

17th Credit Risk Management
Conference

ESG Impact on Credit Risk:
Navigating through
challenges



Integrating C&E risks in banks' credit risk
management framework – Strategic
considerations

Michael P. Haralabidis
Chief Risk Officer
Hellenic Financial Stability Fund

Athens, November 6th 2024

Climate & Environmental (C&E) risks definitions

C&E risk types

Physical risks



Transition risks



Risk Drivers

Acute
(Extreme climate events)
(e.g. Wild-fires, heat waves, floods, storms, cyclones, hurricanes)

Chronic
(Incremental climate changes)
(e.g. Increasing temperatures, droughts, sea-level rises, water stress, biodiversity loss, deforestation, water & land pollution)

Change in Government policies, Legislation & Regulation

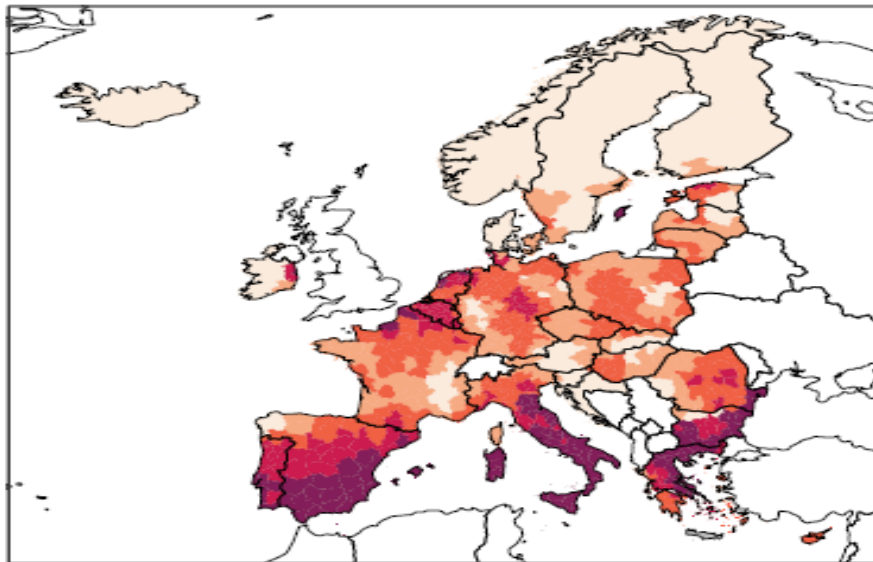
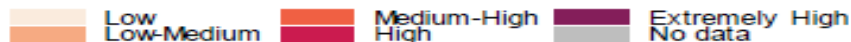
Change in investor & consumer (Market) sentiment & preferences

Change in Technology & Innovation

Why C&E risk management is crucial for Europe but esp. for Greece (1/3)

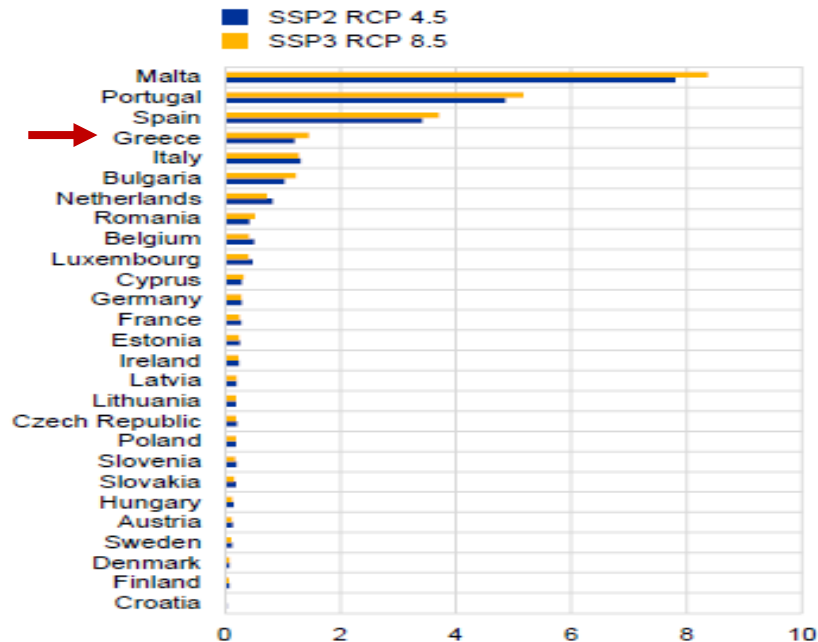
(a) Projected water stress risk in a SSP3 RCP 8.5 scenario for the year 2040

(Water stress risk score)



(b) Projected level of water stress by country and by scenario for the year 2040

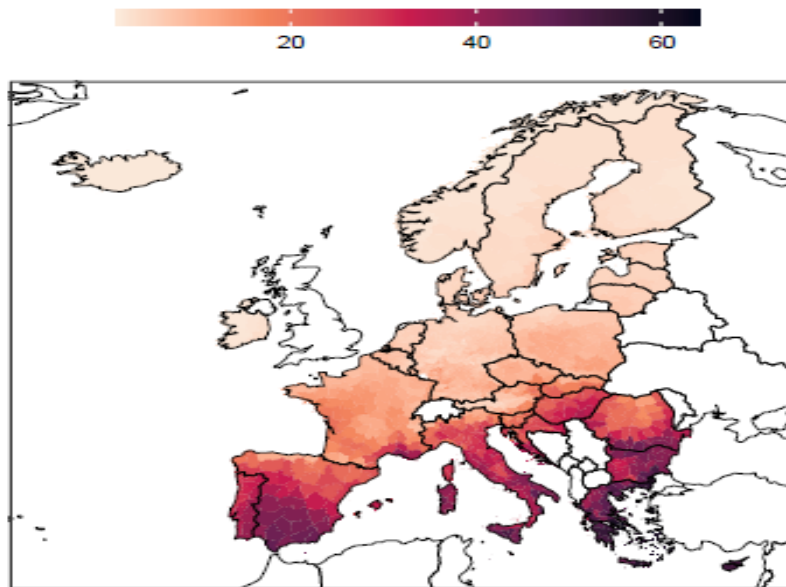
(Ratio of water demand to water supply)



Why C&E risk management is crucial for Europe but esp. for Greece (2/3)

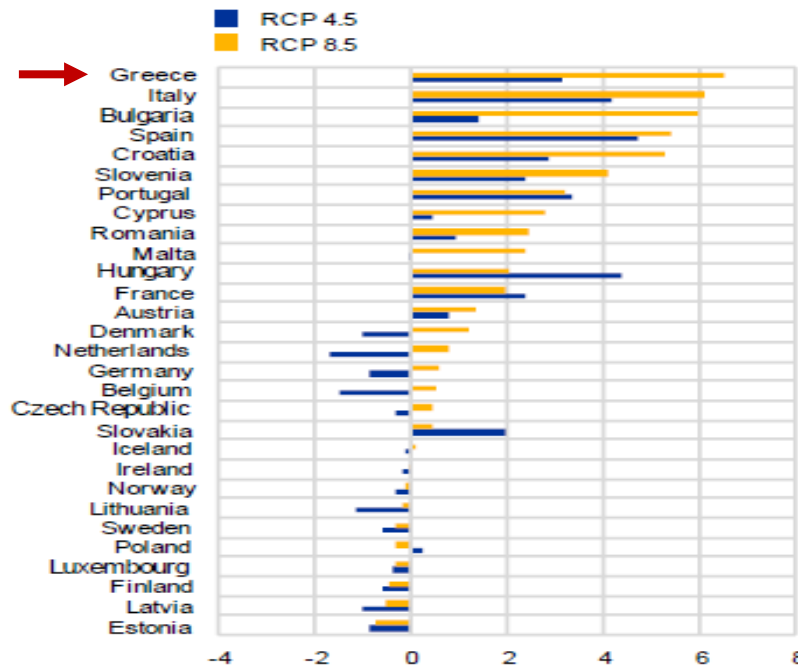
(a) Projected Fire Weather Index in RCP 8.5 scenario, for the year 2040

(Fire Weather Index)



(b) Projected change in Fire Weather Index compared to historical values, by country and by scenario, for the year 2040

(Absolute change in FWI)



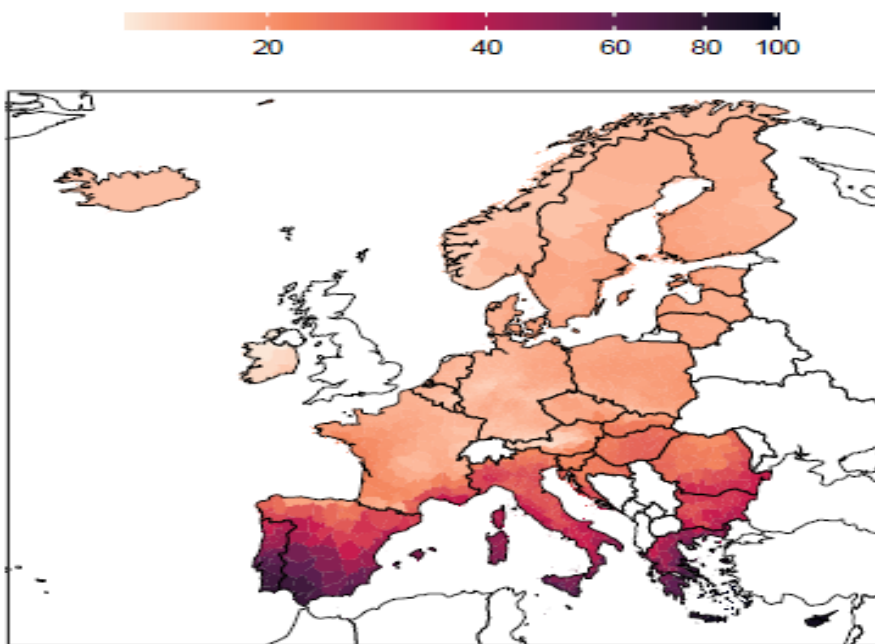
Source: ECB/ESRB Chartbook for monitoring financial stability impacts of climate, Dec. 2023.

Notes: [Representative Concentration Pathways \(RCP\)](#), [Fire Weather Index \(FWI\)](#).

Why C&E risk management is crucial for Europe but esp. for Greece (3/3)

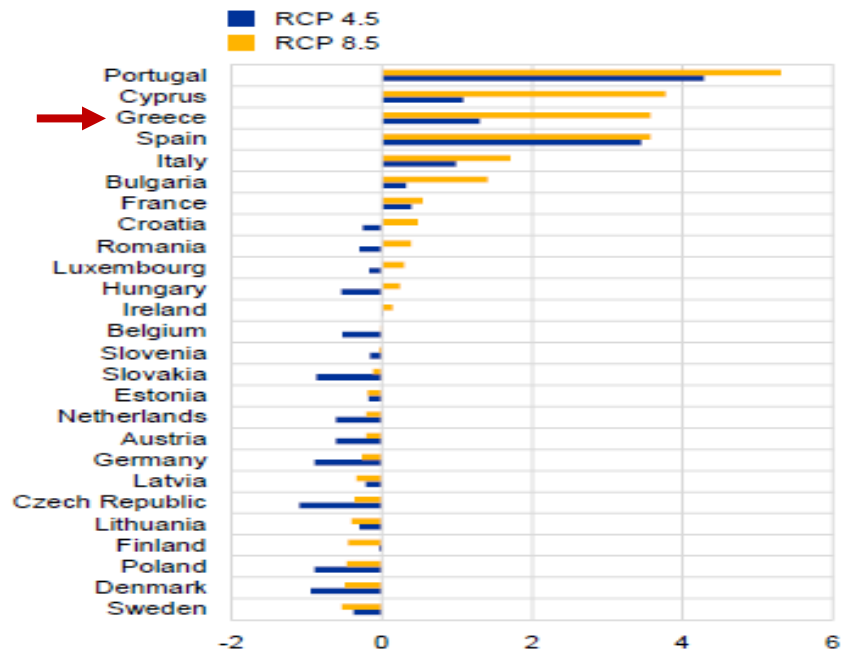
(a) Projected number of Consecutive Dry Days (CDD) in a RCP 8.5 scenario and for year 2040

(Average number of days)



(b) Average change in number of Consecutive Dry Days (CDD) compared to 2005, by country and by scenario (year 2040)

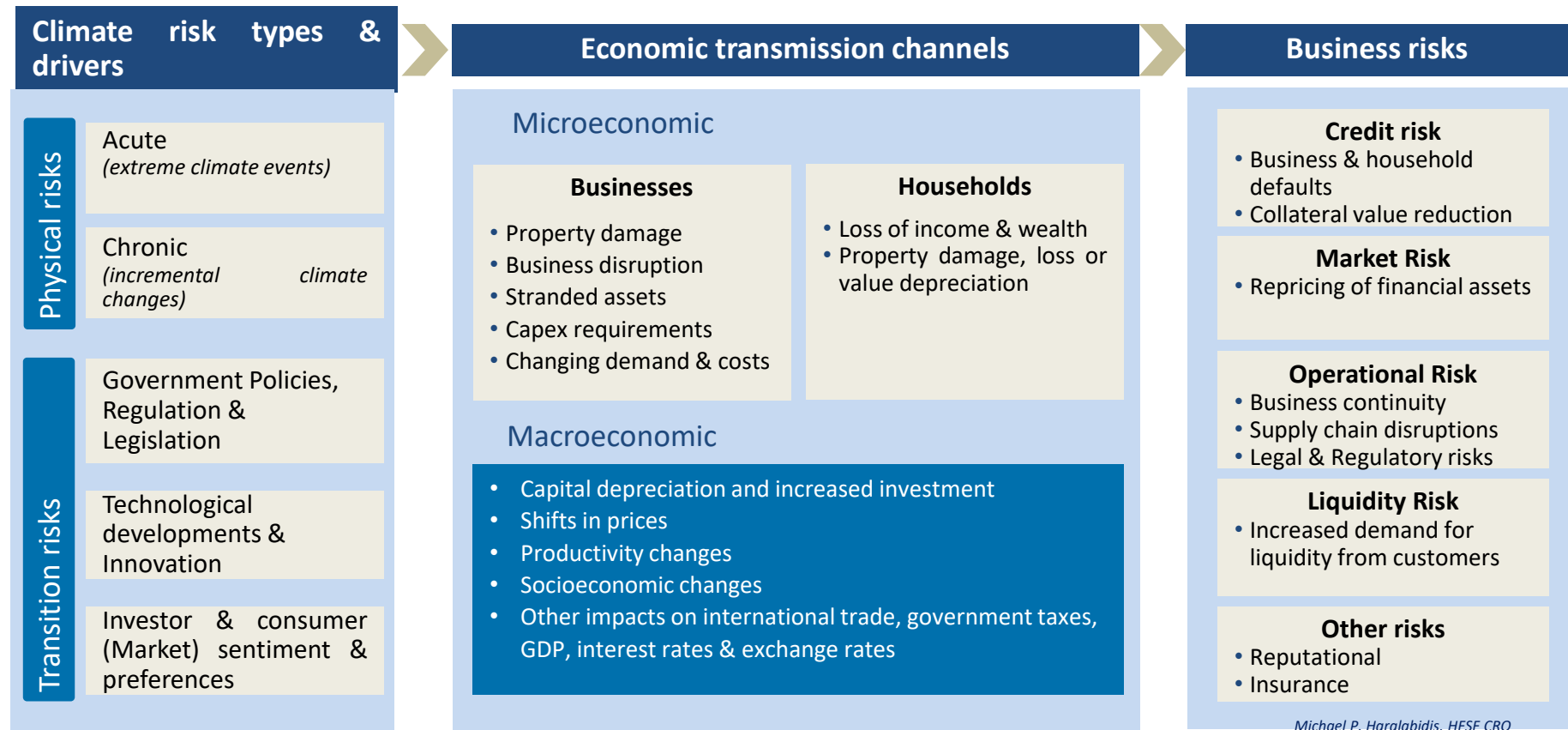
(Average change in number of days)



Source: ECB/ESRB Chartbook for monitoring financial stability impacts of climate, Dec. 2023.

Notes: [Representative Concentration Pathways \(RCP\)](#).

C&E risks types & drivers and their transmission channels for their translation to business risks



C&E risks as the drivers of borrower's credit risk



Transition risks' indicative impacts

On borrower's cash flows

- **R&D expenditures** in new and alternative technologies.
- **Costs** to adopt and deploy new practices and processes.
- **Reduced demand** for carbon-intensive products and services.
- **Increased production costs** due to changing input prices (e.g. energy, water) and output requirements (e.g. waste management, carbon emissions)
- **Fines** due to non-compliance to environmental legislation and regulation

On borrower's capital & collateral

- Potential **re-pricing** of **stranded assets** (e.g. real estate, fossil fuel)
- Changes in **real estate valuation**

Physical risks' indicative impacts

- **Reduced revenue** from decreased production capacity (e.g. supply chain disruptions, employee absenteeism) lower sales (e.g. demand shocks, transport problems), rents and wages (e.g. for employees who lost their job due to firm's pause of operations)
- Increased **operating costs** (e.g. due to the need to source inputs from alternative more expensive suppliers) and increased **capital costs** (e.g. due to damage to facilities).
- **Direct damages** on assets (e.g. to houses & factories due to extreme weather events)
- **Write-offs** of assets (e.g. houses & factories) situated in high-risk locations

Example of integration of climate transition risk into credit risk methodology (1/2)

Step 1: Defining Climate Transition Scenarios



Each transition scenario helps to assess the economic impacts on sectors & borrowers

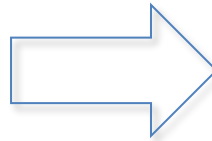
Climate transition pathways towards decarbonized economy

Risk Drivers

Change Government Policy, Legislation & Regulation

Change in Technology & Innovation

Change in investor & consumer (Market) sentiment & preferences

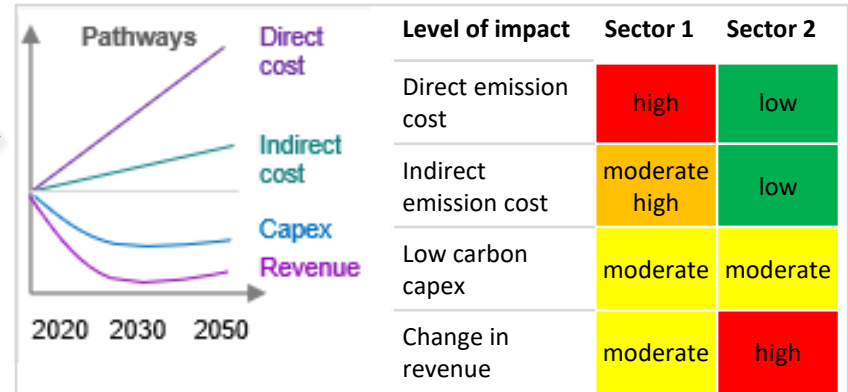


Step 2: Estimating economic & financial impacts

Risk factor pathways by sector/borrower



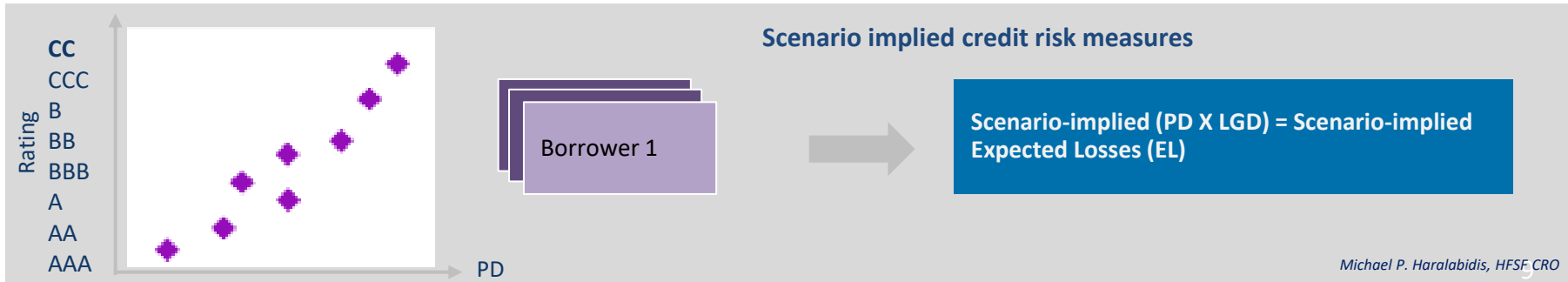
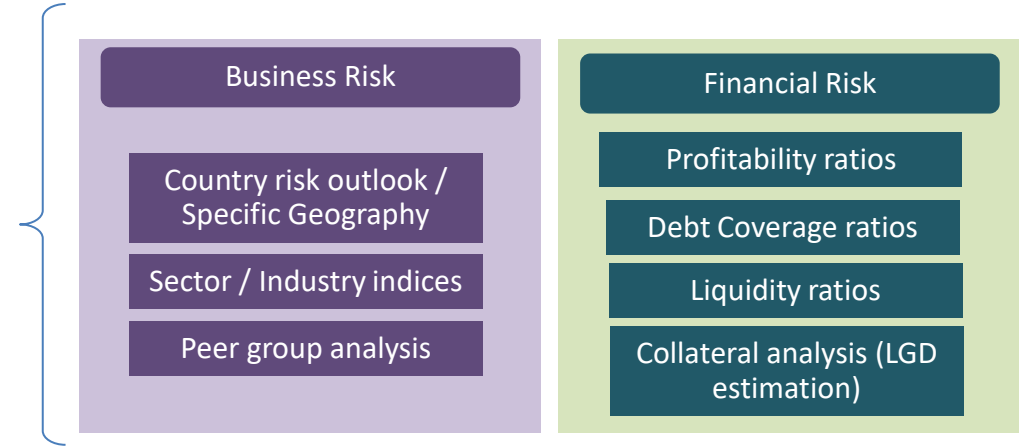
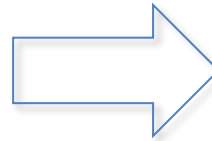
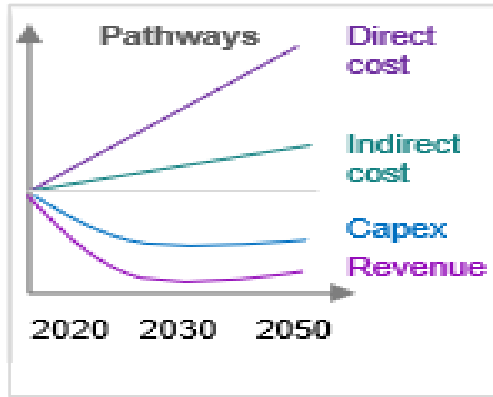
Interpreting climate transition scenario impact in corporate financial terms



Example of integration of climate transition risk into credit risk methodology

Transition scenarios adjustments to Internal Credit Rating Systems (2/2)

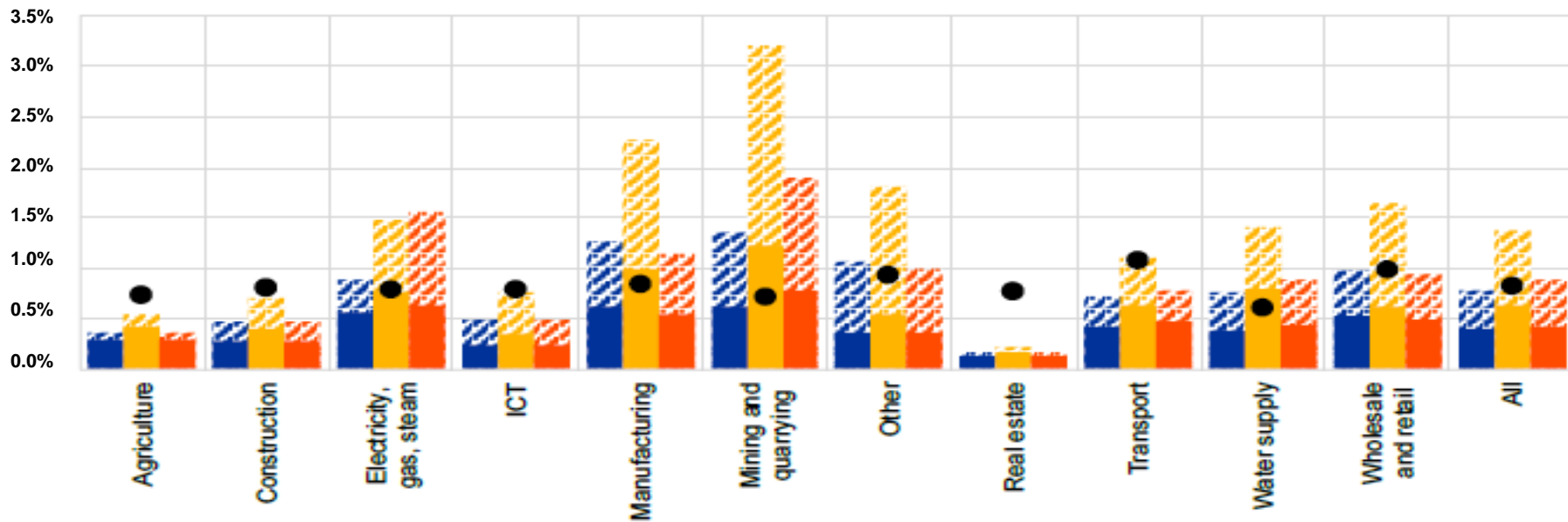
Step 3: Translating financial impacts into credit risk measures



The climate transition impact would be heterogenous across sectors by 2030. The strongest rise in credit risk (PDs) would be in energy-intensive sectors



Absolute difference in pps in sector-level PDs between 2022 and 2030



Strategic considerations in addressing C&E risks challenges (1/2)

1. Data availability

- Banks are missing historical data to assess C&E risks impact on credit risk losses
- Access to firms and household – level data is limited (eg EPCs)
- New data sources or methodological adjustments are needed

2. Developing internal Capabilities

- In-house expertise (hirings, upskilling, re-skilling) needs to be developed fast
- Climate Risk Assessment needs to be fully integrated in the Credit Risk process

3. Regulatory/Supervisory pressure and uncertainty

- Existing and upcoming regulation creates heavy burden and investor scrutiny (e.g. GAR)
- C&E risks will be fully integrated in European Banks' SREP as of Dec. 2024

4. Commercial & Credit Strategy

- Embedding C&E risk considerations in risk appetite & capital allocation
- Decide on companies and sectors to serve based on emissions thresholds & other climate risk metrics
- Establish a dedicated strategy - decide on what role to play and identify client segments and industry sectors with most value.

System-wide initiatives to address data gaps & align with EU Taxonomy

The [ENGAGE4ESG project](#), funded by the European Union, is working towards reaching the EU's energy efficiency and climate objectives, supporting the alignment of Green Mortgages & Energy Efficient Home Renovation Loans with the EU Taxonomy.

Follow best practices and market leaders in sustainable Lending

- i. [The Green Loan Principles](#)
- ii. [Net-Zero Banking Alliance](#)
- iii. [The Equator Principles](#)
- iv. [The Poseidon Principles](#)
- v. [The Sustainable Steel Principles](#)



Together to the next level



www.icapcrif.com