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13 | 14 LUGLIO 2022 ESG IN BANKING

INTESA SANPAOLO

Climate/ESG integration into Risk Management Internal Dataset: How to get closer

July 13th, 2022

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AMBITIOUS 2030 FINANCED EMISSIONS REDUCTION TARGETS ALREADY SET FOR PRIORITY HIGH-EMITTING SECTORS

EXTRACT FROM STRATEGIC PLAN

Net-Zero aligned targets for 2030 in high-emitting sectors(1)…

	Sector and scope	Metrics	Baseline 2019(3)	Target 2030(4)
High-emitting sectors(1)	**Oil & Gas**(2) (Scope 1, 2, 3)	gCO_2e/MJ	64	52-58
	Power generation (Scope 1, 2)	$kgCO_2e/MWh$	214	110
	Automotive (Scope 3)	gCO_2e/km	162	95
	Coal mining (*exclusion policy*)	€ bn exposure	0.2	0 *by 2025*

… disclosed ahead of peers and covering a large part of the high-emitting portfolio

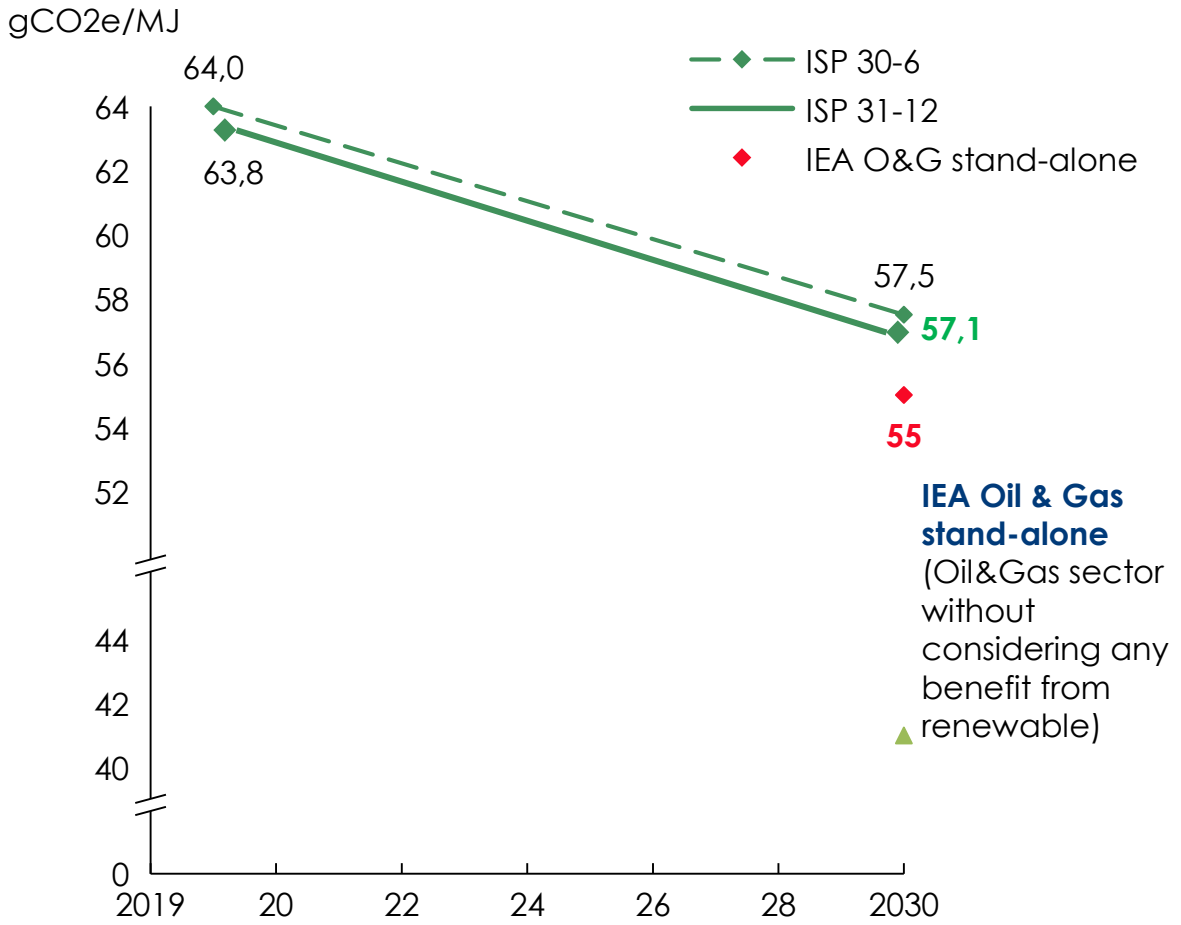
- **Starting point on emissions intensity lower than European peers(5) in high-emitting sectors**
- **2030 targets disclosed more than a year ahead of the Net-Zero Banking Alliance deadline**
- **Over 60% of the Non-Financial Corporates portfolio financed emissions(6) covered by 2030 reduction targets**
- **Committed to request SBTi certification**

(1) Sectors consistent with Net-Zero Banking Alliance. Reference scenario: IEA Net-Zero 2050
(2) The Group already has a policy in place to phase out unconventional Oil & Gas by 2030
(3) Portfolio composition as of 30.6.21, latest available emissions data as of FY19
(4) Targets may be updated following the evolution of the emission calculation methodology and any issuance of new external guidelines (i.e., NZBA, SBTi)
(5) Only banks that have disclosed emission intensity
(6) In sectors identified by Net-Zero Banking Alliance

OIL&GAS – ISP 2030 ESTIMATE (BASED ON CURRENT CLIENT PORTFOLIO) IS WITHIN THE 2030 RANGE TARGET ANNOUNCED IN THE BUSINESS PLAN

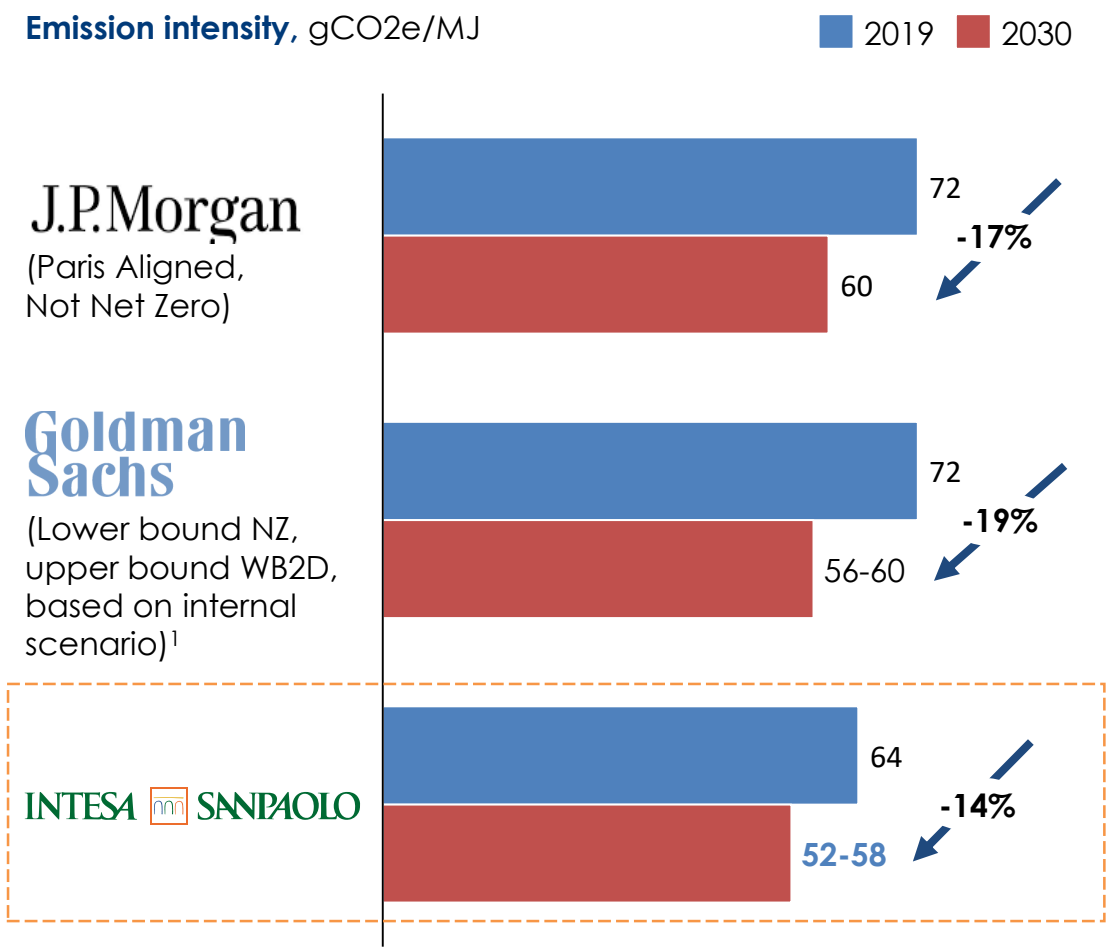
ILLUSTRATIVE

Curve ISP vs. scenario Net-Zero



NOT EXHAUSTIVE BENCHMARK

Benchmark target ISP vs. peers



1. "The lower bounds of our targets are aligned to net zero pathways from Goldman Sachs' Carbonomics. The upper bounds for all sectors reflect a rapid decarbonization in the context of evolving policy and technology dynamics. In all three sectors, our proposed target ranges are aligned with the goals of the Paris Agreement to limit the increase in global average temperature to well below 2°C above pre-industrial levels"

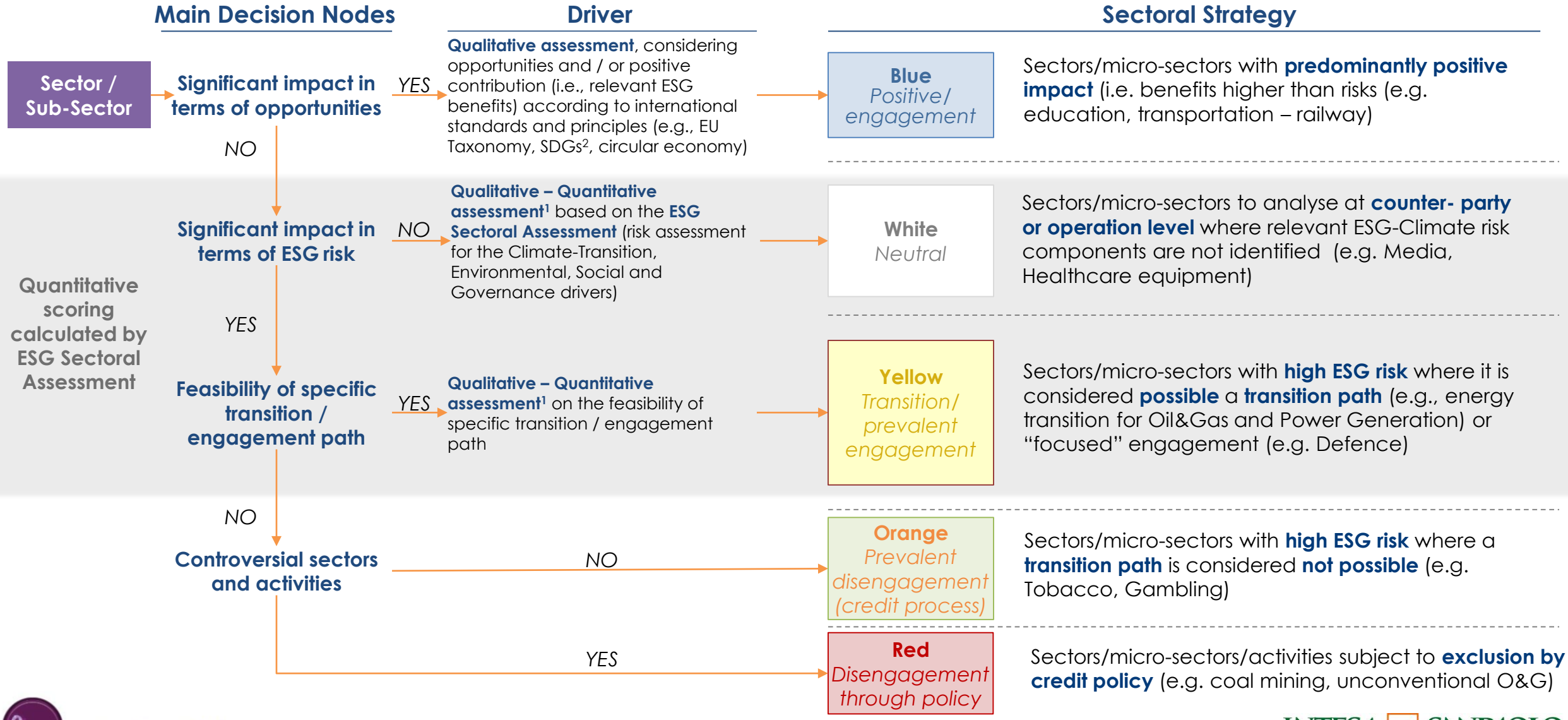
CLIMATE & ESG METRICS HAVE BEEN INCLUDED WITH THREE LEVELS OF GRANULARITY ACROSS THE WHOLE RISK FRAMEWORK

ILLUSTRATIVE

New ESG-Climate metrics		Description of ESG Framework processes			
Granularity	Description	1 Risk Appetite Framework (RAF)	2 Credit Risk Appetite (CRA)	3 Credit Strategies and pricing	4 Underwriting
A Sector/ Micro-sector	**ESG Sectorial Heatmap Assessment**[1]	Framework to identify types and levels of risk to undertake based on Bank's appetite, e.g. through exposure and concentration limits	Counterparty forward-looking credit risk assessment defining Bank's appetite towards different types of clients	Combination of sectorial attractiveness and counterparty CRA level to determine growth strategies and pricing incentives	Process, roles and rules to follow in the underwriting process
B Counter-party	Internal **ESG Score**[2] at **counterparty level**				
C Transaction	**Sustainable Products frame-work**[3] vs. standard products/operations				

1 Based on ESG sectorial risk assessment, defined in 2021
2 Currently under development by CFO Area
3 Currently under development within the ESG/Climate Credit Framework project. Lending products only

A SECTORIAL HEATMAP ALLOWED TO IDENTIFY 5 ESG-CLIMATE SECTORAL STRATEGY CATEGORIES



1. The quantitative component is limited to the "scores" as per Climate and ESG Sectoral Assessment
2. Sustainable Development Goals

DESPITE THE WIDE RANGE OF VENDORS, NO STANDARD APPROACH FOR ESG SCORING RESULTS IN LOW CORRELATION AMONG PROVIDERS

ILLUSTRATIVE | NOT EXHAUSTIVE

Global / Large-scale

Market / ESG vendors

MSCI

REFINITIV

SUSTAINALYTICS

S&P Global Ratings

FTSE Russell

vigeo eiris

Moody's

FitchRatings

RepRisk

ISS ESG

SCOPE Scope Group

Specialist

CDP

Rh RHODIUM GROUP

TRUCOST

Italian

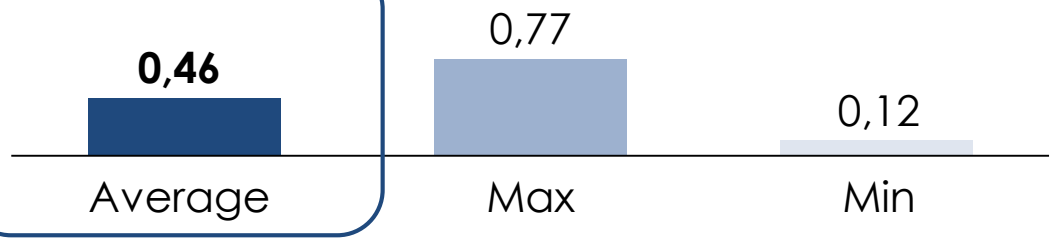
CRIF Together to the next level

Cerved

ESG market players approaches differ due to various methodological and data-driven choices

Methodologies	Inputs / KPIs
Aggregation and weighting approach	Data sources used
Normalisation (e.g. cross-sector or within sector)	Selected KPIs (#, thematic coverage)
Standardisation	Data pre-processing

Low average pairwise correlation for the overall ESG rating



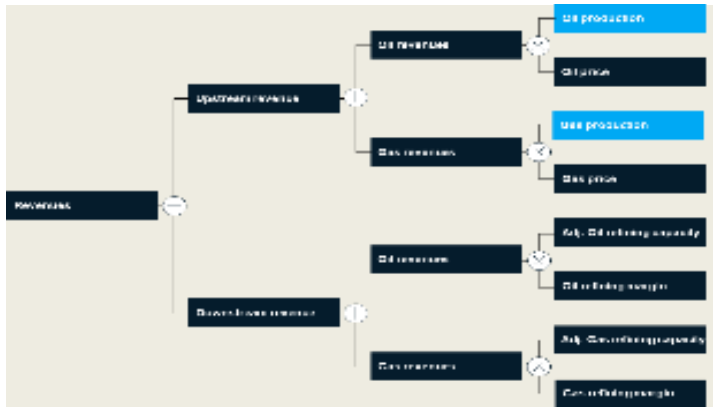
Source: UN PRI (2021). "ESG rating disagreement and stock returns"
https://www.unpri.org/pri-blog/esg-rating-disagreement-and-stock-returns/5625.article

THE TRANSITION RISK SCENARIO MODELLING APPROACH FOLLOWS THREE STEPS TO MEASURE THE IMPACT OF CLIMATE AT COUNTERPARTY LEVEL

ILLUSTRATIVE

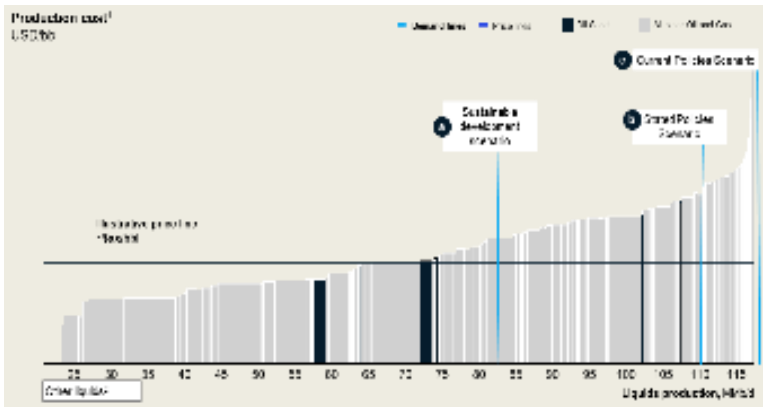
A. Identify key risk drivers for each priority sector in scope

Transition risk drivers for financials of each priority sector are identified, e.g., drop in O&G production levels due to market adjustments towards greener energy consumption & new regulatory standards would affect revenue and cost projections



B. Model the pathway of each risk driver under different scenarios

For each risk driver, relevant NGFS variables are used to assess impact at counterparty level, e.g., break-even analysis combining oil price scenarios from NGFS with O&G cost curves to assess production at asset level



C. Assess financial impact at counterparty level

Evaluate financial impact (e.g., Capex) on each counterparty considered in the development sample

Extrapolate to the application sample in various clusters (based on sensitivities)

Income Statement	2020	2030	2040	2050
Oil Revenues	1000	1090	1134	1168
Gas Revenues	250	270	284	309
A. Total Revenues	**1250**	**1360**	**1417**	**1477**
Operating Expenses – Fixed	150	149	162	178
Operating Expenses – Variable	125	134	142	146
Depreciation	175	186	198	216
B. Total Costs	**450**	**468**	**502**	**540**
Carbon tax	50	52	52	53
Royalties & other taxes	100	216	220	225
C. Government Take	**700**	**735**	**774**	**818**
Net Income (A – B – C)	**200**	**157**	**141**	**118**

ECB CLIMATE STRESS TEST 2022 – STRONG EFFORTS REQUESTED TO CRO AREA IN IMPLEMENTING THREE MODULES AND PROJECTIONS

EU countries | Global

Module

1. Qualitative Questionnaire
2. Climate Risk Metrics
3. **Bottom-up stress test projections**

	SCENARIO	OBJECTIVE	PROJECTIONS	HORIZON	CREDIT RISK	MARKET RISK
TRANSITION RISK	SHORT TERM STRESS	Assessment of the short-term vulnerabilities in a three-year disorderly transition scenario triggered by a sharp increase in the **price of carbon emissions**	BASELINE STRESS	**3 Years** (2022 - 2024)	**Corporate loans** (incl. SME, CRE) **+ mortgages**	**Bonds + stock issued by NFC**
TRANSITION RISK	LONG TERM PATHS	Assessment of long-term strategies over a **30-year horizon** with **3 different transition scenarios** implying a more carbon-neutral economy	ORDERLY DISORDERLY HOT - HOUSE	**30 Years** (2030 – 2040 - 2050)	**Corporate loans** (incl. SME, CRE) **+ mortgages**	
PHYSICAL RISK	DROUGHT & HEAT RISK	Assessment of the vulnerability of banks to the scenario of a severe drought and heatwave in Europe	BASELINE STRESS	**1 Year** (2022)	**Corporate loans** (incl. SME)	
PHYSICAL RISK	FLOOD RISK	Assessment of banks' vulnerability to the hypothetical scenario of a **severe flood in Europe**	BASELINE STRESS	**1 Years** (2022)	**Mortgages + CRE loans**	

Dynamic Balance Sheet required (focus on next slide)

The dynamic balance sheet hypothesis is assumed for the long-term strategy (credit risk)

PROJECTING UNDER DYNAMIC BALANCE SHEET HYPOTHESIS: STRESS TESTS AS SUPPORT OF LONG TERM RE-BALANCING STRATEGIES

CONSTRAINTS FOR DYNAMIC REALLOCATION

- **Reallocation** based on **emission trajectories** according to the **Target setting on sectors** declared in the Plan
- **Control of OMR credit strategy** and **CRA** constraints on **red classes**
- **Cross-sectoral reallocation** based on criteria established by **ESG color coding**

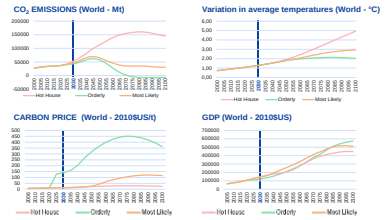
PROJECTING BANK'S PORTFOLIO(S) ALIGNMENT TO CLIMATE-RELATED COMMITMENTS

0 UNDERSTANDING CLIMATE RISK UNDERLYING BANK'S EXPOSURES

Understanding the current environmental footprint of Banks clients and prospects (business context) merging both reported and estimated information

1 GHG AND INVESTMENTS FORECASTING UNDER DIFFERENT SCENARIOS

Projecting the expected GHG profile of the Bank's clients / prospects and their needs of financing



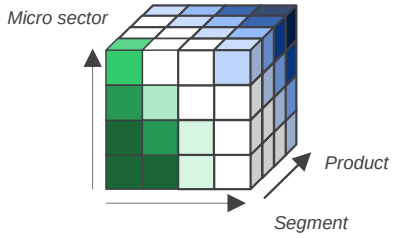
Portfolio Alignment Engine

2 TRANSLATING BANK'S TARGETS AND COMMITMENTS INTO A SET OF CLIMATE KPIS

- Absolute emissions
- Portfolio-wide emissions intensity
- Sector-specific emissions intensity

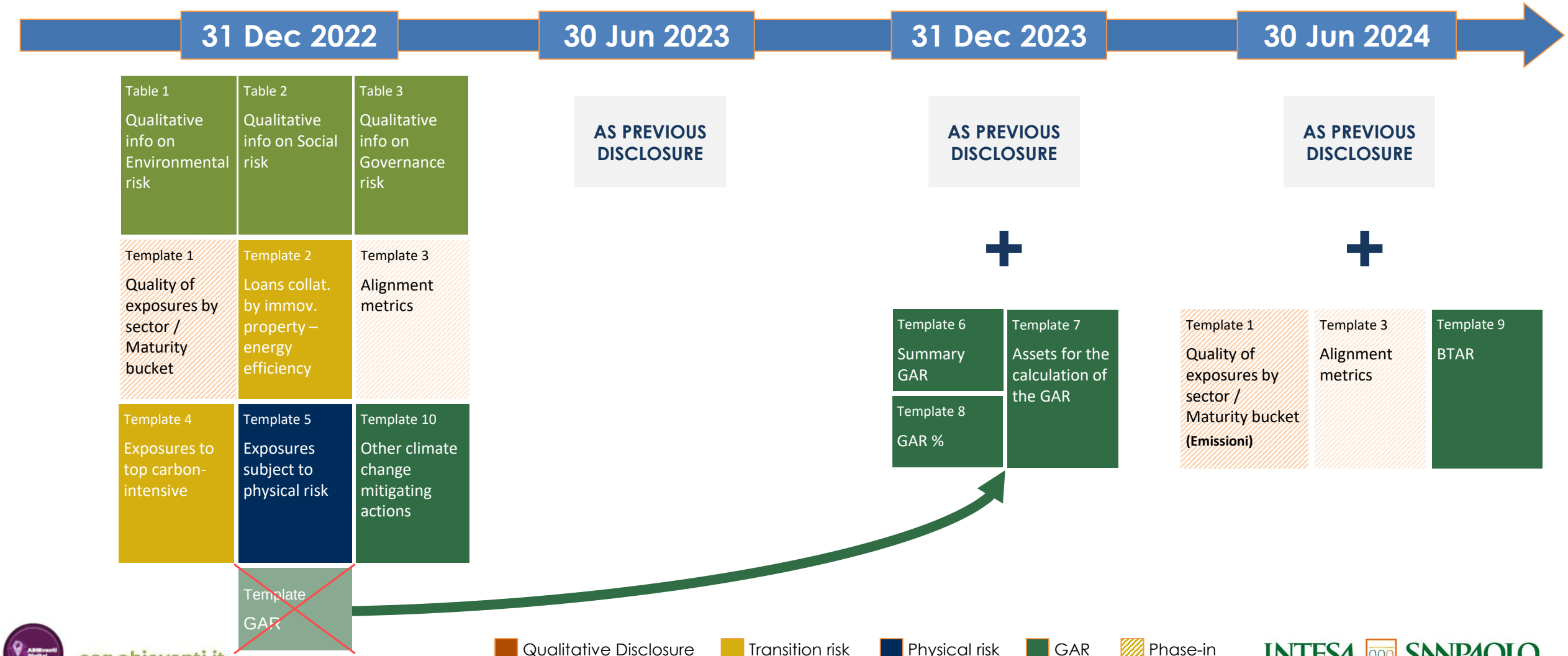
3 SETTING-UP THE BEST PORTFOLIO TAKING INTO ACCOUNT CLIMATE AND "TRADITIONAL" TARGETS / CONSTRAINTS

Re-allocating credit and investments taking into account market capacity "ESG Color Coding", climate goals alignment and risk profile (CRA)



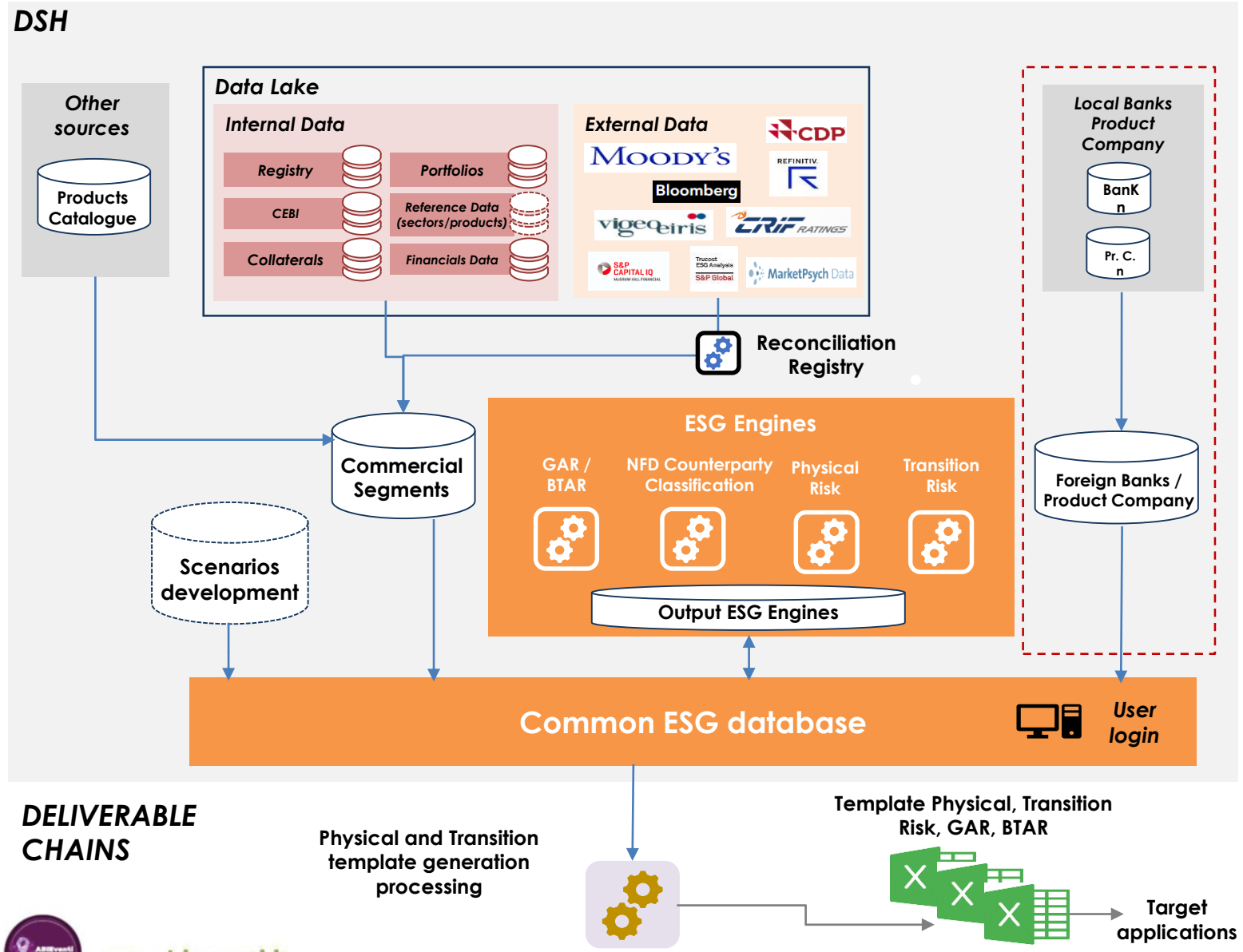
TIMELINE ADOPTION OF NEW ITS PILLAR 3 ON ESG RISKS

New ITS confirms the **first implementation date to Dec22** and **postpones the GAR application**, in line with the taxonomy, to **Dec23**. **Phase-in period is maintained until Jun24**, allowing Institutions to only produce the more **complex information relating to CO2** (of which the data collection methodology, templates 1 and 3, must be disclosed from **Dec22**)



FOCUS ON IT ARCHITECTURE OF ESG&REGULATORY REPORTING

ILLUSTRATIVE



OBJECTIVE

Development of a target solution to be implemented also for the creation of the **Pillar 3 tables**

MACRO ACTIVITY AND DELIVERABLE DATA ARCHITECTURE

INPUT

- Enrichment of data on the Data Lake for ingestion of new sources (internal and/or external Bank)
- Improvement of internal data and mapping of data feeding information

ENGINES

- GAR/BTAR engine implementation
- Porting of Physical and Transition Risk engines

OUTPUT

- Enrichment of the ESG engine output database with the data returned by the calculation engines

DELIVERABLE CHAINS AND REPORTING

- Preparatory processing for the generation of Physical and Transition Risk, GAR, BTAR templates

PROJECT DEPENDENCIES

- Aladdin Module for Physical Risk
- EU Taxonomy Adherence
- NFD Engine for counterparty classification
- ESG Climate Credit Framework

ANY QUESTION?

Thanks for your attention!

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