



Understanding Climate Risk & opportunity

Climate Risk is Financial Risk

Climate change has a global impact and is a source of transition risks and physical risks.

Transition risks

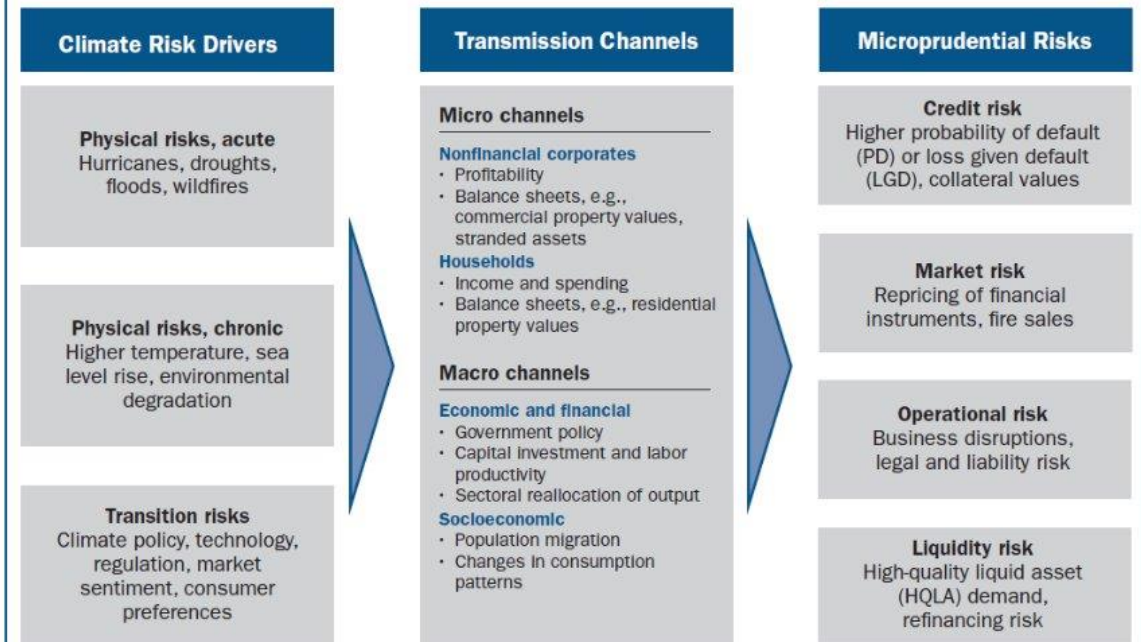
- ✓ Stems from the need to transform global economies and societies
- ✓ Response to mitigation and adaptation requirements
- ✓ Include policy, legal, technology, and market changes

Physical risks

- ✓ Stem from the increasing incidence and severity of climate hazards
- ✓ Include acute isolated events and chronic risks over the medium to long term

Figure 1. Climate risk drivers manifest as prudential risks

Climate risk drivers could bring about microprudential risks to supervised financial institutions. These risks may manifest through a variety of transmission channels.



Note: Examples are indicative and not exhaustive.

Source: Federal Reserve, 2024.

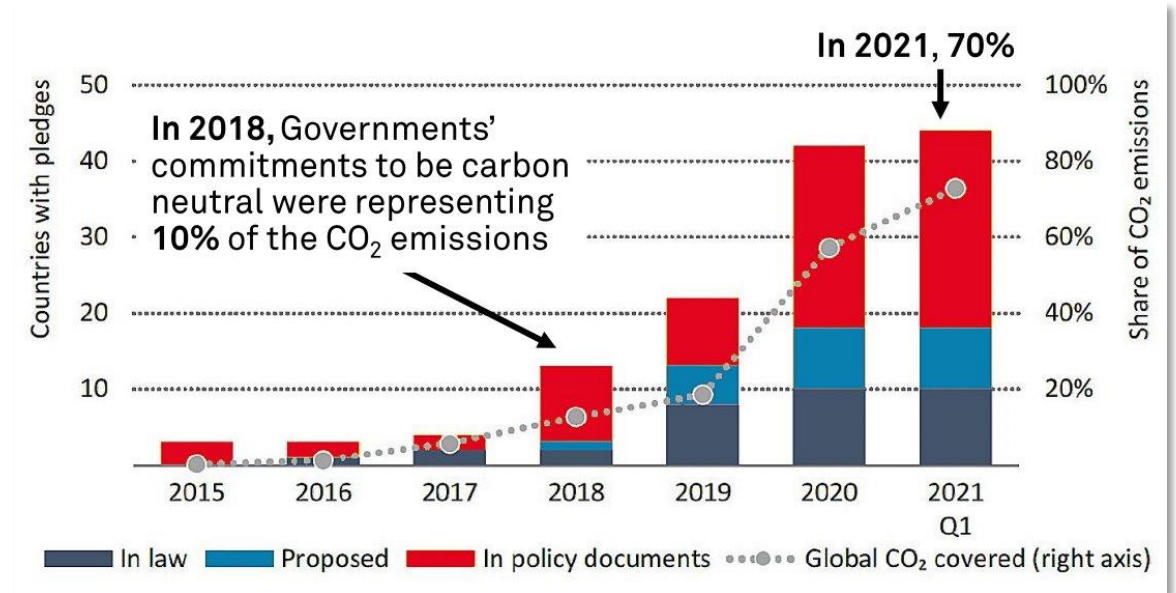
Available online at: <https://www.federalreserve.gov/publications/files/csa-exercise-summary-20240509.pdf>

Transition risk relates to socio-economic transformations we must undertake

Climate transition risks are a function of the pace and extent of efforts to reduce greenhouse gas emissions and limit the global temperature rise.

- Paris Agreement:** The global community has committed to keep global warming well below 2°C by the end of this century compared with pre-industrial levels, and to pursue efforts to limit the increase to 1.5 °C.
- Implications:** S&P Ratings believes national commitments and associated actions would likely transform many issuers' operating models with impacts on credit worthiness.

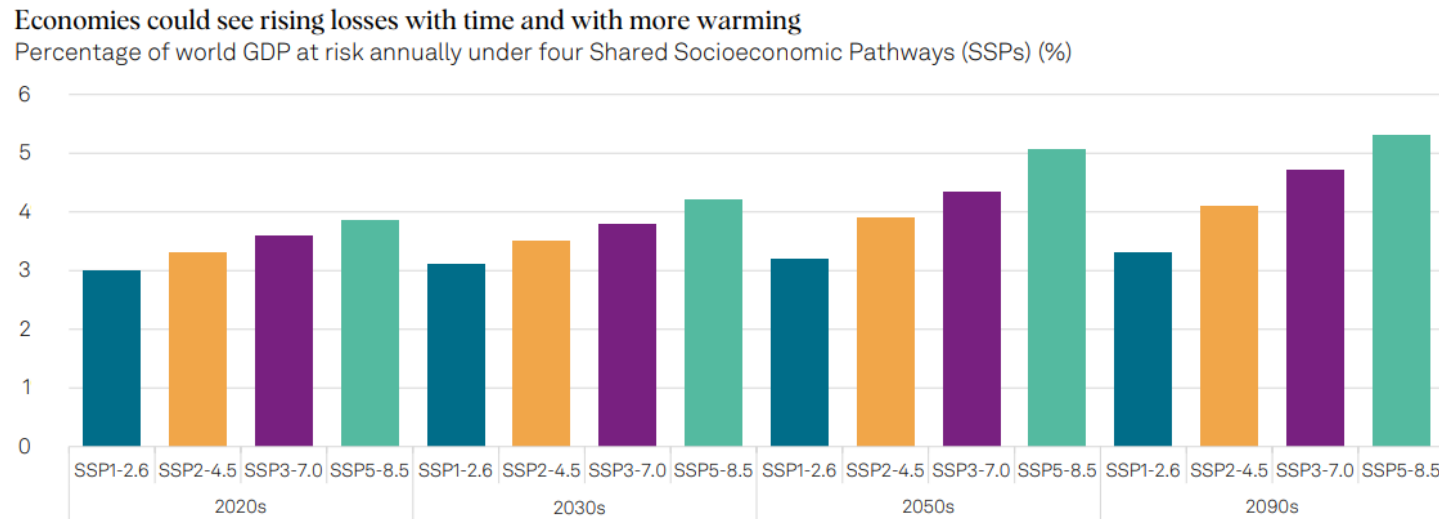
Source: S&P Global Ratings, 2024.
 Available at: https://www.spglobal.com/_assets/documents/ratings/research/101601706.pdf



Source: Patrick Bolton, Marcin Kacperczyk & Frédéric Samama (2022) Net-Zero Carbon Portfolio Alignment, Financial Analysts Journal, 78:2, 19-33, DOI: 10.1080/0015198X.2022.2033105

Physical risk refers to the ongoing acute and chronic impacts of climate change

Physical climate risks stem from rising global temperatures. The Intergovernmental Panel On Climate Change (IPCC) reports this will result in increasingly frequent and severe physical climate hazards, such as wildfires, storms, and flooding; and chronic events like changing temperature and precipitation patterns, as well as rising sea levels.



Note: GDP at risk represents the share of GDP that could be lost annually due to high exposure to physical climate risks, in the absence of adaptation to climate risk, without accounting for changes in the economic geography and structure and assuming all hazards occur every year. Sources: S&P Global Ratings, S&P Global Sustainable1 (2023).

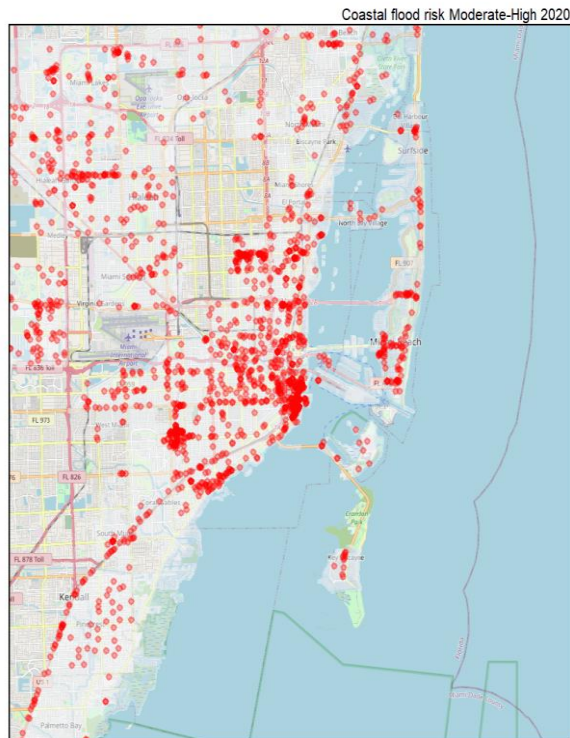
By 2050, if global warming does not stay well below 2 degrees Celsius, up to 4.4% of the world's GDP could be lost annually, absent adaptation.

Source: S&P Global Ratings, 2024.
Available at: https://www.spglobal.com/_assets/documents/ratings/research/101601706.pdf

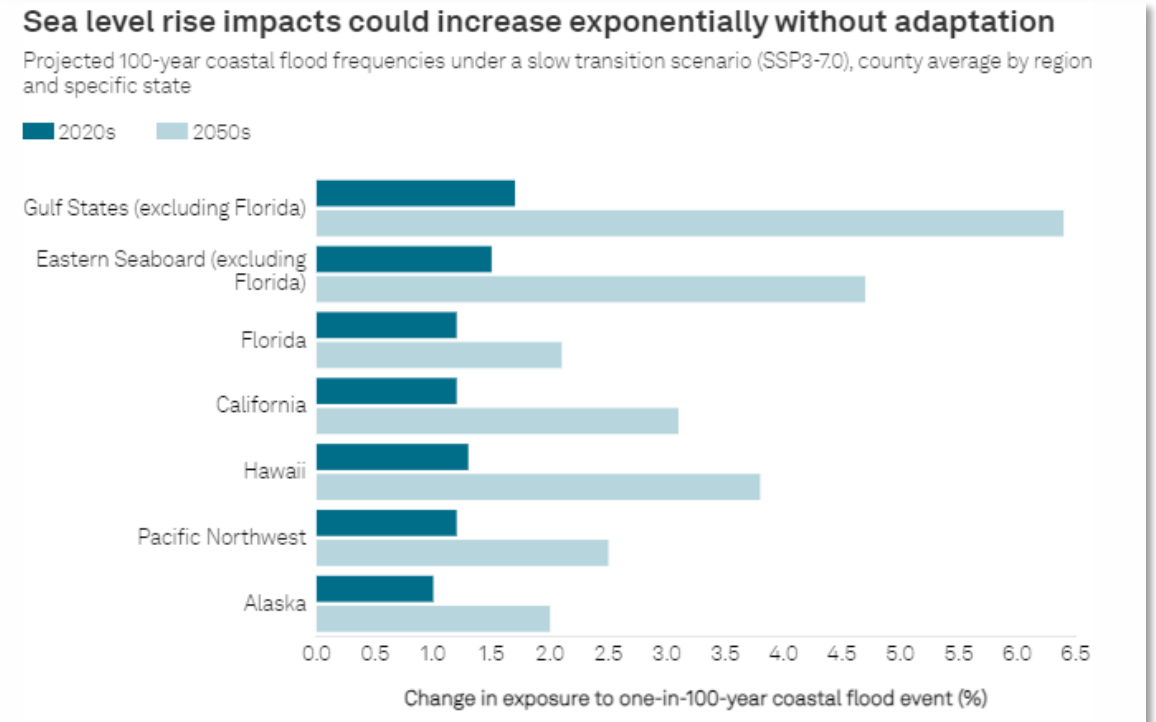
Source: S&P Global Ratings, 2024.
Available at: https://www.spglobal.com/_assets/documents/ratings/research/101601706.pdf

Physical Risk Florida is already impacted, and climate models forecast a significant increase in risks

The S&P Sustainable1 dataset suggests that by midcentury, the frequency of a one-in-100-year coastal flood event could at least double for many coastal US counties. Counties in Florida could see an average 1.7x increase in historical 100-year flood frequencies.

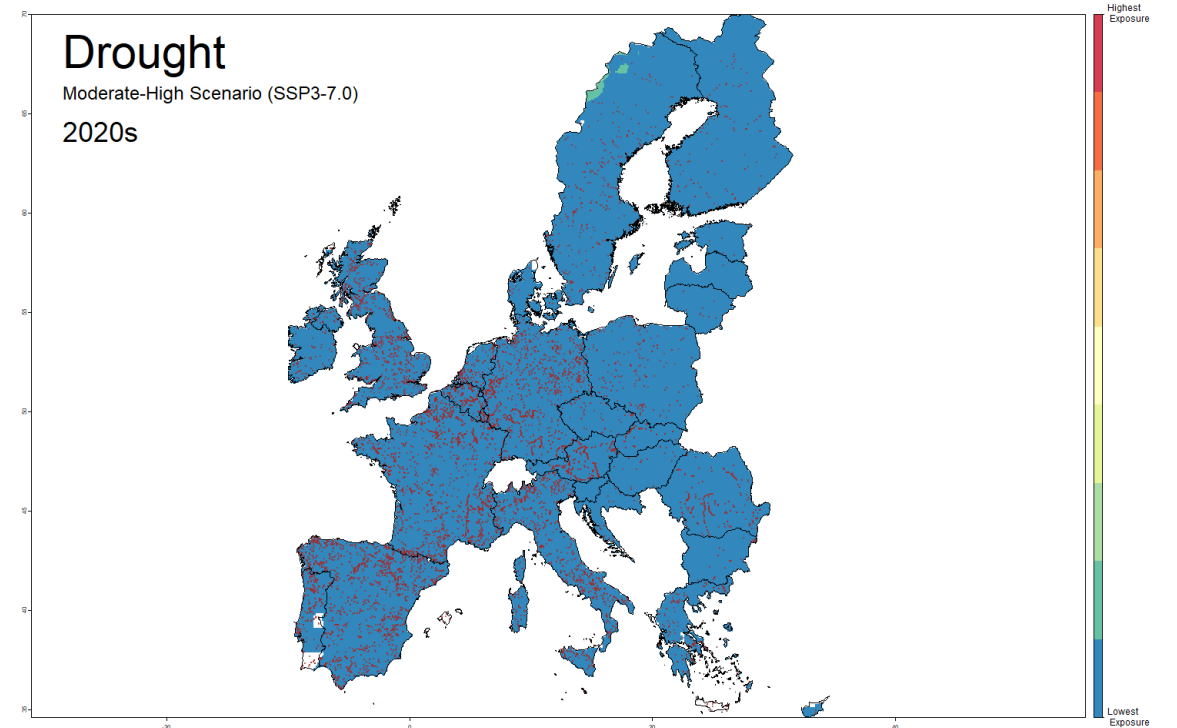
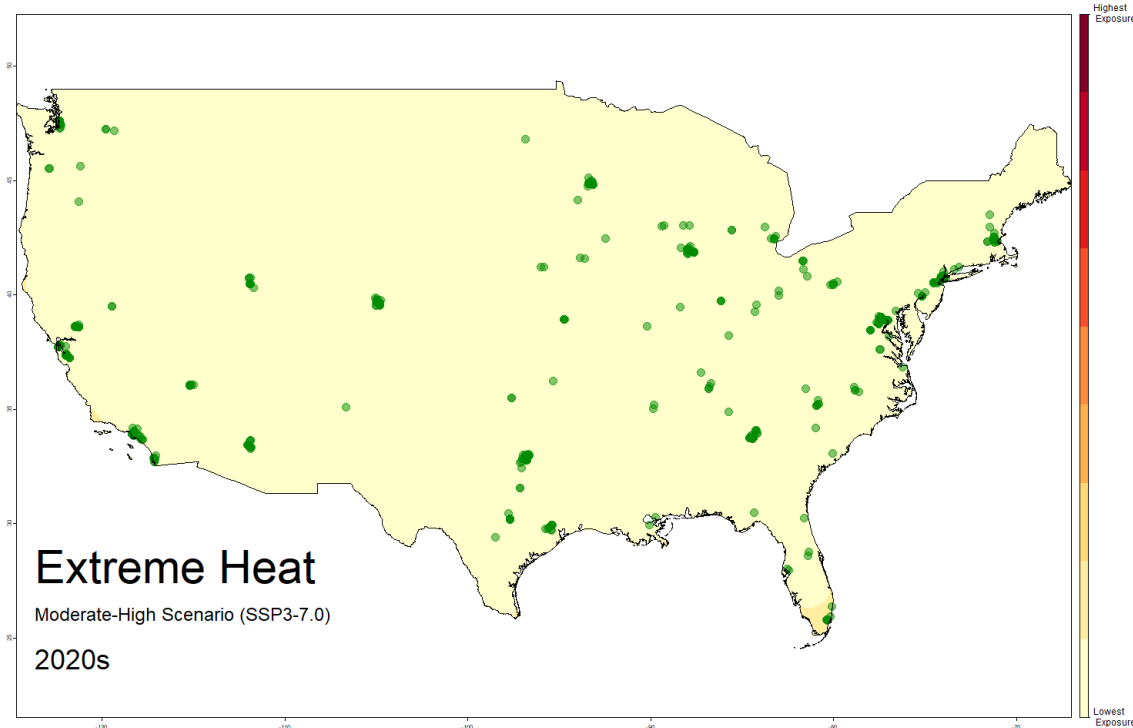


Source: S&P Global Sustainable1, 2023.



Source: S&P Global, 2024.
Available at: <https://www.spglobal.com/esg/insights/featured/special-editorial/navigating-uncertainty-us-local-governments-and-physical-climate-risks>

Impacts from climate physical risk are diverse and widespread



Source: S&P Global Sustainable1, 2023.