



Prometeia solution for ESG Risks Management

***Climate Risk data
and advanced analytics***

Unique blend of economic research, model development and reporting automation expertise, providing the client with a full array of ESG solutions, covering all major EMEA economies

Our ESG solutions are fully up-to-date on market best practices and take advantage from the consolidated relations of Prometeia with multiple Central Banks and regulatory bodies across EMEA

Climate Risk data, simulation engines & reporting

Prometeia's ESG solutions rely on PMP™, the open modelling environment designed to accelerate the development of internal models and advanced analytics. This solution allows to easily integrate bottom-up analysis and simulation into the Bank's ESG framework, supporting Rating Attribution, Credit Planning and Integrated Stress Testing, in line with the latest regulatory trends

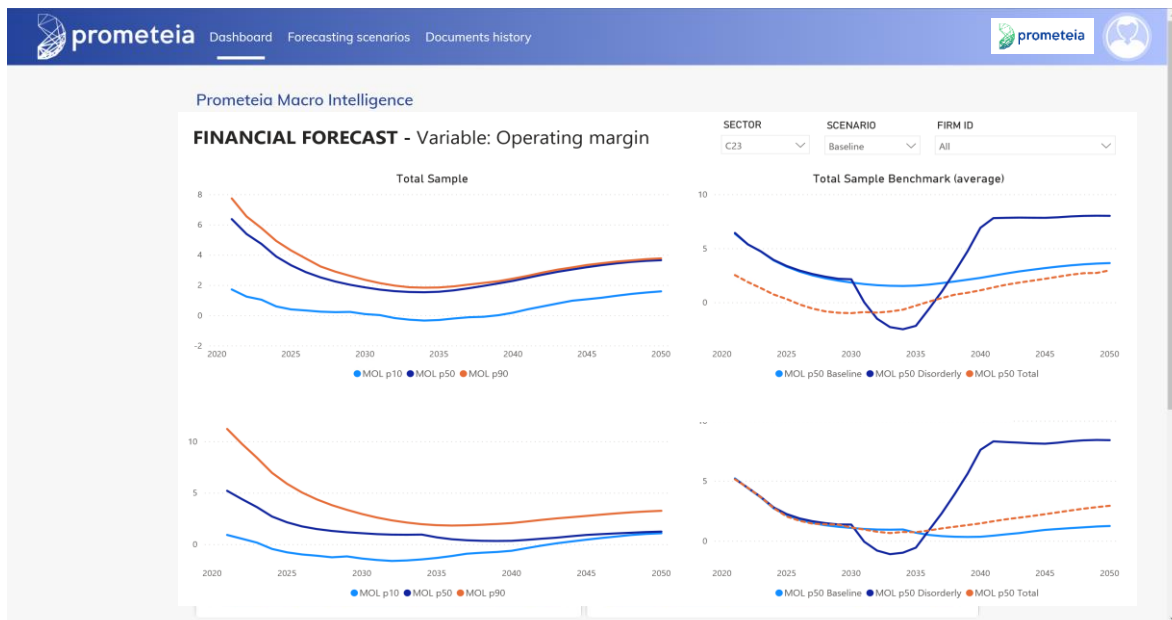
Use cases supported

- End-to-end support to the Regulatory Climate Stress Test (CST)
- Treasury strategy optimization measuring Green Risk Factor
- Credit Portfolio Alignment with Net Zero Emission roadmaps
- Climate-related lending and advisory risks and opportunities
- Insurance Risk Premium estimation for Physical Risk Coverage
- ESG Data framework and questionnaires



Scenario Generator & Transition Risk Engine

- Combines geo-sectoral outlooks and supply chain assessment (via a proprietary Geo-sectorial Model) with single name data (public or gathered with surveys), covering all major EMEA economies
- Single-name engine that allows to measure and forecast Transition Risk impacts, modeling cost increases, investments needed, financial charges etc.
- Output includes future balance-sheets, ESG Scores and climate-environment information (e.g. expected Carbon Footprint) at firm level



Asset Geo-location & Physical Risk Engine

- Through the embedded geo-location tool, it is possible to locate all the plants and offices of a single company, starting from tax codes / other IDs
- Fully integrated with the Scenario Generator, provides a long-term forecast of climatic hazards on a granular geographic level, integrating geomorphological features
- Comes with an embedded modeling framework to estimate damages from hazards to real estate assets and business operations, and their impacts, for example on PDs and LGDs

Asset geolocation

Select: Heavy Rainfall 5day

Class of Risk: Medium-Low, Low

Portfolio characteristics

Class of Risk	#Assets	#Assets % of Total	# Assets	Market Value € Mln	Surface sqm
Medium-Low	8	50.0%	8	472	68,700
Low	8	50.0%	8	1,116	128,900
TOTAL	#16			1,587	197,600

Destination of Use: Offices, Retail, Residential, Hotel

Nr Assets by risk class - Latest period

Risk Class	Risk Indicator	Nr of Assets				
		No risk	Low	Medium-Low	Medium-High	High
Geological Hydraulic risk	Volcanic Eruption risk	16				
	Seismic risk		6	5	5	
	Landslide risk		16			
	Hydrologic risk		14		1	1
Acute Events risks	Heavy Rainfall 1day			8	8	
	Heavy Rainfall 5day		8	8		
	Drought (12 months)		12	1	1	2
	Wildfires		6	10		
	Heatwaves		12	4		
	Coldwaves		16			
	Wind gust		16			

Exposure to Physical Risk

Location: Milan

Market Value: 50,372,000 € | **Reconstruction Value**: 10,794,000 €

Surface: 5,140 sqm | **Ground floor**: 1,028 sqm | **Floors**: # 5

Altitude: 115 mt | **Type of Zone**: Flat Land | **Distance to river/sea**: 3,562 mt | **Destination of Use**: Offices

GEOLOGICAL - HYDRAULIC

- Landslide: Low
- Volcanic Eruption: No Risk
- Seismic: Medium-Low
- Hydrologic: Low

POLLUTION

- PM 10: High
- PM 2.5: High

ACUTE EVENTS

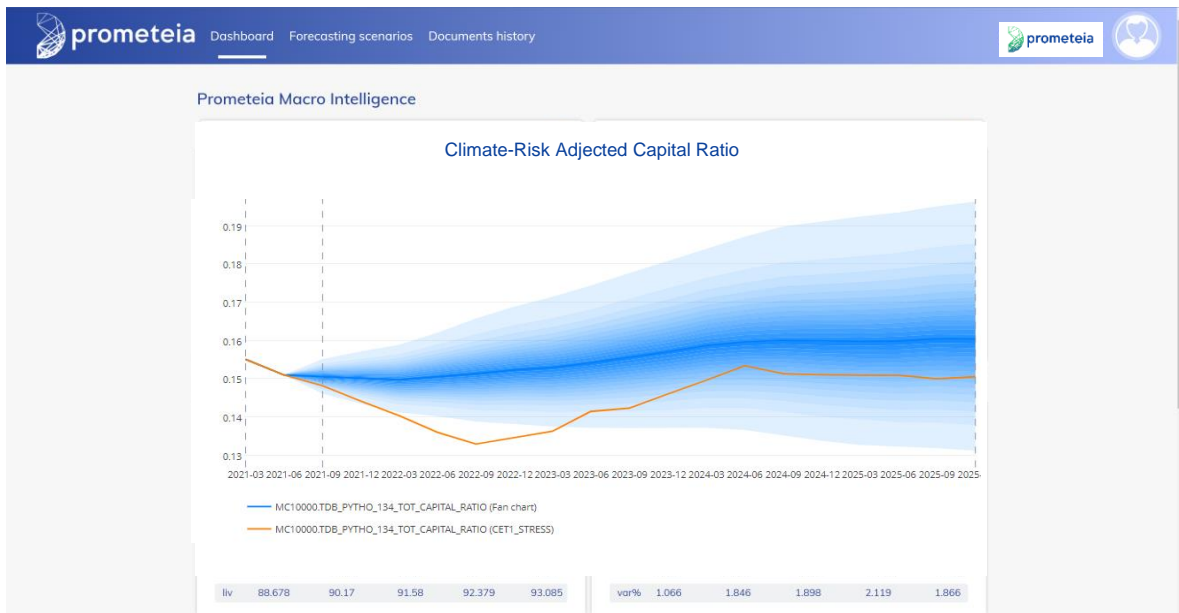
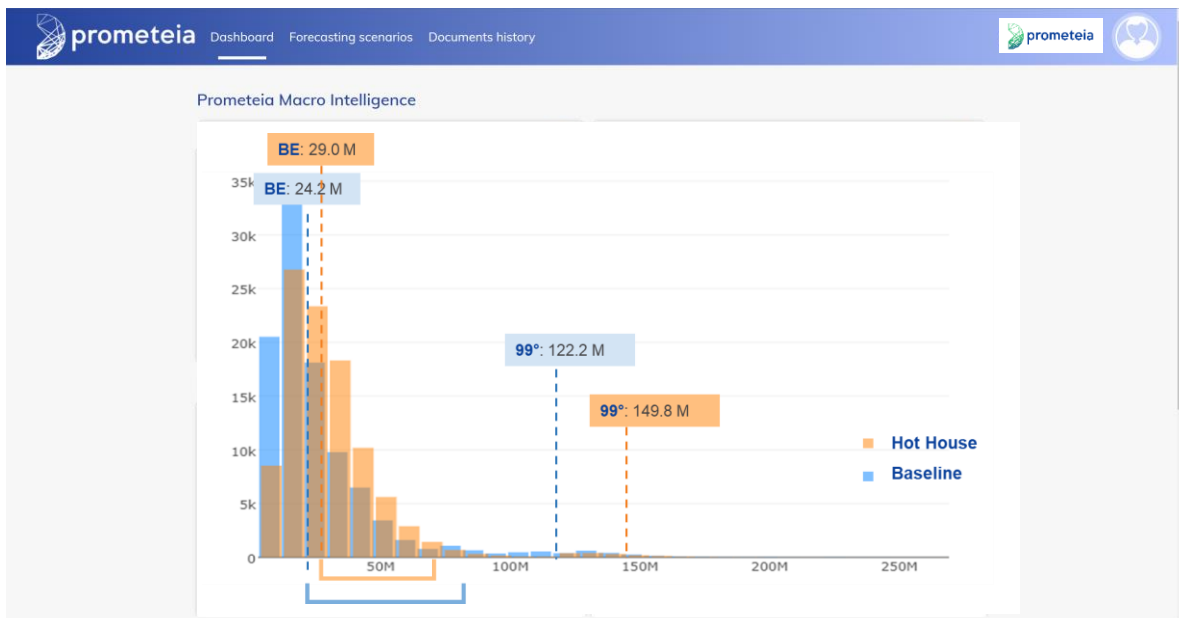
Risk Indicator	Latest period (2011-2021)	Trend (vs baseline 1990-2010)	Climate scenario-up to 2050		
			Orderly	Disorderly	Hot-House world
Flood	Low	Stable	Low	Low	Medium-Low
Heavy Rainfall 5day	Medium-Low	Stable	Low	Medium-Low	Medium-Low
Drought (12months)	Low	Decreasing	Low	Low	High
Heat Waves	Low	Increasing	Medium-Low	Medium-Low	High
Cold Waves	Low	Stable	Low	Low	Low
Wind gust	Low	Stable	Low	Low	Low
Wildfires	Low	Stable	Low	Low	High

CHRONIC EVENTS

Risk Indicator	Latest period (2011-2021)	Trend (vs baseline 1990-2010)	Climate scenario-up to 2050		
			Orderly	Disorderly	Hot-House world
Temperature - min	Low	Stable	Low	Low	Low
Temperature - max	Low	Stable	Low	Low	High
Temperature - mean	Low	Stable	Low	Low	High
Precipitation	Low	Stable	Low	Low	Low
Sea level rise	Low	Stable	Low	Low	Low

Portfolio Alignment & Climate Risk Optimization

- Optimization targets are set in terms of GHG emission under a specific scenario, defining constraints in terms of asset growth, sectorial mix, etc.
- Possibility simulate the impact under various scenarios (i.e. via stochastic simulation), calibrating the granularity of the optimization process: e.g. single name for "Target Setting counterparties", NACE + geography, etc.
- Economic Capital Model for the quantification of the correlation effects among economic / industrial sectors considering their Carbon Footprint



About Prometeia

Prometeia is a **global firm of quantitative experts and software engineers**, dedicated to applying financial modelling, economic research and data science to solve complex business and regulatory challenges. Established in 1974 as an independent institute for economic research, for half a century Prometeia has been developing **innovative software solutions, studies, and reports for banking and insurance groups**, institutional investors and public organizations. Our distinctive mix of competencies has made Prometeia a leading European company in Risk, Asset and Wealth Management solutions. Our expertise is proved by our award-winning solutions, our double-digit growth in turnover and staff, over **500 references in 20+ countries**.

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