

# *Just in Time*

## Climate Change Risks

### *Overview, Supervisory Expectations and Implications for Financial Institutions*

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Jun 2021

# Executive Summary



- In the **2015 Paris Agreement** national governments agreed to strengthen the global response to **climate change** by introducing policies to improve the transition to low-carbon and more circular economies on a global scale and to **limit the global temperature increase below 2° C** (target 1.5°C)
- Following this path, the European Union launched the **European Green Deal** to make its economy sustainable and become the first climate-neutral continent by 2050
- In this context, the **financial sector** is expected to play a key role in the so-called **sustainable finance**, mainly driven by:
  - Market's expectations and sentiments
  - Regulatory and supervisory requirements
- **Supervisory expectations** that banks need to address starting from 2021 can be identified at **Governance, Strategy, Risk Management** and **Disclosure** levels



- Given both market and regulatory expectations, the **main purpose** of this document is to provide an **overview** on the **implications and challenges** that can derive from the integration of the **climate and environmental risks** into the already existing bank's processes, with particular attention on the impacts in the **risk management frameworks**
- Leveraging on experience and advanced skills, **Iason** can provide support to its Clients by developing **new tools** and **strategies** to handle with both **data and methodology challenges**, together with end-to-end support in the **governance** of the projects



# At a Glance



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# 01

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## Overview

ESG and Sustainable Finance

Climate Change Risks

Regulatory and Supervisory Roadmap



# Overview

- **Sustainable finance** is a comprehensive approach that brings together different strategies to improve the ESG performance of the financial system
- Given the main purpose of this document, the focus will be on the **Environmental strategies** and in particular on **risks** that financial institutions should consider in relation to the **climate change** phenomena
- This section will provide an overview on:
  - Definitions of ESG factors
  - Identification of the climate change risk drivers
  - Regulatory and supervisory roadmaps on climate-related and environmental risks



# Overview 1/4

## ESG and Sustainable Finance

- **Environmental, Social and Governance (ESG)** refers to a set of criteria that play a role in the **decision-making process** of an investment and/or a company
- **Sustainable finance** is a **comprehensive approach** that brings together different strategies to improve the **ESG performance** of the **financial system**



**Environmental factors**  
consider how an investment or a company's operation contributes to environmental issues (e.g., **climate change**)



**Social factors**  
examine the impacts of an investment or a company's operation on the society



**Governance**  
relates to transparency and compliance of an investment or a company's operation with respect to law

# Overview 2/4

## Climate Change Risks

- Within the *Environmental* factors it is possible to identify two main **drivers** of **climate change related risks**



### Physical Risks

It arises from the **changes in weather and climate that affect the economy**

- **Acute physical risks** refer to those that are driven by extreme weather events
- **Chronic physical risks** refer to longer-term progressive shifts in climate patterns



### Transition Risks

It arises from the **transition to a low-carbon and more sustainable economy**

- Change in public sector **policies**
- Investments in **technology** and innovation
- Change in **investors** and **customers sentiment**



# Overview 3/4

## Regulatory and Supervisory Roadmap 1/2

- Regulatory and supervisory authorities are moving fast in developing guidelines, recommendations and technical standards in order to **encourage financial institutions** to begin **developing tools** and **models** for the proper handling of climate risks

### ECB

#### Guide on Climate-related and Environmental Risks<sup>1</sup>

- In **13 points** the guide explains how the ECB expects banks to prudently manage and transparently disclose climate change risks under current prudential rules

#### 2021:

- Banks to perform **self-assessment** on ECB expectations as part of the supervisory dialogue with JSTs

#### 2022:

- ECB to **fully review** banks' practices
- Dedicated **supervisory stress-test** on climate-related risks



Focus in the next section

### EBA

#### Action Plan on Sustainable Finance

- The plan is aimed at addressing high-level expectations in terms of disclosure and risk management for large listed banks subject to CRR2

#### June 2021:

- Final report on incorporation of ESG into risk management and supervision (**Pillar II**)
- Final drafts on implementing technical standards on Pillar III and regulatory technical standards on consumer and investor disclosure (**Pillar III**)

#### 2022-2025:

- Classification and prudential treatment of assets from a sustainability perspective (**Pillar I**)

<sup>1</sup> Final version published on November 2020

For sake of simplicity, in this document we will refer to climate risks meaning climate-related and environmental risks (both physical and transition risks)

# Overview 4/4

## Regulatory and Supervisory Roadmap 2/2

- The **European Green Deal** sets out the target of making Europe the first climate-neutral continent by 2050
- The EU **Commission action plan on financing sustainable growth** is expecting the financial sector to play a key role in that

### EU Taxonomy EU Regulation 852/2020

- **Define sustainable activities** from an environmental point of view according to certain **technical criteria**
- **Standardize** the very involved ESG playground as concerns the **classification needs**
- Regulation active starting from the official publication date (**22<sup>nd</sup> June 2020**)
- **Technical criteria** will enter in force from January **2022** or January **2023**

### EU SFDR EU Regulation 2088/2019

- Improve transparency on sustainable investments to limit / avoid *greenwashing*
- Applied at both **entity** and **product** level
- Allow to qualify the ESG products
- Active starting from **10<sup>th</sup> March 2021**
- Disclosure to investors from **January 2022**

### EU NFRD EU Directive 95/2014

- Large Public Entities should report policies they implement in relation to:
  - environmental protection
  - social responsibility and treatment of employees
  - respect for human rights
  - anti-corruption and bribery
  - diversity on company boards
  - Under **revision** to **extend reporting requirements** to **non-listed companies**

A low-carbon transition would require **significant amounts of new financing**, that is why the European Commission launched last year a comprehensive programme named the **Just Transition Mechanism** (2021-2027) within the **European Green Deal**

# 02

## Supervisory Expectations

Implications for Financial Institutions

Business Strategy

Governance and Risk Appetite Framework

Risk Management

Disclosure



# Supervisory Expectations

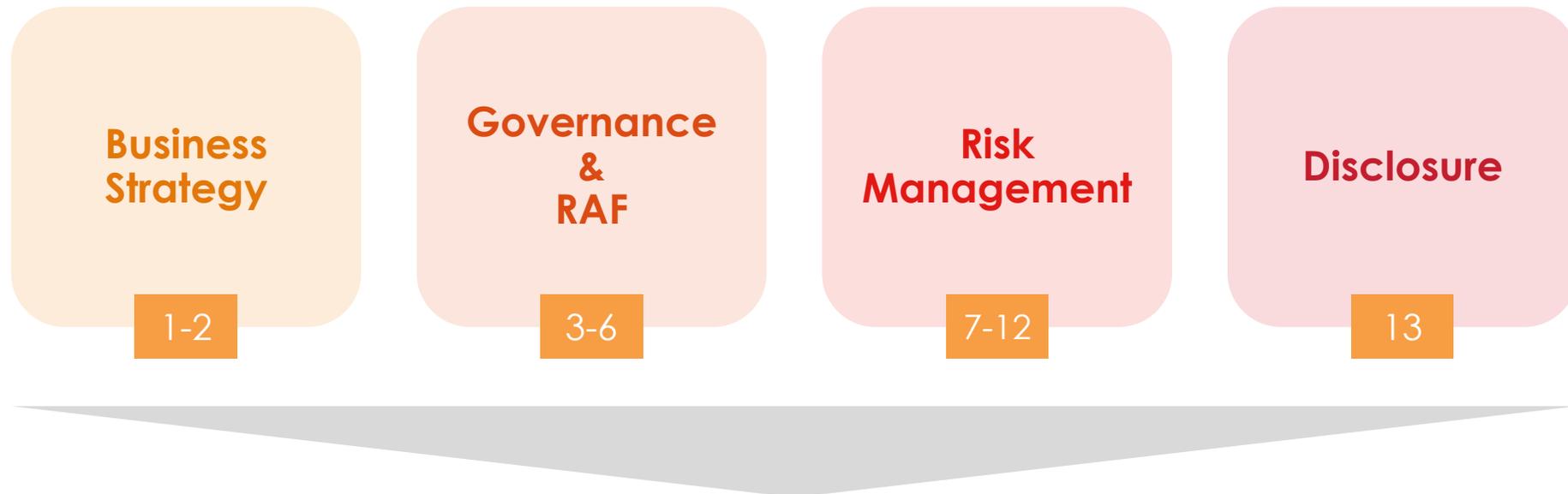
- In November 2020, following a public consultation, the **ECB** published the final version of the **Guide on Climate-related and Environmental Risks**
- In **13 points** the guide explains how the ECB expects banks to **prudently manage** and **transparently disclose** climate change risks under current prudential rules
- After the publication, the ECB will follow up with banks, in particular:
  - In 2021 banks are asked to conduct a **self-assessment** considering the **supervisory expectations** outlined in the Guide and to define action plans
  - These supervisory expectations will be benchmarked by ECB and will be subject of supervisory discussions with banks throughout 2021
  - In 2022 the ECB will conduct a **full supervisory review** of banks' practices and take concrete follow-up actions where needed
  - In 2022 the ECB will conduct its **supervisory stress test on climate risks**



# Supervisory Expectations 1/5

## Implications for Financial Institutions

- Following the **13 ECB supervisory expectations**, impacts of **climate-related risk drivers** can be highlighted and grouped in **four key areas** of interventions

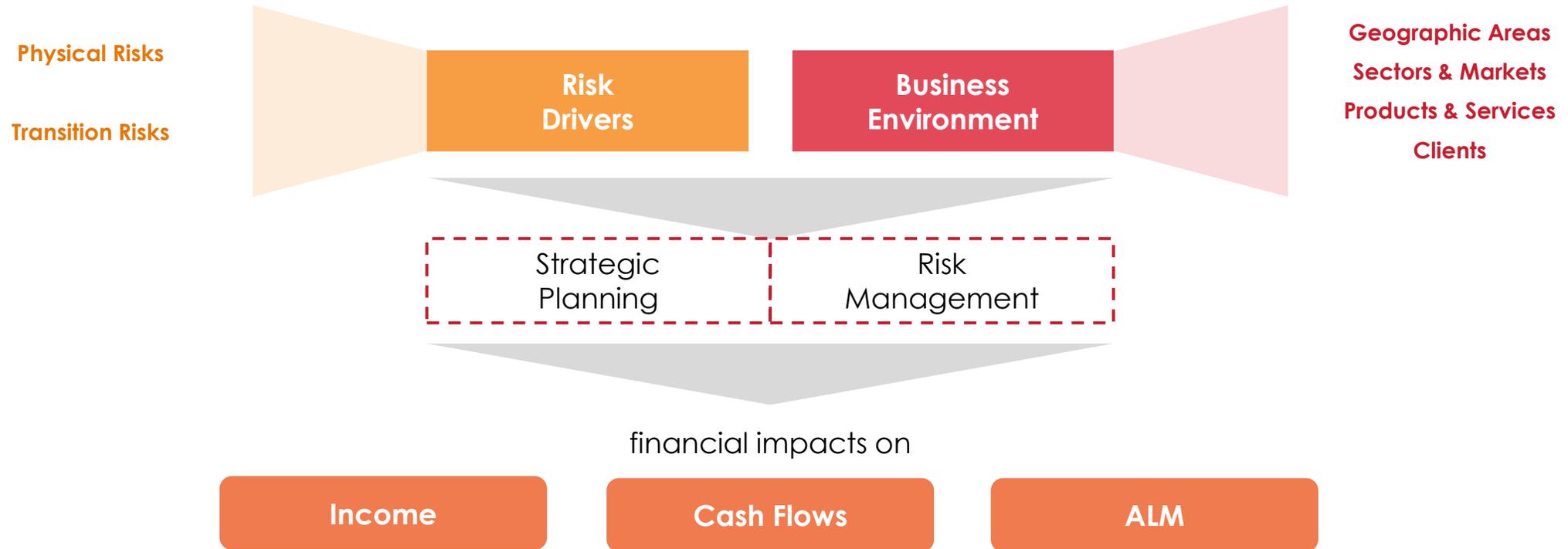


 For **significant institutions** under the SSM, the **ECB expectations** on **climate-related risks** are part of the **2021 supervisory priorities**. Following a **proportionality principle**, the NCAs will apply consistently these supervisory standards also to **less significant institutions** across Europe.

# Supervisory Expectations 2/5

## Business Strategy

- Using scenario analysis, banks are expected to understand the impacts of climate risks on their **business environment** on the short, medium and long term and integrate the relevant impacts in their **business strategy**
- In order to make the strategy measurable, banks are expected to develop and monitor **KPIs** applicable at both **business line** and **portfolio levels**



# Supervisory Expectations 3/5

## Governance and Risk Appetite Framework

- Financial institutions are expected to establish a **holistic approach** to identify, monitor and report climate risks at both individual and consolidated levels

### Governance

The **management body** is expected to:

- allocate **roles** and **responsibilities** in accordance with the **three lines of defense** model
- embeds climate-related risks in the overall **business strategy** and **risk management framework**
- oversee the institution's **exposures to climate risks** and response towards them

### Risk Appetite Framework

Within the **RAF** is expected to:

- update the **risk inventory** to properly feed the Risk Appetite Statement (RAS)
- ensure the compliance of internal risk taxonomy with **EU taxonomy**
- develop **KRIs** and set **limits** for effectively managing climate risks in line with **regular monitoring** and **escalation processes**

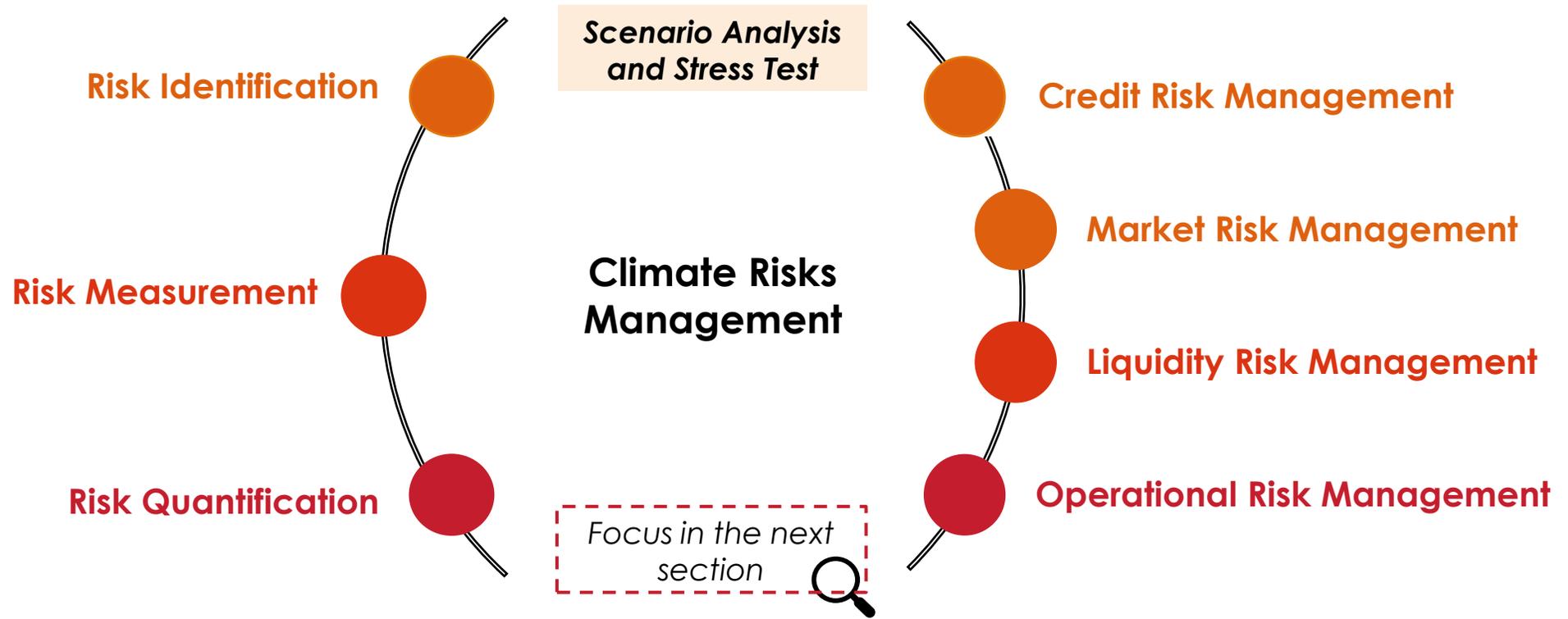


Financial institutions are expected to **report aggregated risk data** that properly reflect the **exposures to climate risk** in order to enable the top management to make **informed decisions**

# Supervisory Expectations 4/5

## Risk Management

- ECB is expecting that banks **incorporate climate risks** as drivers of existing risk categories in a **holistic way** and will perform the **supervisory climate stress-test exercise** in **2022**
- Banks are expected to manage, monitor and mitigate climate risks over a sufficiently long-term horizon
- Banks are expected to properly identify and quantify climate risks in their **ICAAP** and **ILAAP**



# Supervisory Expectations 5/5

## Disclosure

- For **regular reporting** purposes, institutions are expected to be compliant with *TCFD recommendations on disclosure*<sup>1</sup> and with the integration provided by the *European Commission's Guidelines*<sup>2</sup> and to transparently publish the KPIs and KRIs considered in strategy planning and risk management

<u>Governance</u>	<u>Strategy</u>	<u>Risk Management</u>	<u>Metrics and Targets</u>
Disclose institution's <b>governance</b> around climate-related risks and opportunities	Disclose actual and potential <b>impacts</b> on the <b>business areas, strategic</b> and <b>financial planning</b>	Disclose how the institution <b>identifies, assesses</b> and <b>manage</b> climate-related <b>risks</b>	Disclose <b>metrics, KPIs</b> and <b>KRIs</b> used to assess and manage relevant climate-related risks

During 2020 ECB conducted an **assessment of the ESG disclosure state of art** in the reference year 2019 including **107 significant institutions** and **18 less significant institutions**

- Only 3%** on the sample disclosed **all** the above information
  - 58%** disclosed **less than half** of the above information
    - 16%** disclosed **none** of the above information



<sup>1</sup> [Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2017)

<sup>2</sup> [Guidelines on reporting climate-related information](#) and [EU Regulation 2088/2019](#) (2019)

# 03

## Implications & Challenges on Risk Management

Implications for Financial Institutions

Business Strategy

Governance and Risk Appetite Framework

Risk Management

Disclosure



# Implications & Challenges on Risk Management

- As part of ICAAP and ILAAP, financial institutions in Europe are expected to **integrate climate risks** into **existing risk management framework**
- This section is focused on the **implications** of such integration in the three main processes of **Risk Identification**, **Risk Measurement** and **Risk Quantification**
- Regarding the risk quantification, particular attention should be paid to the definition of **methodologies for scenario analyses** and **stress tests** that might assess the vulnerability of exposures to climate change drivers, especially in the credit risks processes
- **Challenges** can be identified both at **data and model governance levels**, and shall be addressed immediately, especially in the light of the supervisory expectations and the 2022 climate stress test exercise



# Implications & Challenges on Risk Management 1/10

## Risk Management: a Holistic Approach

- The inclusion of climate risks into **risk management frameworks** implies that banks need to take decisions in relation to

### 1 | Risk Identification

- Definition of **climate risks drivers**
- Identification of material climate risks as **drivers** of **existing financial risks** via **transmission channels**

### 2 | Risk Measurement

- **Mapping** of risk exposures: **data** analysis, identification of **metrics** and **indicators**, definition of **methodologies** for risk exposure measurement
- **Classification** of assets based on their risk exposures (e.g., using **heatmaps**) and consistency with EU taxonomy

### 3 | Risk Quantification

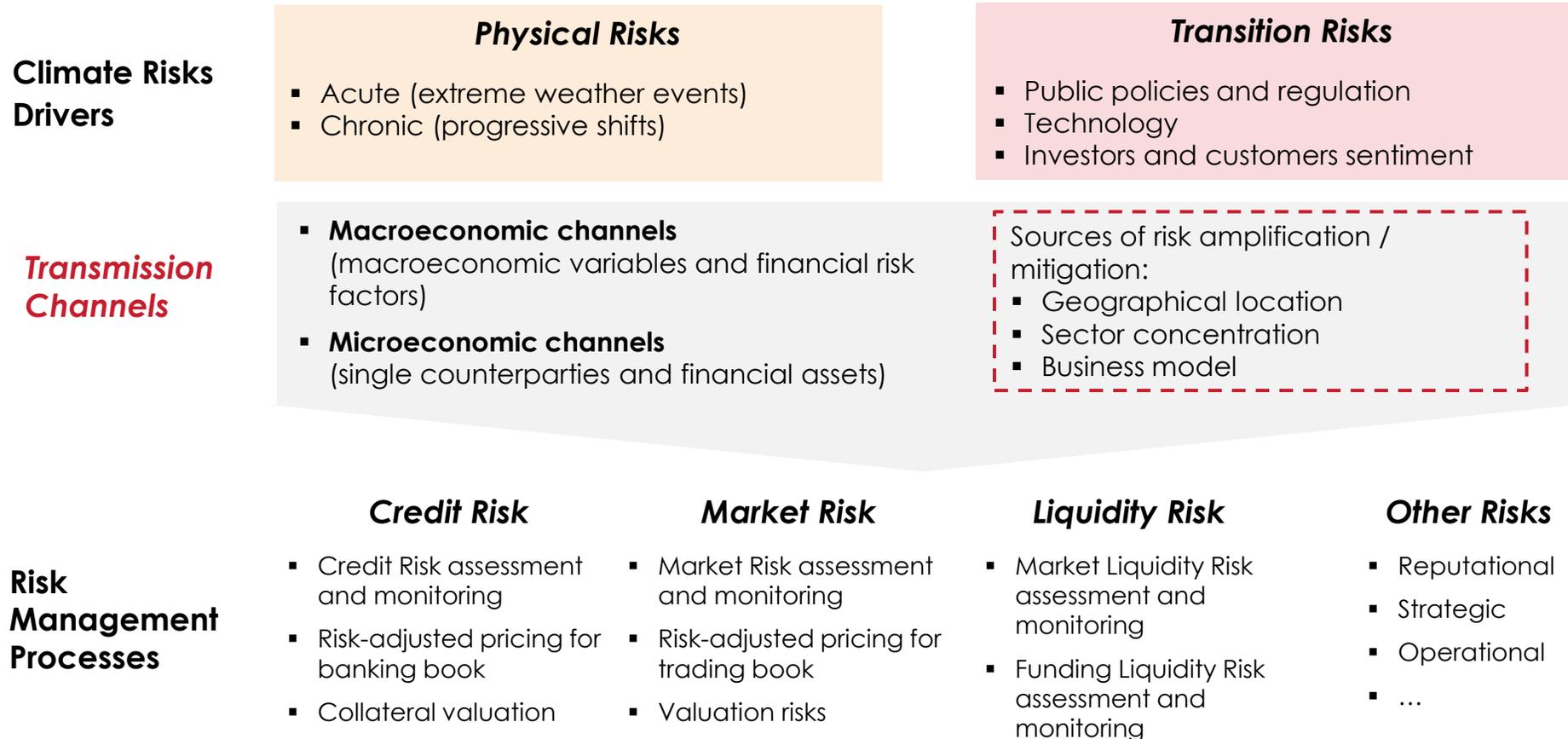
- **Scenario analysis** and **stress-test methodologies**
  - Pillar 2 review processes
  - Forward-looking approaches
  - Risk metrics calculation



# Implications & Challenges on Risk Management 2/10

## Risk Identification: Risk Drivers and Transmission Channels

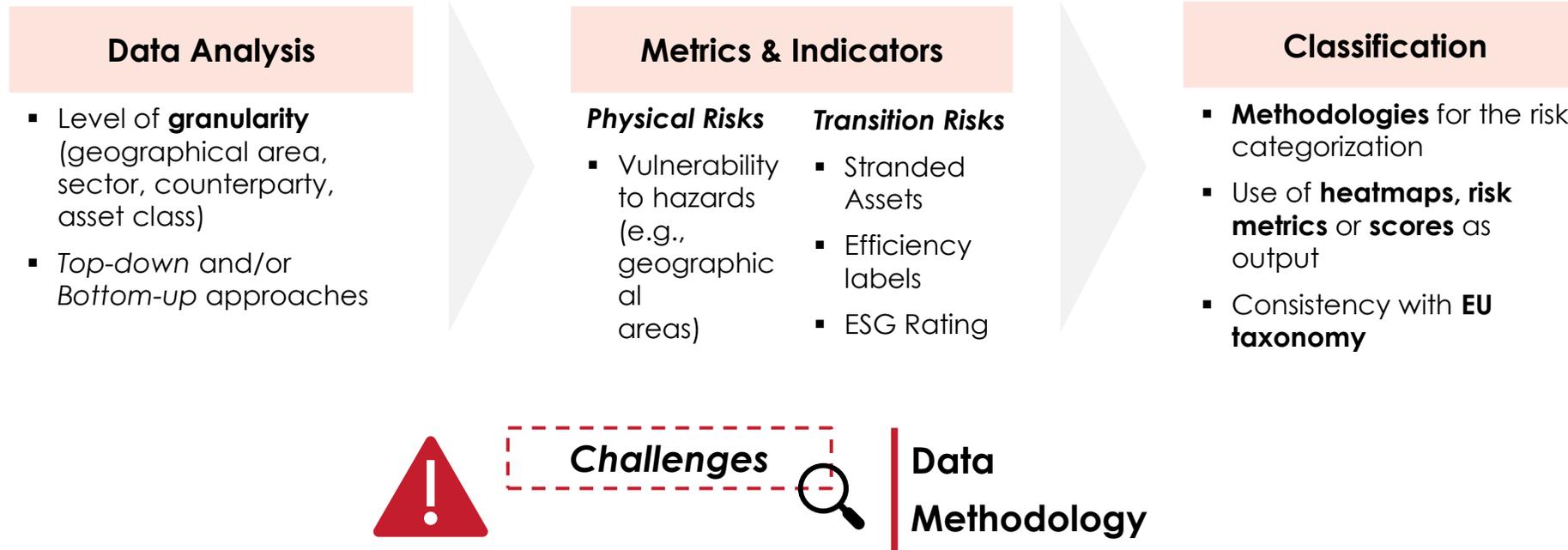
- As part of ICAAP and ILAAP, banks are expected to perform a risk identification process to identify **material risks** and include them within the key risk management processes



# Implications & Challenges on Risk Management 3/10

## Risk Measurement (1/4): Mapping and Risk Classification

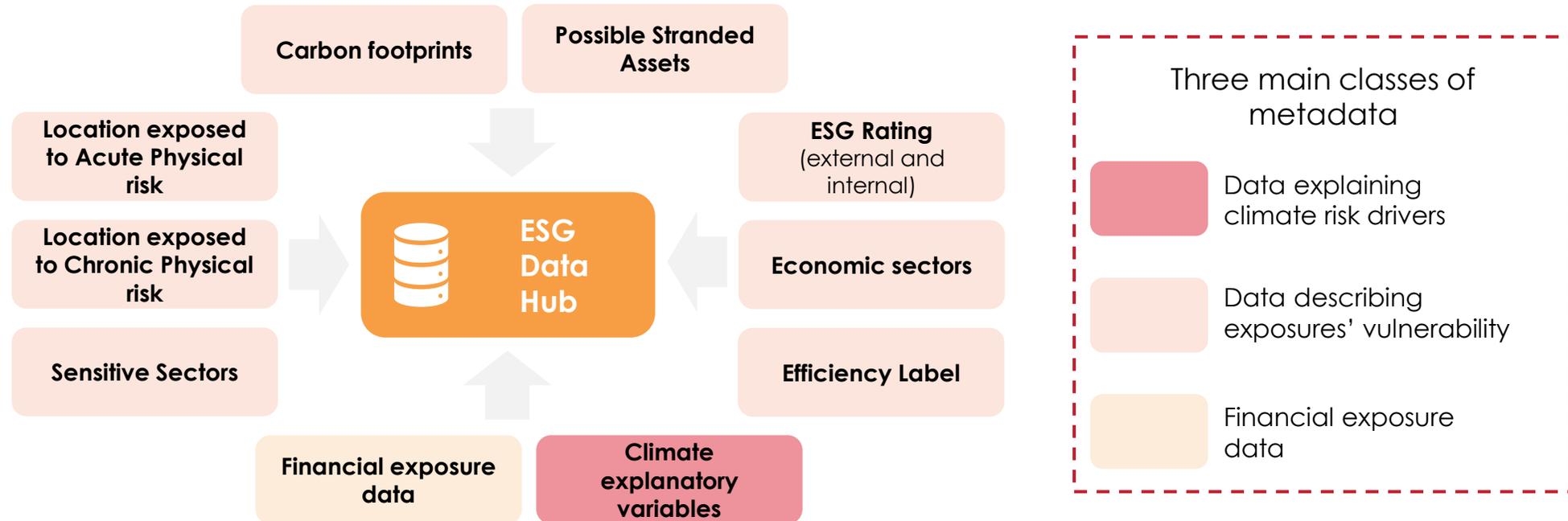
- The first step of the process is related to **data analysis** and poses significant challenges in terms of **data needs**
- The second step of the mapping process is related to the identification of **metrics** and **indicators** in order to assess and monitor the vulnerability of exposures to climate risks and poses challenges in the choice of proper **methodology**
- Applying proper methodology to the mapping allows the **classification of the exposures** depending on their **vulnerability**



# Implications & Challenges on Risk Management 4/10

## Risk Measurement (2/4): Data Challenge

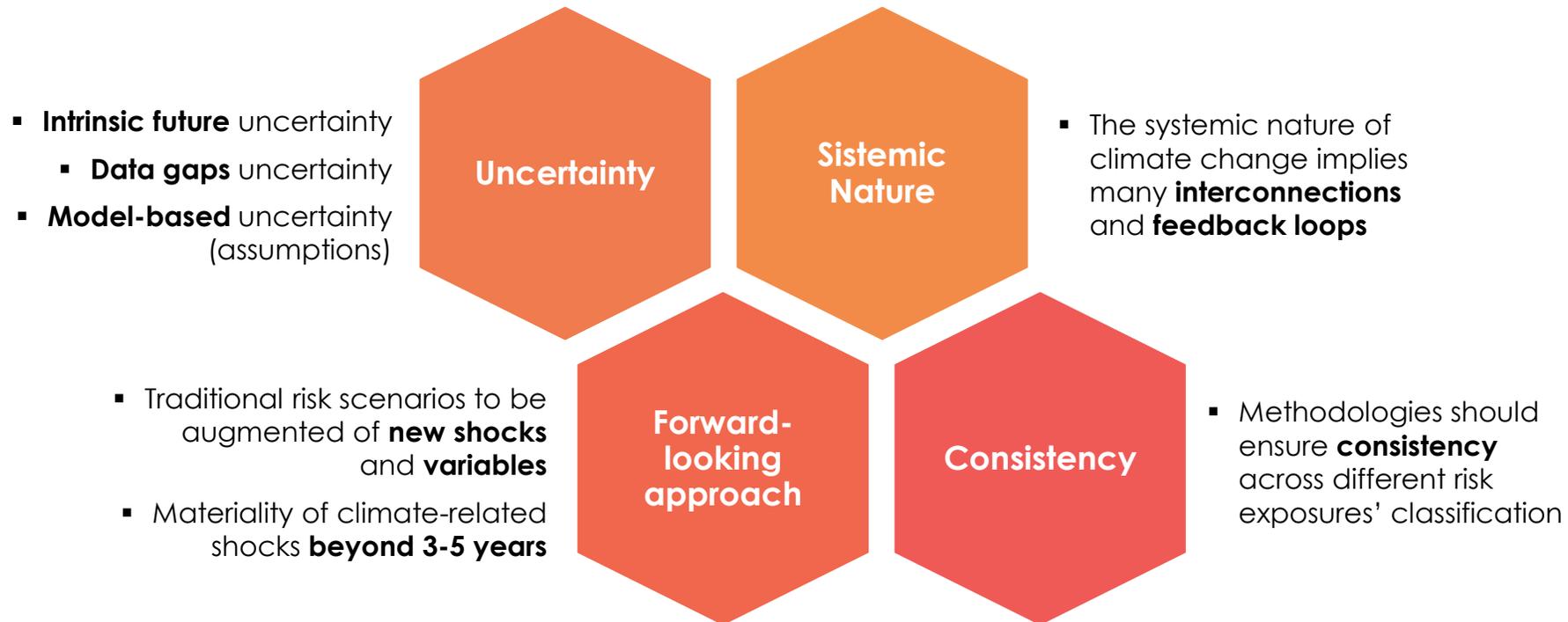
- Assessing climate risks may require **new** and **unique types of data** in addition to already existing ones, that might generate some challenges in terms of **data coverage**, **data reliability**, **data comparability** and **data sourcing**
- Due to the high level of heterogeneity in information, sources and purposes, we suggest to manage data in a **centralized and unified ESG Data HUB** that can collect, map, validate and distribute data across the whole bank



# Implications & Challenges on Risk Management 5/10

## Risk Measurement (3/4): Methodology Challenge

- Assessing the **vulnerability** of an exposure, especially to **long-term transition risk**, poses some important **methodological challenges** to banks



# Implications & Challenges on Risk Management 6/10

## Risk Measurement (4/4): Heatmap

- The following **heatmap** shows the **potential impact** of different risk measurements on the **credit risk management processes**



# Implications & Challenges on Risk Management 7/10

## Risk Quantification: Scenario Analysis and Stress Testing

- As part of the **ICAAP** institutions are expected to conduct a tailored and in-depth review of their vulnerabilities through **stress testing** and **scenario analysis** considering how the institution might be affected by climate risks and how risks might evolve under various scenarios and materialize in the short, medium and long term
- There could be significant **differences** between **climate stress testing** and **standard macroeconomic stress testing**, that can be summarized in terms of scenario design, time frame and balance sheet assumptions

Clusters	Standard macroeconomic stress testing	Climate risks stress testing
<b>Scenario Design</b>	No specific forecasts for industry sectors	Focused on the most vulnerable exposures / industry sectors
<b>Time Frame</b>	At most <b>5 years</b> scenario projections	<b>Short, medium, long term</b> (beyond 10 years)
<b>BS Assumptions</b>	Usually <b>static BS assumption</b> , providing insights into potential vulnerabilities in bank's <b>existing business model</b>	Potential need of <b>dynamic BS</b> , to assess the effects of <b>business strategy adjustments</b> on the short, medium and long term
<b>Purpose</b>	<b>Mainly regulatory context</b> (e.g., ICAAP)	

# Implications & Challenges on Risk Management 8/10

## Stress-Testing (1/3): Challenges

- Generally, **challenges** in performing climate risks scenario analysis could be summarized in five points

# 1

### Limited empirical data

- First methodologies for risk quantification need to heavily rely on **expert judgment** or **assumptions**

# 2

### Long time horizons

- Transition risks are expected to impact bank's business over a **time horizon of 5 to 10 years**

# 3

### Holistic approach for methodology

- Methodology shall be **systematic**, **repeatable**, and **consistent** in order to ensure comparability of results and disclosure

# 4

### Heterogeneity across economic sectors

- Methodologies shall be **flexible** enough to both adapt across sectors and highlight differences within each sector

# 5

### Governance

- Conducting quality scenario analysis requires **major coordination** across the bank's organization

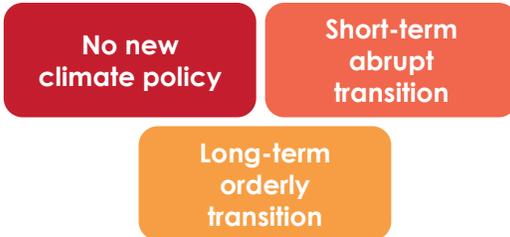
# Implications & Challenges on Risk Management 9/10

## Stress-Testing (2/3): Implications

- Macro-steps in performing climate risk stress testing are summarized below
- The peculiarities related to this new exercise implies some **choices** to be performed at each step



- Following a **forward-looking approach**, choices to be performed in terms of **climate outcome** and **type of transition**



- After scenarios simulations, **risk drivers** should be associated to industry sector (e.g., by NACE or ATECO) using **weights**; following a **modular approach**, this association could be handled also at single-name level (see next slide)
- **Satellite models** used to infer impact on risk parameters generally rely on the **historical statistical relationship** between a given risk driver and the parameters
- The **most straightforward approach** would be to introduce **variables linked** to climate risks scenarios as **direct regressors** in the model development; to be guaranteed:
  - **Robustness of historical series** for target variables
  - **Robust methodology for identification** of significant climatic variables
  - **Proper trade-off** between number of models and granularity consistent with risk classification

# Implications & Challenges on Risk Management 10/10

## Stress-Testing (3/3): a Modular Approach for Risk Drivers Association

- Below an example of a possible **modular approach** based on the **data availability** for different **types of counterparty**
- Once the metadata for climate risks become easily available and can be collected and processed in the **unified data hub**, the inclusion of **specific single-name's forecast** and **information** could be foreseen also for counterparties of smaller size

	Data Availability			
	Large corporate, banks	Corporate, SME	Private individuals	Sovereign
Single-name ESG Rating	✓	✗	✗	
Energy efficiency label for Real Estate assets	✓	✗	✗	
Single-name assumption in scenario construction	✓	✗	✗	
Impact through macro-economic variable	✓	✓	✓	✓
Impact through single-name forecast	✓	✗	✗	
Impact through sector analysis	✗	✓	✓	
Impact through geographic area	✓	✓	✓	

# 04

## How Iason Can Support

Strategy, Methodology, Governance

Final Remarks



# How Iason Can Support

- This section will focus on the support that Iason can provide to its Clients in order to properly develop and implement a **holistic approach to climate risk management**
- **Iason support** is focused on the following areas:
  - Strategy
  - Methodology
  - Governance



# How Iason Can Support 1/2 Strategy, Methodology, Governance

- Iason can provide its Client with **highly specialized consultancy** in order to properly address climate risks and challenges



# How Iason Can Support 2/2

## Final Remarks

- The correct assessment and **management of climate and environmental risks** is one of the most important **challenge** of the financial sector for the coming years
- **Financial institutions** are called upon to respond to the challenge:
  - By adapting their **business strategies** and credit assessment processes
  - By improving **data governance** and **methodology** for proper risk management
  - By augmenting **transparency** and **disclosure** in regulatory reporting
- **Iason** can support financial institutions by leveraging the following strengths:
  - **Strategic redesign of processes and procedures**, making maximum use of existing skills and capabilities and allowing cost optimization using strong synergies
  - **Advanced modelling skills** for credit, market and liquidity risks, combined with a deep understanding of the impacts of climate and environmental risks
  - **Specific skills** in development and implementation projects for **data management** and **models** for **scenario analysis and stress-testing**
  - In-depth knowledge of the **regulatory framework**

**Based on the specific needs and priorities of its Clients, Iason can start supporting in impact analyses, evaluations, and implementation for projects on specific ESG-related topics**

# Company Profile

**Iason** is an international firm that consults Financial Institutions on Risk Management. Iason integrates deep industry knowledge with specialised expertise in Market, Liquidity, Funding, Credit and Counterparty Risk, in Organisational Set-Up and in Strategic Planning.

## ESG Iason Research Team



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