

ESG, Sustainability & Banking

Mitigating Climate & Environmental Risks

Clint Azzopardi Flores

Head– ESG Department
Bank of Valletta p.l.c



Collaborating to safeguard sustainability

Background: Climate Paris Agreement & UNSDGs

- **Climate Paris Agreement, 2015**

The Paris Agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change. Urgent action to halt climate change and deal with its impacts is integral to successfully achieve all Sustainable Development Goals (SDGs). The goal is to **limit global warming** to well below 2, **preferably to 1.5 degrees Celsius**, compared to pre-industrial levels.

- **UNSDGs**

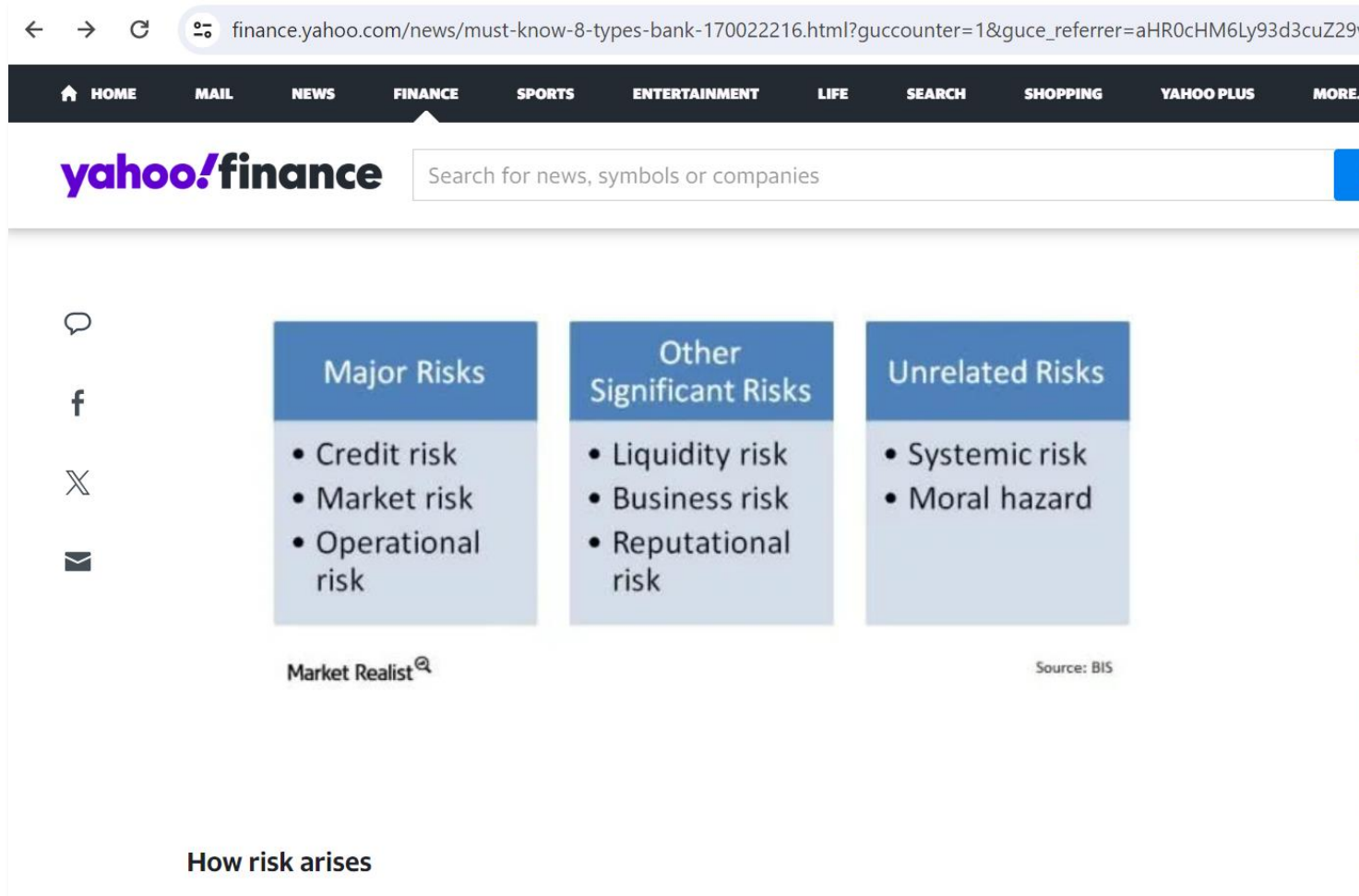
Assessing the impact of credit institutions on the 17 UNSDGs. The United Nations Environmental Programme Finance Initiative (UNEPFI) developed a tool in the form of an open source. The methodology captures the impact on for instance the environment, like waste recycling, environmental degradation etc.

- **Regulations**

EU Action Plan: Financing Sustainable Growth 2018 / European Green Deal, 2020 / Fit for 55, 2021 / Taxonomy Regulation + multiple delegated acts / SFDR/CSRD / CSDDD



Traditional Banking Risks



finance.yahoo.com/news/must-know-8-types-bank-170022216.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29v...

HOME MAIL NEWS FINANCE SPORTS ENTERTAINMENT LIFE SEARCH SHOPPING YAHOO PLUS MORE...

yahoo!finance Search for news, symbols or companies

Major Risks	Other Significant Risks	Unrelated Risks
<ul style="list-style-type: none">• Credit risk• Market risk• Operational risk	<ul style="list-style-type: none">• Liquidity risk• Business risk• Reputational risk	<ul style="list-style-type: none">• Systemic risk• Moral hazard

Market Realist[®] Source: BIS

How risk arises

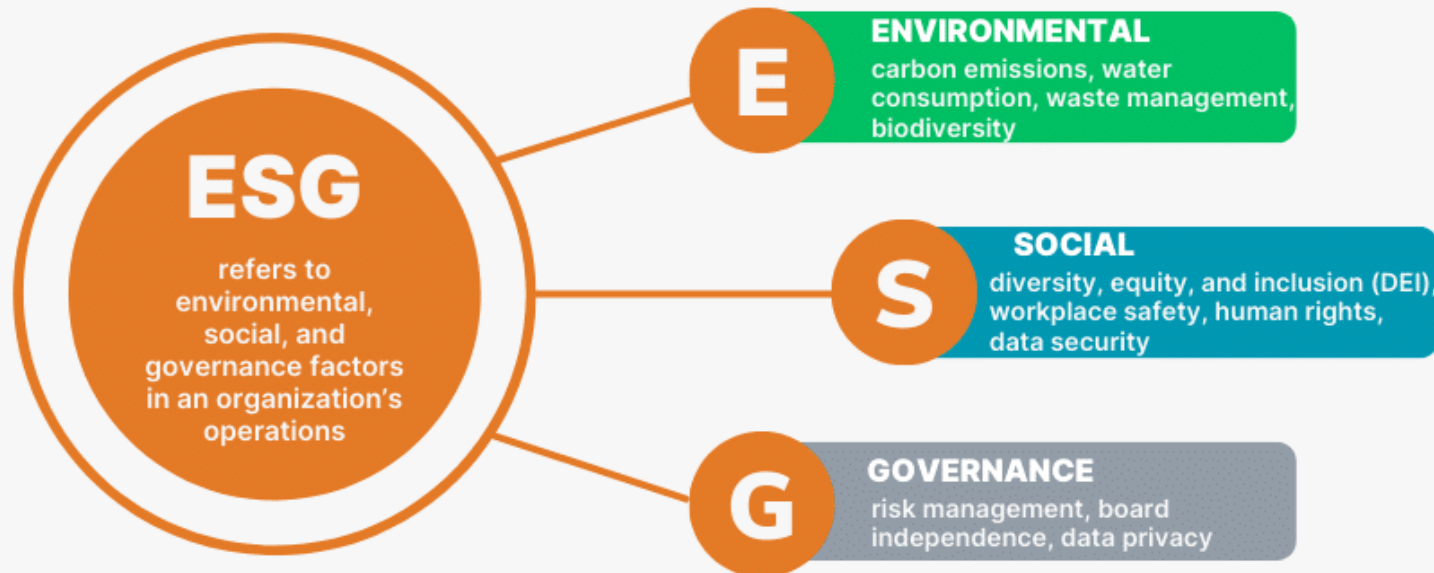
Yahoo Finance was quite current in the past.

What's different, today?

We are missing ESG Risks.



WHAT IS ESG?



Why is it a must to manage such risks?



Aligning a Bank's Portfolio to CPA or Net Zero

- **Moving towards Net-Zero commitment:**

- cutting greenhouse emissions to as close to zero as possible
- putting in place science-based targets in line with net zero



- **Measuring the carbon footprint:**

- Knowing our carbon footprint is the first step to reduce it; we are measuring our footprint with these three parameters:
- Direct emissions (Scope 1): Gases released from fuel combustion in machines, furnaces, vehicles and boilers that the business controls or owns. It also includes emissions from heating and cooling system leaks and machine breakdown.
- Indirect emissions (Scope 2): Gases released mainly when a business consumes energy bought from a third party.
- Other indirect emissions (Scope 3): Gases released from employee transport, supply chain activities and other outsourced services with assets that the business does not own or control.



Why do we need to reduce emissions?

Climate Mitigation: reducing emissions will slow the process of climate change. The reason why we need to transit to cleaner practices is to decelerate the process of climate change.

Climate Adaptation: prepare to adapt to climate change, including water stress, heat street and drought. These are all factors that pose pressure on the environment.

If we do not reduce emissions the following risks will be accelerated!



Taxonomy: Physical Risk: Acute & Chronic Physical risk hazards relevant for Malta according to literature review



■ High ■ Medium ■ Low

Step 1 – Identification of potential risk drivers based on a review of existing taxonomies

Step 2 – Assessment of relevance of the different risk drivers for Malta

		ECB ¹	EU taxonomy ²	EBA taxonomy ³	Relevance for Malta ⁷	Sources		
						ECB ⁴	Think-hazard ⁵	EEA ⁶
Acute	Heatwaves	✓	✓	✓	High	Medium	Low	High
	Cold waves	✗	✓	✓	Low	Low	Low	Low
	Droughts / Water stress	✓	✓	✓	High	High	Low	Medium
	Wildfires	✗	✓	✓	Low	Low	Low	Low
	Floods / Extreme precipitation	✓	✓	✓	High	Medium	High	High
	Severe storms	✓	✓	✓	High	Low	Low	High
	Biodiversity / land use change	✓	✗	✗	Medium	Low	Low	Medium
Chronic	Mean temperature	✗	✓	✓	High	Low	Low	High
	Wind & Soil erosion	✗	✓	✓	High	Low	Low	High
	Mean precipitation	✗	✓	✓	Low	Low	Low	Low
	Sea level rise	✗	✓	✓	Medium	Medium	Low	Low

Source: ECB, EU commission, EBA, ThinkHazard, EEA

1. Climate-related risk and financial stability, June 2021
2. Synthesis of EU Technical expert group on sustainable finance
3. EBA report on management and supervision of ES risks for credit institutions and investment firms - June 2021
4. Analysis of share of companies exposed to a certain hazard in 17 countries
5. Risk level analysis of different hazards in a certain geography based on World Bank data
6. Data base providing with information on expected impact of climate change in different EU regions
7. Worst score taken



Climate & Environmental: Risk Taxonomy

Taxonomy created by reviewing literature of best industry practice and most relevant hazards for Malta

C&E risk taxonomy

C Climate risk

E Environmental risk

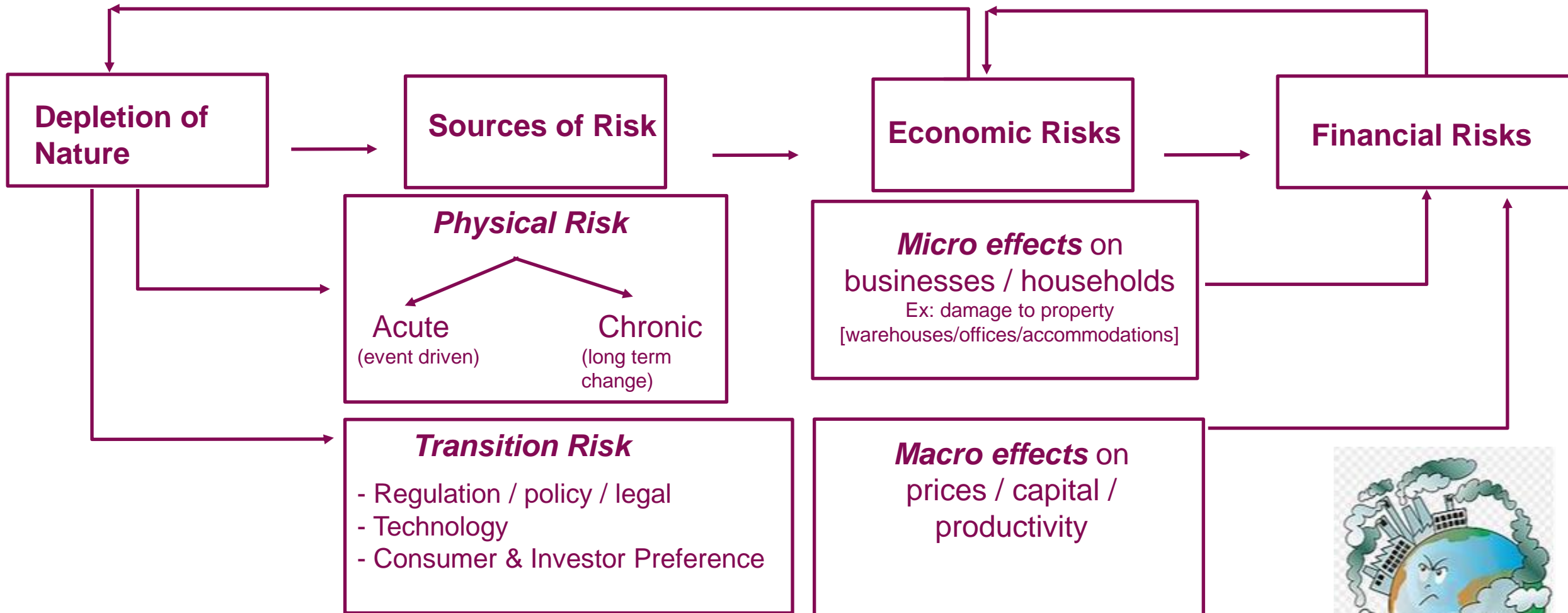
Risk type

Physical risk	Acute	C Heatwaves: period of at least 5 consecutive days with max temperature at least 5°C higher than the climatology of the same calendar day
		C Droughts: precipitation significantly below normal levels, causing hydrological imbalances affecting land resource production systems
		C Water stress: low water availability combined with a level of water demand exceeding the supply capacity of the natural system
		C Floods: unusual accumulation of water above the ground caused by high tide, heavy rain, melting snow or rapid runoff from paved areas
		C Extreme precipitation: amount of rain/snow in a location substantially exceeds what is normal
		C Severe storms: strong sustained wind. In many cases accompanied by heavy precipitation (rain, hail or snow) and lightning
Physical risk	Chronic	E Biodiversity: collectively describes millions of unique living organisms that inhabit Earth, and the interactions among them
		E Land use change: change in the use or management of land by humans, which may lead to a change in land cover
		C Mean temperature: Weighted average of near surface air temperature over land and sea surface temperature over oceans
		C Soil erosion: Detachment and movement of topsoil or soil material from the upper part of the profile, by the action of wind or running water, especially as a result of changes brought about by human activity, such as unsuitable or mismanaged agriculture
		C Sea level rise: Indicator that comprises several metrics to describe past and future sea level rises globally and in European seas
		Transition risk
Policy & regulation	C EPC regulations: Obligation for landlord to obtain and share an EPC assessment of the property before marketing it for rent. Potential obligation to meet minimum EPC standards to be allowed to rent a property E/C Corporate regulations: Changes in laws and regulations impact the profitability or operations of a certain sector / market (e.g., carbon removal, emission limit, carbon tax, air quality, etc.)	
Market sentiment	E/C Market sentiment: Changes in supply and demand for certain products and services as C&E risks/ opportunities are increasingly considered	



What are the risks that bankers are looking into?

The property sector plays an important role on the effects of climate change



A carbon-neutral Europe by 2050

European Green Deal: the first step taken towards sustainability.

Objective is to **decarbonise Europe by 2050.**

Fit for 55 package: introduced European legislation to align our society with the agreed climate targets covering all transport sectors.

By 2030: CO2 emissions should already be reduced by 55% compared to 1990.

Several measures to green the transportation sector. The new ETS covers the maritime industry:

2024: CO2 (carbon dioxide),
2026: CH4 (methane) and N2O (nitrous oxide) emissions,

2024 additional disclosure: companies above a certain size are required to report on their sustainability performance under the Corporate Sustainable Reporting Directive (CSRD).



Climate & Environmental: Physical Risks | Transmission Channels



Risk type	Transmission Channel	Economic + Financial Impacts	Relevant hazards
Credit risk	Corporate creditworthiness	Corporate, treasury	Acute: Flood, storms, wind, heatwaves, droughts and water stress, biodiversity / land use change Chronic: soil erosion, sea level rise, mean temperature increase
	Decrease in collateral value due to damages to the collateral	Retail, corporate	Acute: Flood, storms, wind Chronic: soil erosion, sea level rise
	Retail creditworthiness	Retail	Acute: Flood, storms, wind, heatwaves, droughts and water stress, biodiversity / land use change Chronic: soil erosion, sea level rise, mean temperature increase
	Government creditworthiness	Treasury	Acute: Flood, storms, wind, heatwaves, droughts and water stress, biodiversity / land use change Chronic: soil erosion, sea level rise, mean temperature increase
Operational risk	Damages to branches & headquarters	All	Acute: Flood, storms, wind, Chronic: soil erosion, sea level rise, mean temperature increase
	Staffing issues following disaster	All	Acute: Heatwaves Chronic: mean temperature
	Damages to power facilities and cloud services disruptions	All	Acute: Flood, storms, wind, Chronic: soil erosion, sea level rise, mean temperature increase
	Payment services disruption	All	Acute: Flood, storms, wind, Chronic: soil erosion, sea level rise, mean temperature increase
Strategic risk	Revenues at risk due to physical hazards	Corporates	Acute: Flood, storms, wind, heatwaves, droughts and water stress, biodiversity / land use change Chronic: soil erosion, sea level rise, mean temperature increase
Liquidity risk	HQLA devaluation	Treasury	Acute: Flood, storms, wind
	Bank run following disaster	Treasury	Acute: Flood, storms, wind



Climate & Environmental: Transition Risks | Transmission Channels

Risk type	Transmission Channel	Economic + Financial Impacts	Relevant hazards
Credit risk	Corporate creditworthiness	Corporate, Treasury	Technology, policy and regulation, market sentiment
	Retail creditworthiness	Retail	Technology, policy and regulation, market sentiment
	Government creditworthiness	Treasury	Technology, policy and regulation, market sentiment
Operational risk	Lawsuits from NGOs / Activists	All	Technology, policy and regulation, market sentiment
Reputational risk	C&E clauses in product offering	Retail	Policy and regulation, market sentiment
	Accusation of greenwashing and green hushing	Retail, Wealth Management	Market sentiment
	Exposure to sectors with high environmental impact	Retail	Market sentiment
	Failure to comply with C&E regulation	All	Policy and regulation, market sentiment
	Board members exposure to ESG adverse companies	All	Market sentiment
Strategic risk	Revenues at risk due to transition to a low carbon economy	All	Technology, policy and regulation, market sentiment
Liquidity risk	HQLA devaluation	Treasury	Technology, policy and regulation, market sentiment
	Cost of funding	Treasury	Market sentiment



Moody's real estates physical risk

2/4

Physical **assets intensive business** model ✓

Diversified portfolio of assets by real estates operators ✗

Environmental **site diligence** typically required **before construction project** ✓

Real estates operators **invest to protect their assets** ✓

Real estates properties are typically **covered by insurances** ✓

Specificities of real estates development in Malta

+1

Operators are mostly **local real estates developers** with **operations concentrated in Malta**.

They hence do not have the **same geographical diversification** other operators would benefit from on mainland Europe.

The impact of **C&E physical risks on real estates in Malta** is expected to be significant as:

- An important **share of real estates development is at the coast**, with a **high exposure to sea level rise**
- Malta is facing significant **land-use constraints**, which could **jeopardize future** real estates **developments**
- New real estates development are typically **tall buildings**, often at the **seaside** – exposing the constructions to **storms**

Increasing real estates score to three is equivalent to assuming that a **similar risk level as tourism accommodation, warehousing, land transportations or power generation**



Score adjustments: wholesale trade, tourism accommodation & warehousing



Moody's score

Adjustment for Malta's specificities

Transition risk

Wholesales trade

2/4

- Companies are **largely intermediaries**, with **new regulations** expected to be **regional** and **not impacting all producers at the same time**.
- Could be impacted by increased **cost from carbon taxes** but historically the industry has **adapted quickly to change**

+1

- Exposures to **wholesales trade is to wholesales of fuels and related products** which are likely to be highly impacted by the transition to a low carbon economy in Malta.

Physical risk

Wholesales trade

1/4

- Regional nature of **exposure to exogeneous events** (e.g., land-use restrictions, droughts, water shortages, etc.) **not affecting all producers globally at the same time**

+1

- Concentration of **operations with SME companies in Malta** increasing exposure to geo-specific physical risk event

Accommodation (tourism)

2/4

- Unfavorable and extreme weather can **dampen visitation** and thus revenue, or **damage and even destroy assets**

+1

- Beaches** in Malta expected to be **particularly affected by sea level rise** (size reduction, replenishment, etc.)
- Seasonal **scarcity** of precipitation when the **water** requirements of the tourism sectors is at the highest

Warehousing

2/4

- Extreme weather events disrupting business**, typically for shorter timeframes
- Extreme weather events can **damage / destroy assets**

+1

- Land use constraints** on new development jeopardizing ability to create new warehouses
- Heatwaves and increased temperature leading to increased **temperature control requirements**
- High **dependency on shipping in Malta**, more at risk than land transportation



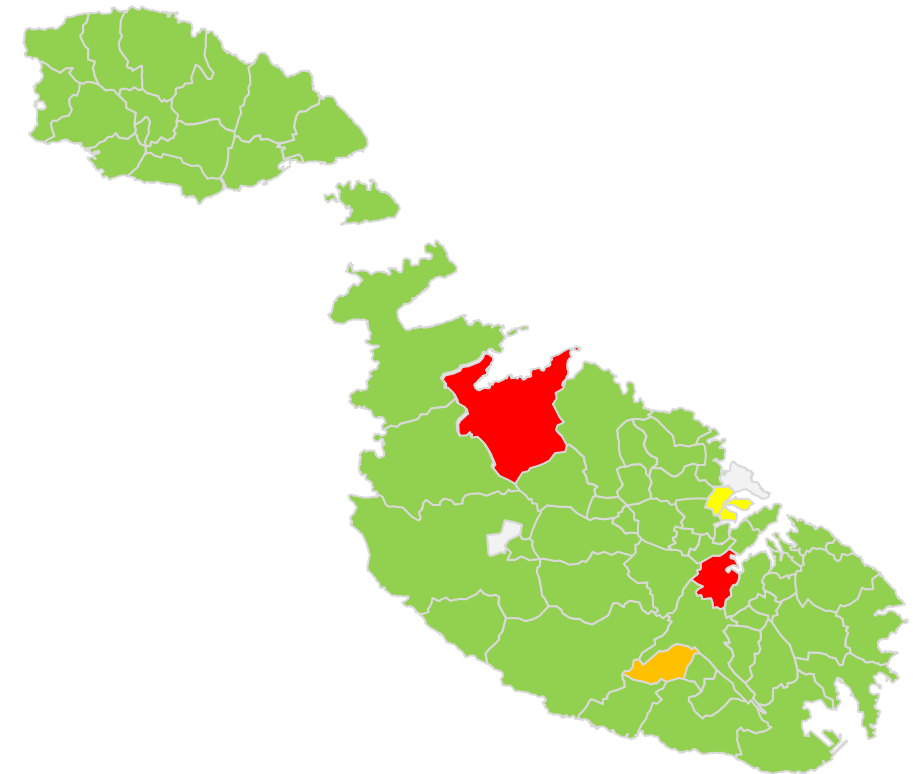
Decrease of collateral value due to flood risk damages

x% % of total ■ Low risk ■ Moderate risk ■ High risk ■ Very high risk

E.g., of the breakdown of collateral by flood risk region:
Using LAU or NUT 3 Region

	Mortgages		Corporate loans secured by RE	
Very High	X%	4	X%	4
High	X%	3	X%	3
Moderate	X%	2	X%	2
Low	X%	1	X%	1
Total				

Simplified overview of flood risk by region



Residential real estates: ~X% areas with materially exposed to flood risk
Corporate loans secured by RE: ~X% of the collaterals are in regions with **Very High exposure to flood risk** (Marsa, St Paul's Bay/Burmarrad)



Banks are being asked for the transition plans of their clients that fall within climate-sensitive sectors, including those within the accommodation sector, as well as the construction sector.

EPC: Banks are being asked to collect EPC certificates for any building that will be financed in the future.

Best practices within the industry is moving towards financing energy efficient buildings, as well as assessing that any construction site would not affect the biodiversity within the area especially if the proposed buildings are within areas or on areas of ecological importance. An efficient building contributes towards less CO2 emissions. Less CO2 emissions slows the process of climate change.

Climate Change Mitigation:

- Energy Efficient Building
- Renewable Energy Systems
- Insulation
- Double Glazing System

Climate Change Adaptation:

- Water Catchments
- Water Reservoirs
- Secondary Water Systems



Convincing Banks to issue Credit

EPC: these certificates have become the bible of banks through the regulator. It is a common metrics.

Efficient buildings promote less CO2 emissions, therefore they are taking into consideration climate change mitigation.

Financing Products at EU Level at a low and neat 0 interest rate through the EIB:

Climate Change Mitigation:

- Solar Panels
- Energy Systems
- Insulation
- Double Glazing System
- Electric Vehicles
- Recyclable products

Climate Change Adaptation:

- Water Catchments Structures
- Water Reservoirs
- Secondary Water Systems



Banks are partners towards sustainability



United on the path of sustainability

Questions?

