

FINANCIAL SERVICES ADVISORY

Climate risk quantification: Focus on ESG data

How Grant Thornton can help to quantify
and manage your climate risk



Overview



The global economic crisis that resulted as a consequence of the pandemic has stressed the relevance of prioritising sustainability pillars within financial services.

In addition, it is becoming increasingly clear that such sustainability risks are being realised and can be measured, monitored, and mitigated. This has driven the global regulatory community to seek ways in codifying ESG risks, especially those that are climate change-related, into a single risk type.

Of course, risk is inversely linked to opportunity and the emergence of such additional risks presents potential areas of growth and competitive advantage for banks in recognising such pathways more efficiently than their competitors.

Grant Thornton's ESG services are across three pillars, Strategy, Risk Management and Integration. This document outlines our focus on the development of a climate change risk quantification, stress testing, and portfolio management framework. This framework aims to identify and measure key vulnerabilities in a bank's portfolio given the negative effects of climate change, as well as to identify opportunities for growth in reference to risk based pricing reflective of climate risks.

Our services

Grant Thornton provides a full suite of Environmental, Social and Governance (ESG) advisory services for Financial Services institutions across:



Although EU Directives request some companies to disclose ESG information through their reporting, it is still a major challenge for Banks to identify, collect and use such data. Recent regulatory requirements (e.g. 2022 ECB CST, ESG Pillar III Disclosures) have increased the need for Banks to source ESG information.

This paper focuses on **ESG data requirements, availability, usage** and **challenges**, and falls under the Grant Thornton’s ESG series within our [ESG Management and Quantification framework](#).

ESG data: Key focus areas

What are the ESG regulatory data requirements to date?

What data is required by developers to fully quantify ESG impacts?

Who are the key data providers on market and what data can they provide?

What are the key challenges associated with data availability, consistency and usage?



Regulatory requirement



Developers' requirements



Data providers



Key challenges

Data requirements

Data required by regulators

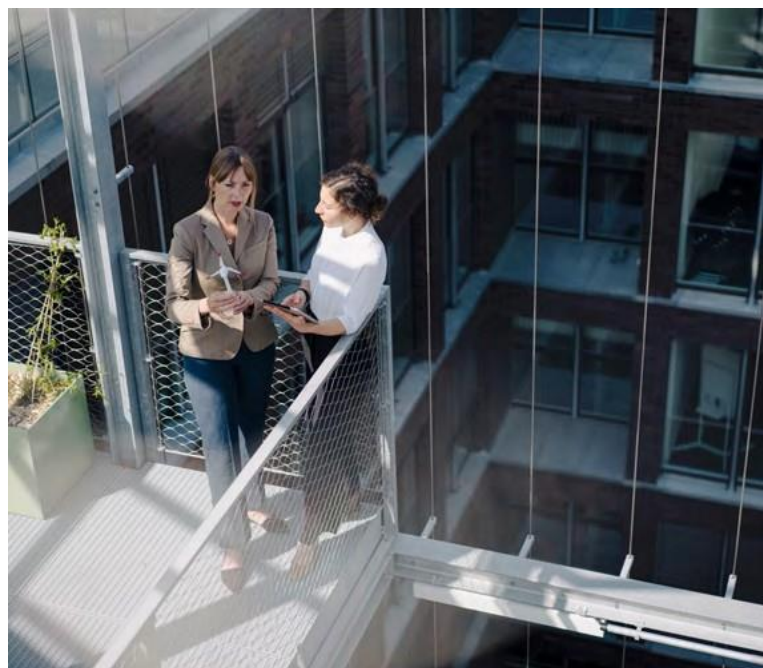
2022 ECB Climate Stress Test Exercise – (H1 2022)

- Evaluation of bank's exposure to sectors (mapping to NACE codes) and Countries of Risk;
- Financed greenhouse gas emissions (Scope 1, 2 and 3 GHG emissions);
- Interest, fee and commission income from greenhouse gas intensive industries;
- Counterparties' revenues;
- Credit Risk Parameters, LTV, Funded Collateral, Collateral NUTS3 location, EPC rating.

ESG Disclosures - Pillar III (EOY 2022 - semi-annual thereafter, transition period until 2024)

Ensures institutions are embedding sustainability considerations in their risk management, business models, and strategy and their pathway toward the Paris Agreement goals.

- EU Taxonomy aligned financial assets;
- Green-Asset Ratio (GAR) on NFRD Corporates and Retail financing (Dec 2023);
- Banking book taxonomy alignment ratio (BTAR) non-NFRD corporates (Jun 2024).



Use of proxies

Missing GHG emissions (tCO₂e) data:

- Scope 1, 2: Banks may exceptionally use proxies;
- Scope 3: Banks can use proxies.

Proxy method example:

- Economic activity-based emissions;
- Physical activity-based emissions;
- Average sector-based emissions.

Missing EPC Rating for Real Estate Collateralised Exposures:

- Use provisional rating if final is not available;
- Use estimation approach (internal methodology in line with national regulations);
- Report as 'Unknown'.

Proxy method example:

- Association of EPC with building period of property;
- Association of EPC with size of property;
- Association of EPC with energy costs of building (euro/m²)

Grant Thornton's view is that proxies can be practically operationalised:

- Using data from External data providers based on representative sample.
- Estimation of proxies for specific countries/industries/size.
- Ensure a conservative approach is taken in use of proxies.
- Proxy methodologies expected to be transparent, robust and disclosed in detail.

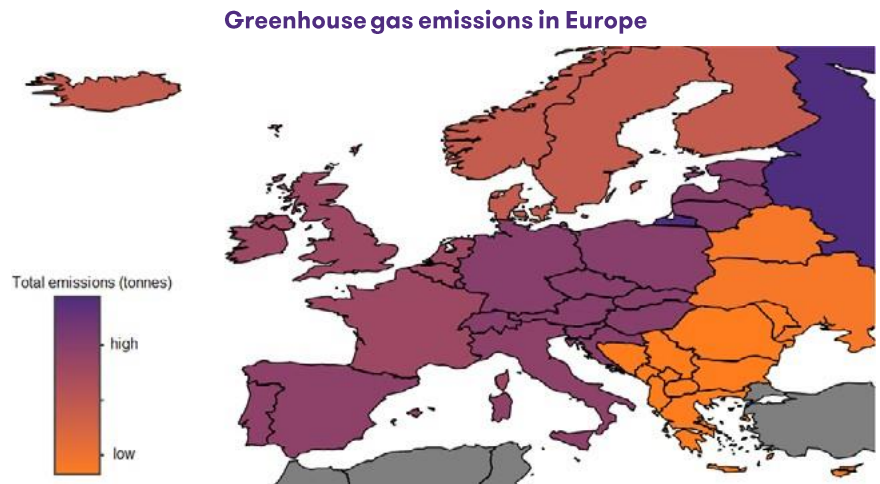
Data requirements

Data required by model developers

The map shows the intensity of Scope 1, 2 and 3 emissions in Europe.

Data can be used to identify Country/ Sectoral GHG CO₂ emissions intensity representative of particular bank portfolio.

Map demonstrates a high level example of median Scope 1, 2 and 3 CO₂ emissions per different regions, based on external data.



ESG risk drivers

ESG score and its borrower level-specific components

Macroeconomic data

Time series of macro indicators per geography, sector, RCP and SSP pathways

Bank measures

- Borrower default behaviour
- Probability of default
- Loss given default



This diagram represents an example of ESG Rating and its ESG components that can be used as input for climate risk quantification.

External data providers

ESG data sources and providers

ESG data are obtained from monitoring processes of companies including, for example, annual company reports (company websites, ESG disclosures, proxies), news reports, government reports, NGOs, social media. Every data provider has built its own process of identifying, collecting and handling the ESG data and methodologies of scoring/rating the companies that they cover. Ratings are expected to vary from one provider to another.

	Data type	External provider examples	Data use in risk management
ESG drivers	Legal Entity ESG Scores	Refinitiv EIKON	Key ESG Risk Drivers in model build
	E [e.g., Scope 1, 2, 3 GHG]	Bloomberg	Direct data join to internal book by Name or legal entity ID
	S [e.g., Working Conditions]	Sustainalytics	Construction of representative external portfolio
	G [e.g., Board Diversity]	SGP Global ESG Scores	
Sustainable development alignment	Diagram highlighting areas of both positive and negative impacts of ESG across a portfolio	UNEPFI PRB Portfolio Impact Identification Tool	<ul style="list-style-type: none"> • Comprehensive breakdown of portfolio (customer type, asset class, industry, location); • Identification of sensitivities in the bank's business model; • Assessment of sustainable development goals outlook; • Alignment with business strategy development and target-setting.
Physical risk data	Information on physical hazard risk and impacts on assets globally	Earthscan by Cervest	Low, medium and high-risk geographical classification of portfolio under range of climate evolution scenarios (can be used for changes collateral valuations/LGD)
Transitional risk data	Industry/sector information	The Sustainability Accounting Standards Board (SASB) Standards	ESG Risk Heatmap for NACE sectors (Can be used in stress test scenario design)

Key challenges with ESG data

Currently practices differ among the various data providers. As a result, evaluating the quality of ESG data is a challenge.

- Information mainly available for large corporates and listed companies at the moment.
- Reliability of Data reported by companies may not be validated.
- Transparency around methodologies, sources, weighting.
- Inconsistencies in frequency of data updates.
- Potential conflicts of interest.
- Data providers expected to keep enhancing their data coverage.

How we can help

Grant Thornton can assist in sourcing data, ensuring its representativeness and analysing ESG scores and its components at a borrower, industry and region level. Such analysis can be utilised to identify sensitivities of the portfolio to drivers in both bottom-up and top-down setting.

Our team would be delighted to discuss your challenges and opportunities in any aspect of climate risk. Our services are flexible and efficient, designed to facilitate and support your business model. Contact us today to discuss.

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