European Stability Mechanism

CLIMATE CHANGE AND FINANCIAL STABILITY

Presentation at University College Dublin

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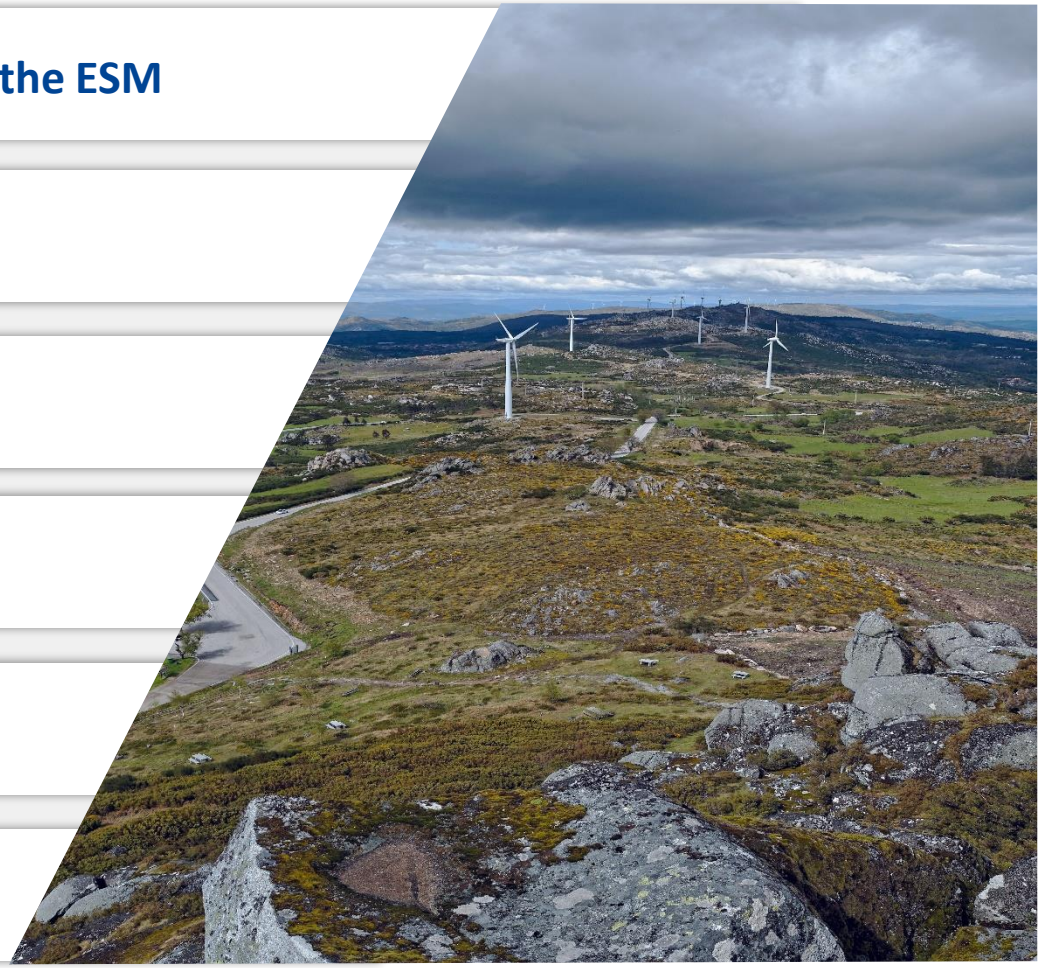
OVERVIEW: CLIMATE CHANGE AND FINANCIAL STABILITY

- Why climate change matters for Ireland and the ESM
- How economic growth is affected
- How government budgets are affected
- How the financial sector is affected
- Policy implications
- Q&A



ESM AT A GLANCE

Financial stability:
prevent and overcome financial crises in the euro area and maintain its long-term financial stability and prosperity.

Financial assistance:
provide financial assistance to euro area countries experiencing or threatened by severe financing problems, through raising financing on debt capital markets.

Strong capital structure:
€708.5 billion subscribed capital of which **€80.7** billion is paid-in capital

Max. lending capacity:
€500 billion;
€427 billion available

EFSF AND ESM SUPPORT PROGRAMMES

EFSF

Ireland (2010-2013)
€17.7 bn

Portugal (2011-2014)
€26 bn

Greece (2012-2015)
€141.8 bn

ESM

Spain (2012-2013)
€41.3 bn

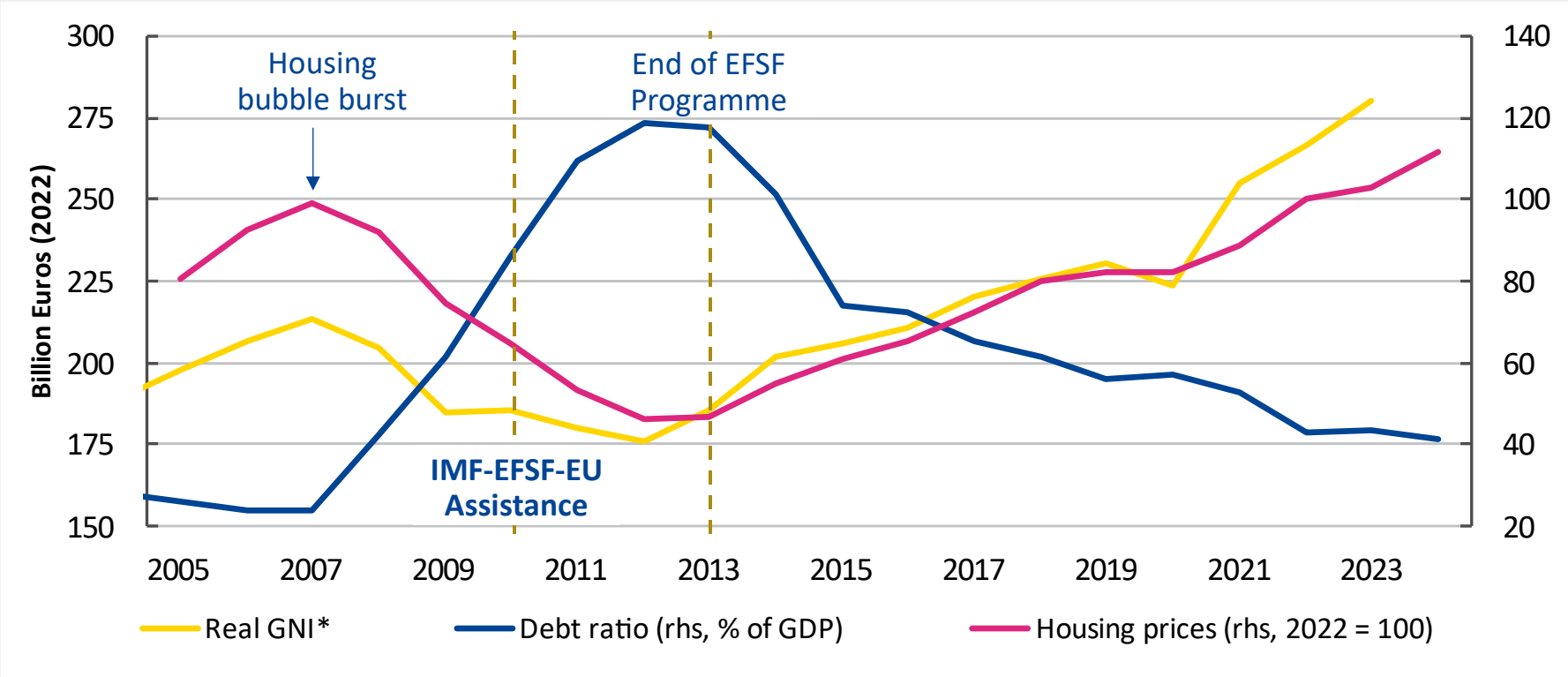
Cyprus (2013-2016)
€6.3 bn

Greece (2015-2018)
€61.9 bn

Total amount disbursed by EFSF and ESM:
€ 295 billion

Total outstanding amount of loans:
€ 247 billion

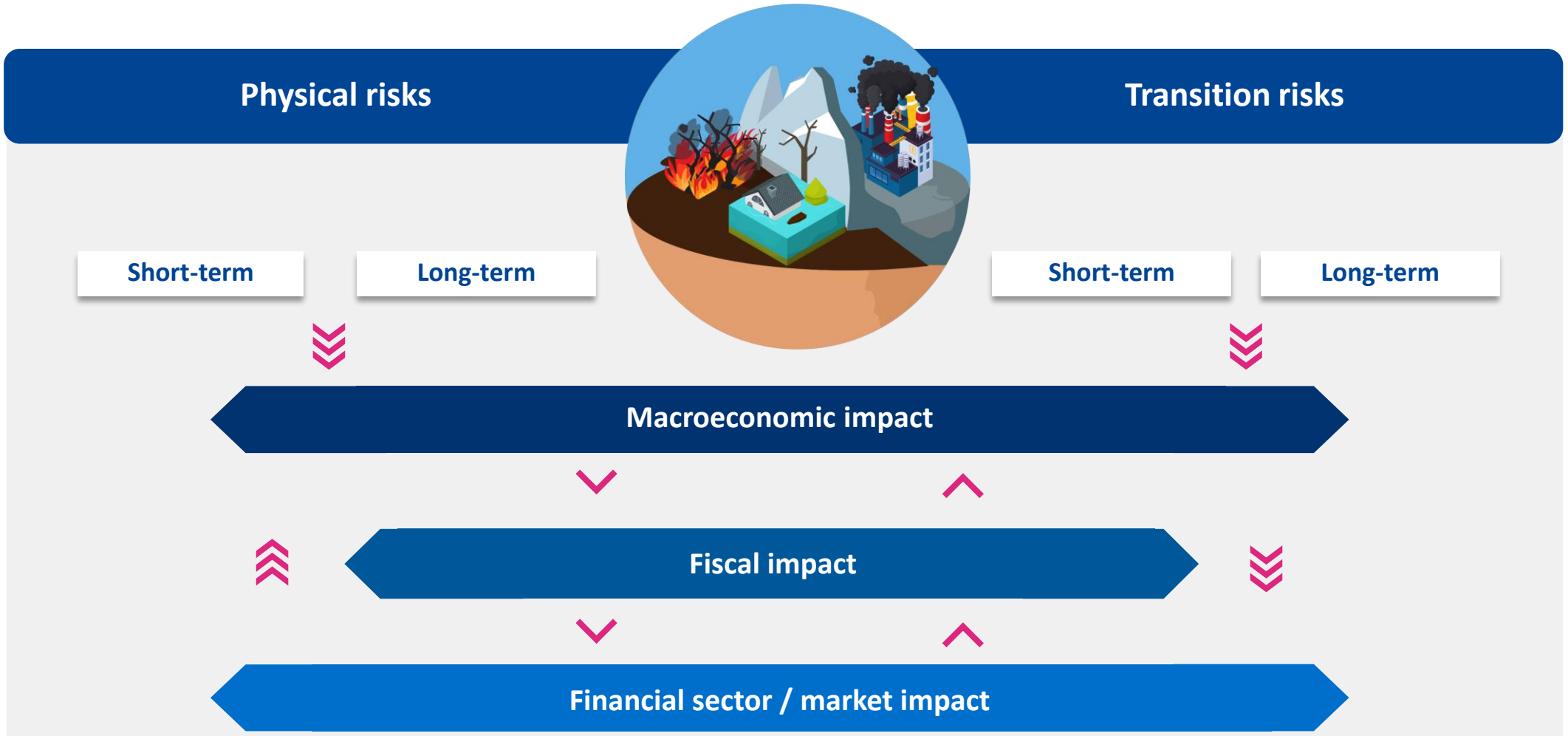
IRELAND AND THE ESM: CRISIS, GROWTH, RISKS, OPPORTUNITIES



Source: Eurostat and CSO

WHY CLIMATE CHANGE MATTERS FOR IRELAND AND THE ESM

ESM EMBEDS CLIMATE RISK IN ITS ASSESSMENT



CLIMATE CHANGE CAN THREATEN FINANCIAL STABILITY

Climate change and response to climate change will materialise under any scenario.

Climate change has large-scale macroeconomic and/or financial stability implications

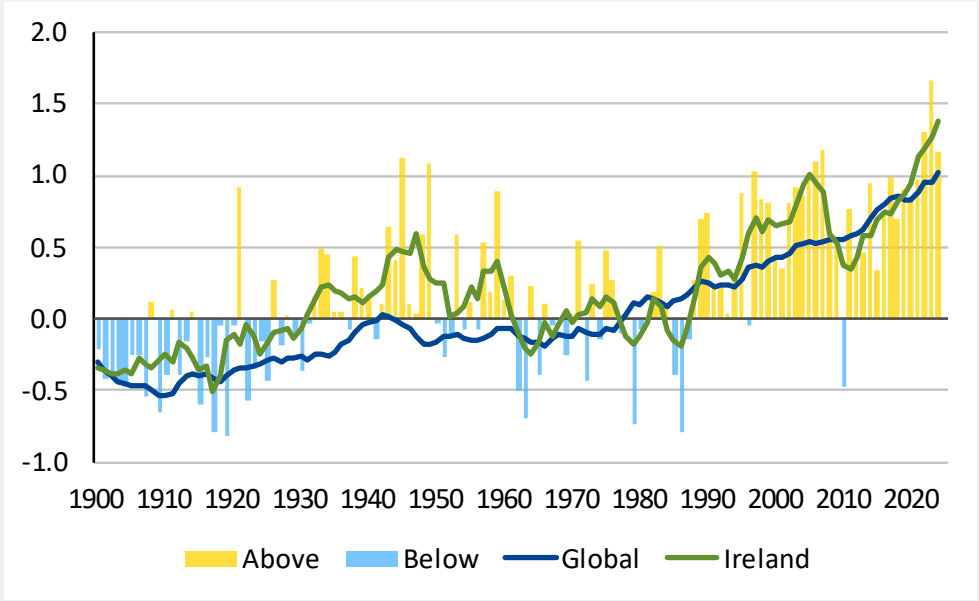
ESM mandate: safeguard financial stability in the euro area

WHAT DO YOU THINK IS THE GREATEST CLIMATE-RELATED THREAT TO IRELAND?

147 responses

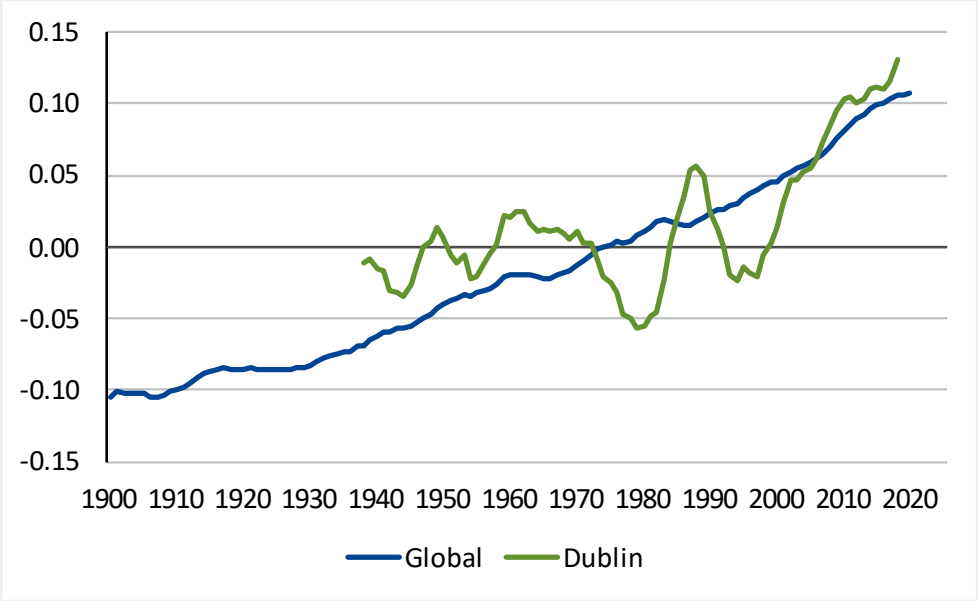
IRISH CLIMATE CHANGED MORE THAN THE GLOBAL AVERAGE

Rise in average temperature
(°C, difference with respect 1961-90 average)



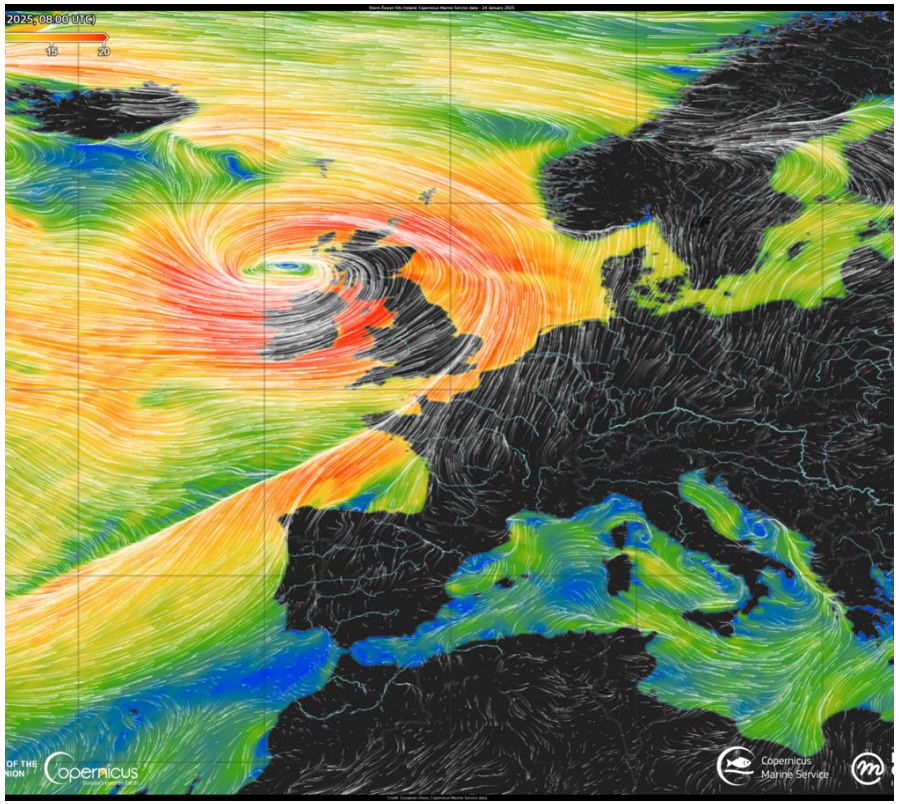
Source: Environmental Protection Agency

Rise in sea levels
(meters, difference with respect 1961-1990 average)



Source: Environmental Protection Agency

EXTREME WEATHER EVENTS: MORE FREQUENT AND COSTLY



Another Storm Éowyn ahead?
Increasing Risk Exposure: Extreme weather events in Ireland have been relatively rare (14% probability per year) but are expected to become more frequent

Increasing Economic Cost

- Extreme weather and climate events costed €4.6 billion from 1980 to 2019
- Without urgent policy action, it will go beyond €12 billion between 2025 and 2030

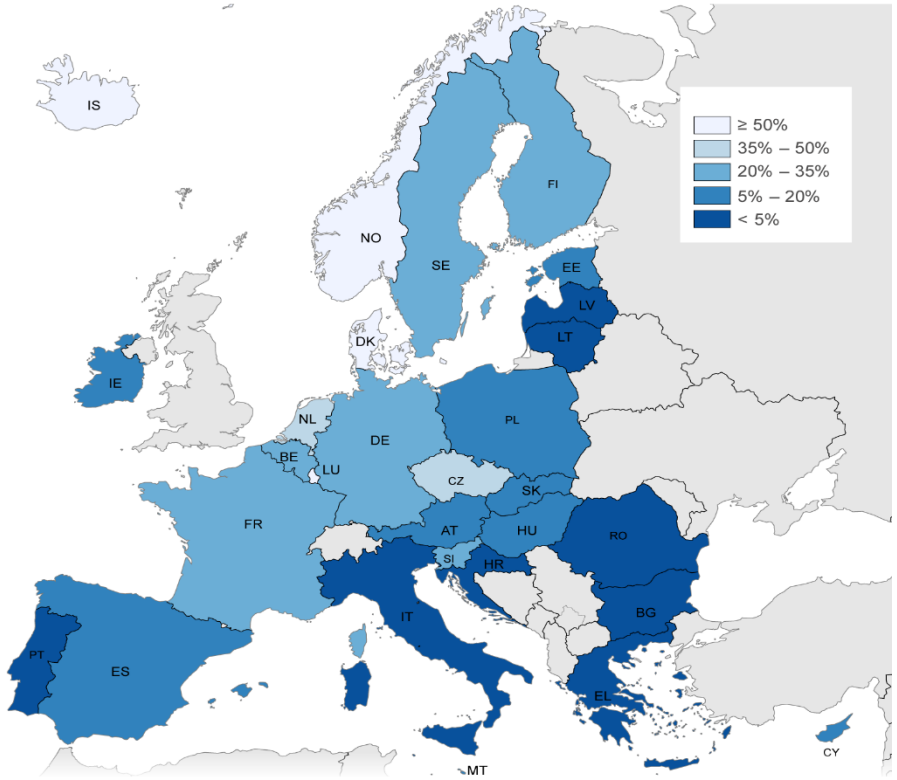
THERE IS AN INSURANCE PROTECTION GAP…

Effects of extreme weather and climate events **can be mitigated by insurance**.

Around ¼ of climate-related catastrophe losses are insured in EU, with **coverage in some countries falling below 5%.**

Climate change intensifies risks ➡ climate **insurance protection gap is expected to widen** further.

Average share of insured economic losses caused by natural catastrophes

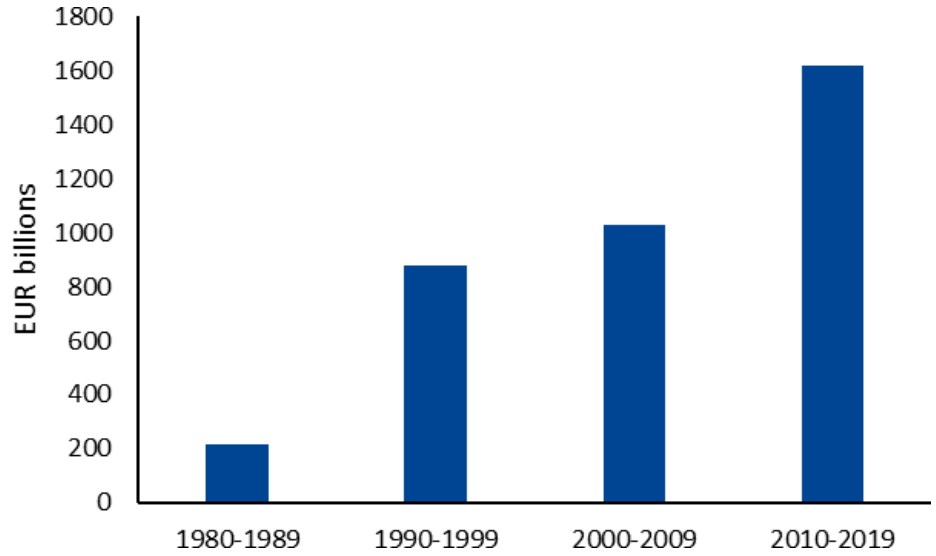


Source: ECB and EIOPA dashboard on insurance protection gap for natural catastrophes, 1980-2023. In percentages

HOW ECONOMIC GROWTH IS AFFECTED

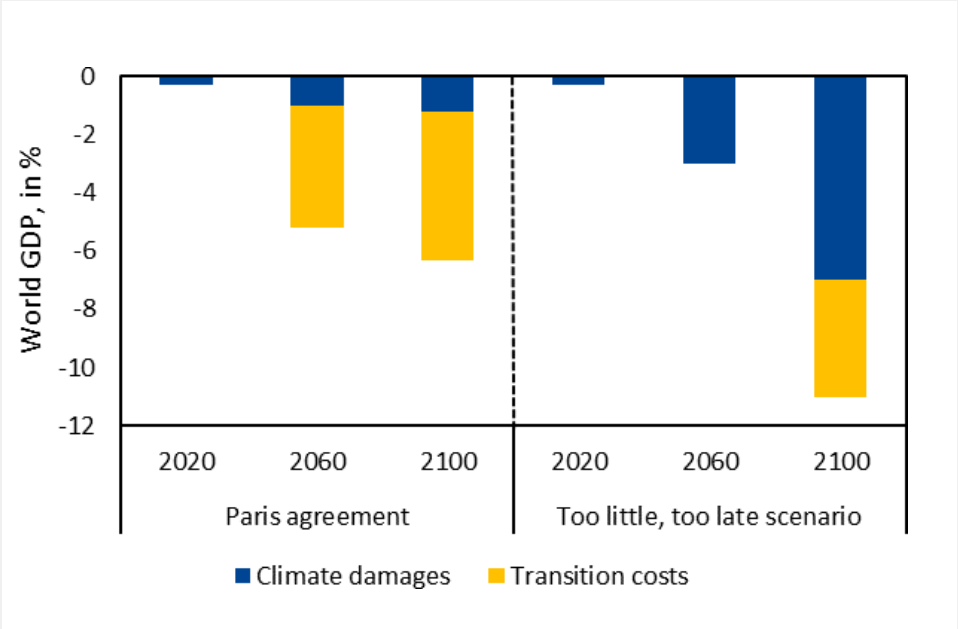
EXTREME WEATHER DAMAGES WEIGH ON GROWTH…

Global economic losses from weather-related catastrophes have been on the rise…



Source: SwissRe (2020)

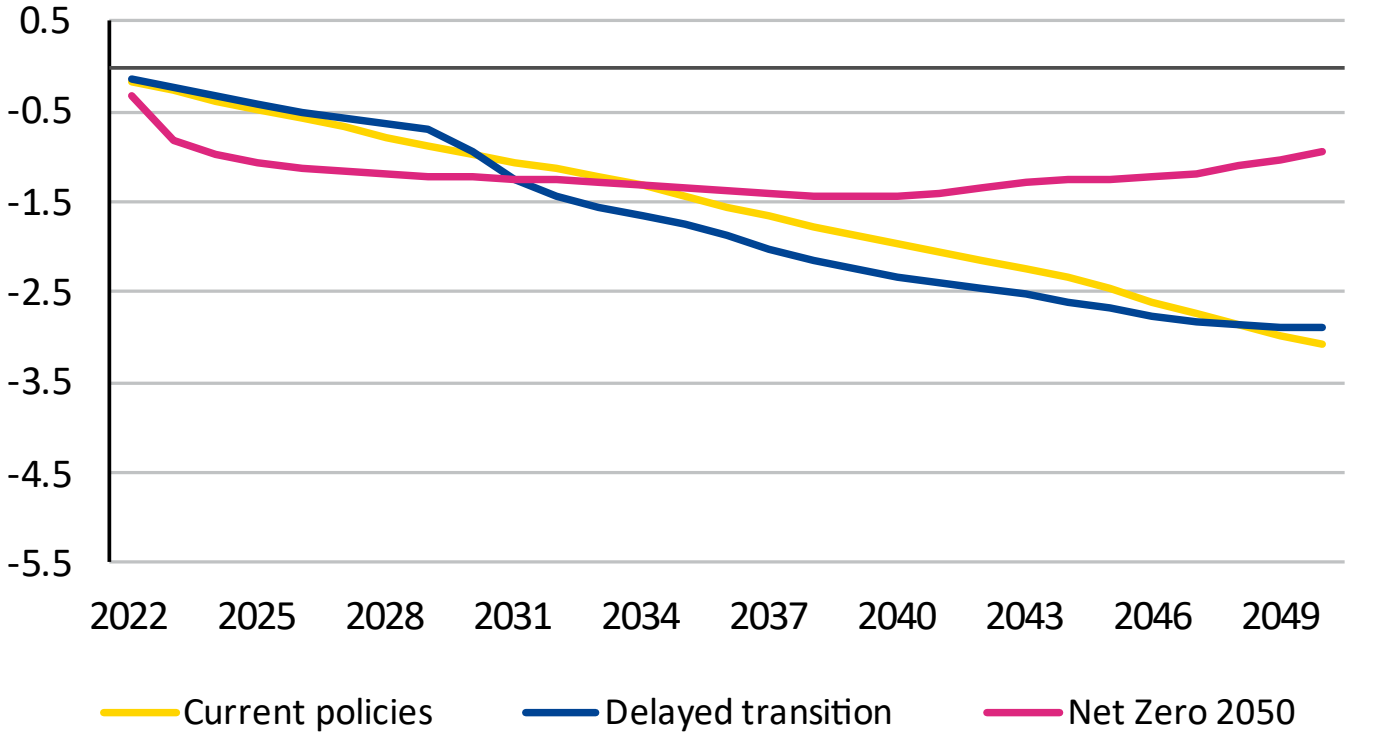
… while long-run GDP losses will depend on the ambition of transition policies.



Source: ECB, Climate-related risk and financial stability
Notes: The "too- little, too-late" scenario is based on the assumptions defined by the Network for Greening the Financial System (NGFS).

…AND SO DOES DELAYING OR NOT TAKING ACTION

Figure: GDP impact across scenarios (Europe)
(Europe, % dev. from NGFS baseline)



Source: NGFS (Phase 3), NiGEM with GCAM trajectories
Notes: Dotted lines refer to the most affected European country under each scenario.

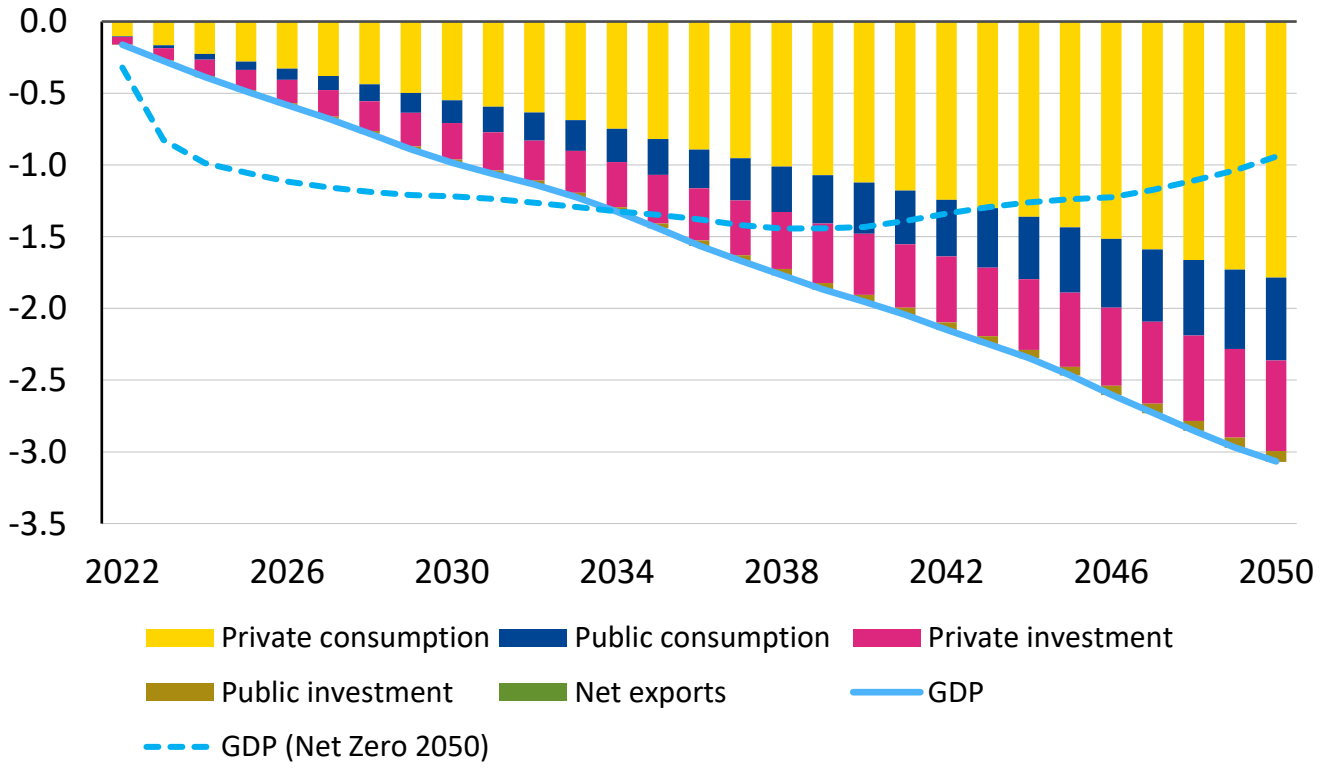
Other estimates for Europe:

Kahn et al. (2021): (physical risk)
→ -2.3% (-6.4%) by 2050 (2100) if global emissions continue to rise

Gourdel et al. (2024): (for euro area)
→ -12% by 2050 if transition disorderly and high physical risk

DAMAGE IS WIDESPREAD ACROSS THE ECONOMY

Figure: GDP impact for scenario "Current Policies"
(Europe, % dev. from NGFS baseline)



Lower productivity and increased level/volatility of food and energy prices → lower real wages and consumption

Uncertainty regarding extreme weather events → weaker investment

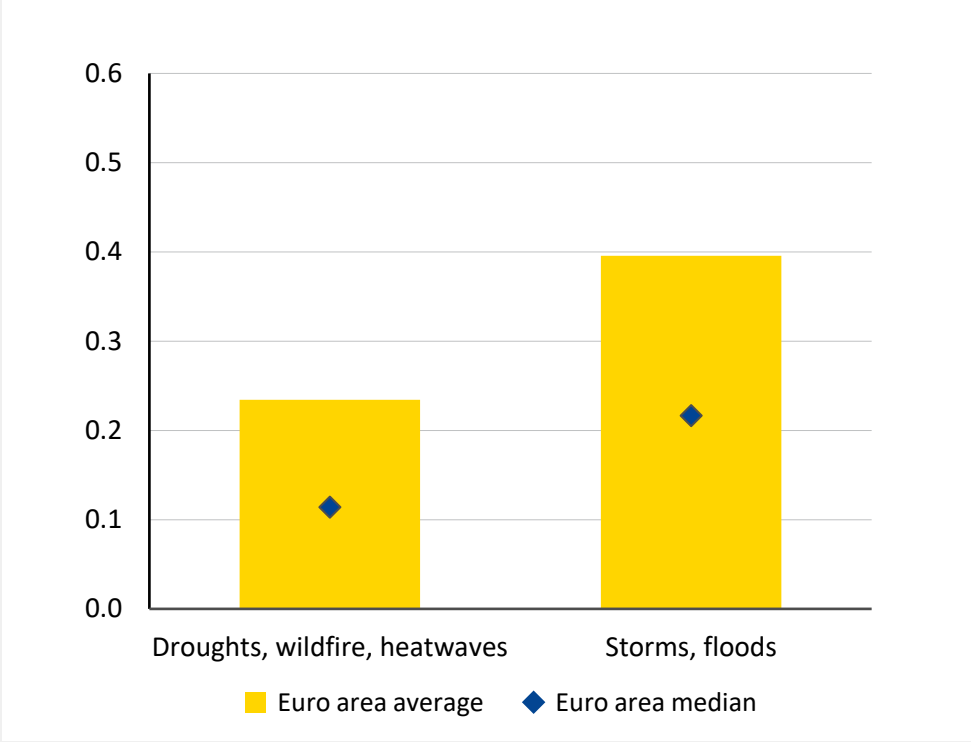
Source: NGFS (Phase 3), NiGEM with GCAM trajectories

HOW GOVERNMENT BUDGETS ARE AFFECTED

PUBLIC BUDGETS HELP ABSORBING DAMAGE COSTS

Worst-case scenario of one-off fiscal costs from extreme weather shocks (% of GDP)

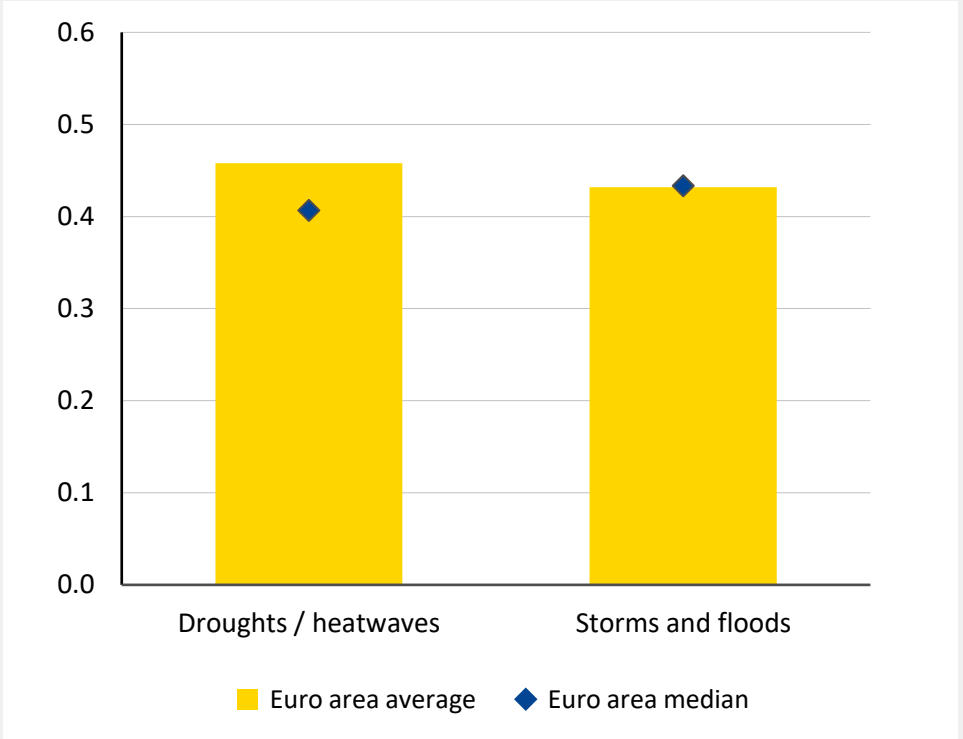
Inferred indirectly from recorded losses



Source: NGFS (Phase 3), NiGEM with GCAM trajectories

Notes: Estimated worst annual uninsured damage (EM-DAT 2000-2022, CATDAT 1980-2021).

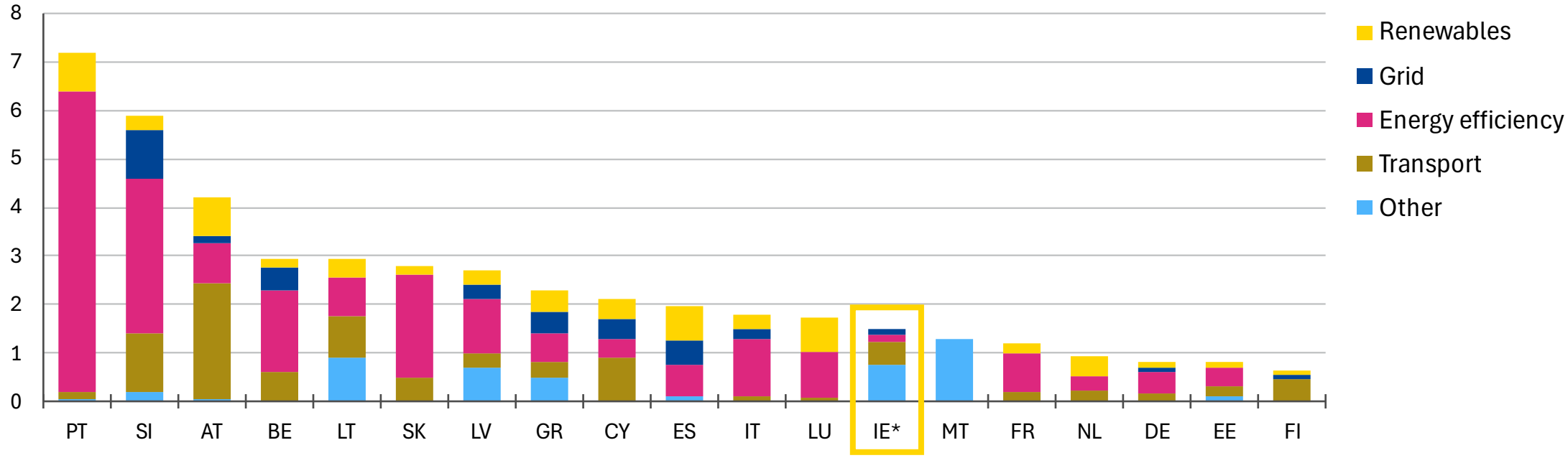
Estimated directly from weather data



Notes: Effect on the expenditure-to-GDP ratio of a country-specific 3-standard-deviation shock based on Akyapi et al (2024).

GOVERNMENT INVESTMENT CONTRIBUTES TO MITIGATION

Self-assessed mitigation public and private investment needs in the euro area by sector
(% of GDP/y, 2021-30)



Source: European Investment Bank and the 2019 euro area National Energy and Climate Plans (NECPs)
Note: Ireland (IE*) expressed as % of GNI*/y.

HOW THE FINANCIAL SECTOR IS AFFECTED

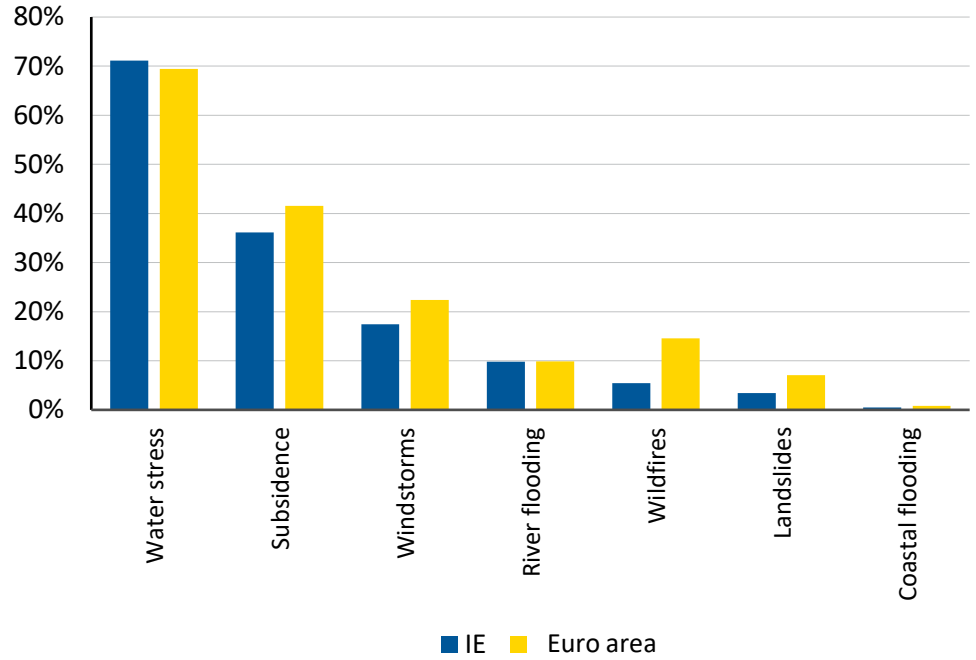
PHYSICAL DAMAGES CAN TRANSFORM INTO LOSSES

Loan books and securities portfolios of European banks could be **significantly affected by acute physical risks.**

Varying approaches for insurance coverage exist in member states. **Private insurers** typically cover only a relatively **small share** of total economic losses.

Linkage between banks and insurers: without insurance, a disaster affects the value of collateral and the credit risk of the borrower.

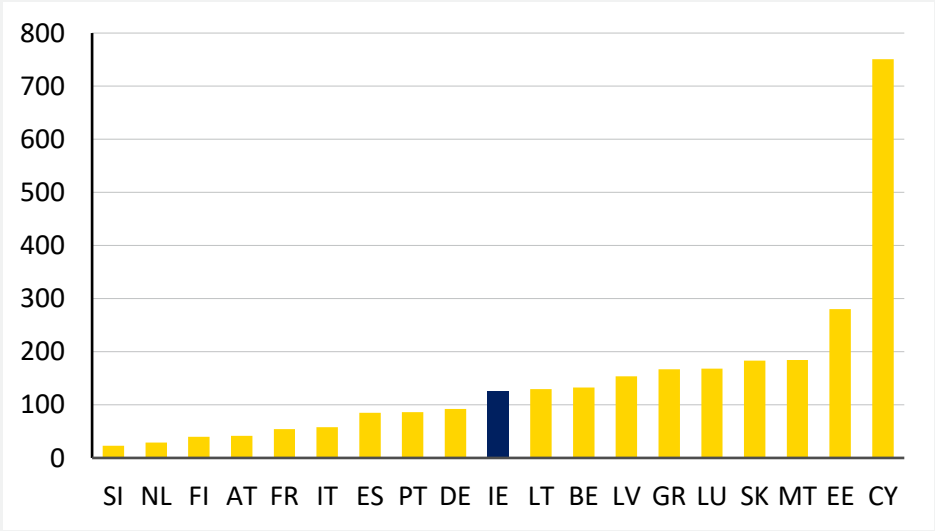
Potential exposure at risk by hazard type
(in % of portfolio)



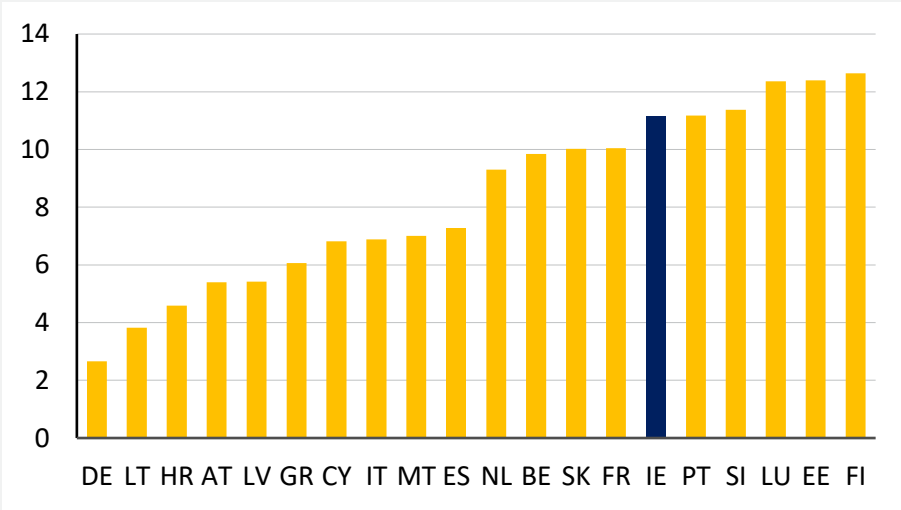
Source: ECB

ADAPTATION COSTS DIFFER ACROSS THE FINANCIAL SECTOR

Carbon footprint of bank loans (tons CO_2/mn EUR)



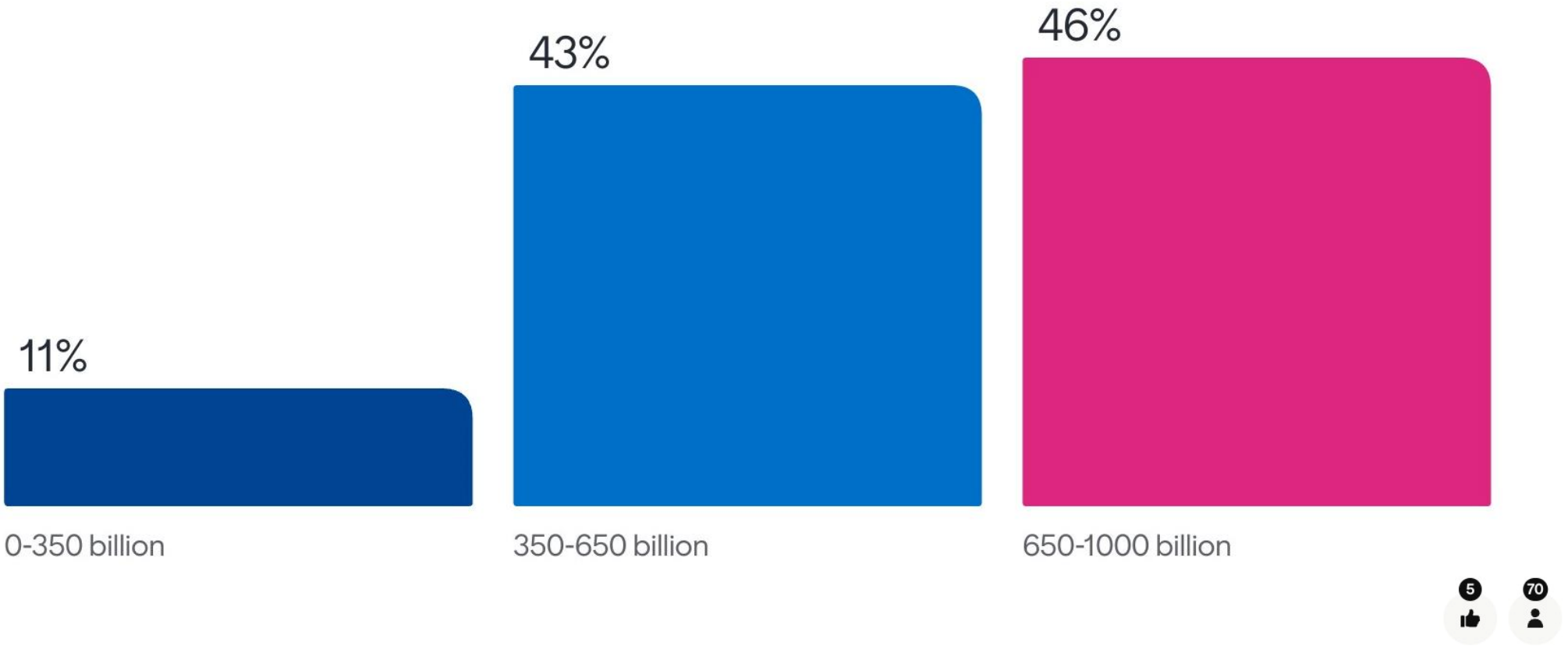
Share of insurers' bond and equity investment in climate-exposed industries
(% of total bond and equity investments)



Source: ECB, EIOPA Data, ESM calculations
Different risk weights in right-hand graph have been applied across industries

POLICY IMPLICATIONS

HOW MUCH ADDITIONAL ANNUAL INVESTMENT IS NEEDED IN EUROPE TO MEET THE CLIMATE TARGETS BY 2030?



POLICY IMPLICATIONS: EVERYONE MUST LEND A HAND

- Climate change related risks impact **financial stability** in the euro area.
  Risks also have implications for ESM's mandate.
- Financial stability perspective: orderly transition is crucial to **contain climate-related costs**.
- Significant physical and transition risks underline ambitious **mitigation objectives**.
- Objectives require large investment needs, particularly from **private sector** with support from **public sector**.
- While improving, development of **sustainable finance and bank-level info on climate risks** could be accelerated.

THE ROLE OF THE EU AND MEMBER STATES

	EU	Member States
Climate change	• Single market (create incentive for transition: carbon pricing, financing) • Technological progress • Insurance and risk-sharing (CMU, NGEU) • Economies of scale: energy market, Carbon Border Adjustment Mechanism (CBAM) • Policy coordination (‘Climate Club’)	• Investment (mitigation & adaptation) • Dealing with stranded assets • Tax incentives for innovation (directed technological change)

THE ESM'S ROLE: MANY WAYS TO SUPPORT THE EURO AREA

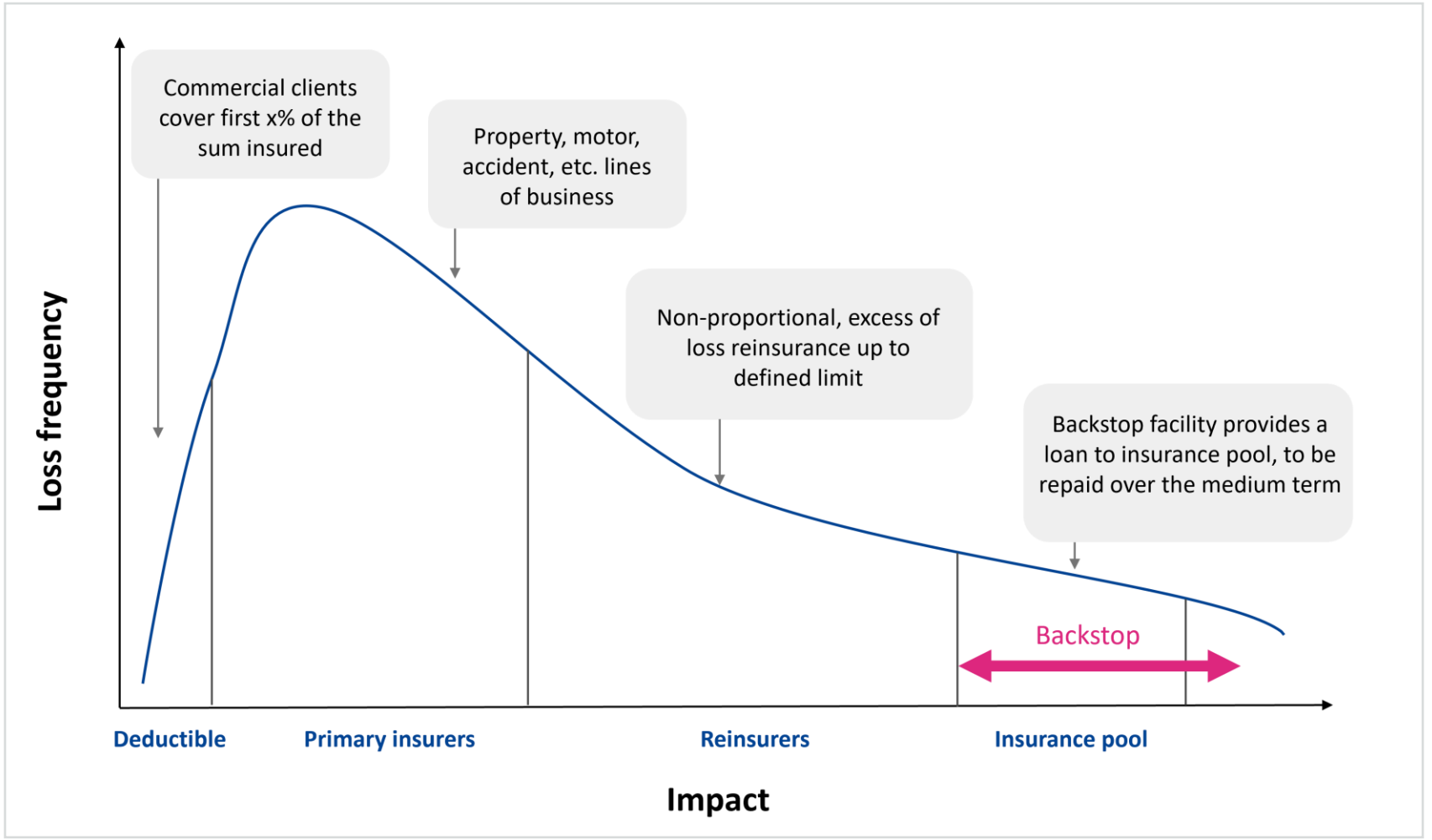
Last year, ESM published a report on the **toolkit review**

ESM **tools can be used to address climate-related risks** and could be further optimised (e.g. Indirect Bank Recapitalisation Instrument)

ESM is taking steps towards explicitly **accounting for climate-related risk in its country monitoring framework**

Potential European loan-based **backstop for climate insurance protection gap** (Blogpost and discussion paper)

EUROPEAN BACKSTOP CAN REDUCE INSURANCE PROTECTION GAP



THE FUTURE IS IN (Y)OUR HANDS

"If everyone helps to hold up the sky, then one person does not become tired."

- ***Askhari Johnson Hodari***

ESM YOUTH TALK: CLIMATE CHANGE AND FINANCIAL STABILITY

European Stability Mechanism

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