

## SETTIMANA DELLA SOSTENIBILITÀ

25-28 MARZO 2025







## How financial institutions evaluate C&E profiles of the companies

The integration of C&E factors into banks' strategies and their business plans

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## Climate change risk at a glance

### An evolving context

The world is at an inflection point towards a resource efficient economy – Europe as first mover yet other regions following



**European Union** 

Front-runner in enforcement mode

EU green deal, EU Taxonomy, Green funding



**United States** 

Fast-follower with new political focus

Net zero emissions by 2050 and 100% carbon-free electricity by 2035



China

Leap-frogging with rigorous execution power

Carbon neutrality target by 2060, but ability to move fast on policies promoting efficiency

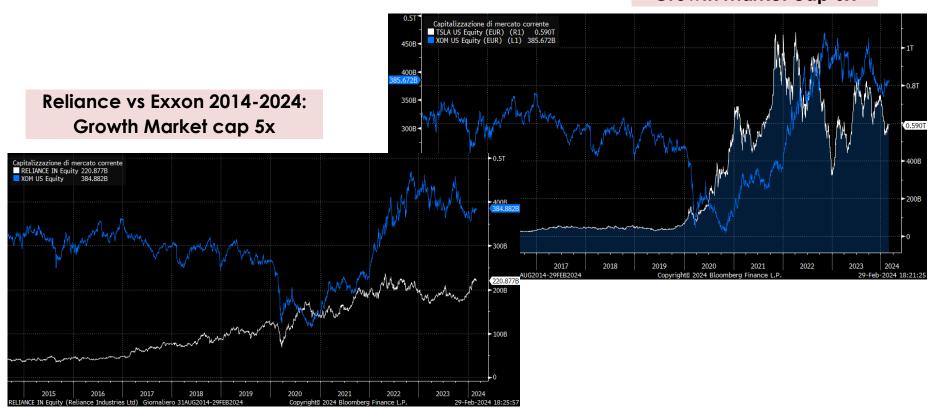




## But what is Mr. Market is telling us?

Latest trends of Tesla and O&G companies

Tesla vs Exxon 2014-2024: Growth Market cap 6x



Source: Bloomberg

## Bank risk management in a nutshell

**Balance sheet and Capital concepts** 

Assets	Liabilities		
<ul> <li>✓ Loans to:</li> <li>Retail, Mortgages, SME</li> <li>Corporates, Banks,</li> <li>PSE &amp; Sovereigns</li> <li>✓ Sovereigns bond</li> <li>✓ Others Bonds</li> <li>✓ Equities</li> <li>✓ Derivatives / Currencies</li> <li>✓ Commodities</li> <li>✓ Real Estate</li> <li>✓ Liquidity</li> </ul>	Equity / Tier 1	Capital as a <u>buffer</u> against risks => 8% RWA	
	Subordinated / Tier 2	Manusiaka	
	Senior Bonds	Many risks  Business & Strategy, Credit, Market, ALM, Liquidity, Operational & Cyber risk, Reputational and Climate risk  Probability Function  Probability Function  October 100 200 300 400	
	Banks loans		
	Deposit accounts		

## A short "history" of Climate & Environmental risks and opportunities: ISP started in 2019 its journey

ISP begins a journey of **building ESG** framework, focusing on Climate Risk (Transition and Physical Risk)

Heterogeneous feedbacks. The ECB marked the need of C&E factors inclusion in **Business Strategy**. **Materiality Assessment and** Nature Related Risks

Progressive disclosure of "market sensitive" indicators (e.g., GAR) and improvement of strategic risk management framework (BES / MA. ICAAP and ILAAP

Introduction of ESG and Physical risk drivers within corporate internal models

Action plans on ECB "Guide on climate-related and environmental risks"

Feedbacks and shortcomings on action plans and disclosure: C&E risks inclusion acceleration

Addressing ECB feedbacks and working on fine tuning of IRB (PD/LGD) models and IFRS9

2019

2021

For the first time ISP faces problems with **C&E** data collection (e.g., GHG emissions, EPC, etc.) and single name measurement of Transition/Physical Risk

**ECB Climate** Stress Test 2022

2022

**ISP** joins NZBA/ SBTi





'Commitment" and, later, disclosing decarbonization targets, initially ISP focused on **Carbon Footprints** also defining a strong connection to Business Strategy and Lending

processes

2023

CRR3 and CRD6 + NFRD evolution towards new disclosure requirements (CSRD)

Following slides will show the journey so far and next steps to be done in parallel to progressive enrichment of data availability, allowing an evolution of the ESG/Climate risk management framework

## Credit risk: Introduction to Expected Loss logics

**Credit risk:** the possibility of suffering a <u>loss</u> as a result of <u>insolvency</u> (i.e., failure to repay a debt as per contractual obligations)

Key variable of credit risk:

**▶ Expected Loss («EL»):** Estimation of the loss that is most likely to occur in a year

Analytically: **EL = PD \* LGD \* EAD** 

**PD** = Probability of Default

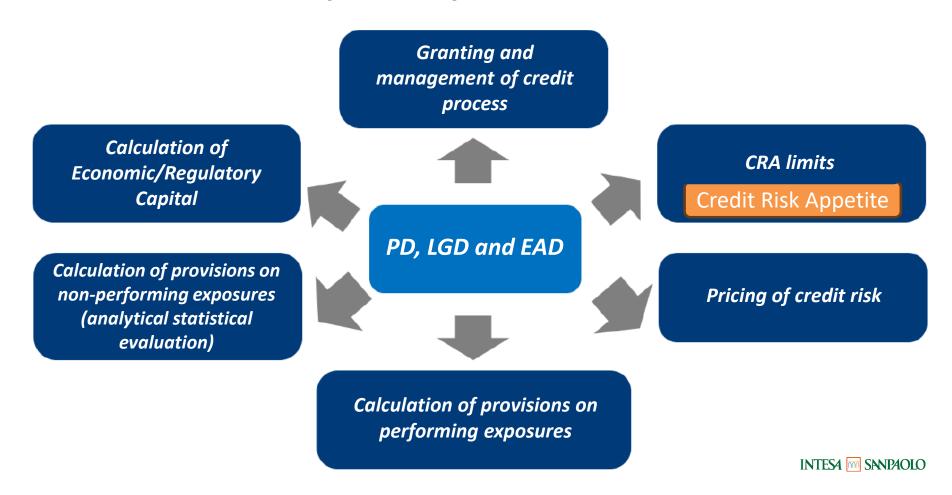
**LGD** = Loss Given Default

**EAD** = Exposure At Default

Customer

**Debt Financing** 

## Credit risk: Basic concepts of the process



## Need for a new holistic Risk Inventory for C&E risks

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#### **C&E** risk drivers

#### **Transition Risk**

Risks related to the transition to a lowercarbon economy:

- Policy and regulation: political actions which will encourage a transition to a green economy
- Technology development
- Consumer preferences: changes in demand and supply of raw materials, products and services

#### **Physical Risk**

Risks related to the physical impacts of climate change

Acute Risks Chronic Risks

Risks arising from extreme events. such as droughts, floods and storms.

Risks arising from progressive shifts, such as increasing ! temperatures

and water stress.

#### **Transmission Channels**

#### Macroeconomic

Transition and Physical risk drivers impact on an economy overall and sovereigns in general, as well as macroeconomic variables

Commodities Prices

Corporates and Households

Sovereians

Interest rates levels

Governments Bonds

#### Microeconomic

Are those channels that allow physical risk drivers to impact banks' financial risks either directly or indirectly, for example through their counterparties or financial assets.

Drop in labor productivity

Increasing costs

Reduction in revenues

Worsening collateral's value

#### **Potential Impacts**

#### **Credit Risk:**

- NFCs Unsec /Sec Exposures
- Retail Unsec /Sec Exposures
- Governments Exposures

#### Market Risk:

- Government Securities
- Corporate Securities
- Financial Securities

#### **Liquidity Risk:**

- HQLA Assets
- Cash Inflows
- Cash Outflows

#### **Operational Risk:**

- Bank Branches
- Production Sites
- Service Centers

**Technology Risk** 

**Reputation Risk** 

Policy and Legal Risk

## **Application of forward looking Transition Risk on Mortgages?** Haircut based on EPC & "Granular heat-map"

In order to comply with the expectations of the Regulator on mortgages, we considered reasonable to imagine the creation of Granular heat-map (ZIP code,

EPC, Heating systems level) that exploits the results of bottom-up processing on the bank's stock performed with a transition engine as part of ICAAP processes

#### Granular Heat-map solution

## Methodology

- Analysis dimensions: fixed geographical grid approach (ZIP Code) with breakdown by EPC and heating system
- Measure: Average % depreciation from **transition risk event** estimated on the stock
- **Scenario:** Orderly transition
- **Time horizon**: average residual maturity of the portfolio (ca. 13 years)

### How to & Results

Average haircut → impact on LTV (the same for each analysis dimensions)

#### Granular Heat-map illustrative application

#### **ITALY**

- Average zip code level Depreciation: 7,9%
- Given the high dispersion of the sample at the municipal level, it was decided to proceed with **ZIP code** level maps

Country	EPC Level	Average Depreciation (no A)
Italy	Α	-
	В	3.4%
	С	5.1%
	D	5.8%
	E	5.0%
	F	8.9%
	G	12.9%

#### Average level of depreciation against EPC A broken down, by province



#### **ZIP Code 10121 (TO)**

- Average zip code level Depreciation: 11,7%
- The depreciation was calculated considering some key features such as the level of EPC and the **heating system**

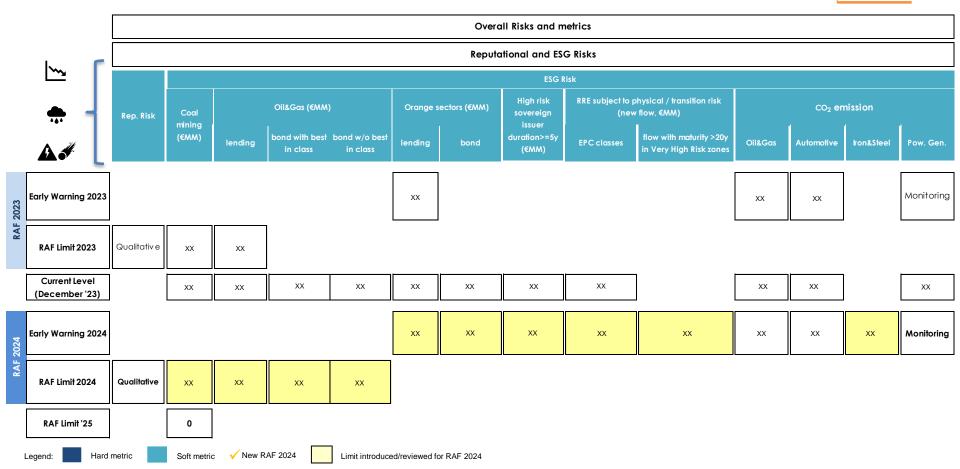
Zip Code	EPC Level	Average Depreciation (no A)
10121	Α	-
	В	0.7%
	С	4.4%
	D	6.6%
	E	4.8%
	F	9.4%
	G	9.0%

The map is not directly comparable with the distribution by energy class because the average retrofitting costs are different depending on the geographical area

- ✓ RAF Early Warning (EW) thresholds have been introduced for RRE portfolio with the aim of improving the risk portfolio's profile
- ✓ EWs have been set on energy classes F and G with the objective of maintaining the quality of residential properties taken as collateral
- ✓ Commercially, benefits on pricing for energy classes A and B have been introduced and mortgages that include purchase and renovation have been excluded from limits monitorina

## Risk Appetite Limits on C&E: ISP experience

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# Grazie per l'attenzione!



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