have the possibility to address climate change risks;
- General insights on the materiality assessment and climate change scenarios.

Technical deep dive



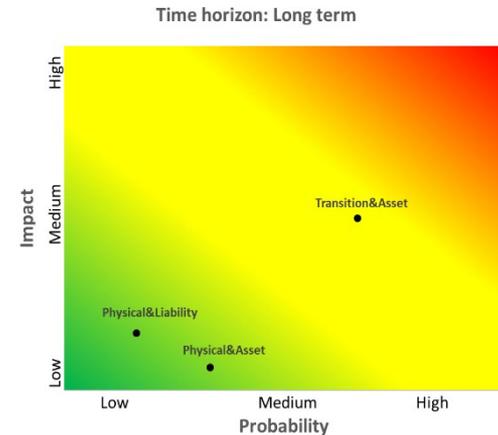
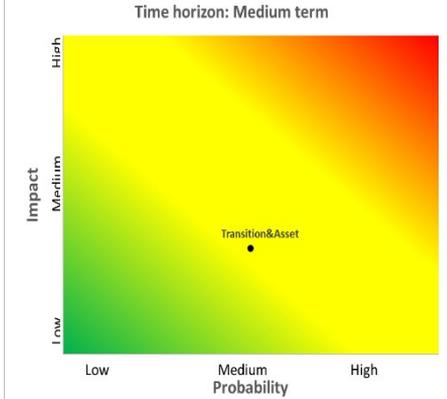
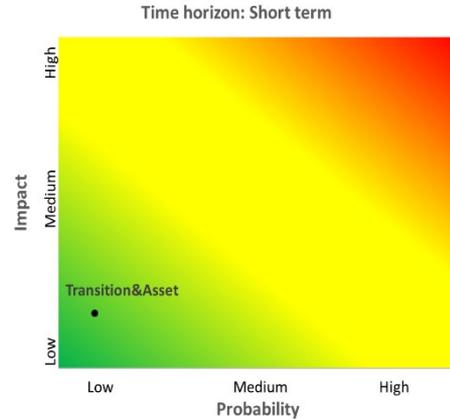
- Around 110 pages;
- Concrete examples using life and non-life dummy companies, created using real data;
- Extended sections on materiality assessment and scenario analysis, treated for both assets and liabilities.



APPLICATION GUIDANCE

Materiality assessment

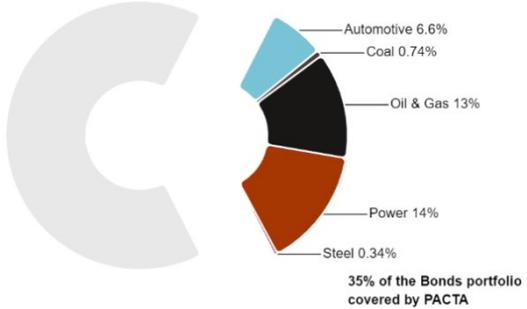
- The application guidance proposes some approach to assess the presence of climate risk via a **materiality assessment**.
- The materiality assessment would ideally take into account **the impact, the probability and the time horizon** of the specific risk driver.
- Physical and transition risks are addressed for **both assets and liabilities** and for **both life and non-life business**.



APPLICATION GUIDANCE

Materiality assessment

- Examples of qualitative and quantitative materiality assessments are given in the paper;
- On the **asset side**, a particular focus has been given to transition risk which is presented via different approaches, such as a **reclassification by sector using the NACE codes** and an **exposure analysis with the tool PACTA**.
- On the **liabilities side** the approaches have been based on the **geospatial and demographical characteristics** of the products portfolio.



Exposure analysis using PACTA



Exposure of the dummy company to windstorm

APPLICATION GUIDANCE

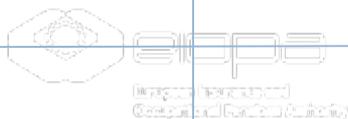
Scenario analysis



For material risks, the Opinion expects undertaking to run at least **two climate change scenarios**.



The application guidance provides several examples of scenarios using different **easy-to-apply tools**



European Insurance
Occupational Pensions Authority



Physical risk scenarios explore the possible consequences of human activities on the climate system according to different changes in socio-economic systems.

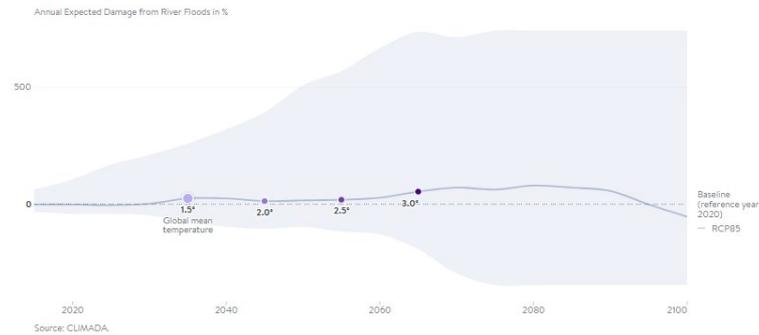


Transition risk scenarios define different views on the future decarbonization of the economy and associated trends

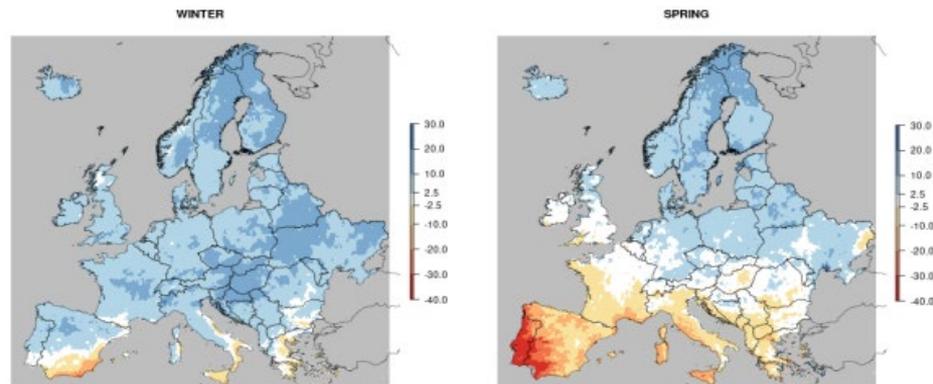
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Non-Life scenario analysis

- **Using NGFS climate impact explorer:** the tool shows how the severity of climate change impacts will increase over time in continents, countries and regions at different levels of warming, starting with 1.5°C;
- **Using the PESETA IV study:** it aims to better understand the effects of climate change on Europe, for a number of climate change impact sectors;
- **Using CAT models:** Catastrophe modeling is the practice of using computer programs to mathematically represent the physical characteristics of natural catastrophes.
- **Using existing scenario analysis:** Previous scenarios could also be used to perform a climate change scenario analysis in the ORSA. The UK PRA has for example launched its biennial insurance stress test in 2019 which included an exploratory exercise in relation to climate change



NGFS climate impact explorer

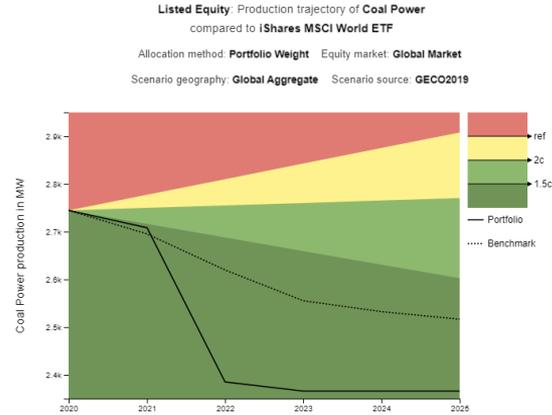


CAT models

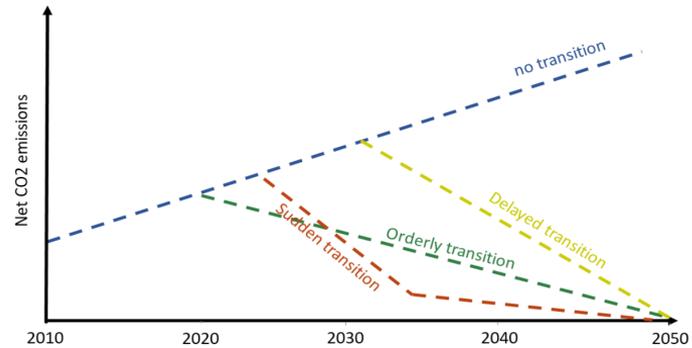
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Life scenario analysis

- **Using a combined scenario analysis:** long term scenarios underlying the Solvency calculations might be able to capture some of the impact of climate change. In addition, they offer flexibility for tailoring to the specific objective of the stress test exercise;
- **Using the open-source tool PACTA:** PACTA scenarios measure the alignment of a portfolio to a range of climate transition scenarios via forward-looking comparisons of key outputs, e.g. emissions intensity of the investment portfolio;
- **Using existing scenario analysis:** The 2020-2021 ACPR pilot climate exercise scenarios has been presented as an example of an application of a climate stress test to a whole market using the NGFS transition pathways as a starting point.



Example of PACTA output



NGFS transition pathways

APPLICATION GUIDANCE

Pilot exercise

- EIOPA is collecting participations for the **pilot exercise starting in March 2022**, after the consultation phase;
- It will consist of **workshops and trainings** on the document and on the approaches presented in order to collect further feedback from the stakeholders;
- The exercise will be open to **supervisors, associations and industry**.

If you are interested in participating to the workshops on the application guidance, please send an email to (ORSACLIMATE@EIOPA.EUROPA.EU).





THANK YOU!

For more information visit:
<https://www.eiopa.europa.eu>