

Just in Time

EBA Report On Management and Supervision of ESG Risks for Credit Institutions and Investment Firms

EBA/REP/2021/18

Jul 2021

Executive Summary

The EBA has received several mandates to assess how to include Environmental, Social and Governance (ESG) risks into the three pillars of the banking prudential framework. This report **assesses** their potential **inclusion in Pillar 2** by providing:

- **The relevance** of ESG risks **for the credit institutions and investment firms** and **provides uniform definition** of ESG factors and ESG risks, including definitions of physical risks and transition risks as the main transmission channels for environmental risks. ESG risks to institutions are defined as risks that stem from the current or prospective impacts of ESG factors on their counterparties or invested assets; ESG risks materialise through the traditional categories of financial risks (credit risk, market risk, operational and reputational risks, liquidity and funding risks).
- A non-exhaustive **list of quantitative and qualitative definitions, indicators and metrics** for a list of ESG factors, together with a **description of several tools and methodologies** that can support the identification, evaluation and assessment of ESG risks, namely the portfolio alignment method, the risk framework method and the exposure method. They are presented in a neutral way (i.e. without any prioritisation or preference) and can complement each other.
- **The incorporation** of ESG risks **in the institution's business strategy and business processes** (the resilience of business models over the short-, medium- and long-term time horizons), several policy recommendations regarding the way in which institutions can embed ESG risks in their **internal governance and risk management frameworks** in risk-based and proportionate manner; effective way to proportionately reflect ESG risks in the **supervisory review** for credit institutions and makes several policy recommendations in this respect; a new aspect of analysis in the supervisory assessment is to evaluate whether credit institutions is resilient in the long-term - 10 year horizon.



Executive Summary

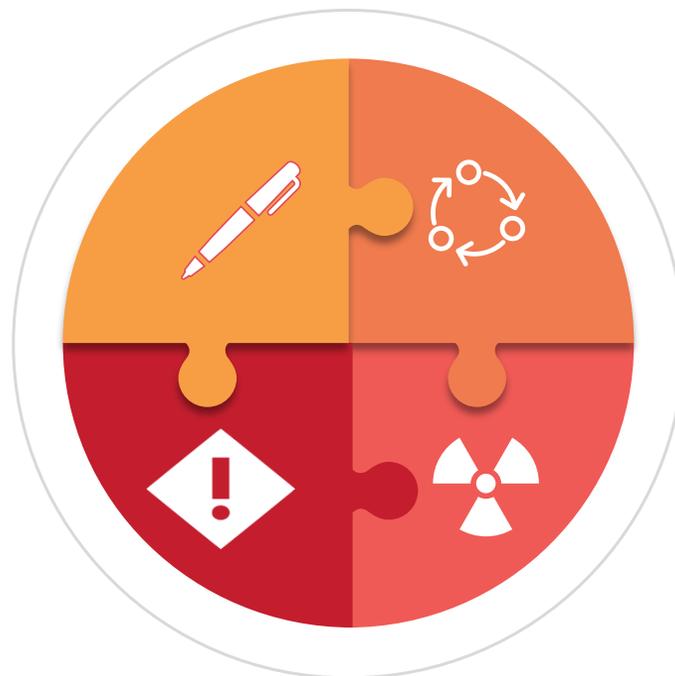
Main Content of EBA Report

Common Definitions

- ESG factors
- ESG risks
- Transmission channels (physical, transition and liability risks)

ESG Risks Supervision

- ESG factors as drivers of financial risks
- Extension of time horizon in supervisory assessment (via scenario analysis/stress test)
- Policy recommendations



Indicators, Metrics and Methods to Evaluate ESG Risks

- E, S and G indicators and metrics
- Tools and methods to evaluate, estimate and incorporate ESG risks

ESG Risks Management

- Business strategy and business processes
- Governance and risk management
- Policy recommendations

Source: EBA Discussion paper - On management and supervision of ESG risks for credit institutions and investment firms - EBA/DP/2020/03

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01

Introduction

Regulatory Background and Rationale



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Regulatory Background and Rationale 1/4

The determination of the legislators to fundamentally change the way in which EU economies work should encourage institutions to approach ESG risks from a strategic perspective.

- 1 | In 2015, more than 190 governments around the world adopted the **UN 2030 Agenda for Sustainable Development**, aiming to support further progress on a wide range of many interconnected and cross-cutting economic, social and environmental objective.
- 2 | Achieving the Sustainable Development Goals - SDGs - will depend on the mobilisation of significant financial resources from the public and private sectors, with a SDGs financing gap currently estimated at an incremental USD2-3 trillion per year for all countries.
- 3 | Also in 2015, signatories to the **Paris Agreement** committed to undertake ambitious efforts to limit the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5° above such levels.

UN 2030 Agenda for Sustainable Development



Paris Agreement



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Regulatory Background and Rationale 2/4

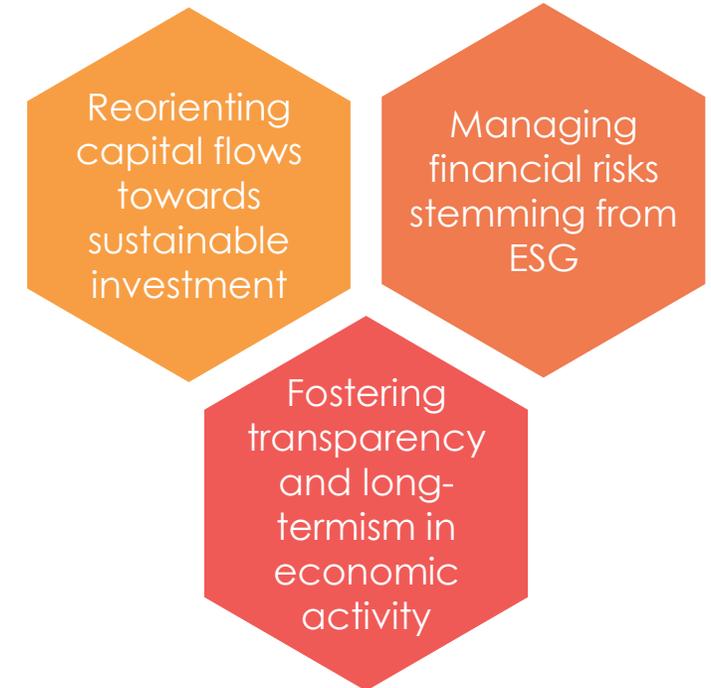
- In the European Union, a commitment to a binding target of at least a 40% domestic 2015. reduction in greenhouse gas emissions by 2030, compared to 1990, was adopted:

1 | The Commission's proposal the “**Action Plan: Financing Sustainable Growth**”

2 | The Deal, **Communication on the European Green**

- The **financial sector is expected to play a key role** in financing the transition of the economy to a more sustainable form
 - This transformation will certainly spur new business opportunities, but the financial sector will also experience the financial risks stemming from the transformation of the economy and the worsening physical conditions.

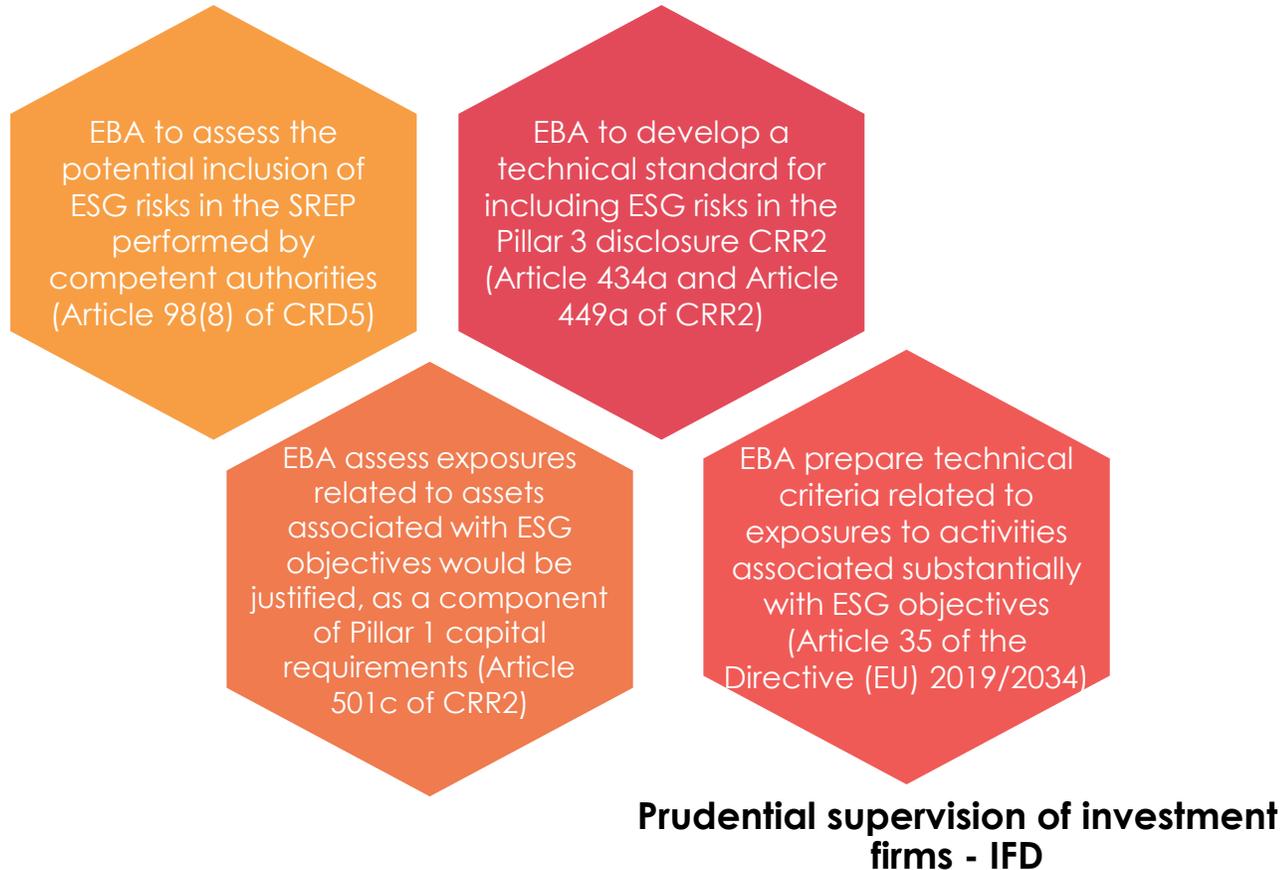
European Commission's Action Plan three main objectives:



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Regulatory Background and Rationale 3/4

**CRR2/CRD5 has been in the area of sustainable finance
3 mandates:**



Moreover, this report should be considered in conjunction with other relevant publications and initiatives which impact the regulatory framework for institutions with respect to ESG factors: the **EU taxonomy**, the Sustainable Finance Disclosure Regulation (**SFDR**), the European Single Access Point (**ESAP**) for financial and non-financial information, the review of the Non-Financial Reporting Directive (**NFRD**) and proposal for a Corporate Sustainability Reporting Directive (**CSRD**).

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Regulatory Background and Rationale 4/4

EBA had transmitted this Report to the EU Parliament, the Council and the Commission, and will be used as a basis for the development of Guidelines on The Management of ESG Risks by Institutions and the supervision of ESG risks by EU competent authorities.



02

ESG Factors, Risks, Drivers and Transmission Channels

Overview

ESG Frameworks

ESG Risk Drivers and Transmission Channels: Overview

Environmental Factors and Risks

Social Factors and Risks

Governance Factors and Risks



ESG Factors, Risks, Drivers and Transmission Channels 1/11

Overview

Despite the developments at EU level (EU Taxonomy Regulation 2020/852, SFDR 2019/2088, new CSRD), the current policy framework still **lacks common definitions** of ESG factors and hence current market practices vary across institutions. The **EBA defines**:



ESG factors are environmental, social or governance matters that may have a **positive or negative impact** on the financial performance or solvency of an entity, sovereign or individual.

ESG factors can lead to negative financial impacts through a variety of **risk drivers**. The causal chains that explain how these risk drivers impact institutions through their counterparties and invested assets are called **transmission channels**.



ESG risks are the risks of any negative financial impact on the institution stemming from the current or prospective **impacts of ESG factors on its counterparties or invested assets**.

ESG Factors

- Useful to **evaluate opportunities** (in line with the EU Taxonomy approach)
- Their impacts depend on business activities paired with their governance and their management **strategy**
- They are likely to **evolve over time**

ESG Risks

- Impact on the financial system and economy as a whole, with potential **systemic** consequences
- They can materialise through **financial risk categories**, such as credit, market, operational, liquidity and funding risks

ESG Factors, Risks, Drivers and Transmission Channels 2/11

ESG Frameworks 1/4

An EBA market survey conducted in May-June 2019 and the responses received to the consultation on the EBA Discussion Paper on 'Management and supervision of ESG risks for credit institutions and investment firms' between November 2020 and February 2021 show that **institutions rely on various international frameworks and standards defining ESG factors**, while some of them use their own definitions.

Frameworks Addressing ESG Factors

- | | | | | | |
|---|--|---|----|--|--|
| 1 | UN Sustainable Development Goals | Collection of 17 interlinked global goals designed to be a blueprint to achieve a better and more sustainable future (by 2030) | 7 | IIRC Integrated Reporting Framework | Framework for integrated reporting along the lines of six capitals (financial, manufactured, intellectual, human, social and relationship and natural) |
| 2 | Principles for Responsible Investment (PRI) | They aim at supporting signatories to incorporate ESG factors into their investment and ownership decisions | 8 | IFC Performance Standards | They define IFC clients' responsibilities for managing environmental and social risks |
| 3 | UNEP FI Principles for Responsible Banking | They aim at aligning banks' business strategies with the objectives of the SDGs and the Paris Agreement | 9 | OECD Guidelines for Multinational Enterprises | They cover non-binding principles and standards for responsible business conduct in a global context |
| 4 | GSSB Global Reporting Initiative | It aims at helping organisations to better understand, manage and communicate their impacts on sustainability-related issues | 10 | SASB Standards | They are designed to help companies disclose financially-material sustainability information to investors for 77 industries |
| 5 | Equator Principles | They aim to provide a common baseline and framework to identify, assess and manage environmental and social risks when financing projects | 11 | COSO and WBCSD Guidance for Applying ERM to ESG-related risks | Approaches to overcome ESG-related risk challenges across the ERM process, with methods for managing both upside and downside ESG-related risks |
| 6 | WEF "Measuring Stakeholder Capitalism" | Common metrics and disclosures on non-financial factors for reporting on performance against ESG indicators and track contributions to the SDGs | | | |

ESG Factors, Risks, Drivers and Transmission Channels 3/11

ESG Frameworks 2/4

In addition to frameworks covering the entire ESG scope, an EBA survey revealed that practitioners rely also on more specific structures for E and S factors.

Frameworks Addressing Environmental Factors

- 1 Natural Capital Protocol + Supplement** It provides a standardised framework for organisations to identify, measure, and value their impacts and dependencies on natural capital
- 2 TCFD Recommendations** Framework to help public companies to effectively disclose climate-related risks and opportunities through their existing reporting processes
- 3 Climate Bond Initiative – Climate Bonds Standard** It provides sector-specific eligibility criteria for assets and projects that can be labelled as green investments
- 4 ICMA Green Bond Principles** Process guidelines that clarify the approach for issuance of a green bond
- 5 Global GHG Accounting and Reporting Standard** Methodological guidance to measure and disclose GHG emissions associated with six asset classes and motor vehicle loans
- 6 CDP, UNGC, WRI and WWF Science-Based Targets Initiative** It provides targets that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement

Frameworks Addressing Social Factors

- 7 UN Principles on Business and Human Rights** Set of guidelines for states and companies to prevent, address and remedy human rights abuses committed in business operations
- 8 8 Conventions of the ILO** They cover subjects that are fundamental principles and rights at work, like the elimination of all forms of forced or compulsory labour
- 9 United Nations Global Impact** Non-binding pact to encourage businesses worldwide to adopt sustainable and socially responsible policies

ESG Factors, Risks, Drivers and Transmission Channels 4/11

ESG Frameworks 3/4

Based on the frameworks' **commonalities**, ESG factors displays one or more of the following **intrinsic features** (possibly with interactions):

Sensitivity to Public Choices and Preferences

The signatories of the Paris Agreement and UN member states subject to the SDGs efforts to meet the established targets imply major changes in public policies and regulatory frameworks. Specifically, efforts to limit climate change and mitigate the effects of other environmental issues could lead to **significant regulatory shifts** and to wider structural changes (difficult to predict).

Non-financial Characteristics

The factors reflect characteristics such as **GHG emissions**, environmental footprint, social welfare, poverty, equal rights and ethics, in **addition** to those factors that have been traditionally considered financial, such as profits, capital and costs.

Uncertainty about Impact on Short, Medium and (very) Long Term

There is **uncertainty over the timing** of the impacts of these factors, as they may occur at any time and trigger effects over very different timespans. ESG factors are not only relevant in the medium and/or longer term, as they also create risks in the short term, such as acute environmental hazards and the abrupt implementation of environmental policies.

Patters in Value Chain

This aspect refers to the impacts of an entity's activities and its interactions with different stakeholders within its **upstream and downstream value chains**. In the context of these activities, an entity may be faced indirectly, through its debtors and creditors, with different ESG factors.

Negative Externalities (e.g., Pollution, Health)

Some ESG factors, such as GHG emissions, pollution, the welfare of society as a whole and poverty, are **not captured in the financial statements**, meaning that the costs of those activities are borne by **third parties** or by society at large and are not captured by market mechanisms.

ESG Factors, Risks, Drivers and Transmission Channels 5/11

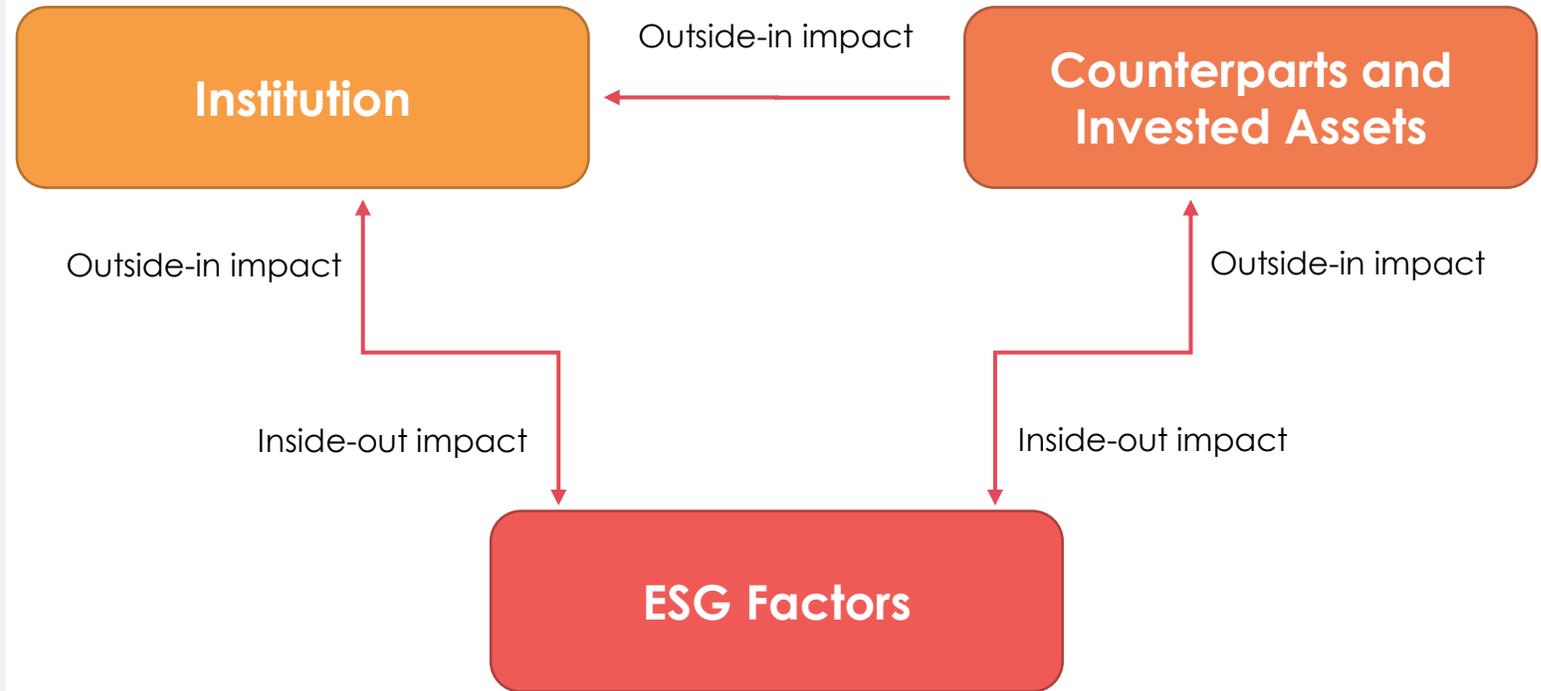
ESG Frameworks 4/4

Source	Environmental	Social	Governance
International frameworks	<ul style="list-style-type: none"> GHG emissions Energy consumption and efficiency Air pollutants Water usage and recycling Waste production and management Impact on biodiversity and ecosystems Innovation in environmentally friendly products and services 	<ul style="list-style-type: none"> Workforce freedom of association Child labour and forced/compulsory labour Workplace/customer health and safety Discrimination, diversity and equal opportunity Poverty and community impact Supply chain management Training and education Customer privacy Community impacts 	<ul style="list-style-type: none"> Codes of conduct and business principles Accountability Transparency and disclosure Executive pay Board diversity and structure Bribery and corruption Stakeholder engagement Shareholder rights
EU frameworks	<ul style="list-style-type: none"> GHG emissions Energy consumption and efficiency Exposure to fossil fuels Water, air, soil pollutants Water usage, recycling and management Land degradation, desertification, soil sealing Waste production and management Raw materials consumption Biodiversity and protection of healthy ecosystems Deforestation 	<ul style="list-style-type: none"> Implementation of fundamental ILO Conventions Violation of UN Global Compact Principles Inclusiveness/Inequality Exposure to controversial weapons Discrimination Insufficient whistle blower protection Rate of accidents and number of days lost to injuries, accidents, fatalities or illness Human rights policy Investment in human capital and communities Trafficking in human beings 	<ul style="list-style-type: none"> Anti-corruption and anti-bribery policies Excessive CEO pay Diversity (unadjusted gender pay gap and board gender diversity)
Industry	<ul style="list-style-type: none"> Consumption of materials, energy and water Production of GHG emissions, other emissions to air and water Production and management of waste and wastewater Protection of biodiversity Research and development in low-carbon and other environmental technologies 	<ul style="list-style-type: none"> Quality and innovation in customer relations, rights of customers to gain information about environmental issues Human rights Labour practices: human resource management and employee relations, diversity issues, gender equality, workplace health and safety considerations Access to credit and financial inclusion Personal data security 	<ul style="list-style-type: none"> Set of rules or principles defining rights, responsibilities and expectations between different stakeholders in the governance of the entity/sovereign Executive pay Board of Directors independence Board composition and structure Shareholder rights Internal audit Compensation Bribery and corruption Integrity in corporate conduct/conduct frameworks

ESG Factors, Risks, Drivers and Transmission Channels 6/11

Institutions can be **impacted by** ESG factors (**outside-in perspective**), for example through the physical effects of climate change on their premises. As example, this might happen when providing a loan to a counterparty with an energy-intensive business model, which is affected by the implementation of policies promoting the transition to an environmentally-sustainable economy.

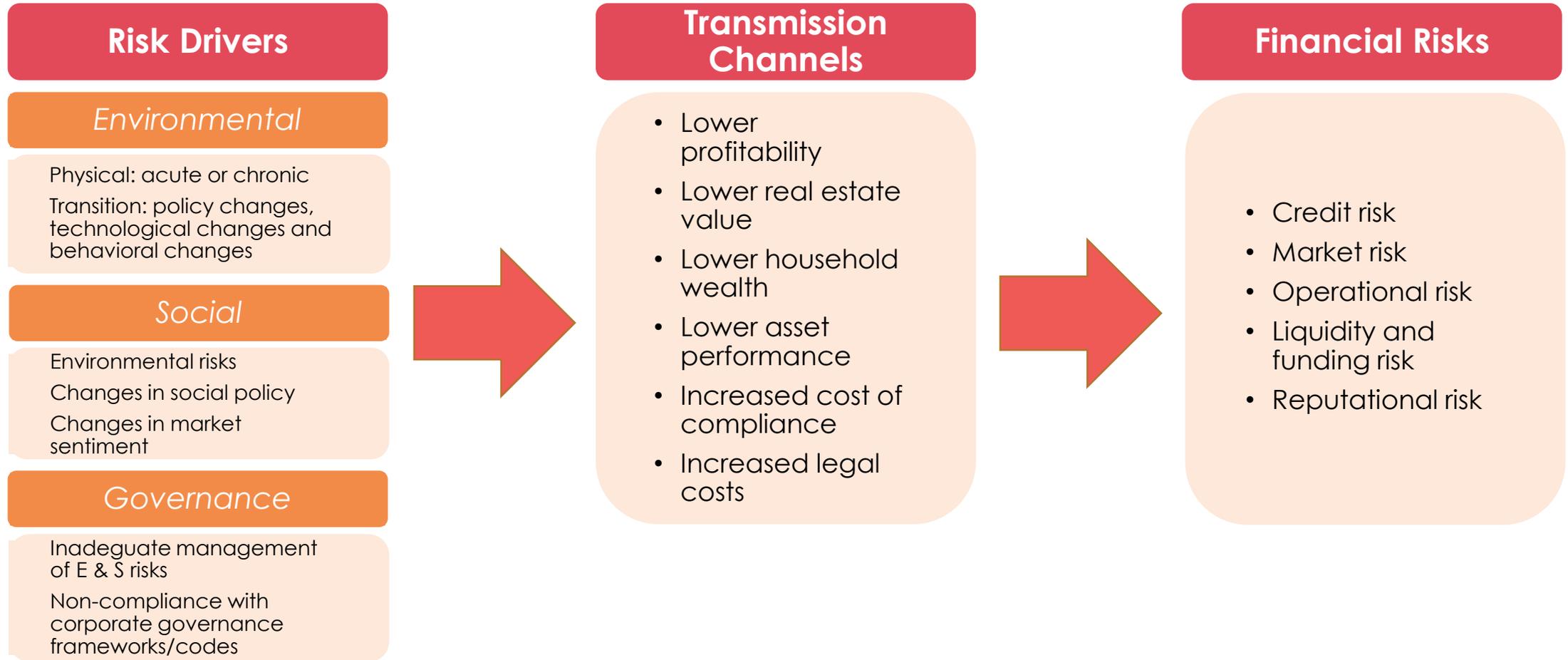
They might also have an **impact on** ESG factors (**inside-out perspective**). Although relevant for institutions from a financial perspective, these impacts stem from the institution's own fully-controlled activities and related management arrangements, so they are expected to be considered in the **already existing** risk management and internal governance **frameworks**.



 Both perspectives should be considered when evaluating ESG risks, with the “inside-out” one only to the extent that its related impacts further aggravate the impacts from the “outside-in” perspective.

ESG Factors, Risks, Drivers and Transmission Channels 7/11

ESG Risk Drivers and Transmission Channels: Overview



For further details please see the [Annex](#)

ESG Factors, Risks, Drivers and Transmission Channels 8/11

Environmental Factors and Risks 1/2



Environmental factors are related to the quality and functioning of the natural environment and systems, and include factors such as climate change, biodiversity, energy consumption, pollution and waste management.

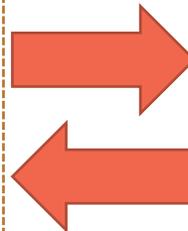
Environmental risks are those of any negative financial impact on the institution stemming from the current or prospective impacts of environmental factors on its counterparties or invested assets.

Environmental risks are commonly splitted among two categories, **physical and transition risks, closely interacting** with each other: abrupt climate events might induce policymakers to speed up the production of regulation and mitigation policies. On the other hand, a **trade-off** exists among the two types, since physical risks are expected to decrease when policies are implemented to facilitate a transition to a more sustainable environment.

Physical Risks

They are driven by physical effects of environmental factors:

- **Acute** physical effects, which arise from particular events, especially weather-related events such as storms, floods, fires or heatwaves or other environmental hazards that may damage production facilities and disrupt value chains
- **Chronic** physical effects, which arise from longer-term trends, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity



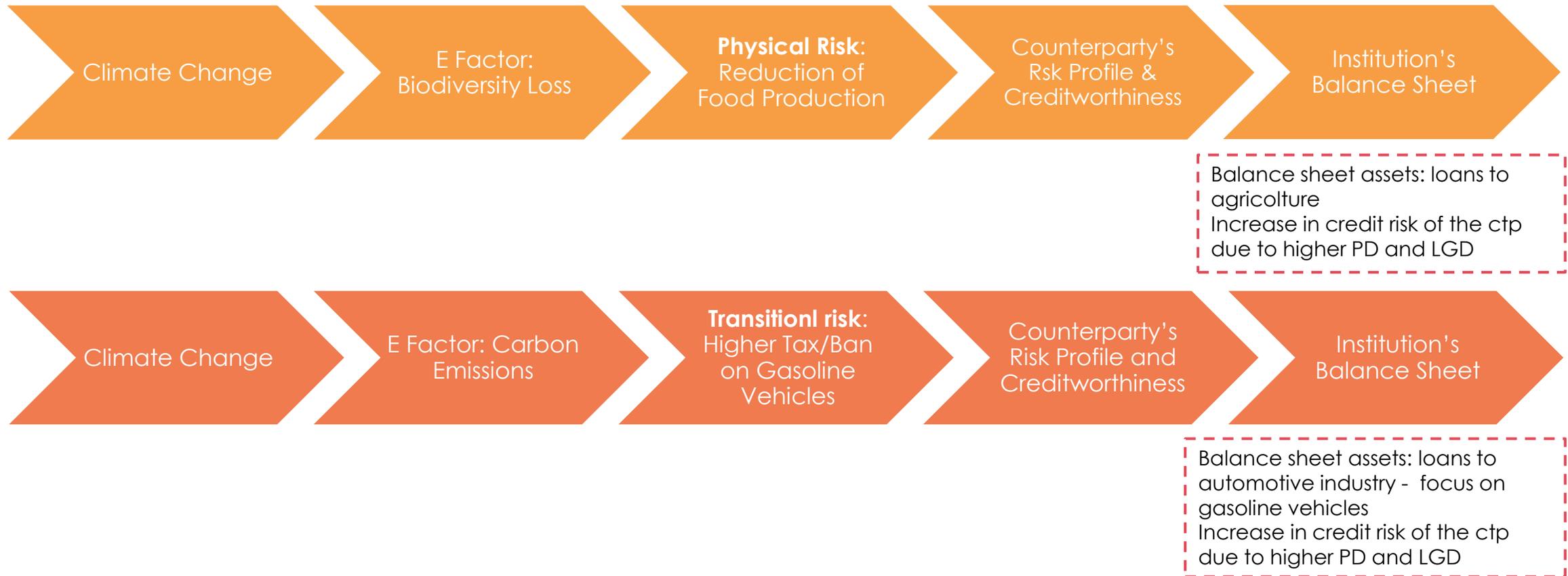
Transition Risks

- **Policy risks**, e.G., As a result of energy efficiency requirements, carbon-pricing mechanisms which increase the price of fossil fuels
- **Legal risks**, e.G., The risk of litigation for failing to avoid or minimise adverse impacts on the climate
- **Technology risks**, e.G., If a technology with a less damaging impact on the climate replaces one that is more damaging
- **Market risks**, e.G., If the choices of consumers and business customers shift towards more sustainable products
- **Reputational risks**, e.g., the difficulty of attracting and retaining customers, employees, business partners and investors if a company has reputation for damaging the climate

ESG Factors, Risks, Drivers and Transmission Channels 9/11

Environmental Factors and Risks 2/2

How can environmental factors give rise to physical and transition risk drivers, impacting institutions' balance sheets and revenues?



ESG Factors, Risks, Drivers and Transmission Channels 10/11

Social Factors and Risks



Social factors are related to the rights, well-being and interests of people and communities, and include factors such as (in)equality, health, inclusiveness, labor relations, workplace health and safety, human capital and communities. They can be defined as **social matters that may have a positive or negative impact** on the financial performance or solvency of an entity, sovereign or individual.

Social risks are the risks of any negative financial impact on the institution stemming from the current or prospective impacts of social factors on its counterparties or invested assets.

Despite these efforts towards defining social factors at the European level, references to definitions of social factors are generally **more difficult to identify** than for environmental factors: the European Commission's "European Pillar of Social Rights" provides a definition of social factors by outlining 20 principles that relate to equal opportunities and access to the labour market (among which, gender equality), fair working conditions (among which, wages and work-life balance) and social protection and inclusion (among which, childcare, unemployment benefits, healthcare, access to essential services and minimum income).

How can counterparty violations of social factors affect the balance sheets of the institutions?



Balance sheet assets: loans to manufacturing firm violating human rights
Increase in operational/legal risk due to litigation or fines, plus reputational risk due to a shift of consumer preferences and credit risk due to higher PD and LGD of the ctp

ESG Factors, Risks, Drivers and Transmission Channels 11/11

Governance Factors and Risks



Governance factors cover aspects as executive leadership and pay, internal controls, board independence, shareholder rights, corruption and bribery and the way in which companies **include environmental and social factors** in their policies and procedures. They can be defined as governance matters that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual.

Governance risks are the risks of any negative financial impact on the institution stemming from the current or prospective impacts of governance factors on its counterparties or invested assets.

Governance factors in the context of ESG factors **do not refer to the governance arrangements of supervised institutions**, but instead to governance factors that have an **impact on or are impacted by institutions' counterparties or invested assets**, including governance arrangements for the environmental and social factors in counterparty policies and procedures.

No universal frameworks have been identified in Section 2 on governance factors specifically that are currently being used by the market. Instead, governance factors are often part of national legislations, such as corporate governance codes.

The European Commission work on Governance Factors

At the European Commission level, **a public consultation closed in February 2021** on the "Sustainable corporate governance" initiative, which aims to **improve the EU regulatory framework** on company law and corporate governance, enabling companies to focus on long-term sustainable value creation rather than short-term benefits and to better manage sustainability-related matters in their own operations and value chains as regards social and human rights, climate change and environmental factors. **A proposal for a directive is expected to be published later in 2021.**

03

Indicators, Metrics and Methods

Main Challenges

Identification: Quantitative and Qualitative Indicators

Evaluation: Methodological Approaches



Indicators, Metrics and Methods 1/9

Main Challenges

The main challenges of incorporating ESG risks into institutions' management processes and their supervision:

1

Level of Uncertainty

The timing and effect of **policies** and related **regulatory interventions** are **hard to predict**, as are the **timing and effect of physical risks**

2

Insufficient Data

Scarcity of relevant, comparable, reliable and user-friendly data, in particular for counterparties different from Large Corporate

3

Methodological Constraints

Most of the **risk management models** are based on the use of **historical data** and ESG factors are frequently not reflected in these data and **translating ESG risks into financial risks** is very challenging
Lack of a harmonised definition of the full range of sustainability-oriented activities

4

Multi-point Impact of ESG Risks on

Institutions ESG risks can impact **different financial risk** so they can impact the financial position of institutions in multiple ways

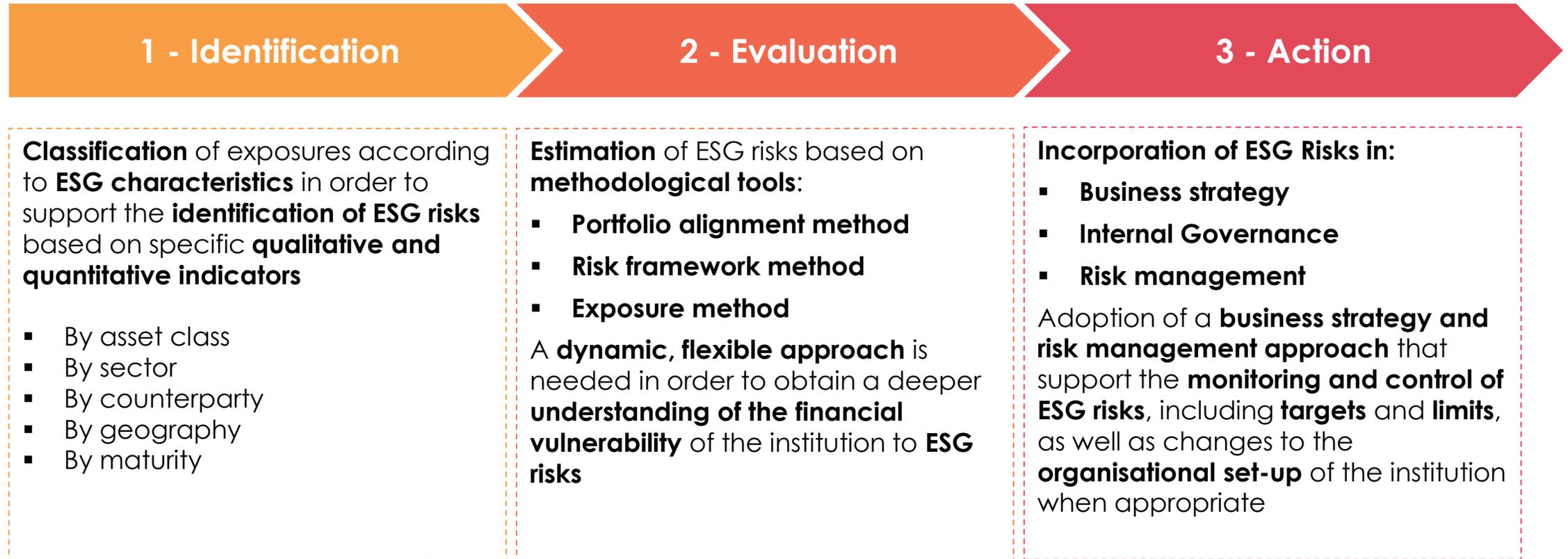
5

Non-Linearity

Most ESG risks, especially those related to environmental risks, are non-linear in nature. Both physical and transition risks can create **complex chain reactions and cascade effects**

Indicators, Metrics and Methods 2/9

Assessment of ESG Risks



Indicators, Metrics and Methods 3/9

Identification: Quantitative and Qualitative Indicators

In order to classify the exposures according to their ESG features, different indicators can be used:

Taxonomies

Classify different **elements** within a given set by defining them and linking them to different **categories based on certain criteria**

Standards/ Principles

Provide certain **generally well-accepted, measures or norms** that allow comparative evaluations to be made

Investment Benchmarks

Incorporate **specific sustainability-related objectives** and help to assess and compare the **performance of sustainable investments over time**

Sustainability-related Frameworks

Focus in the previous section 

Labels

Certified accreditations that formally recognise **compliance** of financial products with given **taxonomies and standards**

Indicators, Metrics and Methods 4/9

Evaluation: Methodological Approaches 1/6

Portfolio Alignment Method

Purpose: How aligned is an institution's portfolio with global sustainability targets?

The key **principle** of the approach is for institutions, investors and supervisors to **understand how far portfolios are aligned with globally agreed (climate) targets**. It is a very **results-oriented** framework which enables institutions to understand the priorities and direct implications of their portfolio allocation.

However it does **not** make an **explicit link** between **sustainability targets and the portfolios' risk characteristics** (in terms of Risk parameters) and it does not take into account the relative transition abilities of industries.

The institutions' actual **strategies and risk management procedures** are **not always considered in a proper manner**.

Being an assessment of the portfolio as a whole, it **does not take into account** the levels of alignment and hence **climate risk** of the **specific exposures**.

Main examples:

- 2 Degrees Investing Initiative - Paris Agreement Capital Transition Assessment tool (2DII PACTA Tool)
- United Nations Environmental Program Finance Initiative Principles for Responsible Banking (UNEP FI PRB)
- Partnership for Carbon Accounting Financials (PCAF)

Indicators, Metrics and Methods 5/9

Evaluation: Methodological Approaches 2/6

Risk Framework Method

Purpose: How will sustainability-related issues affect the risk profile of a bank's portfolio and its standard risk indicators?

Climate Stress Test

Assessment featuring **fully fledged scenarios** that map out possible **future development paths** of **transition variables**, **physical variables** and the related changes in **macro variables** and **financial variables**. These scenarios are then **translated into changes in portfolio risk attributes**.

Main examples:

- DNB Stress test on energy transition risk for the financial system 2018
- BoE Biennial exploratory scenario on the financial risks from climate change 2021
- ACPR Pilot exercise on climate-related risks*
- ECB Economy-wide climate stress test
- ECB 2022 Climate Risk stress test

Climate Sensitivity Analysis

A **simpler exercise without scenarios**, assessing **changes in portfolio risk attributes** by **changing some of the inputs** in financial models based on shading and classification of exposures into 'green' versus 'non-green'.

* For more details, please refer to the following [Just In Time](#) published by Iason

Indicators, Metrics and Methods 6/9

Evaluation: Methodological Approaches 3/6

Exposure Method

Purpose: How do individual exposures and counterparties perform on ESG factors?

The approach **directly evaluates** the **performance of an exposure in terms of its ESG attributes** and it can then be used to **complement the standard assessment of financial risk categories** based on information at company level and sector level characteristics.

It **covers all three aspects of ESGs**, whilst many of the other approaches and tools tend to focus predominantly on climate risk to date and **it does not involve complex scenario analysis** based on many assumptions **but** relies mainly on **backward-looking metrics**

ESG ratings provided by specialised rating agencies:
direct, stand-alone ratings on ESG factors

ESG evaluations provided by credit rating agencies:
incorporation of ESG factors into the standard credit analysis or separate assessment specifically for ESG risks

ESG evaluation models developed by banks in-house for their own assessment

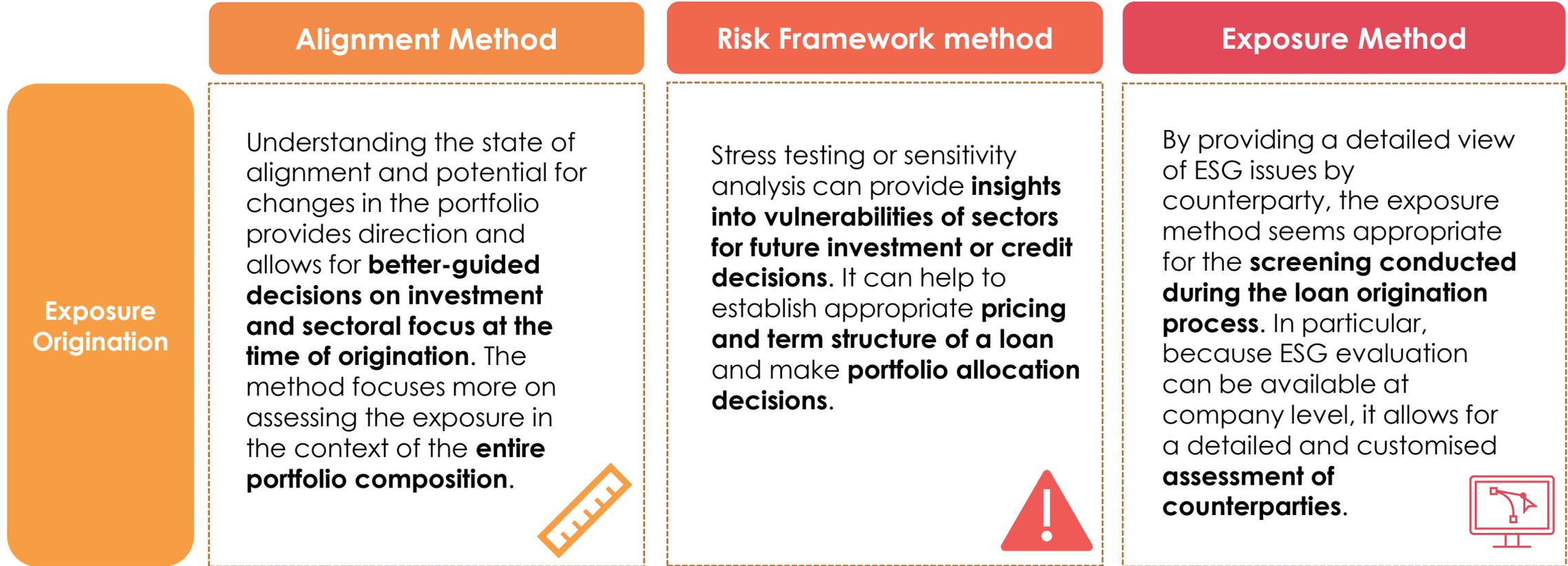
Publicly available ESG scoring models developed by asset managers and data providers

The main issues of the ESG rating are:

- Lack of comparability
- Lack of climate aspects in the ratings
- Over-reliance on external providers
- Lack of transparency with regard to methodologies
- Ratings often exist for listed companies only

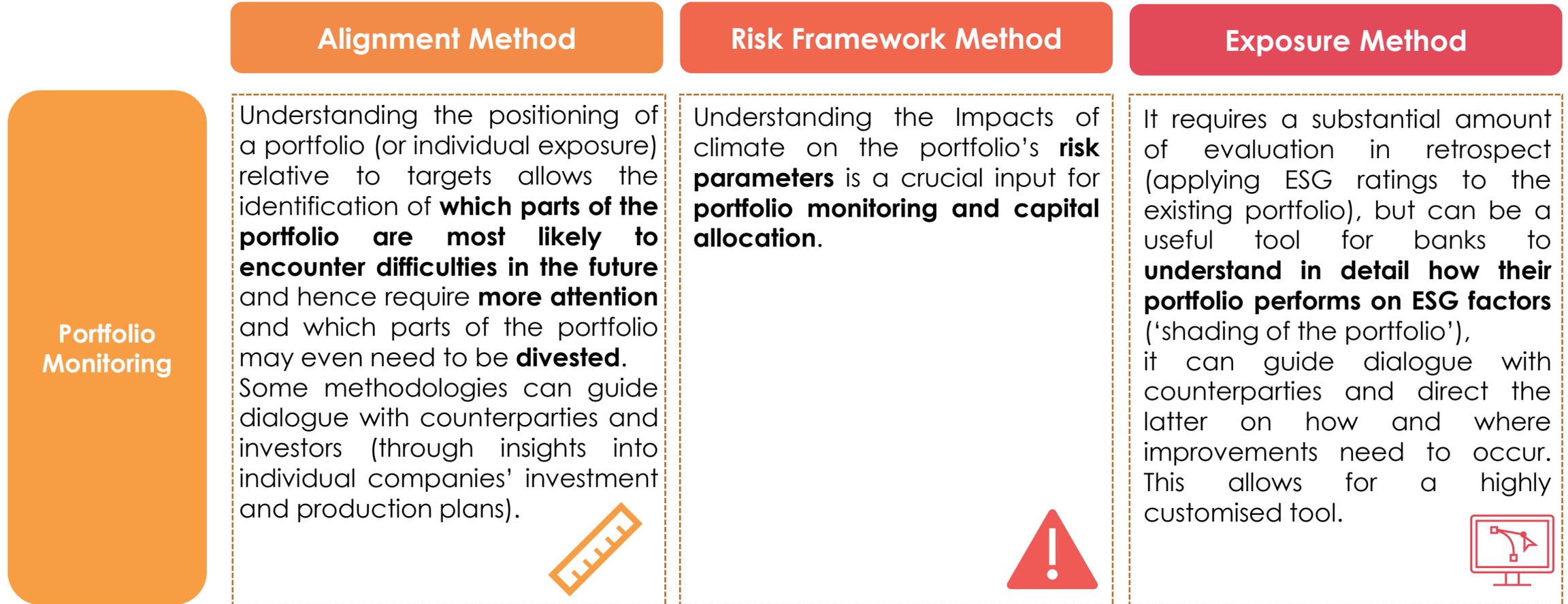
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Indicators, Metrics and Methods 9/9

Evaluation: Methodological Approaches 6/6

	Alignment Method	Risk framework Method	Exposure Method
PROs	<ul style="list-style-type: none"> Introduces explicit targets: direct guidance, highly executable Results-oriented Aligned portfolios are conducive to reduced reputational risk 	<ul style="list-style-type: none"> Risk-based: looks directly at risk, hence integrates well with banks' 'way of doing things' Dynamic nature of scenarios allows interactions of sectors and variables to be reflected, as well as climate dynamics 	<ul style="list-style-type: none"> Transparent, simple, can be done in isolation Established methodology (ESG ratings) Links to Key Performance Indicators (KPI) systems Dialogue with firms
CONS	<ul style="list-style-type: none"> Takes more of a portfolio view (not much focus on individual exposures - individual exposures may well be misaligned) Related to the above: focus is not on individual counterparty dialogue (hence a potential obstacle to counterparty transition) Can be complex (in the case of scenarios), data challenges 	<ul style="list-style-type: none"> Complex, data issues, uncertainty, etc. (see Section 4) Linking ESG risk to the actual financial risk indicators can be a 'black box' 	<ul style="list-style-type: none"> Comparability issues with some ratings Data challenges The outcome is generally of qualitative nature Of a rather static nature - ratings/scores need to be reviewed regularly

04

The Management of ESG Risks by Institutions

Integrating ESG Risks into Business Strategies, Risk
Management and Governance

Business Strategies and Business Processes

Internal Governance

Risk Management Framework

Investment Firms-specific Considerations



The Management of ESG Risks by Institutions 1/16

Integrating ESG Risks into Business Strategies, Risk Management and Governance

Managing ESG risks requires a **specific, long-term, forward-looking and comprehensive approach**, which is at the same time **flexible** enough to account for ongoing developments in terms of the integration of ESG risks into the institutions 'business, internal governance and risk management processes.



The Management of ESG Risks by Institutions 2/16

Business Strategies and Business Processes 1/5

Institutions should take ESG risks into account when assessing, **designing or modifying their business strategy and processes.**

- If ESG risks are not duly taken into account in their business strategies, **institutions might fail to modify their business models in a timely manner to avoid or mitigate the longer-term impacts of ESG risks.**

Considering the relevance and potential impact of ESG risks, including them in the institution's business strategy and business processes could be seen as **inevitable for the institutions' economic resilience over the long-term.**

Business strategies and business processes



The Management of ESG Risks by Institutions 3/16

Business Strategies and Business Processes 2/5

Business Strategies and Business Processes



The assessment of the business environment are translated into considerations on **how and to what extent ESG factors may change the risks to which the financial institution is exposed with a view to adapting its business strategy accordingly.**

- The **specific characteristics and risks** of the financial institution's business model needs to be taken into account:

Geographical Location

Counterparties

Economic Sectors

When assessing the potential impact and materiality of ESG risks and in determining the resulting implications for the business strategy, it is essential to **extend the planning horizons:**

Extend the time horizon for strategic planning to at least 10 years

Including different environmental and social scenarios into the planning process

From a strategic point of view, institutions with a substantial proportion of their business in non-sustainable activities or with a lack of commitment to sustainability objectives may face **reputational issues** affecting their customers or investors base.

The Management of ESG Risks by Institutions 4/16

Business Strategies and Business Processes 3/5

Business Strategies and Business Processes

Setting ESG Risk-related Strategic Objectives and/or Limits

ESG risk-related strategic **objectives and/or limits** are understood as determinations which aim at managing an institution's exposure to ESG risks, over the short-, medium- and long-term time horizons.

- 1 | Institutions should bear in mind that **setting strategic objectives will be likely to alter their overall risk profile**, resulting in a need to **review their risk appetite**.
- 2 | The institutions' overall objectives and targets may need to be translated into more **specific targets (or limits)**.
- 3 | In a similar fashion, institutions could **use the Sustainable Development Goals to mitigate physical and transition risks**.
- 4 | Strategic objectives and limits can also be **formulated based on the EU Taxonomy**.

Institutions should seek to complement **qualitative ESG-risk related objectives and/or limits with quantitative ones**, developing their capacity to quantify these risks and taking advantage of the progress in the availability of data

The Management of ESG Risks by Institutions 5/16

Business Strategies and Business Processes 4/5

Business Strategies and Business Processes

Engaging with Customers and other Relevant Stakeholders

The **direct and indirect engagement** with borrowers, investee companies and other stakeholders' policy should consider at least two perspectives that complement each other:

The **internal perspective**: which capacities and expertise an institution needs to build up in order to understand the business models of its customers and the impact of ESG factors on them.

The **external perspective**: how an institution can interact with borrowers, investee companies and other stakeholders to mitigate ESG risks for the institution that originate from such stakeholders.

While an institution may focus on sustainable activities to reduce ESG risks to its financial exposures, it can also try to address these risks by **starting a dialogue with its counterparties regarding their adaptation to the transition to a more sustainable economy**, through:

- 1 | Promote a mutual understanding
- 2 | Assist counterparties with the development of an action plan
- 3 | Address the energy efficiency of residential homes and their value
- 4 | Define an engagement policy for their market exposures
- 5 | Take a strategic decision on how to use their voting rights

The Management of ESG Risks by Institutions 6/16

Business Strategies and Business Processes 5/5

Business Strategies and Business Processes

Considering the
Development of
Sustainable
Products

Institution should assess the potential need to **develop sustainable products or to adjust features of existing products** as a way of contributing to and ensuring alignment with ESG risk-related strategic objectives and/or limits. These include products typically marked as 'green' or 'social':

1

Institutions that offer **'green' bonds and securitisation** use one of the existing market standards to structure their issuance. These products could take the form of collateralising 'green' exposures on the balance sheet of the institution or collateralising any exposures on the balance sheet in order to use the proceeds or freed-up capital for investments into such 'green' assets.

2

With regard to **social products**, these are generally less developed compared to the green products. Social products aim to finance activities with positive social outcomes.

The Management of ESG Risks by Institutions 7/16

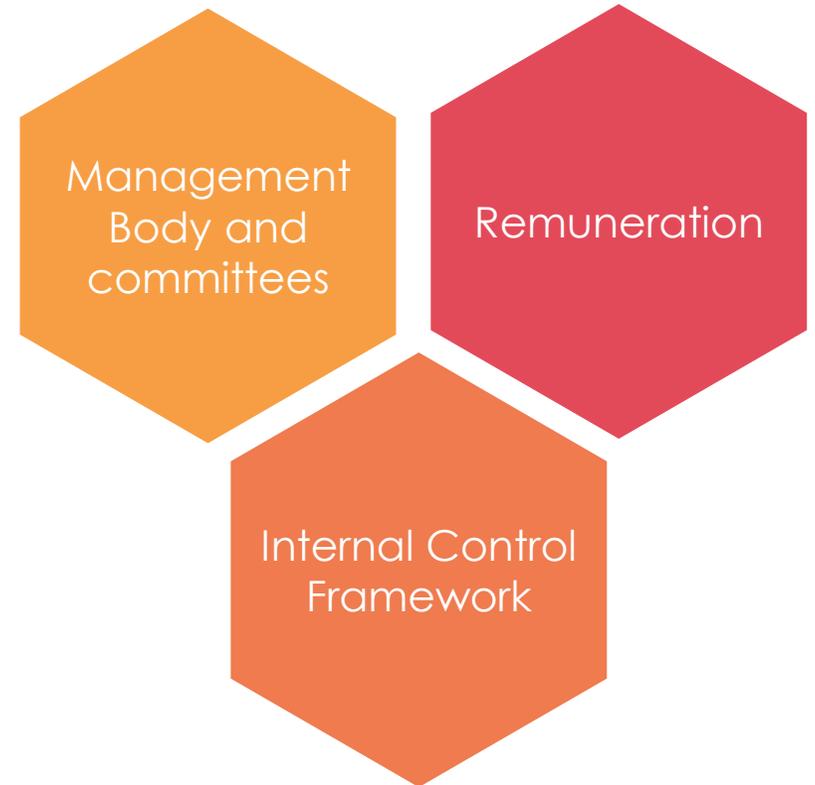
Internal Governance 1/4

Institutions' internal governance arrangements, including the involvement of the management body in establishing a risk culture and setting the risk appetite and the implementation of a robust internal control framework are **key aspects for a successful implementation of ESG considerations and managing ESG risks.**

In current practices it has been found a **common shortcomings** in internal governance arrangements in relation to ESG risks are:

- 1 | **Lack of strategic ownership**
- 2 | **Shortages of knowledge and skills**
- 3 | **Lack of effective third-party risk management**
- 4 | **ESG factors not sufficiently integrated into company culture**

Internal Governance



The Management of ESG Risks by Institutions 8/16

Internal Governance 2/4

Internal Governance



The **management body** in its management function **plays a key role in identifying and assessing the impact, risks and opportunities of changes to the economic, environmental and social environment.** In particular it:

- 1 | Is responsible to ensure an **appropriate monitoring of EG risks and developments**
- 2 | Ensure that a **consistent risk culture** accounting for ESG risks is implemented within the institution
- 3 | **Sets and oversees the implementation of near and long-term goals and strategies**
- 4 | Is involved in **overseeing the progress** against the institution's ESG risk-related **objectives and/or limits**
- 5 | Should ensure that **staff are adequately trained**
- 6 | Needs to **understand the potential impact of ESG factors and related risks** on the business model
- 7 | Ensure that the organisational structure of institutions considers the **potential interaction between ESG risks and financial risks**
- 8 | Have sufficient **knowledge, skills and experience** with regard to ESG factors
- 9 | **Includes the tasks and responsibilities related to the incorporation of ESG factors** into governance arrangements of the institutions.

The Management of ESG Risks by Institutions 9/16

Internal Governance 3/4

Internal Governance



It is important to translate the ESG related aspects of the business strategy into adequate **internal processes and procedures** in line with the institution's risk appetite and risk management policies, credit risk and procedures, adopting a holistic approach.

- 1 | **Business lines and units** are also adequately placed to enhance the dialogue with counterparties and clients, and to enhance due diligence in relation to ESG considerations at the point of risk taking.
- 2 | Institutions set and operate **risk management functions** that are responsible for ensuring the proper risk controls. The risk management function play a key role in the approval of new products.
- 3 | The **compliance function** monitors the alignment of institutions' activities with legal and regulatory requirements on ESG regulatory aspects and sustainability. The compliance function play a key role in the approval of new products.
- 4 | The independent **internal audit function** reviews the internal governance arrangements, processes and mechanisms to ascertain that they are sound and effective, that they are implemented and that they are being consistently applied throughout the organisation.

The Management of ESG Risks by Institutions 10/16

Internal Governance 4/4

Internal Governance



Institutions should ensure that the policy is **consistent** and promotes sound and effective risk management and does **not encourage risk-taking** that exceeds the level of tolerated risk of the institution:

- 1 | A **robust and appropriate incentives-based mechanism** is important to support achieving an appropriate risk culture and should account also for ESG risks.
- 2 | Remuneration policies and practices are applicable to **all staff**, but staff whose professional activities have a **material impact on the institution's risk profile is subject to additional requirements.**
- 3 | **Aligning the remuneration policy** with the institution's ESG objectives is important to avoid conflicts of interest when business decisions are taken.
- 4 | Institution should establish a framework to **mitigate and manage conflicts of interest** which incentivise short-term-oriented undue ESG-related risk-taking, including greenwashing or mis-selling of products.

The Management of ESG Risks by Institutions 11/16

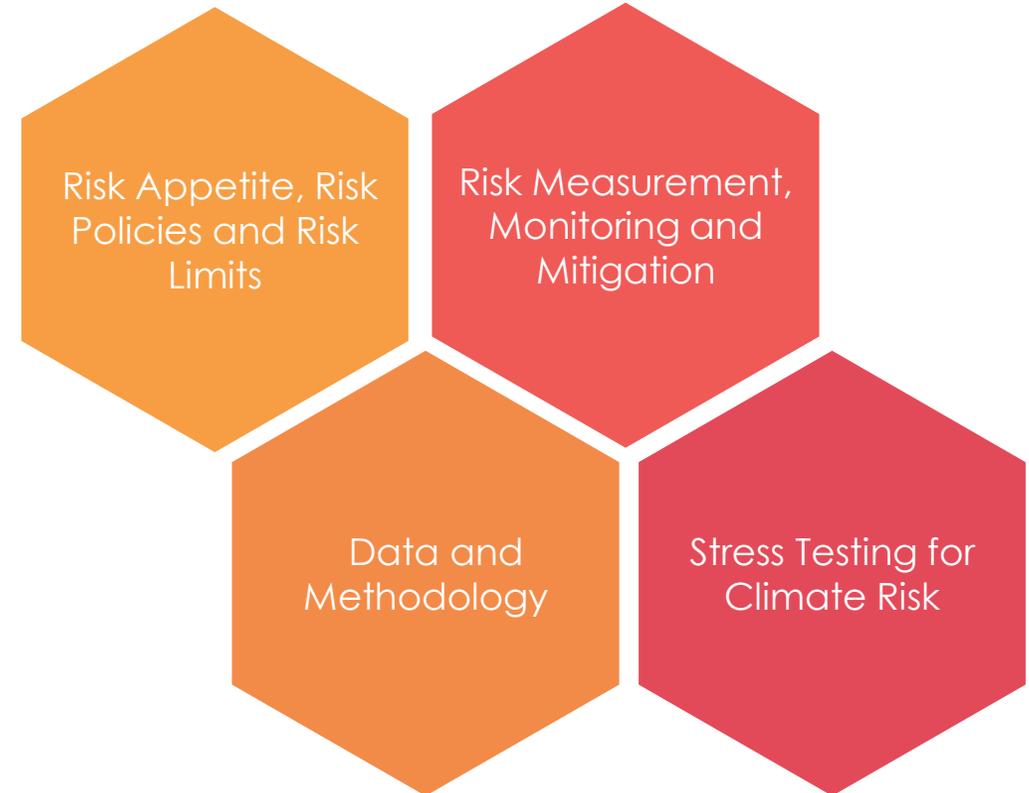
Risk Management Framework 1/5

ESG risks can affect institutions in different ways and ultimately lead to financial impacts. **An active ESG risk management is consequently fundamental to ensure that institutions identify such risks in a timely manner, hence being able to respond to them.**

Although credit institutions assess climate-related risks to be potential material risks for their activities, credit institutions' current efforts to put in place specific risk management processes in relation to climate-related risks are limited. In particular, it appears that credit institutions **have neither yet established:**

- **Key performance indicators** that are necessary for a robust internal risk review process
- Sophisticated **modelling approaches**

Risk management framework



The Management of ESG Risks by Institutions 12/16

Risk Management Framework 2/5

Risk Management Framework



With regards to the **risk strategy, risk appetite**, and the overall **risk policy** it is important to ensure that these sufficiently **reflect ESG factors** as part of the overall framework.

- 1 | Risk management policies could foresee **limits on financing projects** or counterparties which harm environmental/social objectives in line with the institution's business strategy
- 2 | Institution should set out **appropriate policies and procedures** as well as criteria for the assessment of the **repayment capacity and creditworthiness** of counterparties, taking ESG factors and ESG risks into account
- 3 | The risk appetite accounting for ESG risks should be implemented **with the support of applicable ESG risks metrics and limits.**

Institutions should also **include in their ICAAP and ILAAP frameworks** a description of the **risk appetite levels, thresholds and limits** set for the identified material risks, as well as the time horizons, and the process applied to keeping such threshold and limits up to date.

Similarly, institutions' **recovery plans should** account for ESG risks as they can be prone to especially climate change and environmental degradation.

The Management of ESG Risks by Institutions 13/16

Risk Management Framework (3/5)

Risk Management Framework



Data on ESG risks are needed for large institutions to meet their **Pillar 3 disclosure requirements** to improve transparency for the market participants and the wider public.

In **methodology** building, it is essential to evaluate which of the existing methods can incorporate sufficiently the ESG factors.

- The assessment of ESG risks in the initial methodology building might have to build on **different metrics** and categorising them according to their ESG characteristics and risks associated with these, subject to their size and complexity

Methodological challenges due to **limited availability of data** could hamper this quantitative analysis.

- 1 | Given the characteristics of these risks, institutions could rely **first on qualitative information** and a comprehensive and thorough **due diligence process** in order to establish a risk profile of the different counterparties.
- 2 | **Nevertheless and ultimately**, institutions could aim to **establish quantitative metrics** (ie. KPI) for assessing and monitoring social and governance risks.
- 3 | Institutions should identify the **gaps** they are facing **in terms of datasets and methodologies**, and consider **remedial actions**, taking account of the ongoing developments in the field of ESG data and methods

Institutions can **incorporate ESG risks into their risk management frameworks as drivers of existing prudential risk: risks to capital** (credit, operational, market) **and risks to liquidity**.

The Management of ESG Risks by Institutions 14/16

Risk Management Framework 4/5

Risk Management Framework

Risk measurement, monitoring and mitigation

Risk Measurement

When **identifying and measuring or assessing risks**, due to the unique characteristics of ESG risks, institutions would need to employ **measurement methodologies** that are able to **capture the most relevant ESG factors** and sufficiently deal with the fundamental uncertainty of such risks

Risk Monitoring

ESG risks require **monitoring on a continuous basis**, using **tools, models and data**. In order to do so, appropriate **reporting frameworks**, enhanced and supported by the underlying **IT systems**, seem essential. **Accurate data and information** related to ESG risks collected at the point of loan origination form the basis of the monitoring process for the purposes of risk management and throughout the lifecycle of the products.

Risk Mitigation

Additional and complementary measures that institutions may take to **mitigate ESG risks depend on the source of the ESG risks**.

- Institutions can manage ESG risks by implementing an exclusion policy or by **setting specific limits in line with their ESG-risk-related objectives and/or limits**
- **Pricing** is another element that institutions should consider to ensure that their pricing frameworks also reflect the risks driven by ESG factors.

The Management of ESG Risks by Institutions 15/16

Risk Management Framework 5/5

Risk Management Framework



The identification of exposures affected by climate-related risks represents the base of a climate risk stress test, but:

- **Only limited empirical and granular data exist** to measure actual climate risk exposures;
- **Classifying green versus non-green exposures** in a consistent way is the major challenges.
- **Translating borrower level criteria into supervisory data requirements at exposure class level** appears fraught with operational issues as more granular information would be needed at activity level to identify those borrowers particularly exposed to climate risk.
- **Integrating inputs data with a broader set of climate risk indicators** could pose significant comparability and data quality issues
- The **assumption of longer time horizons** challenges the way risks are usually assessed
- **Transition risks vary** across sectors depending on the adaptation pace and can change in the future: early adaptation versus late adaptation

In light of these challenges, **climate stress tests remain work in progress and in an early stage.**

Published methodologies are **described at high level:**

- In a first step, the channels through which the risk factors provided in the climate scenarios affect banks' balance sheet are identified.
- Then, the shocks transmission mechanism to banks exposures is modelled.

The Management of ESG Risks by Institutions 16/16

Investment Firms-specific Considerations

The risks faced and posed by investment firms from an ESG point of view may have some **differences** compared to those faced and posed by credit institutions:

- 1 | The materialisation of ESG risks would manifest in **different risk metrics monitored under the IFD**.
- 2 | Investment firms are expected to increasingly consider the ESG factors in **their activities** and potentially **adjusting their investment behaviour reflecting their risk tolerance to the ESG risks**. Such change in investment behaviour need to be supported also by **adjustments in reporting and disclosure practices** in line with the relevant legislative developments.
- 3 | ESG risks may materialise for investment firms when they perform **deals on own account** through either shareholders' funding or clients' finances. The ESG risks may manifest on their **balance sheets** mainly through the positions they take in the **markets**.
- 4 | The **type of investment and the asset** for investment may drive the impact of ESG risks on the investment firms dealing on own account.

Key Arguments on the Need to Incorporate the ESG Risks



Reflecting the specificities of their activities is equally valid

05

ESG Factors and ESG Risks in Supervision

Links Between ESG Risk and Supervisory Review

ESG Risks in Business Model Analysis

Internal Governance and Institution-wide Controls

Assessment of Risk to Capital

Assessment of Risks to Liquidity and Funding

SREP Capital Assessment



ESG Factors and ESG Risks in Supervision 1/7

Links Between ESG Risk and Supervisory Review

- ESG risk shall be embedded in the supervisory review and evaluation process (SREP).
- The links between ESG factors/risk and supervisory review can be exemplified through the following figure:



- The key areas that support the institutions' sound and effective management of ESG risks are the following:
 - Business strategies and business processes;
 - Internal governance
 - Risk Management
- ESG risks imply negative financial impacts** to the institution and Supervisory understanding of the institution's ESG risks exposure is very relevant for the evaluation of the risks the institution is or might be exposed to.
- Capital requirements set in Pillar 2 are estimated to cover primarily the unexpected losses over a 12-month period, however **ESG risks can be seen on a longer time horizon.**

ESG Factors and ESG Risks in Supervision 2/7

ESG Risks in Business Model Analysis

- Institutions need to take ESG risks into account when formulating and revising their business strategies
- For the purpose of evaluating a credit institution's business model from an ESG risks perspective, analysis of the business model implies an **evaluation of the long-term resilience of a credit institution and supervisors shall rely on forward-looking analyses, non-financial reporting, ESG ratings.**
- The analysis of the business model shall be performed both considering the current situation and in a forward looking perspective:

Analysis of the current business model:

supervisors shall conduct both a quantitative analysis and a qualitative analysis. The impact of climate-related regulatory changes should be part of both analyses.

In a forward-looking manner, **supervisors are deemed to analyse a credit institution's financial projections and strategic plans** to assess the sustainability of the credit institution's strategy in the short/medium term (at least 3 years).

Finally, given the longer-term time horizon of the transition with climate mitigation targets being set for 2030 and 2050 in the EU, competent **authorities should analyse the long-term resilience of the institutions' business plans and strategies** (for a period of at least 10 years).

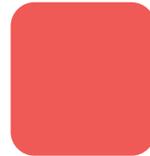
ESG Factors and ESG Risks in Supervision 3/7

Internal Governance and Institution-wide Controls

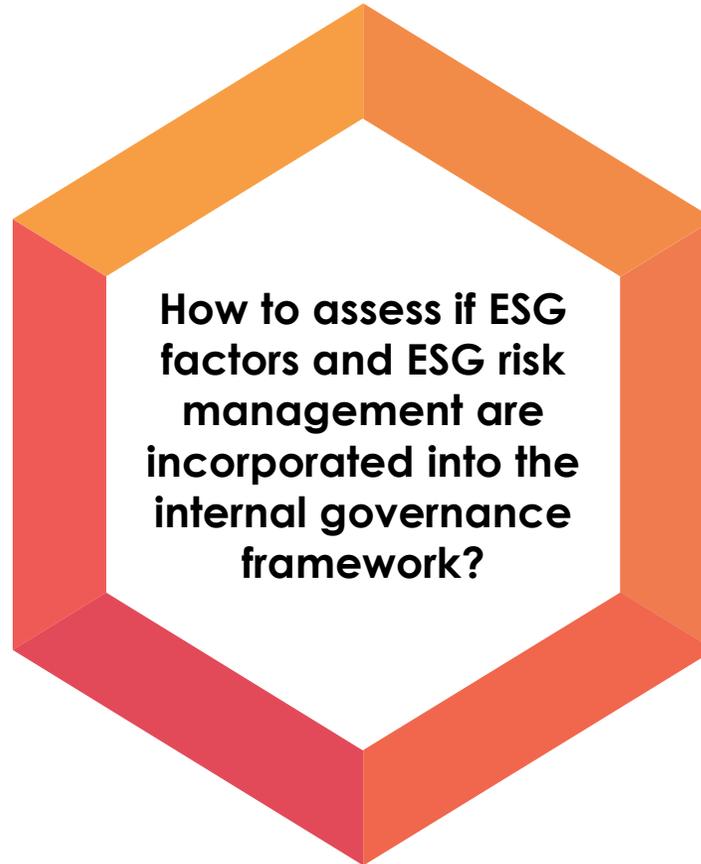
Ensure that the institution has a **clear, strong and effective communication system for its ESG strategy**



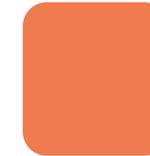
Assess whether the **management body considers ESG factors** in its management and supervisory function.



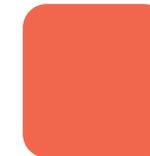
Evaluate whether the institution has effective and reliable information and communication systems and whether such systems are **capable of identifying, quantifying and monitoring ESG risks**



Assess the **impact of remuneration policies** on the achievement of sound and effective long-term risk management objectives from the point of view of ESG considerations



Consider **ESG aspects when evaluating the 'lines of defence' model**, in regard to consistency in the implementation of ESG risk-related objectives



Ensure that **ESG factors and risks are sufficiently incorporated in the overall risk management framework**

ESG Factors and ESG Risks in Supervision 4/7

Assessment of Risk to Capital 1/2

Assessment of Credit and Counterparty Risk

- Credit risk, it is generally assessed in the short to medium term, so the **introduction of forward-looking metrics** is a valuable instrument for understanding whether ESG factors impact an institution's credit risk profile.
- From a strategic perspective, supervisors can assess how the loan book would evolve if long-standing business relations were impacted by ESG risks. This assessment shall consider:
 - **Whether the institution is aware of how ESG risks drive credit risk** for each portfolio;
 - If the institution has assessed the impact of ESG risks on its credit risk, whether it has properly **embedded ESG risks into its risk appetite statement**,
 - How **ESG risks are included in loan origination and monitoring**.
- ESG risks should be considered in the assessment, both at **inception and during the ongoing relationship**.
- At portfolio level, ESG risks can be assessed by means of **concentration analysis**.

Assessment of Portfolio Credit Quality

Supervisors should check that institutions include in their risk measurement a set of forward-looking tools to investigate how exposures can be impacted by, for instance, climate-related risks.

ESG Factors and ESG Risks in Supervision 5/7

Assessment of Risk to Capital 2/2

Assessment of Quality and effectiveness of risk management

- A comprehensive supervisory review will aim at **assessing how the risk management framework incorporates ESG considerations**, how responsibilities are assigned and how the risk is identified, measured, controlled and monitored.
- Supervisors shall check that the credit strategy is fully aligned and properly reflects the underlying ESG risk appetite

Assessment of market risk

It is important that supervisors assess how institutions proactively monitor the impact of ESG risks on their market risk positions. In particular they should check:

- Whether the **proper set of controls to detect the emergence of ESG risks** is in place;
- Whether credit institutions have put a **proper ESG strategy for market risk** in place

Assessment of operational risk

With regard to the impact of ESG risks on operational risk, supervisors could **consider the extent to which the activities in which the institution is involved increases the risk of future reputational damage**. Divergence between the role of ESG risks in the institution's communications and their relevance in its internal reputational risk management should alert the supervisors.

ESG Factors and ESG Risks in Supervision 6/7

Assessment of Risks to Liquidity and Funding

Liquidity

With regard to liquidity, ESG factors are relevant in the following assessments:

- The evaluation of liquidity needs in the short and medium term, in particular whether **ESG risks could cause net cash outflows that negatively impact the institution's liquidity position**;
- The evaluation of the liquidity buffer and counterbalancing capacity, in particular whether **ESG factors and risks are considered in scenario assumptions**
- Supervisory liquidity stress testing, where specific vulnerabilities linked to ESG factors and risks can be evaluated in more detail

Funding

With regard to funding, ESG factors are relevant in the following assessments:

- The evaluation of risks to the stability and sustainability of the funding profile, in particular whether **ESG factors could imply material changes to the types and characteristics of both assets and liabilities**;
- The evaluation of the current, and medium- and long-term market access, in particular due to **reputational issues deriving from a perceived lack of ESG awareness and actions**



Finally, supervisors shall assess the governance and risk management framework underlying liquidity and funding risk. In this respect they shall assess whether **ESG factors and risks are duly considered in the institutions overall strategy regarding funding and liquidity.**

ESG Factors and ESG Risks in Supervision 7/7

SREP Capital Assessment

EBA expects institutions to cover at least all material risks in their ICAAP, meaning that internal capital estimates should be provided for all material risks

The ICAAP assessment should be a starting point for supervisory dialogue, to **discuss with institutions which ESG risks are material** to them and how they intend to mitigate them.

The EBA acknowledges the **inherent uncertainties with respect to the quantification of ESG risks**, and specifically social and governance risks, that are deemed to be less advanced. In this respect, **supervisors should continue developing their methodologies to detect and quantify ESG risks.**

Along with further methodological developments, **competent authorities should be able, in the medium-long term, to assess whether the levels of internal capital adequately cover the ESG risks** to which the institutions are exposed.

06

Final Remarks

The Management of ESG Risks by Institutions and
Supervision

ESG Factors, Risks, Drivers and Transmission Channels

Indicators, Metrics and Methods



Final remarks 1/2

The Management of ESG Risks by Institutions and Supervision

The Management of ESG Risks by Institutions

- It is necessary to enhance the proportional **incorporation of ESG risks into institutions' business strategies and processes**, the impacts of ESG risks should be appropriately taken into account in order to ensure the resilience of their business models over the short-, medium and long-term time horizons.
- It is necessary for institutions to proportionately **incorporate ESG risks into their governance structures** (business lines, internal control functions, relevant committees and management body) and **encourage staff behaviour** that is consistent with the institution's ESG risk approach and design adequate remuneration policies
- It is necessary for institutions to **incorporate ESG risks into their risk management frameworks** (risk appetite, policies and procedures and limits) taking into account the assessment of their materiality over different time horizons

ESG Factors and ESG Risks in Supervision

- The EBA sees a need to introduce a new aspect of analysis into the supervisory assessment, evaluating whether institutions sufficiently test the long-term resilience of their business models against, exceeding commonly used timeframes of 3-5 years and **covering a time horizon of at least ten years**, in order to be aligned to the time horizon of the relevant public policies or broader transition trends
- With this regard, **competent authorities should further develop their stress testing methodologies and practices** in order to better understand institutions' vulnerabilities related to ESG risks in particular to evaluate the potential impacts driven by transition risk and physical risk.

Final Remarks 2/2

ESG Factors, Risks, Drivers and Transmission Channels

ESG Factors,
Risks, Drivers
and
Transmission
Channels

Indicators,
Metrics and
Methods

- A fundamental part of evaluating and measuring ESG risks in a comparable manner is to establish common definitions of ESG factors and to understand how these factors translate into financial risks:
 - Financial institutions and European authorities are working to **establish common frameworks** and definitions, but there still much to do, mostly in terms of Social and Governance factors.
- The Environmental section of ESG factors is the most straightforward to be understood and associated to typical financial risks: **further analyses on S and G topics** need be performed to assess their impacts on traditional risks (apart from reputational and legal).
- For the time being, institutions should **focus on the “outside-in” perspective** of ESG risks, since this is the one mostly expected to have a concrete impact on traditional risk types, as credit or market risks, while also being the most difficult to be studied.
- ESG risks might materialise through a considerably high number of **transmission channels**, whose understanding is a **key prerequisite** to investigate the impact of such risks on the institutions' assets.
- The **main challenges** of incorporating ESG risks into institutions' management processes and their supervision are:
 - **Level of uncertainty**
 - **Insufficient data**
 - **Methodological constraints**
 - **Multi-point impact of ESG risks on institutions**
 - **Non-linearity**
- In order to obtain a **proper assessment** of the ESG risks, the following steps are needed:
 - **Identification** through **quantitative and qualitative indicators**
 - **Evaluation** through **methodological tools** (Portfolio Alignment Method, Risk framework method and Exposure Method)
- The **methodological approaches** identified have different purposes and should not be seen as substitutes, but can be **used alongside each other** in order to have a **comprehensive evaluation** of the ESG risks at different levels

07

Annex

Non-exhaustive List of ESG Factors, Indicators and Metrics



Annex 1/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 1/13

References for terms applied in this Annex

- (a) 'greenhouse gas (GHG) emissions'** as defined in the GHG Protocol methodology (<https://ghgprotocol.org/calculation-tools>) or the ISO 14064-1:2018 standard and, where appropriate, in the European Commission's Recommendation 2013/179 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations;227
- (b) 'scope 1, 2 and 3 GHG emissions'** means the greenhouse gas emissions referred to in point (1)(e)(i-iii) of Annex III of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds, and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014;228
- (c) 'tonnes of CO2'** means tonnes of carbon dioxide equivalent as defined in Article 3(j) of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC;229
- (d) 'carbon footprint'** is an absolute or relative measure of GHG emissions as defined in points (a) and (c);
- (e) 'fossil fuel sectors'** relates to the production, processing, distribution, storage or combustion of fossil fuels, with the exception of investment related to clean vehicles²³⁰ as defined in Article 4 of Directive 2009/33/EC of the European Parliament and of the Council on the promotion of clean and energy-efficient road transport vehicles;
- (f) 'national emissions reduction commitments'** for EU countries, these are obligations to reduce emissions of a given substance, specifying the minimum emission reductions that have to be achieved in the target calendar year, as a percentage of the total of emissions released during the base year (2005), as per Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, pp. 1-31). For other countries, refer when available to intended nationally determined contributions to reduction in GHG emissions under the United National Framework Convention on Climate Change (UNFCCC);
- (g) 'energy consumption intensity'** measures the energy consumption per unit of activity, output or any other metric, in the meaning of Directive ((EU) 2018/2002) amending the Energy Efficiency Directive (2012/27/EU);
- (h) 'renewable energy sources'** means renewable energy sources referred to in Article 2(1) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion and use of energy from renewable sources (recast)²³¹;
- (i) 'non-renewable energy sources'** means energy sources other than those referred to in point (h);

Annex 2/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 2/13

References for terms applied in this Annex

- (j) 'water consumption intensity'** in the meaning of Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy with a view to protecting the sustainable use and environmental status of all waters;
- (k) 'hazardous waste'** means hazardous waste as defined in Article 3(2) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives 232, and radioactive waste;
- (l) 'non-recycled waste'** means any waste not recycled within the meaning of 'recycling' in Article 3(17) of Directive 2008/98/EC;
- (m) 'water pollutants'** means Direct Nitrates emissions (scope 1), Direct Phosphate emissions (scope 1), Direct Pesticides emissions (scope 1), Direct emissions of priority substances (scope 1) as defined in the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy²³³, Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC) ²³⁴, Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment²³⁵ and Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)²³⁶;
- (n) 'air pollutants'** means Direct Sulphur dioxides (SO_x/SO₂) emissions, Direct Nitrogen oxides (NO_x/NO₂) emissions, Direct Ammonia (NH₃) emissions, Direct Particulate matter (PM_{2.5}) emissions, Direct Non-methane volatile organic compounds (NMVOC) emissions, Direct total heavy metals (HM) emissions as referred to in Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC²³⁷;
- (o) 'biodiversity and ecosystem services'** refers to the concept of biodiversity and ecosystem services as laid out in the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), released in May 2019;
- (p) 'protected area'** means an area designated under the European Environment Agency's Common Database on Designated Areas (CDDA)²³⁸;
- (q) 'area of high biodiversity value outside protected areas'** means an area not subject to legal protection, but recognised for important biodiversity features by a number of governmental and non-governmental organisations, including habitats that are a priority for conservation, which are often defined in National Biodiversity Strategies and Action Plans prepared under the United Nations (UN) Convention, 'Convention on Biological Diversity', 1992;

Annex 3/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 3/13

References for terms applied in this Annex

- (r) 'gender pay gap'** means the difference between average gross hourly earnings of male and female paid employees for equal work or work of equal value, as a percentage gross hourly earnings of male paid employees;
- (s) 'human rights policy'** means a policy commitment approved at highest decision-making level on human rights;
- (t) 'workplace safety and health'** as specified in the Directive 89/391/EEC, known as the OSH 'Framework Directive', which lays down the main principles to encourage improvements in the safety and health of workers at work, and the requirements developed thereafter by the European Commission and the European Agency for Safety and Health at Work (EU-OSHA).
- (u) 'inorganic pollutants'** means emissions within or lower than the emission levels associated with the best available techniques (BAT-AEL) ranges set out in the Best Available Techniques Reference Document (BREF) for the Large Volume Inorganic Chemicals- Solids and Others industry;
- (v) 'soil degradation'** means the diminishing capacity of the soil to provide ecosystem goods and services as desired by stakeholders, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) as referred to in paragraph 100 of Decision No 1386/2013/EU;
- (w) 'areas of high water stress'** means regions where the percentage of total water withdrawn is high (40-80%) or extremely high (greater than 80%) in the World Resources Institute's (WRI) Water Risk Atlas tool 'Aqueduct';
- (x) 'heatwaves'** means heat or hot weather that lasts for several days, as defined in the European Environment Agency's indicator assessment of 'extreme temperatures and health'.
- (y) 'water scarcity'** means pressure on the renewable freshwater sources of a defined territory during a specific period, where the percentage of total water withdrawn is high (40-80%) or extremely high (greater than 80%) in the World Resources Institute's (WRI) Water Risk Atlas tool 'Aqueduct'.
- (z) 'floods'** means overflows of large amounts of water beyond its normal limits, caused by increases in mean local sea levels which can be further increased by storm surges and tidal changes, as defined in the European Environment Agency's indicator assessment of 'Extreme sea levels and coastal flooding'.
- (aa) 'coastal erosion'** is the process by which local sea level rise, strong wave action, and coastal flooding wear down or carry away rocks, soils and/or sands along the coast, as defined in the US government's Climate Resilience Toolkit.
- (bb) 'wildfire'** is an unplanned fire that burns in a natural area such as a forest, grassland or prairie and which are often caused by human activity or a natural phenomenon, the risk of which increases in extremely dry conditions such as droughts, as defined in the European Environment Agency's indicator assessment of 'Forest fires'

Annex 4/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 4/13

Environmental Factor

Factor	Indicator	Metric
Emissions	Total GHG emissions (broken down by scope 1, 2 and 3 carbon emissions)	Tonnes of CO2 (please see points (a), (b) and (c) above)
	Emissions of air pollutants	Weight in tonnes of air pollutants (see point (m) above)
	Emissions of water pollutants	Weight in tonnes of water pollutants (see point (n) above)
	Emissions of inorganic pollutants	Weight in tonnes of inorganic pollutants (see point (u) above)
	Carbon footprint	Tonnes of CO2 (please see points (c) and (d) above)
	Fossil fuel sectors	% or total (please see point (e) above)
	Reduction policies or initiatives on the use and production of fossil fuels	Presence/lack of reduction policies or initiatives in place on the use and production of fossil fuels (see point (e) above)
	Compliance with Paris Agreement targets	See point (f) above
	Reduction policies or initiatives on emissions	Presence/lack of reduction policies or reduction policies or initiatives in place on emissions(see points (a), (b) and (c) above)

Annex 5/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 5/13

Environmental Factor

Factor	Indicator	Metric
Energy Efficiency	Energy consumption intensity	In Gigawatt hours(GWh) (please see point (g) above)
	Use of renewable sources of energy	% or total (please see point (h) above)
Water Usage	Water consumption intensity	% or total - weight in tonnes of water consumption(please see point j)
Waste Production	Production of hazardous waste	% or total - weight in tonnes of hazardous waste (see point (k) above)
	Reusability/Recyclability	% or total - weight in tonnes of non- recycled waste production (see point (l) above) Presence/lack of initiatives to reduce the production of waste (see point (l) above)

Annex 6/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 6/13

Environmental Factor

Factor	Indicator	Metric
Biodiversity and Ecosystems	Presence/operations (e.g. own, via value chain) in geographic areas impacted by soil degradation	% or total (see point (v) above)
	Presence/operations (e.g. own, via value chain) in geographic areas and industries that are particularly dependent on biodiversity and ecosystem services	% or total (see point (o) above)
	Presence/operations (e.g. own, via value chain) in protected areas or areas of high biodiversity value outside protected areas	% or total (see points (p) and (q) above)
	Operations (e.g. own, via value chain) affecting IUCN Red List species and/or national conservation list species	% or total (see points (p) and (q) above)
Environmental Hazards	Presence/operations (e.g. own, via value chain) in areas likely to be affected by heatwaves	% or total (see point (x) above)
	Presence/operations (e.g. own, via value chain) in areas likely to be affected by water scarcity	% or total (see point (y) above)
	Presence/operations (e.g. own, via value chain) in areas likely to be affected by floods	% or total (see point (z) above)
	Presence/operations (e.g. own, via value chain) in areas likely to be affected by coastal erosion	% or total (see point (aa) above)
	Presence/operations (e.g. own, via value chain) in areas likely to be affected by wildfires	% or total (see point (bb) above)

Annex 7/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 7/13

Social Factors

Factor	Indicator	Metric	
Community/Society	Relations with local communities (networks)	Establishment of business in rural and economically and socially underdeveloped areas	
	Social impact of products and services	Products' potential to reach rural areas and groups of society where development gaps exist	
Employee Relationships/Labour Standards	Freedom of association and right to organise	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 1 and 2	
	Forced labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 3 and 4	
	Minimum age and child labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 5 and 6	
	Equal representation		Average ratio of female to male board members
			Average ratio of females to males in total workforce
	Discrimination		Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 8
			Number of incidents of discrimination (i) reported and (ii) leading to sanctions

Annex 8/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 8/13

Social Factors

Factor	Indicator	Metric	
Employee Relationships/Labour Standards	Equal remuneration	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 7	
		Average gender pay gap	
		Average ratio of the annual total compensation for the highest individual to the median annual total compensation for all employees (excluding the highest-compensated individual)	
	Human capital management and employee relations (training and development opportunities)	Human capital management and employee relations (training and development opportunities)	Ratio of annual total compensation for the highest compensated individual to the median annual total compensation for all employees (excluding the highest compensated individual)
			Share of employees attending training courses in a given year
		Human capital management and employee relations (training and development opportunities)	Frequency of performance assessment per employee
			Share of employees attending training courses in a given year
	Workplace health and safety	Workplace health and safety	Frequency of performance assessment per employee
			Rate of accidents
			Number of workdays lost to injuries, accidents, fatalities and illness

Annex 9/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 9/13

Social Factors

Factor	Indicator	Metric
Customer Relationships	Customer protection and product responsibility	Extent to which products are monitored once introduced on the market
		Extent to which product recall procedures are in place
		Number of incidents of product recalls/withdrawals
		Handling and degree of transparency on management's actions following product recalls/withdrawals
		Lack/presence of a supplier code of conduct
	Personal data security and privacy	Number/rate of data security incidents in which personally identifiable information (PII) was at risk
		Explanation/Disclosure of policies and practices relating to user privacy
		Monetary losses (total amount in EUR) incurred as a result of legal proceedings associated with user privacy
		Degree of transparency on management's approach to identifying and addressing data security risks

Annex 10/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 10/13

Social Factors

Factor	Indicator	Metric
Customer Relationships	Rights of the customers to gain information about ESG factors	Percentage of significant product/ service categories that comply with information and labelling that includes information on sourcing, content (i.e. substances that might produce an environmental or social impact), safe use of the product or service, disposal of the product and environmental or social impacts
		Degree of transparency on the management's approach to marketing and labelling ESG related information
		Publication of information on ESG performance (in the form of stand-alone reports or by integration into Annual Reports)
	Quality and innovation in customer relations	Number of customer complaint incidents
Human Rights	Contribution to human rights projects	Engagement in social projects aimed at supporting and advancing human rights issues in regions of concern
		Number of cases of severe human rights issues and incidents
		Presence/lack of processes and measures for preventing trafficking in human beings
		Presence/lack of human rights due diligence
		Presence/lack of a human rights policy

Annex 11/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 11/13

Social Factors

Factor	Indicator	Metric
Poverty/Famine	Contribution to poverty reduction	Engagement in poverty reduction/aid programmes
		Employment opportunities for economically less advantaged groups

Annex 12/13

Non-exhaustive List of ESG Factors, Indicators and Metrics 12/13

Governance Factors

Factor	Indicator	Metric	
Ethical Considerations	Integrity of conduct/conduct frameworks	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights	
	Values and Ethics	Alignment with the Charter of Fundamental Rights of the EU	
	Bribery and corruption		Compliance with United Nations Convention against Corruption
			Identification of insufficient actions taken to address breaches in procedures and standards of anti-corruption and anti-bribery
			Convictions and violations of anti-corruption and anti-bribery laws (Number of cases and amount of fines)
			Presence/lack of anti-corruption and anti-bribery policies
	Accountability /Rule of law	Alignment with the Worldwide Governance Indicators (World Bank)	
Strategy and Risk Management	Strategy Implementation, Operational Execution and monitoring	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights	
	Internal controls and risk management policies and procedures	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights	

Annex 13/13

Non-exhaustive List of ESG Factors, Indicators and Metrics

Governance Factors

Factor	Indicator	Metric
Inclusiveness	Discrimination	Gap between males and females or any other minority groups in the given region in education access and/or outcomes, representation in government positions and/or boards, salary income, etc.
		Lack of a diversity strategy in place (e.g. age, gender, minority groups)
		Percentage of employees and individuals within governance bodies as per the various diversity categories defined in GRI standard 405-1.
Transparency	Observance of disclosures of information rules and practices	Reliance on high quality, broadly recognised national, EU-based or international frameworks when preparing non-financial statement, including disclosure of the framework chosen
		Compliance with Non-Financial Reporting Directive

Company Profile

Iason is an international firm that consults Financial Institutions on Risk Management. Iason integrates deep industry knowledge with specialised expertise in Market, Liquidity, Funding, Credit and Counterparty Risk, in Organisational Set-Up and in Strategic Planning.

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