



# Development of Tools and Mechanisms for the Integration of ESG Factors into the EU Banking Prudential Framework and into Banks' Business Strategies and Investment Policies

Final Study

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# **Development of Tools and Mechanisms for the Integration of ESG Factors into the EU Banking Prudential Framework and into Banks' Business Strategies and Investment Policies**

Final Study

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## Abstract

This study, conducted on behalf of the European Commission, explores the integration of ESG factors into banks' risk management processes, business strategies and investment policies, as well as into prudential supervision. It provides a comprehensive overview of current practices and identifies a range of best practices for the integration of ESG risks within banks' risk management processes and prudential supervision. It outlines challenges and enabling factors associated with the development of a well-functioning EU market for green finance and sustainable investment. The study is based on the collection and aggregation of information from a wide range of representative stakeholders, in order to reflect a full spectrum of views. Findings show that ESG integration is at an early stage, and the pace of implementation needs to be accelerated in order to achieve effective ESG integration into banks' risk management and business strategies, as well as prudential supervision. To support this acceleration, enhancements are particularly required on ESG definitions, measurement methodologies, and associated quantitative indicators. A lack of adequate data and common standards remain key challenges to be overcome to drive ESG integration. Cross-stakeholder collaboration, as well as supervisory initiatives and guidance, will be critical in tackling this global and pervasive topic.

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# Executive Summary

## Context and structure

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This study provides an assessment of current practices for integrating environmental, social and governance (ESG) factors into the EU banking prudential framework as well as into banks' risk management, business strategies, and investment policies. Its main purpose is to enhance the understanding of ESG risks and their relevance within the financial system. The study was conducted as a comprehensive stocktake to collect and aggregate information from a wide range of representative stakeholders, including banks, supervisors, regulators, international organisations, civil society organisations, and academics, in order to reflect a full spectrum of views. The study reflects input and perspectives gathered from more than 150 stakeholders through desk research, focus groups, structured questionnaires and interviews, and workshops. Feedback in the form of questionnaires/interviews was received from 28 banks, 15 supervisors and regulators, and 15 international organisations, civil society organisations, and other stakeholders. For the purpose of this study, input received from questionnaires/interviews was not fact checked.

The study's objectives are to identify modalities of (1) integrating ESG risks into EU banks' risk management processes; (2) integrating ESG risks into EU prudential supervision; and (3) integrating ESG objectives into EU banks' business strategies and investment policies.

The study first provides an overview of current approaches to integrate ESG risks into banks' risk management and banking prudential supervision, and subsequently identifies relevant principles of best practices. The study then summarises current banks' strategies to integrate ESG objectives in their lending and investment activity. It concludes with an overview on the impediments to the development of well-functioning EU markets for green finance and sustainable investments, and illustrates enabling factors to promote the scaling-up of these markets.

## Findings

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Overall integration of ESG within banks' risk management and investment practices, as well as prudential supervision, is at an early stage. EU-wide legislation and regulatory activities have played a key role in the first steps towards promoting integration, alongside voluntary and market-based initiatives. Further alignment and coordination of efforts is required to advance ESG integration.

### Integration of ESG risks within banks' risk management

**A common and granular definition of ESG risks among banks does currently not exist.** Few banks have developed a detailed list of ESG factors with a mapping to specific sectors, geographies, and client segments, in order to understand their relevance as drivers of risk. Most banks plan to assess ESG risks through both financial materiality and the material impacts of their activities on environmental and social issues ("double materiality"), which is the perspective advocated by civil society organisations.

**Banks have not yet developed a clear mapping of how different ESG factors feed into financial risk types.** While most banks are making efforts to map ESG risks to traditional financial and non-financial risks, levels of advancement among banks differ across the E, S, and G pillars. The most significant progress can be observed on climate-related risks, which are often mapped to financial risk types. Other ESG risks tend to be viewed through the lens of reputational or strategic risk. Banks indicated a lack of clarity as to whether traditional risk types can fully capture risks from an environmental and social materiality perspective. Most banks consider ESG risks as transversal, rather than as a principal risk type.

**While most interviewed banks mentioned that they have refined their governance to define ESG risk responsibilities at board, executive, or management level, few banks appear to have an explicit and comprehensive ESG risk strategy in place.** There is no single governance structure

that appears to be a standard, although elements such as ongoing training, managerial incentives and sponsorship from executive level are typically considered core features. Whilst many respondents acknowledged the importance of developing a holistic ESG risk strategy, few banks have an explicit and comprehensive strategy in place that ensures coordination between the ESG pillars and visibility on potential trade-offs. Environmental and social risks are often grouped as part of sustainability risks, whereas the governance aspect is more often viewed as a compliance topic and therefore tends to be structurally and conceptually separated.

**A comprehensive and robust data basis is considered a key requirement for advancing ESG risk integration within risk management processes.** The quantitative and qualitative information that needs to be captured for ESG risk measurement is very broad, and banks apply different approaches to source data. Most banks use a combination of client and third-party sourced data. However, coverage of third-party data is often limited for smaller counterparties. Whilst already used by the majority of banks, increased reliance on third-party sourced data is expected in the future. Data points for the environmental pillar, in particular for climate-related risks, are more detailed and include for example scenario-related data, information on production capacity, and data on geolocation of assets. Regarding climate-related risks, participants often expressed a preference for third party data, as this fosters comparability, saves resources and effort, and allows banks to rely on approaches grounded in climate science.

**Banks' measurement of their exposure to ESG risks is very limited. Banks conduct targeted pilot exercises but do not embed ESG risks into business as usual practices.** The scope of these exercises tends to be limited to high-carbon sectors and does not usually cover the entire balance sheet. Initial efforts to assess climate-related risks and impact are conducted via approaches focusing on transition and physical risk – measuring the possible financial impact of climate-related risks through scenario analysis –, and through Paris pathway alignment and net zero approaches that use reference scenarios to assess the portfolio's alignment to temperature-related goals. Further investment in these capabilities is required to enable a comprehensive measurement of ESG risks.

**The current degree of ESG integration in banks' risk management processes is limited.** ESG factors are widely, albeit sometimes superficially, integrated within lending policies, credit application processes, and due diligence, in particular for selected high-risk sectors. However, coverage is often limited and, for example, off-balance sheet investment activity associated with advisory or debt capital markets is often not in scope. There is partial integration within portfolio monitoring and steering processes, and most banks do not have an aggregate portfolio view of their exposure to ESG risks.

**Integration of ESG risks into risk models and stress testing is at an early stage.** Further development of quantitative approaches within banks' risk management frameworks is required. In general, ESG risks are included in the Risk Appetite Framework through qualitative statements. Some banks conduct climate scenario analysis on selected segments of the portfolio, but rarely as a group-wide scenario analysis effort. A number of banks argue that they do not integrate ESG risks fully into risk processes as they are not found to be material in light of the long-time horizons that characterise ESG risks. While the horizons for ESG risks are longer than typical capital planning projections, sudden changes, such as policy developments, can materialise in the short term and could have a significant impact.

**Most banks have not integrated ESG risks within their internal risk reporting frameworks.** The highest degree of integration is observed for the E pillar, specifically on climate-related risks. ESG risk-related information is usually included in banks' public ESG disclosures, influenced primarily by national and EU-wide legislative and regulatory reporting requirements. Disclosures by banks tend to be qualitative, with further development needed to reach international and upcoming regulatory standards such as the Directive on Corporate Sustainability Reporting (CSRD) proposed by the Commission, and civil society expectations. For example, disclosed quantitative metrics are often linked to funding volumes in specific sectors or ESG products, rather than measuring exposure to ESG risks.

## Integration of ESG risks within prudential supervision

**There is no common ESG definition among supervisors.** Although some supervisors have developed high level ESG definitions, many EU supervisors indicated their intention to observe the work of the European Banking Authority (EBA) and follow issued guidance in this respect. Supervisors tend to assess ESG pillars and specific risks within each pillar separately, as opposed to adopting a holistic assessment of ESG risks.

**There is debate amongst supervisors as to whether the double materiality perspective should be adopted when looking at ESG risks.** The majority acknowledge the importance of considering the environmental and social impact of banking activities. Others maintain that the focus of prudential supervision should remain on financial materiality by virtue of their supervisory mandate. There are also differing views among supervisors as to whether ESG risks should be viewed as a principal risk, or as a driver of existing risk types. Supervisors have not yet conducted comprehensive analysis as to how ESG risks, beyond climate-risk, propagate through established financial and non-financial risk types, although credit risk was usually mentioned as having the highest relevance.

**The majority of supervisors have not yet defined quantitative indicators for the measurement of ESG risks.** However, it is acknowledged that quantitative indicators and the measurement of ESG risks form an important part of supervisory oversight. At this point, supervisory ESG risk assessment remains focused on the qualitative elements typically used to assess risk processes within a bank, such as the integration of ESG risks within a bank's business model, governance, and strategy.

**Few supervisors have developed dedicated and publicly communicated ESG prudential strategies.** There are also differences in prioritisation: Some supervisors prefer to approach ESG holistically, whereas others have prioritised a specific element, such as climate-related or environmental risks. Internal capabilities to support a comprehensive approach to prudential supervision of ESG are not yet fully developed.

**ESG risk measurement and scenario analysis are key for integration into supervision but impeded by the early stages of development of ESG definition, data, and quantitative indicators.** Few supervisors have begun categorising assets based on their ESG risk profile. There is a focus on the E pillar and in particular the differentiation between green, brown, and grey exposures and activities. The EU taxonomy is seen as a tool to support this approach. Many banks, supervisors, and civil society organisations believe an expanded taxonomy will be needed in order to be used in a risk management context.

**There are differing levels of advancement among supervisors in relation to the assessment of ESG risks.** The Supervisory Review and Evaluation Process (SREP) is considered the primary tool to assess ESG risks within the current supervisory framework, and all prudential supervisors will expect banks to consider such risks in their Internal Capital Adequacy Assessment Process (ICAAP). However, only a limited number of supervisors have already explicitly integrated ESG risk considerations within Pillar 2 processes or as part of ongoing supervisory oversight. Few supervisors have begun considering ESG risks in supervisory stress testing, focusing on climate-related risks. This is usually done in the form of pilot stress testing exercises. None of the supervisors interviewed as part of this study have indicated plans to use climate stress testing for setting capital requirements at present.

**EU-based supervisors await the outcome of the EBA mandates related to Pillar 1 and Pillar 3 of the Basel Accord.** To this end, many interviewed supervisors consider it premature to attempt the integration of ESG risks into national or EU-wide regulatory requirements prior to the conclusion of these mandates. The EBA mandate to assess whether a dedicated prudential treatment of ESG risks is warranted (Pillar 1) is due to be fulfilled by 2025. In this context, civil society organisations urge an accelerated implementation of more stringent climate-related measures, particularly in light of the climate emergency declared by the European Parliament in 2019.

**Many supervisors do not currently consider Pillar 1 tools as the best suited to address ESG risks, while a number of civil society organisations see capital requirements as an effective tool.** The

main reason given by supervisors is that robust quantitative evidence for a risk differential e.g. for green and brown assets is yet to be established. On the other hand, a number of civil society organisations argue that capital requirements should also play a role in incentivising banks to redirect capital to more sustainable sectors and investments, for example by means of a green supporting factor (GSF), a brown penalizing factor (BPF), or both. Some supervisors view this as a policy biased approach that could have unintended consequences on financial stability. While some civil society organisations see this as a lever to reorient capital, others contend that this would have a limited effect. The use of a BPF is preferred by some civil society organisations, as this could better reflect potential underlying risks on the balance sheet.

**The communication of ESG-related supervisory guidelines, expectations, or best practice approaches plays an important role in ESG integration within the prudential framework.**

Common guidance would provide clarity and harmonise banks' practices. Many supervisors have already published such guidance; topics typically covered include ESG risk definition, governance and strategy, risk management, and disclosure. Supervisory engagement is seen as a crucial element in fostering capacity building and increasing ESG risk awareness in supervised institutions.

### Integration of ESG in banks' business strategies and investment policies

**While banks continue to evolve their offering of ESG-related products and services, such as sustainable bonds and green project finance, many ESG-related offerings are still under development or offered only by a small group of banks.** Current ESG product offering includes capital markets solutions such as green, sustainable and social impact bonds, corporate and SME lending such as green project finance and green corporate loans, and products for individuals and microbusinesses such as energy efficiency mortgages and electric car loans. Banks see more innovative products, such as ESG-linked loans or transition loans, as growth opportunities. Various stakeholders encourage the integration of ESG factors into the full range of products and services offered by banks, including off-balance sheet exposures.

**While most banks state that they are planning to integrate ESG factors into their lending and investment activity as part of a broader ESG strategy, adequate monitoring and targets (e.g. Paris Agreement goals) are still often lacking.** Banks are expecting to continue to develop their ESG integration, for example through the endorsement of market-based initiatives, or adherence to international standards or treaties such as Paris Agreement goals. However, such ESG-related objectives and commitments are often formulated at a high level and lack adequate monitoring and targets. Most banks have been reviewing their governance arrangements and have established centralised sustainability teams or functions to drive group-wide ESG integration.

**Portfolio analysis of banks' ESG lending and investment activity, if available, is often limited to certain sectors and product types. Measuring portfolio exposure to renewables, by loan-purpose, and to certain asset classes, such as green bonds, is more common and better understood.** Approaches to measure and monitor a portfolio's ESG characteristics at a more granular level, for example distinguishing clients based on their ESG performance, are narrower and focused on certain instruments like securities. Despite most banks stating that they have integrated ESG in their lending and investment activities at least partially, there is a need to further develop approaches to actively steer the portfolio towards ESG goals.

**Most banks have not yet collected comprehensive evidence on the risk/return profile of their ESG lending or investment activities.** There are indications in academic research that there is a negative correlation between credit spreads and ESG scores in markets for sovereign and corporate bonds.

### Observed challenges

**Data challenges and a lack of common standards continue to be seen as the most prevalent challenges facing banks and supervisors alike.** ESG data are the cornerstone for performing a wide range of ESG-related activities, including risk measurement, product labelling, portfolio steering, and disclosure. The absence of common standards for ESG-related issues impedes comparability

of information received and disclosed by banks, which creates information asymmetry amongst market participants.

**There is a lack of harmonised definitions and classification standards for a wider range of ESG products at a global level.** Despite the development of international voluntary principles for some ESG market activities like green bonds, products are not always structured according to the same criteria. This hinders product comparison and effective asset allocation by banks.

**Limited internal resources and capabilities are an impediment to ESG integration.** This is a general observation, which is relevant for all three areas of the study, i.e. banks' risk management, prudential supervision, and the development of ESG products and services.

## Conclusions

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Despite increased efforts by banks and supervisors, this study finds that the pace of implementation to achieve effective ESG integration within risk management, prudential supervision, and business strategies and investment policies needs to be accelerated. Collaboration between all stakeholders will be required, including sufficient supervisory guidance and engagement, and cross-bank collaboration. Principles of best practice and enabling factors to support further ESG integration highlighted by study participants are summarised below.

### Principles of best practice for integrating ESG in risk management and prudential supervision

**Banks and supervisors should work to develop coherent definitions of ESG risks and consider the double materiality perspective.** This definition should consist of a granular list of underlying factors under each of the ESG pillars and create a common framework for the understanding of such risks. At the same time, it should allow for geographic or business model related idiosyncrasies. ESG definitions should consider the double materiality perspective and be continually reviewed. To this effect, banks and supervisors should gather input from external stakeholders including civil society organisations to complement and balance perspectives.

**Many stakeholders demand that banks and supervisors should develop ambitious, publicly stated ESG risk strategies with measurable objectives, priorities, and timelines.** For banks, public commitments would foster accountability in relation to their progress on ESG risk integration and related strategic objectives, such as alignment with the Paris agreement. Supervisors should provide guidance to banks in relation to the development of such strategies, thereby also fostering capability building. Banks and supervisors will need to develop internal capabilities, requiring ESG-related training, methodologies, and data to implement these strategies. In addition, ESG KPIs could be included in managerial incentives.

**Although the importance of ESG-related data has been widely recognised, banks should make significant efforts to enhance data quality, availability and comparability, as well as infrastructure improvements.** This would further support banks' efforts to adequately measure ESG risks and integrate them within their risk processes. Data limitations should not be a rationale to defer taking immediate action. Banks can develop interim proxies, and additional ESG data can be sourced from third parties and through client questionnaires. These exercises should be supported by supervisors.

**Study participants highlighted that approaches to measure exposure to ESG risks, such as stress testing and scenario analysis, should be further refined through more market collaboration and the development of dedicated methodologies.** Stress testing and scenario analysis should form a core component of banks' and supervisors' ESG risk measurement, especially for climate-related risk. The number of scenarios should be increased, and scenarios should be sufficiently ambitious and granular in order to standardise approaches and enhance comparability of results. Regardless of involvement in supervisory exercises, banks should conduct internal climate scenario analysis to deepen their understanding of climate-related risks. Many stakeholders indicated that supervisors should conduct regular, mandatory climate stress tests for

banks in order to assess vulnerabilities and foster capability building. In the absence of requisite data, climate stress test exercises should make use of proxy data or assumptions.

**Where possible, ESG risks should be integrated in risk management frameworks through quantitative approaches.** This includes the introduction of quantitative KPIs in the RAF. Stakeholders believe that, in the short term, the integration of ESG risks should be addressed through Pillar 2 processes, supported by detailed supervisory guidance. ESG risks should be treated similarly to established financial and non-financial risk types. Within ICAAP, it should be documented if ESG risks are determined to manifest through traditional risk types. Furthermore, longer time horizons associated with ESG risks should be reflected within the SREP. Developments on the EBA mandate related to a potential dedicated prudential treatment of ESG risks should be closely observed, and supervisors should analyse a potential risk differential to assess the risk relevance of a green supporting or brown penalising factor in Pillar 1 capital requirements.

**The identification of portfolio related quantitative KPIs is a key requirement for furthering ESG integration into risk management and credit processes.** There is broad agreement among stakeholders that supervisors should create a base of common indicators and indicative thresholds to support the quantitative assessment of ESG risks. Such metrics will facilitate the assessment of banks' ESG risk exposure and help maintain a level playing field. Additional efforts should be made to standardise ESG risk-related disclosure more broadly. This should be pursued through mandatory regulatory and legislative measures, such as the recent proposal for a Corporate Sustainability Reporting Directive (CSRD) – which would amend existing Non-Financial Reporting Directive (NFRD) reporting requirements –, as well as through stronger adherence to market initiatives. Such measures should adhere to the proportionality principle. Regulatory developments, such as those related to the EBA mandate on Pillar 3 disclosures, should be closely observed by banks and supervisors. Supervisors should additionally encourage disclosure of ESG risks ahead of the effective date, in particular for climate-related risks.

### **Enabling factors to integrate ESG objectives into EU banks' business strategies and investment policies**

**Various instruments could be considered to help address data challenges, for example defining common technical standards on banks' ESG data collection requirements via regulation.** The definition and implementation of such standards could support the assessment and understanding of ESG risks in the banking sector, and hence the resilience of supervised institutions against ESG-related risks in line with prudential objectives. These instruments could also include mandatory reporting of ESG indicators and metrics. Legislative measures aimed at extending mandatory ESG data disclosures to smaller companies, the introduction of requirements for external validation of self-reported data, as well as standards for disclosure of ESG data similar to accounting standards could be considered in order to improve ESG data coverage, accuracy, and credibility. Beyond such instruments, banks should address their own data needs through further engagement with clients, particularly smaller corporates, including by requesting additional ESG data to improve data availability.

**To harmonise ESG product classification, compliance with certain standards, such as the EU Green Bond Standard or the EU Taxonomy, could be made compulsory.** This could improve the consistency of product offering observed in the market and mitigate the risk of greenwashing, supporting trust in the sustainable product offering by the banking sector. Many stakeholders highlighted that an expanded taxonomy or taxonomy-like classification system, defining brown and grey activities, as well as considerations on the social dimension, could further standardise the classification of business activities. The application of an expanded taxonomy could also increase harmonisation of disclosure of ESG activities.

**Measures aimed at increasing accountability at executive and board level could be introduced.** This could mean encouraging banks, including at executive and board level, to take responsibility for alignment of their ESG strategies with international agreements and initiatives, especially for the E pillar while taking into account the assessment of their ESG risks.

## 1. Purpose, context and structure of the study

### 1.1 Purpose and objectives of the study

The general objective of the study is to explore the integration of ESG risk considerations into EU prudential supervision and into banks' risk management processes, business strategies and investment policies.<sup>1</sup> To this end, the European Commission (the Commission) has defined three specific objectives of the study:

- **Objective 1:** Identify modalities of integrating ESG risks into EU banks' risk management processes;
- **Objective 2:** Identify modalities of integrating ESG risks into EU prudential supervision;
- **Objective 3:** Identify modalities of integrating ESG objectives into EU banks' business strategies and investment policies<sup>2</sup>.

In line with the Tender Specifications provided by the Commission, the study should provide a comprehensive overview of the state-of-play for each of the three objectives.<sup>3</sup> In addition, the study should identify principles of best practice as regards the arrangements, processes, tools, and strategies to achieve Objectives 1 and 2, as well as appropriate instruments and strategies to promote the scaling-up of green finance and of the market for sustainable financial products as part of the scope of Objective 3.

### 1.2 Structure of the study

The study is structured in five sections:

- **Section 1** describes the purpose, structure, and context of the study;
- **Section 2** provides an overview of the methodology applied, including the definition of external stakeholder perimeter groups, as well as a description of the research tools deployed, comprising focus groups, desk research, interviews/questionnaires and workshops;
- **Sections 3-5** cover each of the three study objectives. Each section commences with a brief overview of the respective focus areas. Subsequently, a stocktake of current practices is presented. Sections 3 and 4 are supplemented by principles and best practices across the different focus areas. Section 5 includes an overview of impediments and enabling factors to foster the development of a well-functioning market for green and sustainable finance.

### 1.3 Context of the study

According to the tender specifications, "Sustainability and the transition to a low-carbon, more resource-efficient and circular economy are key in ensuring long-term competitiveness of the EU economy. Sustainability has long been at the heart of the European Union project and the EU

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<sup>1</sup> This document represents the final study prepared by BlackRock Financial Markets Advisory (BlackRock FMA) on the development of tools and mechanisms for the integration of environmental, social and governance (ESG) factors into the EU banking prudential framework and into banks' business strategies and investment policies, as per Tender Specifications N° FISMA/2019/024/D (the Tender Specifications) on behalf of the European Commission (the Commission). Available at: <https://etendering.ted.europa.eu/cft/cft-documents.html?cftId=5201>.

<sup>2</sup> For the avoidance of doubt, the term investment/investment activity in this report is used to indicate capital markets activity (e.g. Equity Capital Markets and Debt Capital Markets underwriting, sales and trading activity) as well as treasury portfolio. It does not include investments on behalf of clients (e.g. asset management or private banking activities) and associated products.

<sup>3</sup> As specified, in section 2.2 "Contract Specifications" of the tender. Available at: <https://etendering.ted.europa.eu/cft/cft-documents.html?cftId=5201>.

Treaties give recognition to its social, environmental and climate dimensions. The EU is committed to development that meets the needs of present and future generations, while opening up new employment and investment opportunities and ensuring economic growth [...] Reorienting private capital to more sustainable investments requires a comprehensive shift in how the financial system works. This is necessary if the EU is to develop more sustainable economic growth, ensure the stability of the financial system, and foster more transparency and long-termism in the economy”.<sup>4</sup>

To this end, the Commission has commenced or conducted several key activities, including but not limited to:

- Appointment of a High-Level Expert Group (HLEG) on sustainable finance, offering a comprehensive vision on how to build a sustainable finance strategy for the EU;<sup>5</sup>
- Launch of the Action Plan on Sustainable Finance in March 2018, in response to the policy recommendations of the HLEG in the January 2018 report. In the Action Plan, the Commission acknowledges that “environmental and climate risks are currently not always adequately taken into account by the financial sector”. For that reason, action 8 of the Action Plan requires the Commission to “explore the feasibility of the inclusion of risks associated with climate and other environmental factors in institutions' risk management policies”;<sup>5</sup>
- Review of the Capital Requirements Directive (CRD).<sup>6</sup> In light of this, the European Banking Authority (EBA) was mandated to “assess the potential inclusion of ESG risks in the review and evaluation performed by supervisors and to submit a report on its findings to the Commission, the European Parliament and to the Council by 28 June 2021”;<sup>5</sup>
- In the context of the Capital Requirements Regulation 2 (CRR2)<sup>7</sup>, the tasking of the EBA to develop draft implementing technical standards (ITS) specifying uniform disclosure standards (Article 434a); moreover, the EBA was tasked to “assess whether a dedicated prudential treatment of exposures associated substantially with environmental and/or social objectives” would be justified and to submit a report by 28 June 2025 (Article 501c);<sup>8</sup>
- Adoption of new guidelines for companies on how to report climate-related information in June 2019, consistent with the Non-Financial Reporting Directive (NFRD, Directive 2014/95/EU)<sup>9</sup> and integrating the recommendations of the Financial Stability Board’s Task Force on Climate-related Financial Disclosure (TCFD);<sup>10</sup>

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<sup>4</sup> Tender Specifications, section 2.1, page 7.

<sup>5</sup> Tender Specifications, section 2.1, page 8.

<sup>6</sup> Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures. OJ L 150, 7.6.2019, p. 253–295 Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC).

<sup>7</sup> EBA (n.d.). *Interactive Rulebook - Capital Requirements Regulation 2 (CRR 2)*, Available at:

<https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/100427>.

<sup>8</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

<sup>9</sup> European Commission (2014). *Directive 2014/95/EU - Non-Financial Reporting Directive*. Available at:

[https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en).

<sup>10</sup> TCFD (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at:

<https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>.

- Proposal for a Corporate Sustainability Reporting Directive (CSRD) to revise the requirements introduced by the NFRD;<sup>11</sup>
- Publication of a regulation on sustainability-related disclosures in the financial services sector in December 2019.<sup>12</sup> From March 2021 onwards, financial market participants will have to disclose to their clients the impact of sustainability on financial returns and the impact of their investment decision on sustainability;
- Presentation of the European Green Deal in December 2019; namely, a roadmap on how to make Europe the first climate-neutral continent by 2050. The plan provides insights into the investments needed, and financing tools available, to transition towards a more efficient use of resources and move to a clean and circular economy. As part of this, the Commission announced a “Renewed Sustainable Finance Strategy” aimed at providing the policy tools to ensure that financial systems effectively support the transition of businesses towards sustainability.<sup>13</sup> To achieve the goals set by the European Green Deal, the European Green Deal Investment Plan (EGDIP), also referred to as Sustainable Europe Investment Plan (SEIP), will mobilise at least EUR 1trn in sustainable investments over the next decade;<sup>14</sup>
- Publication of the final report on the EU Taxonomy in March 2020 by the Technical Expert Group on Sustainable Finance, which constitutes a unified EU green classification system to determine if an economic activity is environmentally sustainable based on harmonised EU criteria.<sup>15</sup> The EU Taxonomy Regulation was published on 22 June 2020 and entered into force on 12 July 2020. The regulation tasks the European Commission with “establishing the actual list of environmentally sustainable activities by defining technical screening criteria for each environmental objective through delegated acts”;<sup>16</sup>
- Adoption of its new action plan on the Capital Markets Union (CMU) which proposes 16 legislative and non-legislative actions with 3 key objectives, including to “support a green, digital, inclusive and resilient economic recovery by making financing more accessible to European companies”.<sup>17</sup>

This study is an addition to the above-stated activities and serves as one of the multiple inputs that will inform the workstream for the implementation of the Commission Action Plan on Sustainable Finance. The study takes into account other ongoing initiatives in the context of ESG. Note that, despite the authors’ best efforts to reflect the current status of ESG-related developments between conclusion of the study and the finalisation of the report, the fast-paced and dynamic nature of the sustainable finance field means that this may not be entirely reflected at the time of publication.

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<sup>11</sup> European Commission (2021). *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN>.

<sup>12</sup> Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. OJ L 317, 9.12.2019, p. 1–16 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R2088>.

<sup>13</sup> European Commission (2019). *The European Green Deal*. Available at: [https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf).

<sup>14</sup> European Commission (2020). *The European Green Deal Investment Plan and Just Transition Mechanism explained*. Available at: [https://ec.europa.eu/commission/presscorner/detail/en/ganda\\_20\\_24](https://ec.europa.eu/commission/presscorner/detail/en/ganda_20_24).

<sup>15</sup> European Commission (2020). *TEG final report on the EU taxonomy*. Available at: [https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy\\_en](https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy_en).

<sup>16</sup> European Commission (2020). *Sustainable finance taxonomy - Regulation (EU) 2020/852*. Available at: [https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852\\_en](https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852_en).

<sup>17</sup> European Commission (2020). *A capital markets union for people and businesses: new action plan*. Available at: [https://ec.europa.eu/info/publications/200924-capital-markets-union-action-plan\\_en](https://ec.europa.eu/info/publications/200924-capital-markets-union-action-plan_en).

## 2. Overview of study methodology and approach

### 2.1 Data collection tools and techniques

To address the three objectives of the study, a comprehensive research exercise was undertaken, utilising the following research methods:

- **Focus Groups:** At the beginning of the study, focus groups were held with key stakeholders, including banks, supervisors and regulators, civil society organisations and academics, in order to discuss and obtain perspectives on the preliminary envisaged focus areas of the study;
- **Desk Research:** Desk research was conducted across the stakeholder perimeter to gather existing publicly available material of relevance for each objective;<sup>18</sup>
- **Questionnaires/Interviews:** Structured questionnaires, including a mix of closed and open-ended questions, were provided to stakeholders to collect input.<sup>19</sup> Structured interviews were held with stakeholders, where appropriate, to complement the information gathered;
- **Workshops:** Two workshops were conducted with key stakeholders, including banks, supervisors and regulators, civil society organisations and academics. The first workshop was organised with the aim of discussing the results of the data collected through desk research, focus groups, interviews and case studies, and gather additional input for the stocktake exercise for each of the three objectives.<sup>20</sup> The second workshop served the purpose of discussing and validating the preliminary results of the study.

To ensure a consistent approach, a set of focus areas and sub-focus areas were identified to provide a structure for each objective (see an overview of these focus areas in sections 3.1, 4.1 and 5.1), which also reflected inputs provided by stakeholders in the focus groups.<sup>21</sup> Beyond the comprehensive stocktake exercise, forward-looking insights into the possible evolution of ESG integration were derived, based on stakeholder input.

### 2.2 Definition of stakeholder perimeter groups

Information was collected and aggregated from as wide a range of representative stakeholders as possible, in order to reflect a full spectrum of views. Three stakeholder perimeter groups were defined and aligned with the Commission:

- i. Banks;
- ii. Supervisors and regulators;
- iii. International organisations, civil society organisations and other stakeholders (including, for example, academics, associations, data and ratings providers, civil society organisations, and international organisations/fora).

Each stakeholder perimeter group includes stakeholders from representative geographical areas of the EU as well as relevant non-EU jurisdictions. As shown in *Table 1*, a total of 155 stakeholders were identified based on selection criteria that ensured an adequate representation of different

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<sup>18</sup> Desk research was based on publicly available material, published prior to a specified cut-off date (1 March 2021). Such material includes literature, case studies, publications, data, and other empirical information. In some cases, developments after the cut-off date were taken into account.

<sup>19</sup> Including banks, supervisors, and civil society organisations as detailed in section 3.2 below. The questionnaires and recipients were aligned with the Commission in advance.

<sup>20</sup> Tender Specifications, section 2.4, page 13.

<sup>21</sup> The identification of focus areas and sub-focus areas did not entail a definition of ESG risks. Instead, and in order to reflect the stocktake nature of the study, stakeholders were asked to provide their respective definitions.

stakeholder groups and views in the study, as well as of geographical areas of the EU and relevant non-EU jurisdictions.<sup>22</sup>

**Table 1: Stakeholder perimeter groups**

Stakeholders	Description	Location/Coverage
<b>1. Banks<sup>23</sup></b>	Banks from EU and non-EU jurisdictions	<b>42</b> 29 from EU member states (of which 7 G-SIBs vs 22 non-G-SIBs) 13 from non-EU member states (of which 11 G-SIBs vs 2 non-G-SIBs)
<b>2. Supervisors and regulators</b>	Micro-prudential supervisors and regulators of the banking sector in EU and non-EU jurisdictions	<b>43</b> 32 from EU member states 11 from non-EU member states
<b>3. International organisations, civil society organisations, and other stakeholders</b>	Composed of various other actors: <ul style="list-style-type: none"> <li>• Academics</li> <li>• Associations</li> <li>• Civil society organisations</li> <li>• Data providers/rating agencies</li> <li>• International organisations/fora</li> </ul>	<b>70</b> 20 from EU member states 14 from non-EU member states 36 with global presence <sup>24</sup>

### 2.3 Total coverage of the study

Research for each objective was conducted by the use of various research methods and associated stakeholder participation. For an overview of the total coverage of the study by objective and research method, see *Table 26* in Annex III of the appendix. Three focus groups were conducted to provide an overview of the study and its approach, to discuss the preliminary envisaged focus areas, as well as to obtain stakeholders’ perspectives on the focus areas and to identify key themes: i) One focus group involving 24 banks covering the “Incorporation of ESG risks into EU banks’ risk management” (Objective 1), as well as the “Integration of ESG objectives into banks’ business strategies and investment policies” (Objective 3); ii) one focus group involving 13 supervisors and regulators<sup>25</sup> covering the “Integration of ESG risks into prudential supervision” (Objective 2); iii) one focus group involving 10 other stakeholders (including 7 civil society organisations and 3 academics) covering all three objectives.

Moreover, questionnaires were designed to obtain additional input from stakeholders. Distinct questionnaires were developed per objective and stakeholder group. Questionnaires for banks and supervisors/regulators included detailed technical and closed-ended questions to identify current practices of respective stakeholders, as well as additional questions related to challenges, best practices, and enabling factors. Questionnaires for international organisations, civil society organisations, and other stakeholders aimed to gather the perspectives of these stakeholders and

<sup>22</sup> The selection criteria, as well as the initial list of stakeholders, were set in line with the Tender Specifications at the beginning of the study.

<sup>23</sup> Please note that banks’ subsidiaries were covered via their respective legal entity.

<sup>24</sup> Grouping is based on field of operation/focus (due to international presence), and not geographic location.

<sup>25</sup> For the remainder of this report, the term “supervisors” will often be used in place of “supervisors and regulators”.

focused on definitions, best practices, as well as impediments and enabling factors. Feedback in the form of questionnaires/interviews was received from 28 banks, 15 supervisors and regulators, and 15 international organisations, civil society organisations, and other stakeholders.

Desk research was conducted, covering the aforementioned 155 stakeholders (referred to in the study as 'analysed' stakeholders). Over 750 documents, papers, and websites were reviewed across stakeholder groups (see Annex IV). This ensured that a wide range of relevant perspectives were captured, including from those stakeholders not participating in the study by means of a focus group or questionnaire/interview. This information was used to enrich and corroborate findings across the three objectives. In particular, desk research information was also utilised to develop case studies and provide illustrative examples throughout the study.<sup>26</sup>

Most empirical observations on banks and supervisors in this study are based on the sample that participated in the questionnaire/interview process, referred to as 'respondents' or 'interviewed stakeholders'. The total responses received amounted to 85 interviews/questionnaires, which included 27 banks for Objective 1, 28 banks for Objective 3<sup>27</sup>, 15 supervisors for Objective 2, and 15 other stakeholders (including international organisations, civil society organisations and academics) across objectives. Given that many answers were provided in qualitative format, the depth of answers provided, as well as the level of granularity, varied among participants.<sup>28</sup> In addition, for the purposes of this study, input received from questionnaires/interviews was not fact checked. However, findings and outcomes on similar topics presented by other relevant studies have been reviewed and reflected in various sections, as applicable.

Finally, two workshops were conducted with key stakeholders, with 19 participants attending the first workshop and 28 participants attending the second.<sup>29</sup> Specifically, the objective of the first workshop was to discuss the results of the data collected and provide additional input for the stocktake exercise for each of the three objectives.<sup>30</sup> The objective of the second workshop was to discuss and validate the preliminary results of the study.

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<sup>26</sup> Case studies were created to provide an in-depth illustration of practices followed by a singular stakeholder or two and more stakeholders (for comparative purposes). Illustrative examples were developed by drawing input from several stakeholders. Both case studies and illustrative examples are illustrated within grey boxes.

<sup>27</sup> All banks but one participated in both interviews, covering both Objective 1 and 3.

<sup>28</sup> Insights from interviews are presented throughout the main body of the study and are illustrated in figures and tables, where relevant. In addition, quotes from respondents were included in illustrative yellow comment boxes.

<sup>29</sup> The first workshop involved 6 banks, 7 supervisors and regulators and 6 civil society organisations and academics, whilst the second workshop involved 10 banks, 10 supervisors and 8 civil society organisations and academics.

<sup>30</sup> Tender Specifications, section 2.4, page 13.

### 3. Modalities of integrating ESG risks into EU banks' risk management processes

This section first provides an overview of the research focus areas covered within this study objective, as defined in the tender specifications and further refined during initial focus groups. Subsequently, a summary of stocktake findings on the way banks currently deal with ESG risks as well as principles of best practice is provided. The remainder of the section provides detailed description of the findings for each focus area, followed by an overview of principles of best practice for each topic in order to provide a forward-looking view of possible arrangements, processes, mechanisms, and strategies to be implemented by EU banks to map, assess, and manage ESG risks.

#### 3.1 Overview of focus areas for research

For the purpose of this study, the following key elements of the integration of ESG risks into EU banks' risk management processes<sup>31</sup> were analysed, as further detailed below:

- ESG risk definition and identification;
- ESG risk governance and strategy;
- ESG risk management processes and tools;
- ESG risk reporting and disclosure.

This list of focus areas served as a structure to systematically gather input and data during the research. The key focus areas analysed under this objective are illustrated in *Table 2* and the following sections present the results of the stocktake exercise along the identified sub-focus areas.

Table 2: Objective 1 focus areas and respective sub-focus areas

<b><u>Focus Area</u></b>	<b><u>Sub-Focus Area</u></b>	<b><u>Description</u></b>
<b>ESG risk definition and identification</b>	<b>ESG risk definition and perimeter</b>	Definition of ESG risks by banks, based on underlying ESG factors and their relevance and materiality for banks' risk management practices
	<b>Risk identification approaches</b>	Approaches used by banks to identify ESG risks (top down vs. bottom up) and review perimeter of ESG risks taken under consideration
	<b>ESG risk transmission channels</b>	Relevance of ESG risks for traditional risk types (e.g. credit, market operational, reputational risk, etc.) and transmission channels (e.g. valuation of assets)
<b>ESG risk governance and strategy</b>	<b>ESG risk governance structures and board oversight</b>	Governance structure arrangements to ensure that ESG risks are properly understood and discussed at board, executive and management level

<sup>31</sup> Banks are exposed to ESG risks indirectly - i.e. through lending and investment activity - as well as directly - i.e. through their own operations and organisational set-up; in line with the tender specifications, the primary focus of the study is on the former.

<b><u>Focus Area</u></b>	<b><u>Sub-Focus Area</u></b>	<b><u>Description</u></b>	
	<b>ESG risk organisational set-up</b>	ESG risk focused teams and efforts to develop and consolidate dedicated expertise	
	<b>ESG risk strategy and initiatives</b>	Definition of an ESG risk strategy and initiatives to advance objectives	
<b>ESG risk management processes and tools</b>	<b>Measurement and assessment</b>	<b>Data taxonomy, standardisation and sourcing</b>	Data used by banks for ESG risk measurement gathered directly from clients, or sourced externally
		<b>Portfolio ESG risk measurement and scenario analysis</b>	Methodology and modelling approaches used to measure portfolio exposure to ESG risks and resulting output, metrics, and portfolio coverage
	<b>Integration into Risk processes</b>	<b>Risk appetite framework/ statement</b>	ESG integration within risk appetite framework as qualitative or quantitative statement
		<b>Lending/investment policies, processes and strategies</b>	ESG-relevant lending and investment sectoral policies, integration into credit application and due diligence (e.g. transaction level), credit portfolio strategies, and monitoring
		<b>Risk parameters and models</b>	ESG integration into risk parameters and models
		<b>Stress testing, ICAAP and ILAAP</b>	ESG integration into regulatory processes including stress testing, ICAAP, and ILAAP
<b>ESG risk reporting and disclosure</b>	<b>Reporting and disclosure type and purpose</b>	ESG-focused risk disclosures tailored to different needs and audiences (e.g. non-financial and Pillar 3 disclosures)	
	<b>Information granularity and transparency</b>	Reporting content (e.g. inclusion of metrics, granularity) and impact of relevant EU legislation on disclosure practices	

## 3.2 Summary of key takeaways

The following key takeaways present the results of the stocktake exercise conducted on the previously defined perimeter of external stakeholders. Insights related to principles of best practice are based on the analysis of the data collected and provide a forward-looking view on the potential evolution of such practices.

### 3.2.1 ESG risk definition and identification

Most interviewed banks do not have a clear and granular definition of ESG risks in place. This would entail a mapping of the underlying factors for each ESG pillar, with an indication of their relevance as risk drivers, based on specific sectors, geographies, client segments, and products.<sup>32</sup> Civil society organisations and international standards and initiatives were mentioned as key reference points for ESG-factor definition, providing input on key focus areas. Generally, climate risk – both physical and transition risk – is currently a key theme for most institutions, in particular G-SIBs. More broadly, feedback provided by respondents was often centred on E&S risks rather than G risks, the latter not always being associated with the broader concept of sustainability.

Banks have not yet developed a clear mapping of how different ESG factors feed into financial risk types. Banks tend to map ESG risks to traditional risk types (i.e. financial and non-financial risks), rather than considering ESG risk as a standalone or principal risk type. When considering ESG risks related to banks' exposures, reputational risks have been prioritised historically. However, more recently, banks have also expanded their focus on credit risk, in particular for climate-related risk. Generally, despite efforts to advance the understanding of ESG relevance for risk types, few banks have integrated ESG risks in their risk identification process to assess their materiality and quantify their financial impact, for example on their solvency and asset valuation.

Most banks (73%) state that they plan to cover ESG risks from a double materiality perspective, hence addressing ESG considerations both when analysing financial materiality, as well as when taking into account the impact of banking activity on the external environment and societal context. However, some banks also mentioned that it is unclear if the environmental and social materiality aspect can be fully captured through traditional risk types, such as reputational and strategic risk.

The focus on the double materiality concept is consistent with the views of most supervisors and other stakeholders, including civil society organisations. As argued by civil society respondents, the double materiality perspective is aligned with broader EU-wide policies and legislation, such as the EU Taxonomy, and it provides a more comprehensive view of ESG risks, capturing the environmental impact of financing activity more holistically.

#### Summary of principles of best practice based on stakeholder perspectives

The definition of ESG risks should adopt the double materiality perspective and consist of a granular list of underlying factors for each pillar, ideally with an indication of their relevance within specific sectors, client segments, and geographies. The list of ESG factors and risks should be reviewed and expanded regularly, with input actively gathered from supervisors and external stakeholders including civil society organisations.

Given that ESG risks are collectively seen as material risk drivers, their integration within the risk identification process is required. A good understanding of ESG risk transmission channels facilitates the development of conceptual maps linking ESG factors to existing risk types,

<sup>32</sup> ESG pillars refer to environmental, social, and governance. ESG factors are more granular elements/issues falling under each of the E, S, and G pillars and may translate into ESG risks based on their materiality. For the purposes of this study, ESG themes were defined as high-level conceptual groupings of ESG factors falling under each of the E, S and G pillars. Further details on the terminology adopted in this study are provided in section 3.3.1.1.

including financial and non-financial risks. Alternatively, ESG risks may also be treated as a principal risk type. Relevant transmission channels for ESG risks should be identified across the E, S, and G pillars, though at this point more quantitative insights can be developed for climate risk. In addition, a clear mapping of how the double materiality perspective is covered by existing risk types should be provided, in particular with respect to the environmental and social materiality perspective (e.g. whether it is captured under reputational and strategic risk).

### 3.2.2 ESG risk governance and strategy

While most interviewed banks mentioned that they have refined their governance set-up to define ESG risk responsibilities at board, executive, or management level<sup>33</sup>, few banks appear to have an explicit and comprehensive ESG risk strategy in place. The most common form of integration is the discussion of ESG risks within existing board committees (50%). 38% banks cover it within other management committees. Integration into committees does not ensure that ESG risks are discussed in every meeting, rather that it is a standing agenda item, and hence the frequency with which these topics are covered varies among banks. As highlighted by civil society organisations as well as academia, further education and training on ESG risks may be required, in particular at board level, to ensure full alignment and understanding of responsibilities with respect to ESG risk integration.

In terms of organisational structure, some banks have set up dedicated ESG risk teams, while others have assigned resources to the topic within existing structures, in order to ensure integration of ESG risk across all risk types and reduce implementation complexity. Generally, training was acknowledged by respondents as an important tool to strengthen internal capabilities and advance ESG risk integration across teams, not only within the risk function but also within business teams and other central divisions.

While interviewed banks often claimed to have initiatives in place to enhance the integration of ESG risks, the majority have not formalised a holistic ESG risk integration strategy with clear timelines and responsibilities across all ESG pillars and with clear linkages to risk types. With respect to climate risk, many smaller banks stated that they have not yet started its integration into risk management.

#### **Summary of principles of best practice based on stakeholder perspectives**

ESG risks should be discussed and overseen at board and executive level through adequate governance structures and strong CEO sponsorship. ESG risk should be discussed as a regular agenda item within board and/or executive level committees. These discussions can either take place in existing committees or through the set-up of dedicated committees. The inclusion of ESG risk-related objectives within management compensation can provide further incentives for advancing ESG risk integration.

ESG risk integration efforts should involve all three lines of defence. Roles and responsibilities to identify, assess, and manage ESG risks across departments and functions should be clearly defined and supported by adequate processes. While ESG risk integration responsibilities should be shared by all risk departments, one unit could be responsible for oversight. A dedicated ESG risk team can be established if deemed necessary for coordination purposes.

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<sup>33</sup> Please note that for the purposes of the study, 'board level' would be closely aligned to the term 'management body in its supervisory function' of the CRD, which "means the management body acting in its role of overseeing and monitoring management decision-making". 'Executive level' is to be understood as closely aligned to the term 'management body in its management function' of the EBA guidelines on internal governance and that "directs the institution" Lastly, 'management level' in the study includes other levels of management of an institution that are not at board or executive level. For further details, please see section 3.2.2.

The ESG risk strategy should be clearly communicated and include measurable objectives, KPIs, and timelines, supported by interim targets, for example to measure alignment to Paris pathways or net zero commitments. The ESG risk strategy should align with the broader business strategy and take into account the double materiality perspective.

Whilst the ESG risk strategy can be differentiated across pillars, defining a holistic ESG risk strategy enables a comprehensive and coordinated integration and supports the identification of potential ESG risk trade-offs.

### 3.2.3 ESG risk management processes and tools

#### 3.2.3.1 Measurement and assessment

Analysed banks tend to use a mix of internal client data and externally sourced data to assess ESG risks. These different types of externally sourced data include ESG-related KPIs (e.g. CO2 emissions, social incidents), other transaction specific data (e.g. geolocation of assets), ESG labels (e.g. energy efficiency standards), scenarios (e.g. provided by the International Energy Agency), and aggregated scores from third party data vendors. Respondents generally consider the amount of information provided by clients as insufficient for ESG risk measurement, in particular for climate risk. Data is highlighted as a key challenge due to availability gaps for certain client segments (e.g. SMEs) as well as concerns on data comparability and reliability, given the self-reporting nature. Data availability concerns were also mentioned in the context of applying the EU Taxonomy to the lending book.

Despite these challenges, some banks are using available data to develop ESG risk measurement capabilities. Banks are developing approaches to measure their current exposure to ESG risks holistically (e.g. through portfolio ESG scoring), or are advancing analytics focused specifically on climate-change, given its more quantifiable nature. Climate change-focused approaches currently being developed assess portfolio sensitivity to climate risk (i.e. transition and physical risks) by leveraging scenario analysis, as well as measure the climate impact of the portfolio and its alignment to environmental goals (i.e. Paris/pathway alignment). These exercises are often performed in collaboration with civil society organisations or international organisations, with the objective of co-developing and standardising methodologies.

However, these exercises are usually performed through pilots, focused on portfolio segments, rather than integrated within repeatable business as usual processes. Transition risk assessments are focused on the corporate book pertaining to high risk sectors (e.g. oil & gas, mining) rather than covering all relevant sectors. Physical risk assessments mostly cover the retail book or mortgage book. Some banks have also publicly committed to using science-based targets to align parts of their portfolio – usually those related to carbon-intensive sectors – to climate goals such as those of the Paris agreement. As argued by civil society respondents, the so-called portfolio or pathway alignment exercises are strongly encouraged as they require banks to quantify the environmental impact of their financing activities and steer their portfolio towards desired targets.

#### **Summary of principles of best practice based on stakeholder perspectives**

Understanding the different types of ESG data available, including associated trade-offs and challenges, is key to developing ESG risk measurement capabilities. Sourcing ESG data externally, in particular for ESG KPIs related to traded instruments and/or listed companies, as well as scenario data, allows for greater comparability and standardisation across banks. More granular data points allow for the development of tailored methodologies. Proxies and simplified measurement approaches relying on reduced datasets can be used temporarily to address data-related challenges. Nonetheless, methods to collect additional data from clients

should be implemented. In addition, standardised ESG data quality assurance and control processes should be set-up to identify data inconsistencies and implement correction measures.

Portfolio transparency exercises should be conducted to: i) Measure current exposure to ESG risks (e.g. portfolio ESG scoring), ii) assess forward looking exposure to ESG risks (i.e. through scenario analysis and assessment of climate-related transition and physical risk), and iii) quantify the ESG impact of the portfolio and its overall alignment to sustainability goals. In this respect, climate change may be prioritised, given the range of methodologies being developed by banks and other stakeholders, including civil society organisations. Measurement approaches focused on climate change should be grounded in climate science and use credible scenarios and metrics. The other ESG pillars should also be considered in order to measure ESG risk exposure holistically.

While exercises can be conducted starting with the most relevant part of the portfolio – or the portion with the highest ESG risk exposure –, the scope should be continuously expanded to cover additional segments and asset classes, eventually covering all relevant parts of the portfolio. Outputs from these exercises, which should be quantitative and scenario-based, should be taken into account and integrated into risk processes, with a focus on portfolio monitoring and steering.

### 3.2.3.2 Integration into risk processes

The integration of ESG into risk management processes varies significantly among banks. Overall, most interviewed banks mentioned that they have integrated ESG within their lending policies, credit applications, and due diligence across selected high-risk sectors – albeit with varying levels of sophistication and granularity – and, to a lesser extent, in their investment activity (e.g. advisory or debt capital markets). Civil society respondents, however, noted that the scope of financial instruments covered under these policies is not sufficiently broad; for instance, the focus is often on project finance, where the use of proceeds is known. Integration within portfolio monitoring and steering is less advanced and most banks do not have an aggregate portfolio view of their exposure to ESG risks.

Half of the interviewed banks stated that they have integrated ESG factors within their risk appetite framework (RAF), considering ESG risk as a transversal risk driver. However, ESG risks are often included as a qualitative statement, for instance as a reference to sectoral lending policies, rather than with quantitative metrics and portfolio limits. Many banks argued that the qualitative integration into RAF is an intermediate step, as more time is needed to solve data-related challenges and develop appropriate quantitative KPIs for further integration.

Integration of ESG risks into risk models, as well as stress testing, ICAAP, ILAAP and regulatory processes, are at a very early stage. Despite some banks having conducted targeted climate risk scenario analysis on segments of their portfolio, few carry out these exercises as structured group-wide stress testing efforts covering all relevant sectors. Civil society respondents argue that banks would benefit from supervisory guidance in this respect. As suggested, this could be advanced by providing banks with a range of reference scenarios to be used as input in the exercises, hence fostering standardisation and comparability of results.

A view held by some banks is that ESG risks are not integrated into risk processes because they are not found to be material, in particular as a result of the shorter time horizon often associated with these risk processes. As illustrated by respondents, the long-time horizons that characterise ESG risks, in particular environmental risks, are difficult to reconcile with capital planning time horizons of banks (e.g. three years for the ICAAP). This may be misleading because, as illustrated

by multiple respondents including civil society organisations, some climate-related risks (e.g. policy changes) are already materialising in the short term.

### Summary of principles of best practice based on stakeholder perspectives

ESG risks should be included within the RAF, either under existing risk types or as a principal risk type, to fully capture the environmental and social materiality perspective, considering banks' materiality assessment. Integration of ESG risks into the RAF should focus on identifying quantitative metrics to support qualitative statements, in particular for environmental risks. To this end, the RAF can leverage scenario analysis for KPI setting and monitoring. In addition, ESG risk limits across divisions and product-lines should be cascaded down to business functions.

Beyond ESG integration into cross-sector standards, a wide range of detailed sectoral policies should be used to guide financing across industries. Criteria established within these policies should cover different time horizons and financial instruments. Dedicated ESG risk due diligence processes should be used to capture information related to counterparties' exposure to ESG risks, capabilities to mitigate and manage these risks, as well as information on sustainable transition plans. This process could be standardised, where possible, and produce relevant ESG risk scores. ESG risk monitoring should also be carried out at portfolio level. Loan terms could be actively adjusted to reduce or mitigate exposure to ESG risks.

To advance integration within internal models for RWA, pricing, and credit risk assessment, the financial materiality of ESG factors should be assessed while taking differences in time horizons into consideration. ESG risks should also be included in the ICAAP using extended time horizons. In addition, ESG risks, in particular climate change risks, should be integrated into stress testing across risk types, starting with credit risk. Scenario-analysis methodologies leveraged for stress testing should use and build on scenarios aligned with relevant supervisory and other external guidance.

#### 3.2.4 ESG risk reporting and disclosure

Most interviewed banks have not yet integrated ESG risks within their internal risk reporting frameworks, with the highest level of integration observed across the E pillar where 43% of banks stated to have done so. With respect to public disclosures, ESG risk-related information is usually included in banks' broader ESG disclosure practices and influenced by national and EU-wide legislative requirements such as the NFRD.

The level of depth of these disclosures varies, and information on exposure to ESG risks tends to be qualitative in nature and not on par with international standards and expectations from external stakeholders, such as civil society organisations. Some respondents plan to enhance their ESG risk-related disclosures and align them both to regulatory and legislative guidelines as well as to voluntary disclosure standards. The update of the NFRD (i.e. the proposed CSRD) was mentioned by banks as a potential stimulus in this respect, as it might enhance reporting by companies and close data availability gaps. The EU Taxonomy was also mentioned by respondents as a step towards standardising disclosures on portfolio exposures. However, as further argued by respondents, its application to the loan book is yet to be advanced given that banks still have to gain greater transparency on borrowers' underlying business activities being financed. In the EU, developments related to Pillar 3 disclosures contribute towards harmonisation of disclosures.

Generally, respondents mentioned an intention to develop more quantitative risk-related metrics, for which significant advancement and standardisation is needed. Metrics currently commonly reported by banks are backward looking in nature. Examples include reporting the number of

transactions subject to E&S risk due diligence or the overall credit exposure to high ESG risk sectors or carbon-related assets. Scenario-based and forward-looking metrics are being developed in tandem with ESG risk measurement approaches. The EBA recently launched a public consultation on draft ITS on Pillar 3 disclosures of ESG risks and published a report on KPIs related to environmentally sustainable activities.

The need to enhance and standardise ESG risk-related disclosure was stated across stakeholder groups, with civil society organisations emphasising the relatively slow speed of adoption of international standards among banks. For instance, five years after the launch of the TCFD, the implementation of its disclosure standards has still not been completed by many banks, in particular with respect to metrics and targets.

#### **Summary of principles of best practice based on stakeholder perspectives**

ESG risk should be integrated within internal risk reporting. Comprehensive and decision-relevant information on ESG risk exposure and strategy should be provided to external stakeholders. As ESG risk disclosures target a diverse audience, they should be presented in different formats and be structured along regulatory guidelines and international frameworks and standards.

ESG risk disclosures should include both qualitative and quantitative information. Specifically, banks could further develop more detailed and granular KPIs for disclosure, beyond those specified by supervisors and regulators. Metrics disclosed could include, among others, KPIs related to: i) Current sectoral exposure (e.g. exposure to carbon-intensive sectors), ii) ESG risk exposure (e.g. portfolio ESG risk score), iii) risk-sensitivity and financial impact metrics (e.g. expected impairments due to transition risk), and iv) ESG impact and alignment metrics (e.g. % portfolio aligned to the Paris Agreement).

For banks that have made public commitments related to the portfolio, such as net zero, interim targets should be set and progress should be regularly communicated. In addition, disclosures should outline banking activities in scope of such commitments. Details on the underlying calculation methodologies and data sources would be required to ensure transparency and comparability.

### 3.3 Detailed stocktake findings and principles of best practice

The remainder of the section provides the detailed findings for each research focus area and sub-focus area. Findings from the stocktake are presented, based on data gathered through desk research, interviews/questionnaires, focus groups, and workshops. Subsequently, principles of best practice are formulated. These principles are forward-looking in nature, and either describe selected practices observed among advanced banks or propose approaches not yet implemented and to be further developed. The definition of best practices seeks to reflect not only the desired level of ambition expressed by banks, but also external stakeholder expectations, including supervisors, civil society organisations, and other stakeholders.

#### 3.3.1 ESG risk definition and identification

##### 3.3.1.1 ESG risk definition and perimeter

The starting point for discussing ESG integration within banks' risk management practices is to firstly understand how ESG risks are defined by banks. At a high-level, ESG risks can be defined as events or conditions related to environmental (E), social (S), and governance (G) issues – which, for the purposes of this study will henceforth be referred to as factors – that may have a negative impact on banks<sup>34</sup> (e.g. on the balance sheet) as well as on the external environment. The three sub-components of ESG are often referred to as ESG pillars. In order to adequately capture how banks currently define ESG risks, this study investigates the specific ESG factors captured under each of the ESG pillars, and to what extent banks understand how these translate into risks based on their materiality and relevance.

Since the introduction of the ESG term in the context of asset management and investments<sup>35</sup>, several entities, in particular international organisations and standard setting bodies – e.g. the Global Reporting Initiative (GRI)<sup>36</sup>, Sustainability Accounting Standards Board (SASB)<sup>37</sup> –, as well as data providers and credit rating agencies, have played a role in advancing a common understanding of key factors falling under each of the ESG pillars<sup>38</sup>.

More recent regulatory and legislative activity, such as the publication of the EBA paper on management and supervision of ESG risk<sup>39</sup>, the EU Taxonomy<sup>40</sup>, as well as market activity – e.g. the Principles for Responsible Banking (PRB)<sup>41</sup> – have further increased the understanding of ESG factors. Even though these efforts are often focused on specific pillars or aspects (e.g. green activities for the EU Taxonomy), they have highlighted the relevance of ESG within the banking sector.

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<sup>34</sup> Banks are exposed to ESG risks indirectly, through lending and investment activity, and also directly, through their own operations and organisational set-up. The focus of the study is on the indirect exposures.

<sup>35</sup> UN Global Compact (2004). *Who cares wins: connecting financial markets to a changing world*. Available at: [https://www.unglobalcompact.org/docs/issues\\_doc/Financial\\_markets/who\\_cares\\_who\\_wins.pdf](https://www.unglobalcompact.org/docs/issues_doc/Financial_markets/who_cares_who_wins.pdf).

<sup>36</sup> Global Reporting Initiative (n.d.). *The global standards for sustainability reporting*. Available at: <https://www.globalreporting.org/standards/>.

<sup>37</sup> Sustainability Accounting Standards Board (n.d.). *Standards Overview*. Available at: <https://www.sasb.org/standards-overview/>.

<sup>38</sup> Not all these initiatives refer to the term “ESG”, e.g. the GRI standards have topic-specific standards across “Economic, Environmental and Social” pillars (with the Governance pillar mostly captured under the former).

<sup>39</sup> EBA (2020). *EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>40</sup> European Commission (2020). *TEG final report on the EU taxonomy*. Available at: [https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy\\_en](https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy_en).

<sup>41</sup> UNEP FI (2019). *Principles for Responsible Banking*. Available at <https://www.unepfi.org/wordpress/wp-content/uploads/2019/09/PRB-Guidance-Document-Final-19092019.pdf>.

Despite the similarity and convergence of these efforts, there is currently no commonly agreed upon list of ESG factors and their associated risks that can be directly applied by the banking sector. Some stakeholders, such as the UN PRI<sup>42</sup>, argue that such a list would likely be incomplete and soon out of date, due to the constant evolution of ESG factors. Moreover, given that ESG covers a wide range of topics, these are defined and prioritised by banks based on geography, sector, client segment, and product type under consideration.<sup>43</sup>

The E pillar, and in particular climate change, is an exception to this, given that stronger standardisation is observed in the definition of its underlying factors. In particular, international initiatives, such as the Network for Greening the Financial System (NGFS), a network of supervisors and regulators, have fostered greater coordination in the definition and understanding of climate-related risks. For example, in its latest report, the NGFS provides an illustration of various factors falling under transition and physical risks.<sup>44</sup>

Overall, interviews showed that banks have high-level definitions of ESG factors and risks, which are often based on a combination of statements, standards, and external guidance from international organisations, civil society organisations, and supervisors. ESG topics are considered as dimensions of sustainability and, while some banks use the terms ESG and sustainability interchangeably, others consider environmental and social (E&S) as part of sustainability, and governance as a standalone topic.

As illustrated by the examples given in *Figure 1*, many respondents highlighted the difficulty of defining ESG risks, in particular given the wide spectrum of topics covered, their constant evolution, and a lack of granular guidelines.

**Figure 1: Illustrative comments on ESG risk definition<sup>45</sup>**

**How do you define ESG risks?**

*“ESG risk is not well defined from a risk management perspective”*

*“Very few have a complete and comprehensive view of what ESG risk means”*

*“[the bank] does not currently have its own definition of ESG risk but relies on the definition provided in the various regulation/directives impacting our business”*

*“This is a fast-moving environment, where everyone is trying to manage high ambitions with little structure”*

*“There are different levels of maturity for different aspects of ESG risks”*

*“The definition of ESG is quickly evolving and hard to pin down; it is hard to get the real scope and coverage”*

*“At the moment the definition is high-level, and not very granular”*

ESG themes were defined as high-level conceptual groupings of ESG factors falling under each of the ESG pillars, in order to provide a framework for analysis.<sup>46</sup> *Figure 2* provides a visualisation of the terminological framework applied for the purposes of the study, including ESG pillars,

<sup>42</sup> UN PRI (2018). *PRI Reporting Framework Main definitions 2018*. Available at: <https://www.unpri.org/download?ac=1453>.

<sup>43</sup> EBA (2020). *Sustainable Finance: Market Practices (Staff Paper Series)*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Sustainable%20finance%20Market%20practices.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf).

<sup>44</sup> Network for Greening the Financial System (2020). *Overview of Environmental Risk Analysis by Financial Institutions*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/overview\\_of\\_environmental\\_risk\\_analysis\\_by\\_financial\\_institutions.pdf](https://www.ngfs.net/sites/default/files/medias/documents/overview_of_environmental_risk_analysis_by_financial_institutions.pdf).

<sup>45</sup> Question: *How do you define ESG risks and what have you identified as the key drivers of ESG risks?*

<sup>46</sup> It is noted that confusion related to terminology exists in the field, and the term ‘ESG theme’ used here is for the purposes of this study.

themes, and underlying factors. Note that the ESG themes and factors presented are illustrative and not exhaustive. This study has not sought to define such an exhaustive list.

Figure 2: Terminological framework including illustrative ESG themes and factors

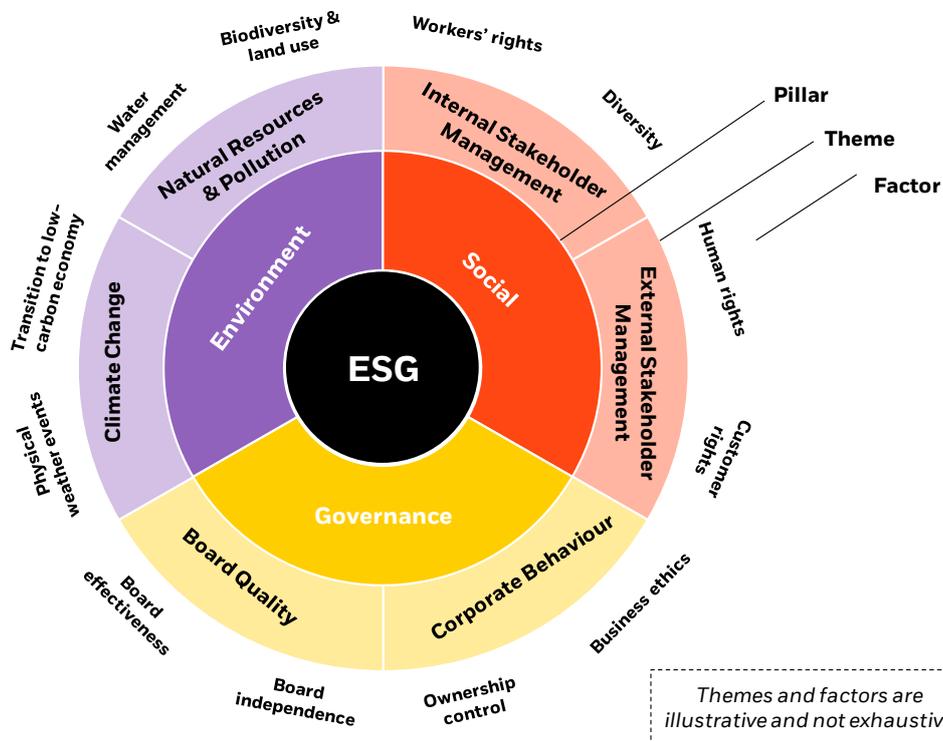


Table 3 illustrates the perceived relevance of the six ESG themes – used as a framework for the purposes of the study – and the most common ESG factors taken into consideration by banks, as well as any other factors mentioned. Despite the challenges raised by some stakeholders in comparing the themes on a relative scale, climate change is the most highly ranked, followed by corporate behaviour and external stakeholder management.

With respect to the specific factors considered across pillars, waste management, water management, climate change-related factors (i.e. physical weather events and transition to a low-carbon economy), community relations/human rights, and business ethics were among those most commonly considered. Consideration of specific ESG factors does not necessarily indicate that these have been integrated within risk management, but rather that banks’ risk management functions, at a minimum, are aware of them.

In banks’ answers, there was a strong focus on discussing the relative importance of ESG themes, but few illustrated clear linkages between ESG factors and risks. Exceptions to this are climate change and governance-related themes, which were often linked to credit risk, and business ethics, which was often mentioned with respect to reputational risk (see section 3.3.1.3).

Some banks also discussed ESG risks without drawing clear lines between those to which they are directly exposed, as an organisation, or indirectly, through their banking activity. This was particularly observed when discussing the G pillar (as further detailed below), but also in relation to the S pillar.

Table 3: Illustrative ESG themes and ranking based on perceived relevance<sup>47</sup>

Themes (Pillar)	Rank	Illustrative factors	Details on factors
<b>Climate Change (E)</b>	<b>1</b>		<p><b>Physical Weather Events:</b> Climate change driven weather conditions of acute (e.g. firestorms) and chronic (e.g. temperature rise) nature</p> <p><b>Transition to Low-Carbon Economy:</b> Process of adjustment to a low-carbon economy (driven by policy, technology, consumer sentiment and other)</p> <p><b>Carbon Emissions/Footprint:</b> Impact of business activity on environment in terms of carbon emissions and environmental footprint <i>Other factors: energy efficiency</i></p>
<b>Natural Resources &amp; Pollution (E)</b>	<b>4</b>		<p><b>Waste Management/Toxic Emissions:</b> management of waste and mitigation of toxic emissions generated by activity</p> <p><b>Water Management/Stress:</b> Management of scarce resources such as water</p> <p><b>Biodiversity &amp; Land Use:</b> Utilisation of natural land and protection of eco-system biodiversity</p> <p><b>Raw Material Sourcing:</b> Sustainable supply chain and procurement practices <i>Other factors: deforestation, air pollution</i></p>
<b>Internal Stakeholder Management (S)</b>	<b>6</b>		<p><b>Worker's rights:</b> Ensuring employees' basic rights through positive labour relations, safe working conditions, and fair wages</p> <p><b>Diversity and Culture:</b> Creating a work environment that promotes employee satisfaction/morale, inclusion and diversity</p> <p><b>Talent Management:</b> Offering career development and skills trainings for employees, and managing hiring and retention <i>Other factors: health &amp; safety, culture, racial equality</i></p>
<b>External Stakeholder Management (S)</b>	<b>3</b>		<p><b>Community Relations:</b> Operating as a good corporate citizen that protects human rights, is accountable to local community, and offers access to basic needs</p> <p><b>Customer Relations:</b> Focusing on customer welfare and satisfaction, through product quality, data privacy, and fair disclosure/marketing <i>Other factors: public housing, discrimination, child labour, defence and weapons, cybersecurity</i></p>

<sup>47</sup> Question: What sub-categories (of E/S/G) do you focus on? Please tick E/S/G themes considered relevant from a risk management perspective and rank from 1 (highest focus) to 6 (lowest focus) the ESG thematic pillars. Sample size: 15 (for rankings), 24 (for theme selection). Rankings were then aggregated to calculate their weighted average.

Themes (Pillar)	Rank	Illustrative factors	Details on factors
<b>Board Quality (G)</b>	5	<p>Board Independence 71%</p> <p>Board Effectiveness 71%</p>	<p><b>Board Independence:</b> Alignment of interest of management and shareholders for objective decision making and less possibility for entrenchment</p> <p><b>Board effectiveness:</b> Structures and diverse backgrounds of members leading to better decision making</p>
<b>Corporate Behaviour (G)</b>	2	<p>Business Ethics 92%</p> <p>Ownership Control 79%</p> <p>Audit, Tax and Risk Management 71%</p>	<p><b>Business Ethics:</b> Promotion of a culture for sustainable business practices and misconduct prevention</p> <p><b>Ownership &amp; Control:</b> Guarantee alignment of interests through low concentration of power and understanding of anti-takeover devices</p> <p><b>Audit &amp; Tax:</b> Adherence to best practice and monitoring mechanisms to lower the frequency &amp; scale of scandals, fraud, tax evasion, etc</p> <p><i>Other factors: corruption, bribery, extortion and money laundering, tax evasion, fraud, anti-competitive practices</i></p>

Source: BlackRock FMA analysis

Overall, it seems that banks currently place a stronger focus on the E pillar, and in particular climate change, compared to the S and G pillars. In fact, a significant portion of analysed banks (62%) highlighted the increasing relevance of risks emanating from climate change within their annual disclosures. Respondents, and in particular some of the larger banks, mentioned that the definition and relevance of this pillar has been strongly influenced by regulatory activity (e.g. the ECB Guide on climate and environmental risk<sup>48</sup>), voluntary initiatives (e.g. the CDP<sup>49</sup>), international agreements (e.g. the Paris Agreement<sup>50</sup>) and policy initiatives (e.g. the EU Green Deal<sup>51</sup>).

With respect to climate change, some respondents stated that they have developed an understanding of its underlying risk factor pathways through pilot exercises conducted through portfolio risk measurement and scenario analysis, allowing them to quantify event-driven impacts on exposures (see section 3.3.3.1.2). Several respondents mentioned that they have a focus on physical risk, including both extreme weather events (i.e. acute) and gradual temperature changes (i.e. chronic), given its tangible nature, making them more understandable and identifiable. Other banks mentioned being more focused on transition risk, which is instead driven by changes in legislation, technology, and shifting consumer preferences.

Even though climate change was ranked as the theme with highest priority, the other factors falling under natural resources and pollution – namely waste management and water management – were among the most recurring focus areas. In particular, water stress is regarded

<sup>48</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>49</sup> CDP (n.d.). *What we do*. Available at: <https://www.cdp.net/en/info/about-us/what-we-do>.

<sup>50</sup> UNFCCC (n.d.). *What is the Paris Agreement?* Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>.

<sup>51</sup> European Commission (n.d.). *A European Green Deal*. Available at: [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en).

as an increasingly relevant factor, often considered in conjunction with physical risk.<sup>52</sup> In fact, climate-related and other environmental risks cannot be easily separated, as they are interconnected and may reinforce one another; for example, climate change could increase the degradation of the environment and vice versa.<sup>53</sup>

With respect to the S pillar, all banks in the sample cover themes related to this pillar in their ESG risk definition. Banks with a national focus (e.g. in smaller economies) showed a stronger emphasis on these topics, due to the large impact their lending activity has on the real economy.

External stakeholder management was perceived as more important than internal stakeholder management, although some of its factors (e.g. workers' rights) are equally considered. Within customer relations, cybersecurity and data protection were often mentioned, particularly in light of an increase in cyber-attacks to which banks have been exposed in recent years.

Key drivers for the integration of considerations under the S pillar are international declarations (e.g. the Universal Declaration of Human Rights<sup>54</sup>), conventions (e.g. International Labour Organisation's Fundamental Human Rights Conventions<sup>55</sup>), standards (e.g. International Finance Corporation Performance Standards<sup>56</sup>) and principles (e.g. the UN Global Compact principles<sup>57</sup>). These principles are usually referenced or reflected in group wide position statements and integrated into lending and investment policies and transaction due diligence (see section 3.3.3.2.2).

Moreover, the broader societal context, as well as events such as the COVID-19 pandemic, are also seen as key drivers of change in focus on ESG factors. As mentioned by some participants, the pandemic has had an impact on the prioritisation of ESG factors and may bring about a stronger focus on the S pillar going forward, for example, on labour management and healthcare infrastructure. As further explored by Sustainalytics in a series of research-based blog articles, there are various ESG implications of COVID-19, ranging from the renewed appreciation of local supply chains – which are less subject to disruptions –, and extended considerations on the potential negative implications of an oil price collapse on the renewable energy sectors.<sup>58</sup>

Based on banks' responses, governance is the best understood of the ESG pillars, with priority given to corporate behaviour. Overall, as also found in an EBA staff paper stocktake<sup>59</sup>, a large share of banks initially addressed governance from their own operational and organisational perspective – rather than that of the companies they lend to –, as it relates to long-standing issues that are addressed by banking legislation and regulation. Topics such as anti-money laundering

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<sup>52</sup> BlackRock Investment Institute (2020). *Troubled water: Water stress risks to portfolios*. Available at: <https://www.blackrock.com/corporate/literature/whitepaper/bii-water-risks-july-2020.pdf>.

<sup>53</sup> EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>54</sup> UN (1984). *Universal Declaration of Human Rights*. Available at: <https://www.un.org/en/universal-declaration-human-rights/>.

<sup>55</sup> International Labour Organization (n.d.). *Conventions and Recommendations*. Available at: <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm>.

<sup>56</sup> IFC (2012). *Performance Standards*. Available at: [https://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards](https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards).

<sup>57</sup> UN Global Compact (n.d.). *The Ten Principles of the UN Global Compact*. Available at: <https://www.unglobalcompact.org/what-is-gc/mission/principles>.

<sup>58</sup> Sustainalytics (2020). *ESG Implications of COVID-19*. Available at: <https://www.sustainalytics.com/esg-investing-news/sustainalytics-blog-series-focuses-on-the-esg-implications-of-covid-19/>.

<sup>59</sup> EBA (2020). *Sustainable Finance: Market Practices (Staff Paper Series)*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Sustainable%20finance%20Market%20practices.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf).

(AML) and avoidance of terrorism finance, which were repeatedly mentioned, somewhat cut across both governance of the bank – as they have implications on their own internal processes and compliance –, as well as the governance of financed counterparties.

Overall, interviews revealed that governance – and particularly certain sub-topics such as AML – is often not associated with discussions on ESG and sustainability. This is because it is usually embedded within traditional Know-your-Customer (KYC) and client onboarding practices, which are typically undertaken from a compliance perspective, rather than from an ESG risk standpoint (see section 3.3.3). Some banks also mentioned the importance of assessing client governance practices beyond a compliance perspective. Respondents noted that borrowers' governance practices and management quality are already assessed in traditional credit processes. Others emphasised that this assessment should be further expanded to capture, among other elements, how E&S risks are managed by the counterparties, for instance through the set-up of adequate governance structures and control mechanisms for climate risk management.

Illustrative comments on ESG factors and considerations made by interviewed banks related to the three pillars are given in *Figure 3*.

**Figure 3: Illustrative comments on ESG risk considerations per pillar**

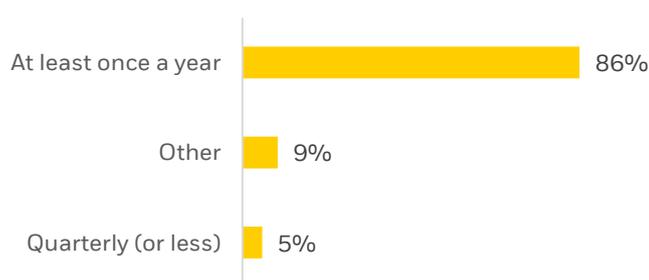
<b>What sub-categories (of E/S/G) do you focus on?</b>
<u>Environmental</u> <i>“Physical risks are more tangible and better understood than transition risks”</i> <i>“[...] more factors on climate change have been included following EBA and Bank of England guidelines”</i> <i>“The real focus is on E [...] having a clear identification of climate risk and specifically the transition risk that the counterparty would have in moving to a lower carbon emitting business model”</i>
<u>Social</u> <i>“The S pillar is harder to define, however there is a gradual realisation in the industry of its relevance”</i> <i>“Key drivers of S are human rights abuses and corporate complicity, impacts on communities, social and other forms of discrimination, forced/child labour, health &amp; safety, and poor employment conditions”</i> <i>“Social considerations vary by geographies”</i>
<u>Governance</u> <i>“On G, the internal risk control framework focuses more on financial-crime related drivers”</i> <i>“There is also a strong focus on compliance within national and European regulation”</i> <i>“Topics such as corruption and compliance are also part of governance, however they are managed by the compliance and financial crime team, which is separate from the Environmental and Social Risk team [...] Sustainability should not overlap or replicate existing things”</i> <i>“The G pillar can also be interpreted as governance structures set-up to implement and oversee the environmental and social risks framework throughout the organisation”</i> <i>“Governance is important, it is costly, and its implications are not yet fully understood”</i>

The relevant time horizon is also an important dimension to consider when looking at the definition of ESG risks. While some risks may play out in the short to medium term, such as those driven by policy changes, others may stretch out over considerably longer horizons (e.g. beyond

10 years).<sup>60</sup> As highlighted in an interview with an academic, one should take into account the time horizons considered by banks in their risk identification processes, as there may be differences between the long-term view – i.e. the strategic perspective – and the short-term view, which focuses more on financial risk.

As illustrated in *Figure 4*, 86% of respondents review their definition of ESG risks on an annual basis, while others described this as a continuous process, influenced by evolutions within the external environment. As highlighted by some respondents, the shaping of these themes across ESG pillars and their further decomposition into factors (e.g. under the E pillar, plastic consumption within the factor of waste management) is strongly driven by the external environment, including civil society organisations and customers.

**Figure 4: Frequency of ESG risk definition reviews**<sup>61</sup>



Source: BlackRock FMA analysis

Driven by their underlying mission, civil society organisations contribute to the increased awareness of specific ESG factors and can provide input to banks in the identification of emerging ESG risks. To this end, significant engagement between civil society organisations and the banking sector has occurred, in particular on environmental issues. To provide some examples, the World Wildlife Fund (WWF) published a report on the financial risks and opportunities associated with water<sup>62</sup>, Oxfam published an article investigating the financial risks of climate change<sup>63</sup> and Amnesty International published a call to action for climate change to be placed at the “top of the agenda”<sup>64</sup>. Direct engagement activities are often focused on fossil fuel financing – which is one of the most common interaction topics within the banking sector –, but also cover a wide range of other topics such as financial risks from natural degradation and biodiversity loss.<sup>65</sup> Beyond the environmental topics illustrated above, other ESG issues are also

<sup>60</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>61</sup> Question: *How often do you review definitions of ESG risks/refine the scope of ESG risks under consideration (if applicable)?* Sample size: 21. “Other” refers to a bank who mentioned that ESG risk taxonomy does not require frequent update, and another one who mentioned continuously updating their definition through collection of external information.

<sup>62</sup> WWF and KfW (2019). *Freshwater risks & opportunities – An overview and call to action for the financial sector*. Available at: [https://wwfeu.awsassets.panda.org/downloads/wwf\\_waterrisk\\_financialvalue\\_part4\\_keypiece\\_web.pdf](https://wwfeu.awsassets.panda.org/downloads/wwf_waterrisk_financialvalue_part4_keypiece_web.pdf).

<sup>63</sup> Oxfam (2020). *Bankrolling climate action and accountability*. Available at: <https://politicsofpoverty.oxfamamerica.org/bankrolling-climate-action-accountability-financial-sector/>.

<sup>64</sup> Amnesty International (2020). *Davos: Climate emergency must come top of the agenda*. Available at: <https://www.amnesty.org/nz/davos-climate-emergency-must-come-top-agenda>.

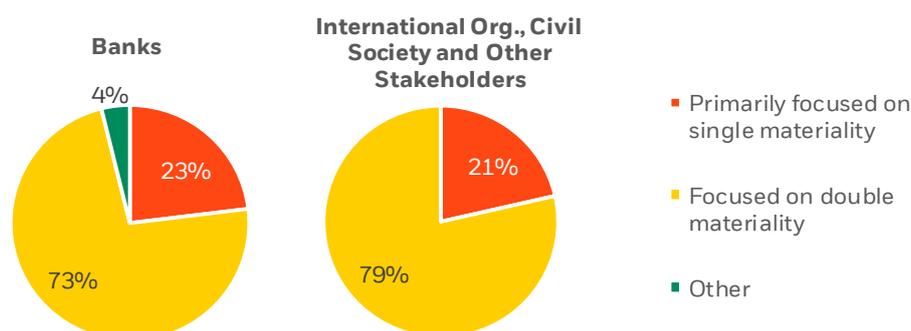
<sup>65</sup> WWF (2019) *Nature Risks – Framework for Understanding Nature-Related Risk to Business* Available at: [https://wwf.panda.org/our\\_work/our\\_focus/finance/?356338/Nature-Risks-are-Financial-Risks](https://wwf.panda.org/our_work/our_focus/finance/?356338/Nature-Risks-are-Financial-Risks).

discussed in the context of banking activities. For example, in one of its papers, Transparency International provides an overview of potential corruption risks in blended finance mechanisms<sup>66</sup>.

In order to understand the extent to which the above-mentioned ESG factors are addressed within banks' risk management, the concepts of 'single materiality' and 'double materiality' perspectives play a key role. The single – also known as financial – materiality perspective considers ESG themes when they constitute financial risks for the bank (e.g. through their negative impact on the balance sheet). The double materiality concept, as defined within the Commission's Guidelines on Reporting Climate-related Information<sup>67</sup>, instead indicates that ESG considerations are relevant both when analysing financial materiality, as well as when taking into account the impact of banking activity on the environment and society.

As shown in Figure 5, 73% of interviewed banks stated that they define ESG risks through the double materiality perspective. Banks focused on single materiality (23%) are usually at an early stage of ESG integration, and often mentioned that the double materiality approach should be the focus going forward. While all G-SIBs mentioned adopting the double materiality approach, non-G-SIBs-s responses were somewhat equally split between the two perspectives. As further shown in the figure, the double materiality perspective is also the view mostly encouraged (79%) by interviewed international organisations, civil society organisations, and other stakeholders. This is in line with publicly shared perspectives from such organisations (e.g. GRI<sup>68</sup>) – who encourage banks to address ESG issues even if these go beyond a financial impact –, as well as ESG rating providers – who include environmental and social impact related-data in their scores.

Figure 5: ESG definition by materiality approach<sup>69</sup>



Source: BlackRock FMA analysis

Multiple civil society respondents noted that banks should focus on double materiality as it is aligned with the principles and objectives of EU-wide activity (e.g. EU Taxonomy). However, as argued by another civil society respondent, ESG assessments by banks are currently skewed towards corporate risks (i.e. financial materiality) rather than corporate impact (i.e. environmental and social materiality). On the other hand, respondents endorsing the single materiality view suggest that ESG integration should be a step-by-step approach, and it may therefore be simpler and more practical for banks to begin by first addressing financial materiality. An academic

<sup>66</sup> Blended finance refers to the strategic use of development finance for the mobilisation of additional commercial finance towards the SDGs in developing countries. Source: Transparency International (2018). *Better Blending – Making the case for transparency and accountability in blended finance*. Available at: [https://images.transparencycdn.org/images/2018\\_WorkingPaper\\_BetterBlending\\_English.pdf](https://images.transparencycdn.org/images/2018_WorkingPaper_BetterBlending_English.pdf).

<sup>67</sup> European Commission (2019). *Guidelines on Reporting Climate-related Information*. Available at: [https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines\\_en.pdf](https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines_en.pdf).

<sup>68</sup> Global Reporting Initiative (2020). *GRI contribution to the EU public consultation regarding the proposal by the European Commission for regulation*. Available at: [https://www.globalreporting.org/media/5egmieer/nfrd\\_update-2020.pdf](https://www.globalreporting.org/media/5egmieer/nfrd_update-2020.pdf).

<sup>69</sup> Question: *Does the above definition of ESG risk focus on single or double materiality?* Sample size: 26.

respondent further stated that financial materiality should be prioritised for the time being, as discussions on sustainability may often be abstract and high-level, and hence, lack the financial relevance aspect that is needed to bring the topic to the attention of financial institutions.

Another important consideration raised by a civil society respondent concerns the different time horizons associated with financial and environmental and social materiality. While financial materiality may be more short-term focused, environmental and social materiality usually has more of a long-term perspective. Banks should therefore keep in mind the interplay between the different time horizons in their materiality considerations. This point is also emphasised in the guidelines on reporting climate-related information.<sup>70</sup>

Many respondents highlighted the issue of whether the double materiality concept is fully captured through existing risk categories, or if it introduces new considerations that cannot be adequately mapped. As further detailed in section 3.3.1.3, while financial materiality is easily captured through existing risk types (e.g. credit, market), environmental and social materiality was mentioned by many respondents as being partly covered by reputational risk, as the impact of their banking activity on the environment is often subject to public scrutiny and, hence, associated with reputational considerations. However, some respondents also mentioned that reputational implications can translate into financial impact, indicating that environmental and social materiality is inherently connected to financial materiality.

In essence, there seems to be no “clear line between the different approaches to materiality”<sup>71</sup>. Risk management functions of banks seem to consider ESG risks only if they indirectly translate into financial risks, whilst the management of other ESG risks and factors is handled by central Sustainability or Corporate Social Responsibility (CSR) departments (see section 3.3.2.2)

### Principles of best practice based on stakeholder perspectives

**The definition of ESG risks should consist of a granular list of underlying factors for each pillar, with an indication of their relevance within specific sectors, client segments and geographies.** The list of ESG factors should be defined across all ESG pillars; *Figure 6* provides an illustrative starting point. Subsequently, banks should distinguish which ESG factors are relevant within specific sectors and client segments and acting as potential risk drivers.

Figure 6: Illustrative ESG factors

The below table provides a high-level illustration of an ESG factor definition. Subsequently, banks should develop a granular matrix to summarise, to the extent possible, which ESG factors are more relevant within specific sectors and geographies.

Pillars	Illustrative Themes (non-exhaustive)	Illustrative Factors (non-exhaustive)
E	<b>Climate Change</b>	<ul style="list-style-type: none"> <li>Transition to low-carbon economy</li> <li>Physical Weather Events</li> <li>Carbon Emissions and Energy Efficiency</li> </ul>
	<b>Natural Resources &amp; Pollution</b>	<ul style="list-style-type: none"> <li>Waste Management &amp; Toxic Emissions</li> <li>Water Management/Stress</li> <li>Biodiversity</li> <li>Raw Material Sourcing &amp; Land Use (incl. Deforestation)</li> <li>Air Quality</li> </ul>

<sup>70</sup> European Commission (2019). *Guidelines on Reporting Climate-related Information*. Available at: [https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines\\_en.pdf](https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines_en.pdf).

<sup>71</sup> IIF (2020). *Building a Global ESG Disclosure Framework: a Path Forward*. Available at: [https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20\(June%202020\)%20final.pdf](https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20(June%202020)%20final.pdf).

S	<b>Internal Stakeholder Management</b>	<ul style="list-style-type: none"> <li>Workers' rights</li> <li>Diversity and Culture (incl. Racial Equality)</li> </ul>	<ul style="list-style-type: none"> <li>Talent Management</li> </ul>
	<b>External Stakeholder Management</b>	<ul style="list-style-type: none"> <li>Human Rights (incl. Affordability)</li> <li>Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Customer Relations (incl. Data Protection &amp; Privacy)</li> </ul>
G	<b>Board Quality</b>	<ul style="list-style-type: none"> <li>Board Effectiveness</li> <li>Board Independence</li> </ul>	
	<b>Corporate Behaviour</b>	<ul style="list-style-type: none"> <li>Business Ethics (incl. Corruption, Bribery, Extortion)</li> <li>Ownership &amp; Control</li> </ul>	<ul style="list-style-type: none"> <li>Audit, Tax and Risk Management (incl. AML)</li> </ul>

Source: BlackRock FMA analysis

**The relevance of ESG factors should be assessed adopting the double materiality perspective.** As suggested by different stakeholder groups, this allows banks to look not only at the potential impact of ESG risks on their balance sheet, but also consider the impact of banking activities on the external environment. This approach is in line with the guidelines provided in the NFRD and is endorsed by external stakeholders, including civil society organisations, as it provides a holistic view on the interconnections between banking activity and ESG risk.

**The list of ESG factors and risks should reflect supervisory and regulatory guidance and be regularly reviewed and expanded, including actively gathering input from external stakeholders.** Regulatory definitions of ESG risks, such as those provided by the EBA<sup>72</sup>, should serve as a starting point for banks' ESG risk definition. In addition, input from civil society organisations and international organisations should be captured, to balance perspectives and continuously challenge and update existing definitions. Using and referencing international frameworks ensures standardisation or a common baseline of definitions across stakeholders.

### 3.3.1.2 ESG risk identification approaches

As part of their ICAAP, banking institutions in the EU are expected to perform a risk identification process, at least annually, to identify risks that are material, and update or review their 'internal risk inventory'.<sup>73</sup> Following the risk identification process, material risks are then aggregated and included within the key risk types, which are assigned to a risk owner, who reports on and/or actively manages these risks. Despite this structured approach for risk identification in place in banks, most interviewed institutions have not yet systematically integrated ESG considerations within that process. This is in line with the joint European Banking Federation (EBF) and Institute of International Finance (IIF) Climate Finance Survey, which found that only 17% of banks have fully integrated the process for identifying and assessing climate-related risks and opportunities

<sup>72</sup> EBA (2020). *EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*. Available at:

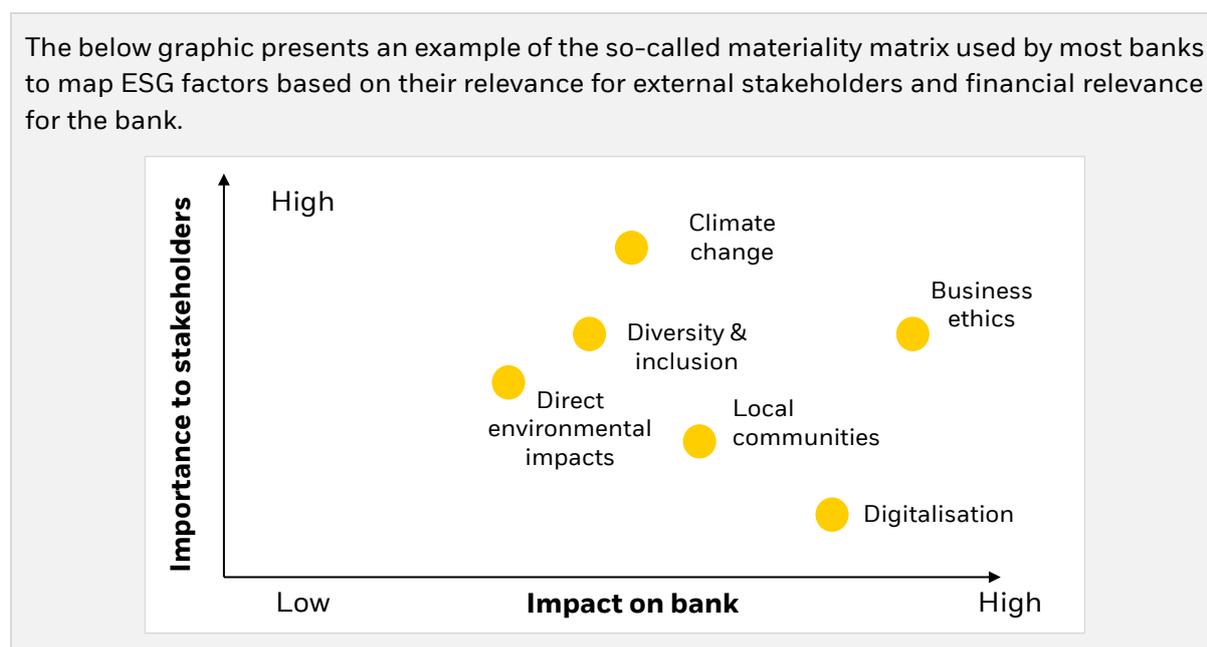
[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>73</sup> European Central Bank (2018). *ECB Guide to the internal capital adequacy assessment process (ICAAP)*. Available at: [https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap\\_guide\\_201811.en.pdf](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap_guide_201811.en.pdf).

in their risk management framework.<sup>74</sup> As discussed in the previous section, this is also related to the lack of a common ESG risk definition and the overlap of ESG risks with existing risk types.<sup>75</sup>

When asked about their ESG risk identification process, a wide range of interviewed banks mentioned that they also carry out materiality analysis from a broader CSR perspective<sup>76</sup>, and not as part of risk processes (such as ICAAP). This approach, which is endorsed by common standards such as the GRI, encourages the development of a so-called materiality matrix as the final output. As illustrated in *Figure 7* these visualisation tools, which are included in the majority of analysed banks' CSR/Sustainability Reports (i.e. 64%), help illustrate which ESG themes have particular relevance for the bank and for stakeholders. As mentioned by respondents, these exercises are used to identify key themes; however, they do not have a connection with ESG factors and risk types (e.g. credit, market risk).

**Figure 7: Illustrative example of a materiality matrix**



Source: Public reports from banks and BlackRock FMA analysis

For these types of analyses, banks rely on internal and external input, which is actively collected through questionnaires or direct dialogue with a wide range of stakeholders (including customers, civil society, investors), and subsequently prioritised as deemed relevant and in alignment with the bank's broader strategy.

Banks use different approaches for ESG risk identification, with most relying on a combination of top-down and bottom-up approaches, using a mix of quantitative and qualitative data. For instance, top-down approaches include sectoral reviews carried out at portfolio level aimed at identifying sectors that are most exposed to ESG risks and potentially reviewing their sector ratings accordingly (e.g. for carbon intensive sectors). Another example of a top-down approach is the identification of ESG risks through the 'Top and Emerging Risk identification process', a

<sup>74</sup> EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

<sup>75</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>76</sup> Defined as a company's commitment to carry out its activities in an ethical way, mindful of the social, economic and environmental impact.

practice also mentioned in the risk management chapter of the Climate Financial Risk Forum (CFRF) guide.<sup>77</sup>

Bottom-up approaches rely on more granular data than top-down approaches, are often conducted in collaboration with the business lines, and are connected to business processes. Some banks mentioned the existence of differentiated approaches across ESG pillars. For instance, according to respondents, the approach for the identification of climate-related risks (i.e. physical and transition risks) is becoming increasingly bottom-up. *Figure 8* provides examples of considerations related to ESG risk identification processes mentioned by respondents.

Figure 8: Comments on risk identification process

**What are your approaches to ESG risk identification?**

*“Key ESG issues are identified through the materiality assessment, by asking internal and external stakeholders about topics that may have a positive or negative impact on the external environment”*

*“ESG risk is included in the identification approach at aggregate level (top-down approach), however we are in the process of building it from a bottom-up view”*

*“As part of our Top & Emerging risk process, the bank has identified ESG risks as a high priority risk partly due to increasing focus from our stakeholders and regulators”*

*“For ESG risk more broadly, the Group uses a combination of Bottom up/Top down, internal/external information, and both quantitative and qualitative methods when identifying ESG risks”*

*“As for all financial risks, we maintain a risk register to identify climate-related risks and provide appropriate mitigation measure where necessary”*

As part of the ESG risk identification process, most banks mentioned the importance of effective interaction between the three lines of defence – in particular, risk management functions, business units, and other group functions – to ensure that all risks facing the bank are considered in this process. One bank also mentioned that they have an ESG risk working group in charge of scanning the internal and external environment on a semi-annual basis to identify new and emerging ESG risks.

#### Principles of best practice based on stakeholder perspectives

**ESG risk identification should be embedded within existing risk identification processes and conducted at least yearly to identify and prioritise ESG risks based on their materiality.**

ESG risk identification should be included in regulatory processes, such as the ICAAP, and should be referenced within the risk inventory and internal taxonomy. Following the risk identification process, banks should prioritise ESG risks based on materiality, based on their business model, markets served, geography and culture.

**The ESG risk identification process should be complemented by an outside view of perceived materiality from external stakeholders.** This could be performed by carrying out dedicated surveys tailored to a wide and diverse audience, whose input could be used to identify themes that should be prioritised (e.g. represented through materiality matrixes).

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<sup>77</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

### 3.3.1.3 ESG risk transmission channels

At a high-level, banks can be exposed to ESG risks in two ways. The first, the direct exposure, arises from own operations; for instance, banks may be exposed to ESG operational risk if their offices are in high flood risk areas. The second, the indirect exposure, arises through financing and investment activity and is therefore more significant in terms of potential impact based on the business mix of banks. For instance, through their loan book, banks could be lending to counterparties operating in high flood risk areas, whose asset and collateral value may be negatively impacted by extreme weather events.<sup>78</sup>

The focus of this study is on the indirect risk. As also argued in an EBA discussion paper, ESG risks related to institutions' fully-controlled activities and related management arrangements are expected to be already taken into account in existing risk management and internal governance frameworks.<sup>79</sup> However, direct risks were also included in the analysis of transmission channels.

From the rise of CSR, ESG risks have been mostly addressed from an operational, compliance, and reputational risk perspective.<sup>80</sup> More recently, there have been coordinated efforts – for instance, through the set-up of the UNEP FI<sup>81</sup> –, to understand ESG implications for other financial risk types, in particular for credit risk. However, interviews showed that banks have not yet developed a clear mapping of how different ESG factors feed into financial risk types.

Almost all banks consider ESG as a transversal topic impacting other risk types rather than treating it uniquely as a principal (or standalone) risk type. This is in line with examples of good practice provided by the CFRF, according to which “climate risk is a cross-cutting risk type that manifests through most of the established principal/standalone risk types.”<sup>82</sup> Given the relevance of ESG for all risk types, many banks mentioned that understanding these interconnections will likely be a step-by-step process, where some risk types (e.g. reputational risk) as well as ESG themes (e.g. climate risk) will be more advanced than others.

As observed among banks, advancements on these mapping efforts are mostly related to climate risk assessments. One respondent argued that climate risk should be separated from the other ESG or sustainability risks given that it is more relevant for financial risk and its mapping efforts are more advanced, due to the existence of shared evidence, as well as growing awareness, on how physical and transition risks can materialise as financial risk and induce spill-over effects. As illustrated in a Bank of International Settlements (BIS) paper, climate-related risks involve “dealing with multiple forces that interact with one another, causing dynamic, nonlinear and disruptive dynamics that can affect the solvency of financial and non-financial firms, as well as households' and sovereigns' creditworthiness”.<sup>83</sup>

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<sup>78</sup> OECD (2016). *Financial Management of Flood Risk*. Available at: <https://www.oecd.org/daf/fin/insurance/OECD-Financial-Management-of-Flood-Risk.pdf>.

<sup>79</sup> EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>80</sup> See for example: Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>.

<sup>81</sup> UNEP FI (n.d.). Pilot Projects on Implementing the TCFD Recommendations for Banks. Available at: <https://www.unepfi.org/banking/tcfd/>.

<sup>82</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>83</sup> Bank for International Settlements (2020). *The green swan moment: Central banking and financial stability in the age of climate change*. Available at: <https://www.bis.org/publ/othp31.pdf>.

Generally, understanding the relevance of ESG for financial risk types is key to understanding their potential impact on banks' solvency. *Table 4* provides an overview of the perceived relevance of ESG risks by interviewed banks based on their mapping to traditional financial and non-financial risk types. The strongest focus is on credit risk, reputational risk, and strategic risk. For instance, credit risk may be affected by extreme weather events, that may have a negative impact on collateral value and hence affect LGD. On the other hand, impact on market risk, which transmits through lower asset valuation, as well as liquidity risk, are yet to be explored and hence their impact on banks' solvency to be quantified.

Multiple respondents mentioned the need to prioritise specific ESG themes for these mapping efforts, developing a step by step roadmap in order to manage the high level of complexity. Given the current momentum on climate-related risk, some banks prefer advancing their mapping efforts on this specific theme, and plan to expand to other ESG themes later.

The high scoring of credit risk by respondents is an indication of the relevance of climate risk factors for this risk type, which is also one of the most explored in academic literature. For example, a paper from the EDHEC Business School, which investigated the relationship between exposure to climate change and firm credit risk, found a negative correlation between distance-to-default<sup>84</sup> and the amount of a firm's carbon emissions and carbon intensity, hence suggesting exposure to climate risk affects the market's perception of creditworthiness of corporate debt instruments.<sup>85</sup>

Table 4: ESG relevance to risk types<sup>86</sup>

Risk Relevance	Score	Description	Illustration (not exhaustive)
<b>Credit risk</b>	4.0/5	Loss due to the failure of a counterparty to meet its agreed obligations to pay the bank	ESG component may affect PG/LGD calculation (e.g. damages to borrowers' assets may reduce their collateral value/ability to pay loans)
<b>Reputational risk</b>	3.9/5	Loss of earnings or market capitalisation as a result of stakeholders taking a negative view of the organisation	Decrease in corporate valuation due to scandals/increased scrutiny by clients and customers on ESG issues (e.g. pollution, investments in controversial sectors, etc)
<b>Strategic risk</b>	3.3/5	Loss due to poor business decision management or from pursuit of an unsuccessful business plan	Failure to account for rising ESG factors, leading to misalignment of business model to market best practice (e.g. not being able to finance the environmental transition)
<b>Concentration risk</b>	3.0/5	Potential for loss in a bank's portfolio due to concentration to a single counterparty, sector or country	Rapid increase in risk exposure across certain ESG friendly asset classes through thematic investments lacking diversification (e.g. renewables)
<b>Legal risk/ conduct/ compliance risk</b>	2.9/5	Loss due to the breach of contractual obligations or loss due to a breach of regulatory	Incurrence of fines due to lack of consideration on compliance with

<sup>84</sup> The distance-to-default provides a measure of the distance – in asset value standard deviations – of the current market value of assets in a company from a specified default point.

<sup>85</sup> EDHEC (2020). *Climate Change and Credit Risk*. Available at: <https://risk.edhec.edu/publications/climate-change-and-credit-risk>.

<sup>86</sup> Question: *Where do you consider ESG as a significant driver of risk among traditional risk types? Please provide a score on ESG relevance to each risk type on a scale from 0 to 5, with 0 being not relevant and 5 being very relevant*. Sample size: 24. The score illustrated is the average score provided by respondents, however, not all respondents scored all risk types.

Risk Relevance	Score	Description	Illustration (not exhaustive)
		practices and/or code of conduct and result into civil fines, sanctions, etc	"E&S international standards and regulation on G"
<b>Operational, IT &amp; cyber security risk</b>	2.6/5	Loss resulting from inadequate procedures, systems or policies and/or from a breach of confidentiality, integrity of information systems	Fraudulent activity within the bank and/or fraud in relation to improper utilisation of financing, originally granted for the ESG scope support
<b>Market risk</b>	2.4/5	Loss of earnings or economic value due to adverse changes in financial market rates or prices	Asset valuations as well as risk-returns across equity, bonds, commodity affected by ESG (e.g. energy and commodity prices by low-carbon transition)
<b>Liquidity risk</b>	1.7/5	Loss due to the failure of a bank to meet short term financial demands	ESG asset classes/instruments may be prioritised above traditional asset classes/instruments affecting the bank's liquidity or funding

Source: BlackRock FMA analysis

Figure 9 lists some comments provided by respondents during interviews when discussing ESG relevance within the various risk types. Most comments were focused on climate-related risks, indicating that market activity and regulatory guidance on this theme have fostered a stronger focus on its financial implications. In addition, respondents mentioned a higher exposure to conduct risk, stemming from the increasingly elaborate regulation and expectations on ESG.

Figure 9: Illustrative comments on ESG relevance for risk types

**Where do you consider ESG as a significant driver of risk among traditional risk types?**

Credit Risk: "ESG risks may have remarkable effects in credit risk, especially among our Large and Corporate Investment Banking clients and in our sensitive sectors"

Reputational: "Reputational risk is high due to continually rising stakeholder expectations and potential for criticism on not taking ambitious enough positions or not being able to deliver fully on ambitious positions"

Compliance: "Compliance risk profile is also elevated as regulations are evolving fast for ESG and climate risk, creating potential for non-compliance against fragmented regulations"

Market Risk: "Market risks may arise from ESG factors due to environmental and social events with a direct impact on the value of our assets. For example, increase in land pricing due to climate tax or deforestation"

Liquidity Risk: "ESG themes can directly affect the liquidity of assets, temporarily or permanently preventing their trading".

Other comments across risk types:

"Climate risk is seen as a cross-cutting risk which touches both financial and non-financial risk; the rest of ESG is currently embedded in the non-financial risk framework"

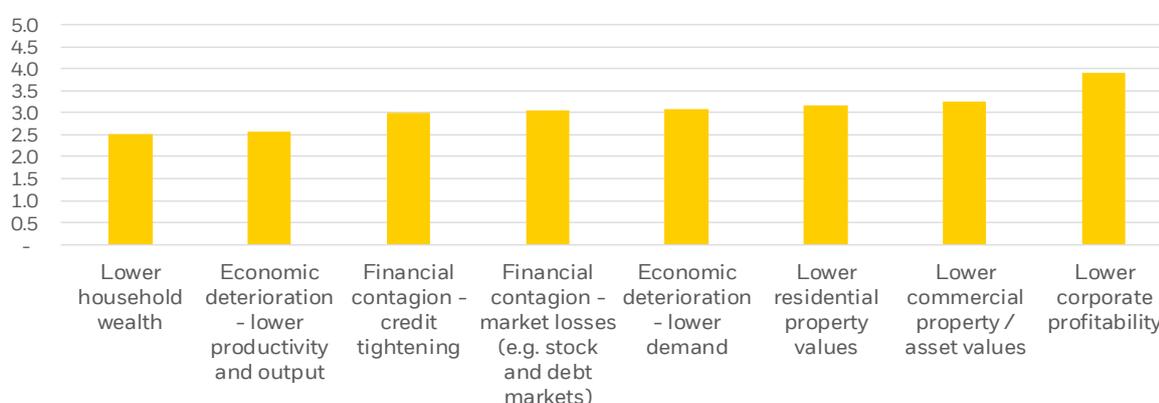
"Climate risk is much more advanced [...] and represents a true financial risk [...] There is no evidence that any of the other risks have the same financial risk as climate risk"

As illustrated in a report from the NGFS, ESG risks impact banks' balance sheets and the broader economy through various transmission channels.<sup>87</sup> For instance, climate risks may impact traditional economic variables (e.g. change in demand, input prices and productivity) bringing additional stress into the economy through a decrease in profitability and asset valuation. As highlighted in the NGFS paper, this in turn results in losses for the financial sector, which then feed back into the overall economic deterioration through market losses and credit tightening.<sup>87</sup>

As mentioned by respondents during interviews, an improved understanding of the various ESG risk transmission channels is seen as an important step in developing a clear map of ESG factors to risk types. Despite efforts to advance work on this topic, many respondents stated that there is still no common understanding of the importance and relative relevance of these transmission channels, for instance, due to the different time horizons associated with ESG risks.

As illustrated in *Figure 10*, participants identified lower corporate profitability and lower commercial and residential property values as the major transmission channels for ESG risks (and climate risk specifically).

**Figure 10: Main transmission channels of ESG risks<sup>88</sup>**



Source: BlackRock FMA analysis

As further detailed in section 3.3.3 many banks are developing approaches to quantify the extent to which climate risk impacts these transmission channels. For instance, exercises on physical risk are focused on assessing the impact of temperature changes and weather events on property values (both residential and commercial), among other elements. Similarly, transition risk exercises are often focused on corporates and assess the impact of changes in legislation, technology, and consumer demand on corporate profitability.

Table 5 illustrates comments provided by banks when discussing the various transmission channels of ESG risks and are mostly focused on climate-related risk.

**Table 5: Illustrative comments on ESG risk transmission channels**

Channel	Consideration	Examples provided by respondents
<b>Lower corporate profitability</b>	Lower revenues	<ul style="list-style-type: none"> <li>- Clients with weak ESG risk management yield lower returns for the bank due to unsustainable business models</li> <li>- Loss of income due to inadequate products, not aligned with a transition to a more sustainable economy</li> </ul>

<sup>87</sup> Network for Greening the Financial System (NGFS) (2019). *A call for action – Climate Change as a source of financial risk*. Available at: <https://www.banque-france.fr/en/financial-stability/international-role/network-greening-financial-system/first-ngfs-progress-report>.

<sup>88</sup> Question: *What do you believe to be main transmission channels for ESG risks?* Sample size: 24. The score illustrated is the average score provided by respondents, however, not all respondents scored all transmission channels.

Channel	Consideration	Examples provided by respondents
		<ul style="list-style-type: none"> <li>- Reputational issues driven by poor ESG practices can have a big impact on corporates' profitability</li> </ul>
	Higher costs	<ul style="list-style-type: none"> <li>- Higher expenditure will be required to adapt to low carbon economy</li> <li>- Public funding grants will be key to supporting companies that make ESG-aligned investments (as such investments may not be economically viable)</li> </ul>
<b>Lower commercial or residential property/asset values</b>	Lower valuations	<ul style="list-style-type: none"> <li>- Commercial buildings and properties with low-energy efficiency standards depreciate compared to energy efficient properties</li> <li>- Non-compliance with energy efficiency standards leads to a downgrade of energy certification labels</li> <li>- Extreme weather events (e.g. floods) impact value of properties</li> </ul>
<b>Economic deterioration - lower demand</b>	Changes in consumer preferences and behavioural patterns	<ul style="list-style-type: none"> <li>- Lower demand for carbon-intensive products from consumers due to price elasticity and availability of alternatives (e.g. Energy, Auto, Transport)</li> <li>- Crisis situations driven by ESG aspects (e.g. COVID-19 pandemic) impact demand for certain products due to changes in behavioural patterns</li> </ul>
<b>Financial contagion - market losses (e.g. stock and debt markets)</b>	Volatility	<ul style="list-style-type: none"> <li>- Turbulence in financial markets due to uncertainty regarding ESG factors</li> <li>- ESG factors impact valuation of underlying assets within securities portfolios (e.g. energy efficiency investments)</li> </ul>
<b>Financial contagion - credit tightening</b>	Funding access	<ul style="list-style-type: none"> <li>- Spikes in interest rates and diminished access to additional funds</li> </ul>
<b>Economic deterioration - lower productivity and output</b>	Supply chain disruptions	<ul style="list-style-type: none"> <li>- Crisis situations driven by ESG aspects (e.g. COVID-19 pandemic) impact availability of inputs, productivity of workers, and outputs</li> <li>- Extreme weather events damage or delay cross-sector supply chains</li> </ul>
<b>Lower household wealth</b>	Lower wealth	<ul style="list-style-type: none"> <li>- Impact on wealth due to residential property devaluation in high physical risk areas</li> <li>- Loss of job-related income due to certain unsustainable sectors and industries re-sizing/closing down</li> </ul>
	Socio-economic instability	<ul style="list-style-type: none"> <li>- Migration due to changes in weather conditions</li> </ul>

### Principles of best practice based on stakeholder perspectives

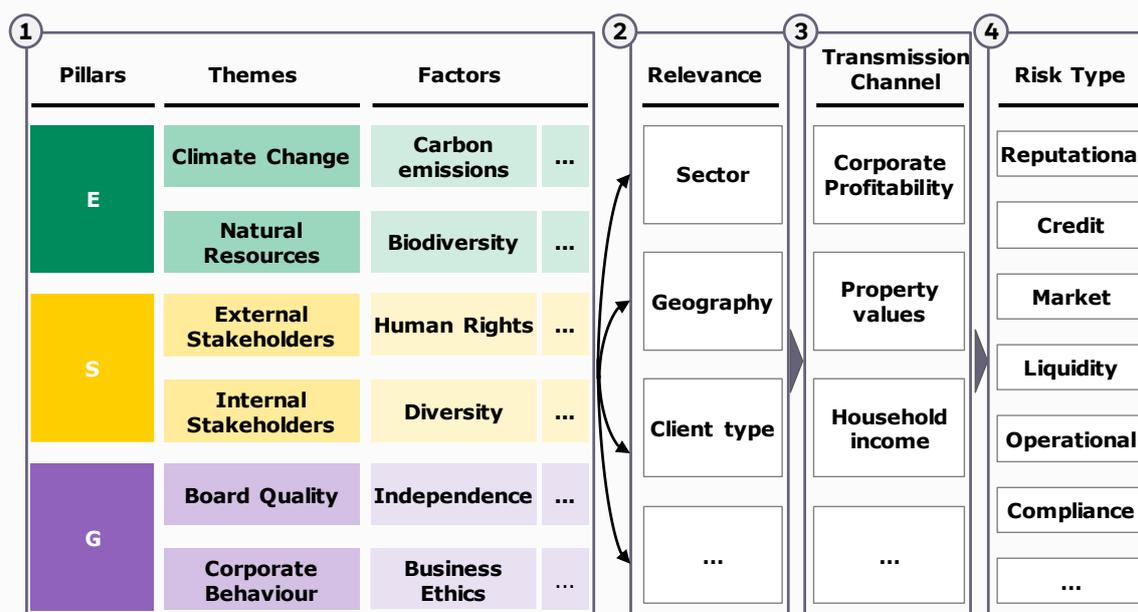
**ESG risks should be treated as drivers of existing financial and non-financial risk types. Through a good understanding of ESG risks' transmission channels, conceptual maps linking ESG factors to existing risk types can be developed.** As illustrated in *Figure 11* the interconnections between ESG factors and risk types should be extensively explored. ESG risk may also be defined as a principal risk type if deemed more appropriate for integration into risk

processes, for example within the RAF. In this case, an understanding of their implications for existing risk types should still be developed.

Figure 11: Illustrative ESG risk definition elements

The illustration below summarises key considerations for ESG risk definition and identification. This includes:

1. Breaking each pillar down into specific themes (e.g. climate change, external stakeholders, board quality, etc.) and factors (e.g. carbon emissions, human rights, business ethics, etc.);
2. Assessing the relevance of factors within specific sectors, geographies and counterparty types. This is an important step to understand how factors transform into risk drivers based on their materiality. By way of example, an illustration of how ESG factors can be mapped to specific sectors is provided by the SASB materiality map<sup>89</sup>;
3. Understanding how ESG factors translate into risks, for instance based on specific events (e.g. incidents, policy changes, etc.) and propagate through a wide range of transmission channels (e.g. corporate profitability, property values, household income, etc);
4. Mapping ESG risks to risk types (e.g. reputational, credit, market, etc.) to be able to measure and quantify them, and further integrate them into risk processes.



Source: BlackRock FMA analysis

**Based on an assessment of ESG risk transmission channels, ESG risk measurement approaches should be developed to assess, for example, the impact on banks' balance sheet and solvency.** As detailed in section 3.3.3, portfolio risk measurement exercises can be used as a starting point to assess the ESG risk impact on financial metrics such as PDs, LGDs and mark-to-market. Such quantification allows banks to estimate the ESG risk impact on their solvency.

**Given the differences in quantifiable nature of ESG pillars and factors, certain risks may be prioritised.** Given the quantifiable nature of climate risks, their mapping to existing risk types

<sup>89</sup> SASB (n.d.). SASB Materiality Map. Available at: <https://materiality.sasb.org/>.

and associated transmission channels should be a focus area for banks. However, adequate coverage of risks across all three pillars is important, including themes from the S and G pillars as well as other themes from the E pillar besides climate change.

**A clear indication should be provided of how the double materiality perspective, in particular the environmental and social materiality, feeds into existing risk types.** Banks should assess how the environmental and social materiality perspective maps to existing risk types, for instance indicating to which extent it is captured by reputational and strategic risk. Where it is not fully captured, a dedicated treatment of ESG risks may be pursued, for example by introducing standalone metrics not linked to traditional risk types in their RAF, such as Paris pathway or net zero alignment related metrics.

### 3.3.2 ESG risk governance and strategy

#### 3.3.2.1 ESG risk governance structures and board oversight

Article 74(1) CRD requires banks to have robust governance arrangements, including well-defined organisational structures, with transparent and consistent lines of responsibility, as well as effective processes to identify, manage, monitor, and report the risks they are or might be exposed to.

Please note that for the purposes of the study, three levels of management functions are being used in connection with governance topics: i) board level; ii) executive level; and iii) management level. When referring to governance structures of banks in the context of this study, 'board level' would be closely aligned to the term 'management body in its supervisory function' of the CRD<sup>90</sup>, which "means the management body acting in its role of overseeing and monitoring management decision-making".<sup>91</sup> 'Executive level' is to be understood as closely aligned to the term 'management body in its management function' of the EBA guidelines on internal governance and that "directs the institution"<sup>92</sup>. Lastly, 'management level' in the study includes other levels of management of an institution that are not at board or executive level, i.e. those natural persons who are responsible for the day-to-day management of the institution<sup>93</sup>.

Respondents emphasised the importance of having adequate governance structures in place to ensure that ESG risks are properly understood and discussed at board and management level; however, approaches to integrate ESG risks into governance structures differ.

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<sup>90</sup> Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures. OJ L 150, 7.6.2019, p. 253–295 Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC).

<sup>91</sup> Please note that the CRD also includes a definition of the term 'senior management'. However, the term has not been used for the study given the term 'management level' in the context of the study refers to different levels of management.

<sup>92</sup> EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf).

<sup>93</sup> This could include, for example, the Head of Enterprise Risk Management, the Head of the Corporate Bank, the Head of Market Risk, etc."

Figure 12: ESG risk committees at board, executive and management level<sup>94</sup>



Source: BlackRock FMA analysis

As Figure 12 illustrates, 17% of interviewed banks stated that they have dedicated ESG risk committees at executive level. 13% stated to have a dedicated ESG risk committee at board level, and 8% at management level. Dedicated ESG risk committees are observed most commonly among G-SIBs and, in particular, board level committees are observed among this group only. Where dedicated ESG committees are not in place, ESG factors are discussed as a topic within other board committees (50%), and 38% of banks cover it within other management committees. Few banks (8%) mentioned not having yet integrated ESG risk within any committee discussion. As noted in a survey by ShareAction, the extent to which climate-related risk is discussed in committees has changed over the years; while their first survey found that climate-related risk was discussed in 74% of banks' group risk committees, the second survey found this number to have grown to 100%.<sup>95</sup>

Participants mentioned the following reasons for integrating ESG risks into existing structures, rather than establishing dedicated structures: i) ESG risks are transversal and cut across multiple risk types; ii) existing risk management governance structures are considered to be reasonably advanced, and therefore suitable for integrating ESG risks; and iii) embedding ESG risks into existing governance structures enhances risk management integration without significantly adding complexity. On the other hand, a common reason given by banks for establishing dedicated ESG risk committees is a desire to spur momentum in the short-term, until ESG risks are fully integrated in risk management processes.

When including ESG risks within other board level committees, there are differing opinions and approaches in relation to how, by whom, and to what extent ESG risks are covered. The majority of interviewed banks address ESG risks via the board level risk committee. However, as highlighted by one interviewed academic, there is a lack of clarity around board member and executive management accountability and liability with respect to ESG risk integration. This is in line with findings from ShareAction's report, which found that across 40% of surveyed banks "the

<sup>94</sup> Question: *Do you have a dedicated ESG risk committee in place? Please select which type of committees you have in place (you may select more than one option).* Sample size: 24. Percentages do not add up to 100% as multiple entries were allowed. "Other" refers to a bank that mentioned discussing ESG on ad-hoc basis only as part of their credit committee. Please note that dedicated ESG risk committee are different than risk committee referred in the EBA Guidelines on internal governance. See EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf).

<sup>95</sup> ShareAction (2020). *Banking on a Low-Carbon Future II - A ranking of the 20 largest European banks' responses to climate change*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

board merely approves climate-related policies and targets” and does not play a central role in advancing the ESG agenda.

As highlighted by an interviewed academic, successful ESG risk integration across firms requires board members to be fully aware of ESG-related organisational objectives and engaged in oversight functions. It was suggested by multiple respondents, including civil society organisations and academics, that the strengthening of board level understanding of ESG risks could be achieved through targeted trainings on the topic.

When a dedicated ESG-related committee is in place – for example, an environmental and social risk committee – respondents stated that it acts as a central hub to discuss, evaluate, approve, and monitor ESG-related risk management processes and is often composed of representatives from various departments e.g. Compliance, Credit risk, Reputational risk, Operational risk or Legal. As further detailed in section 5.3.2.2, more commonly, dedicated ESG committees focus not only on the risk angle but have a wider ESG agenda, where the double materiality view is adopted. As an example, some banks mentioned that they have established committees to oversee and steer their environmental and societal impact and sustainability strategy holistically (named as CSR Committee, Ethics Committee, etc.).

The case study in *Figure 13* compares different ESG risk governance structures. In the first case the committee is specifically focused on climate change and involves executive board members, while in the second case, ESG risk topics are integrated within existing structures, such as the Group Risk Committee, which is however supported by a dedicated cross-business forum.

Figure 13: Case study on possible committee structures for ESG risk integration

#### **Dedicated Climate Change governance**

A European bank has instituted a committee specifically focused on climate change chaired by the CRO, and co-chaired by the executive board member<sup>96</sup> responsible for wholesale banking. It is further made up of a number of executive board members and representatives from the wholesale and retail businesses.

The committee is advised by an internal climate expert group comprising experts from wholesale banking, front office, sustainability team, and risk function. The responsibilities of the committee go beyond managing climate-related risks and also include:

- Mandating processes for identifying and managing climate-related risks and opportunities
- Guiding climate-related policies, strategy, objective-setting and monitoring
- Monitoring and overseeing progress on relevant goals and targets
- Guiding external disclosures

The committee meets six times per year and follows an agenda prepared by the climate expert group, which meets monthly.

#### **Integrated ESG governance**

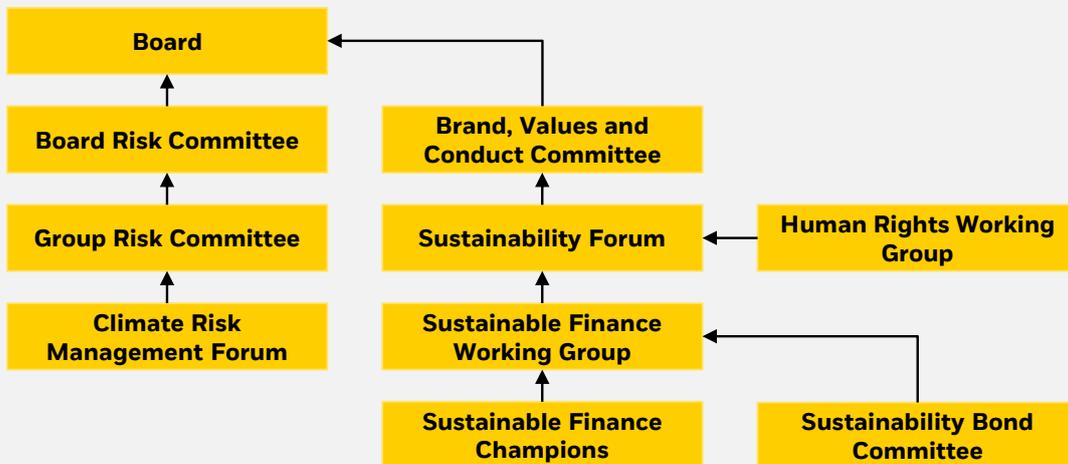
A European bank includes ESG risk as a topic under the existing Group Risk Committee at executive level. In addition, there is a cross-business dedicated forum (Sustainability Forum), which is responsible for the development and delivery of the broader sustainability strategy, beyond ESG risk. The forum is comprised of representatives from various teams including corporate affairs, brand and marketing, conduct, financial crime, and compliance.

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<sup>96</sup> The term “executive board member” used by the bank could be considered executive level as defined for the purpose of the study.

At board level, ESG risk is overseen by both the Board Risk Committee focusing on financial risks, and the Brand, Values and Conduct Committee focusing on non-financial risks.

The bank is currently considering integrating ESG risks into day-to-day activities, e.g. incorporation into the Credit Risk Committee at operational level.



Source: Public reports from banks and BlackRock FMA analysis

The importance of accountability at executive and board level for ESG risk integration was also mentioned in interviews with other stakeholders, including civil society organisations and academia. As illustrated in a report from the World Economic Forum<sup>97</sup>, the introduction of managerial incentives is a potential measure to foster such accountability, as it aligns interests to the broader organisational sustainability agenda. As further detailed in the paper, introduction of such incentives requires the identification of KPIs that are applicable and material (e.g. setting science-based targets for portfolio shares) and for which effectiveness can be monitored after introduction.

However, examples of ESG-risk managerial incentives related to portfolio exposures were not commonly provided by respondents. ESG KPIs integrated within managerial compensation are more commonly observed in relation to banks' own ESG practices and operations or related to sustainable lending activity targets (see section 5.3.2.2), rather than risk-based metrics. Examples of quantitative and qualitative KPIs observed among analysed banks include<sup>98</sup>: targets related to financing the renewable energy sector, targets on the share of loans to companies contributing directly to achievement of UN SDG, targets related to achievement of an improved ESG rating by an external rating agency as well as cumulated investment and financing targets for clean energy/ low carbon technology and alignment to 2° scenario.

### Principles of best practice based on stakeholder perspectives

**ESG risks should be discussed and overseen at board and executive level through adequate governance structures and strong CEO sponsorship.** The management at executive level should consider ESG risks when developing and overseeing business strategy, objectives and

<sup>97</sup> World Economic Forum (2019). How to Set Up Effective Climate Governance on Corporate Boards – Guiding Principles and Questions. Available at:

[http://www3.weforum.org/docs/WEF\\_Creating\\_effective\\_climate\\_governance\\_on\\_corporate\\_boards.pdf](http://www3.weforum.org/docs/WEF_Creating_effective_climate_governance_on_corporate_boards.pdf).

<sup>98</sup> These KPIs are focused on banking activity (i.e. related to lending-book) rather than bank operations. There are a wide range of other KPIs related to banks' own operations that are used to promote an ESG culture within organisation (e.g. staff turnover, scope 1 and 2 carbon footprint, gender pay gap). These KPIs, related to "direct ESG risks" are not the focus of the study.

risk management<sup>99</sup> Responsibility for ESG risk management can be assigned to existing executive functions and, to enhance accountability and ownership, the ultimate responsibility for oversight should be limited to selected executives. This can be formalised through the inclusion of ESG risk management within executives' responsibilities. In general, strong sponsorship from CEO, CRO, and the broader executive body is required to scale up ESG risk integration initiatives.

**Integration at board and/or executive level can be achieved either through integration with existing committees or set-up of dedicated committees.** Banks can establish committees beyond those specifically referred to in the CRD, and there are different stakeholder views on the most effective layout to advance ESG risk integration. Integration of ESG risk in a bank's governance structure can be carried out either through integration into existing committees (e.g. risk committee) or through setting-up dedicated committees. The latter is often seen by stakeholders as a choice for a transition period, before integration within other existing committee(s) can take place. As emphasised by some stakeholders, the set-up of dedicated committees can help raise awareness on the topic and speed up integration efforts. On the other hand, integrated committees allow for stronger coordination and ensure a wider visibility of the topic. Generally, discussions on ESG risk should be ensured at both executive and board level committees. At other management levels<sup>100</sup>, ESG risks should be discussed across multiple business committees, with cross-functional representation fostering group-wide alignment.

**ESG risks should be discussed regularly as an agenda item within committees, by providing frequent updates on ESG-risk related issues and communicating on progress towards advancing ESG-risk integration objectives.** Independently of the chosen committee structure, ESG risks should be regularly discussed within board, executive, and management level committees. Enough time and importance should be allocated for ESG-related discussion.

**Inclusion of portfolio ESG risk-related objectives within management performance scorecards and variable compensation can provide further incentives for advancing ESG risk integration.** In line with Article 94 (1) (a) of the CRD, "non-financial" criteria should be taken into account when determining the variable component of remuneration; to this end ESG-risk related KPIs should be integrated. This would allow for stronger alignment and accountability across management functions. ESG-risk related KPIs could be included both at executive board and other management levels and should be particularly advanced where banks have made public ESG-related commitments. Generally, KPIs should be easily implementable, and hence be based on concepts and metrics used and regularly monitored by the bank.

### 3.3.2.2 ESG risk organisational set-up

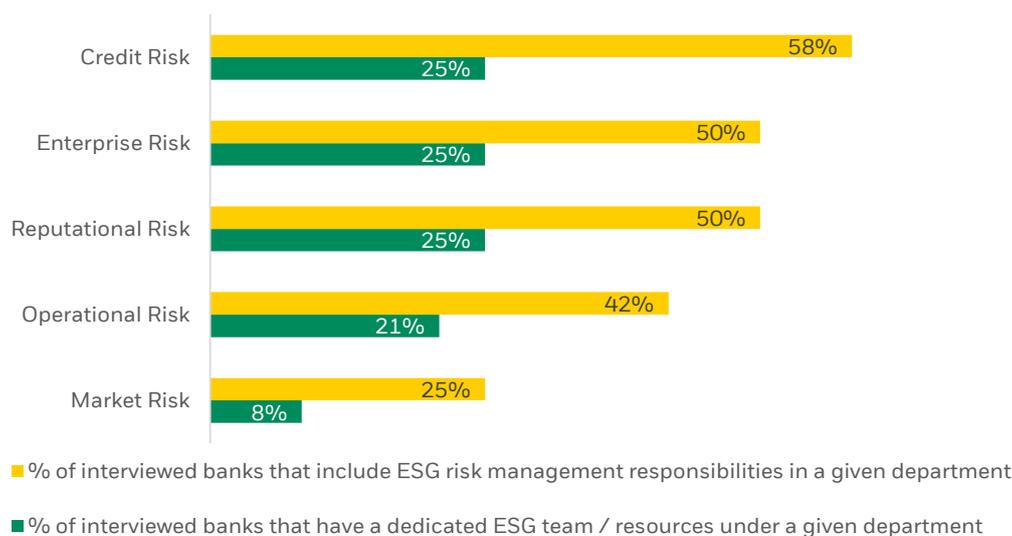
The integration of ESG risk into a bank's wider organisation typically considers existing structures at operational level. The majority of interviewed banks address ESG risk via multiple traditional risk departments, mostly through at least two departments, rather than through dedicated ESG risk teams.

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<sup>99</sup> Also in line with ECB guidelines. See: European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>100</sup> Other management levels indicate top and middle management not part of the executive board.

Figure 14: Departments advancing ESG integration into risk management<sup>101</sup>



Source: BlackRock FMA analysis

Figure 14 summarises the respective risk departments which share the responsibility for integration and management of ESG risk, as provided by respondent banks. Although many banks address ESG risk via different departments, the credit risk department was most commonly referenced by interviewed banks (58%), given the need to assess ESG risks at client or transaction level during the loan origination process. Many banks (50%) stated that the Enterprise Risk department, as well as the Reputational Risk department, also support the ESG risk assessment for various financing activities or perform second-line of defence responsibilities. However, as further shown in Figure 14, these resources are not necessarily dedicated solely to ESG risk assessment, meaning they cover other responsibilities as well.

Some interviewed banks also mentioned that they have established dedicated teams, such as the Environmental and Social Risk department, focusing exclusively on ESG risks assessment and acting in collaboration with other risk departments. Further illustrative examples of how banks set up ESG teams, as well as their associated responsibilities, are outlined in Figure 15.

Figure 15: Illustrative and non-exhaustive examples of ESG risk-related teams

Credit Risk

- Dedicated resources within Credit Risk to advance ESG integration, focused on sustainable lending
- Specific team responsible for ESG risk assessment at client and transaction level
- Dedicated team responsible for analysis of ESG deals in the wholesale bank

Reputational Risk:

- The department is responsible for covering part of the impact assessment from credit risk
- Dedicated resources involved in reputational risk assessment for financing carbon intensive or governance sensitives cases
- Reputational Risk performs second-line responsibilities for ESG risk management across the organisation

<sup>101</sup> Question: Under which department(s) do ESG risk management and integration responsibilities lie? Please provide details on your organisational set-up. Sample size: 24. Percentages do not add up to 100% as multiple entries were allowed.

#### Enterprise Risk:

- Enterprise Risk Committee is mandated with the overall responsibility for holistic climate risk management including the oversight of the development of a climate risk framework
- Dedicated Climate Risk team within Enterprise Risk Management

#### Operational Risk:

- Responsible for product governance and business continuity without dedicated team focusing on ESG
- Dedicated team in place; environmental and social risks identified by the operational risk department are reported to corporate compliance or internal control directors

#### Other:

- Dedicated team of Subject Matter Experts in E&S risks under the Sustainable Finance team to support the business in its risk decision making
- Dedicated personnel under Responsible Banking division, Wholesale Business teams, and Public Policy department

Training was mentioned by respondents as an important tool to foster ESG risk integration in different divisions, not only within the risk function but also within business teams and other central divisions. Given the relevance of training to educate all lines of defence, some banks have expanded their training modules to include ESG risk topics. This is in line with a report from the CFRF, which states that formal training is needed to educate all lines of defence regarding climate risk terminology, metrics, and policies.<sup>102</sup> As further suggested in the report, such trainings could be made mandatory (similarly to anti-money laundering training).

#### Principles of best practice based on stakeholder perspectives

**ESG risk integration should involve all three lines of defence, with the first line of defence helping identify ESG risks early-on at transaction level and the second line of defence providing independent analysis and expert judgement.** Generally, good internal governance practices defined in the EBA guidelines on internal governance also apply to ESG risk management.<sup>103</sup> The first line of defence, which includes for example business managers, is expected to identify, assess and monitor ESG risks that are relevant for a client as well as conduct transaction due diligence. The second line of defence, which includes the risk management and compliance departments, facilitates the implementation of the ESG risk management framework throughout the bank and has the responsibility for further identifying, measuring, monitoring and managing ESG risks, forming a view on an individual and consolidated basis. Compliance departments are expected to play an increasingly important role, especially in light of enhanced disclosure requirements. This is particularly relevant for the double materiality concept, as banks will need to disclose the impact of their financing activity. The third line of defence, which includes the internal audit department, is also expected to review the adequacy of internal control and ESG risk management frameworks.

**Roles and responsibilities to adequately identify, assess and manage ESG risks across departments and functions should be clearly defined.** Given that the integration of ESG risk involves a wide range of departments, roles and responsibilities should be described and

<sup>102</sup> See, for example: Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>103</sup> EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf).

documented in functions' respective mandates in order to ensure coordinated efforts. Working procedures with other functions should be reviewed to ensure an adequate flow of information and coordination of ESG risk integration efforts. In addition, as illustrated in section 3.3.2.1, alignment on responsibilities and objectives could be ensured by introducing portfolio-related ESG risk KPIs at all management levels.

**ESG risk integration responsibilities are to be shared by all risk departments and should be driven through both top down and bottom up approaches. However, one unit could be ultimately responsible for oversight and, additionally, a dedicated ESG-risk team may be established.** As illustrated in *Figure 16*, ESG risk could be integrated across multiple risk management departments, given the cross-cutting impact of ESG on various aspects of the risk management framework. This can be implemented through both top-down and bottom-up approaches, for example appointing reference contacts across relevant risk department, or setting-up sub-divisional teams. Generally, to establish a central coordination of all risk efforts, one division could have the ultimate responsibility for ESG risk integration. Such responsibility can be assigned to an existing division or a dedicated ESG risk team. Cross-risk divisional working groups can be established to foster alignment and stimulate discussions.

**Appropriate resources are required to enable functions to fulfil their roles and invest in the development of adequate capabilities.** As ESG risks relate to topics which are not traditionally assessed as part of banking activity, integrating them within risk processes requires enhanced capabilities and, for some specific activities, new technical skill sets such as climate scenario modelling (see section 5.4.4). Continuous training and building of awareness of ESG risk are required. These initiatives should be mandatory for functions involved in ESG risk identification, assessment and mitigation. Additionally, to foster a strong ESG risk culture across the bank, education and training opportunities should be offered to other functions not directly driving ESG risk integration.

Figure 16: ESG risk organisational set-up

The graphic below illustrates a potential organisational set-up for ESG risk integration where all risk departments have resources responsible for ESG risk integration.

<b>Line of defence</b>	<b>Key team / function</b> <i>(illustrative - not exhaustive)</i>	<b>Key responsibilities</b> <i>(illustrative - not exhaustive)</i>
<b>First line</b>	Debt and Equity Capital Markets	<ul style="list-style-type: none"> <li>Perform ESG risk assessment when onboarding clients or during client reviews</li> <li>Maintain client dialogue to discuss ESG risk related topics (e.g. climate impact) and assess client's mitigation measures and strategies</li> <li>Develop products to mitigate ESG risks</li> </ul>
	Corporate and SME Lending	
	Lending to individuals and microbusiness	
<b>Second line</b>	Credit Risk	<ul style="list-style-type: none"> <li>Set-up an ESG risk framework and integrate into Risk Appetite</li> <li>Develop tools to identify and assess ESG risk (e.g. ESG risk scoring, transition risk measurement)</li> <li>Develop ESG risk lending policies</li> <li>Develop climate stress testing capabilities and drive integration into other regulatory processes (e.g. ICAAP)</li> <li>Support first line in ESG transaction risk assessment</li> </ul>
	Reputational Risk	
	Market Risk	
	Enterprise Risk	
	Compliance	
	...	
<b>Third line</b>	Internal Audit	<ul style="list-style-type: none"> <li>Review internal processes adequacy</li> </ul>

Source: BlackRock FMA analysis

### 3.3.2.3 ESG risk strategy and initiatives

Given that the integration of ESG risk in banks' governance and strategy is still an ongoing and evolving process within many institutions, banks mentioned some elements considered important in the facilitation or acceleration of the integration of ESG risks into key decision-making and risk processes. As shown in *Figure 17*, sponsorship from top management and CEO (i.e. at executive level) - meaning their level of engagement and oversight on ESG risk integration -, was the highest rated element (4.5/5). This was followed by presence of cross-functional work with business lines and central CSR/Sustainability teams (4.4/5) and board oversight (4.0/5). In addition, banks were asked to select the top three elements for which they considered themselves most committed as organisations. Notably, the first two of the highest rated considerations<sup>104</sup> were also within this group, however, board oversight was not, highlighting banks' perceived room for improvement in boards' involvement.

Overall, few analysed banks publish information on a formalised and holistic ESG risk integration strategy with detailed milestones and activities. Of the few respondents who stated that they have a formalised ESG risk strategy, these strategies are narrower and often centred on climate change. For example, banks articulate their climate risk strategies by mapping them to international frameworks and regulatory guidelines (such as those by the ECB<sup>105</sup>), or describing specific portfolio-related commitments, such as pathway alignment and net zero strategies (see section 4.3.3.1.1).

**Figure 17: Importance of considerations for ESG risk governance and strategy<sup>106</sup>**



Source: BlackRock FMA analysis

For those banks that do not have a formalised ESG risk strategy, illustrative responses provided include, among others: i) A wider ESG strategy or priority exists in the bank beyond ESG risks, ii) ESG risks have been embedded in the bank's general risk strategy, iii) ESG risks have not yet been

<sup>104</sup> These are: i) Sponsorship from top management and CEO (i.e. at executive level) and ii) cross-functional work with business lines and central Sustainability team.

<sup>105</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>106</sup> Question: *How important are the following considerations for ESG risk integration within governance and strategy? How committed is your bank respectively? Please provide an absolute score for each consideration, with 0 being not important and 5 being very important.* Sample size: 24. The score illustrated is the average score provided by respondents. Please note that the term 'top management and CEO' could be considered equivalent to executive level as defined for the purpose of the study.

embedded into the bank's strategy, but there are plans to do so, or iv) the bank is waiting for further regulatory guidance to develop a strategy and timeline. As illustrated *Figure 18*, many banks have defined key strategic initiatives in relation to ESG risk integration over the next three years. Examples range from the enhancement of ESG risk know-how to the development of green lending policies.

Figure 18: Examples of key strategic initiatives on ESG risk integration

**What are the key strategic initiatives on ESG risk integration your organisation will focus on going forward in the next 3 years?**

*“Within risk functions we are in the process of developing and implementing a holistic climate risk framework to i) Strengthen governance around the topic, ii) embed climate risk considerations into our business as usual risk management practices and decision making, iii) define qualitative climate risk appetite and quantitative targets”*

*“Our focus will be on the implementation of the ECB guidelines for banks on climate-related and environmental risk management and the EBA Loan Origination Guidelines as they provide a clear roadmap towards full integration of ESG into risk management and business origination”*

[the strategy is to] *“improve ESG risk definition, know-how, assessment and screening of client/transaction, including systematic capturing of risk drivers in the IT landscape”*

[the strategy is to] *“enhance internal ESG score for assessments and reporting purposes, setting risk appetite for ESG risks and developing top-down stress testing capabilities”*

One further point mentioned by interviewed banks and civil society organisations relates to the trade-offs between developing a holistic ESG risk strategy or developing a strategy focused on a specific ESG pillar, such as climate change. As argued by respondents, while it may be easier to analyse and integrate ESG risks into processes individually – for example given the more quantifiable nature of climate risk compared to S or G risks –, developing a holistic ESG risk strategy may better shed light on the potential trade-offs between advancing one ESG objective over another. As illustrated in an example provided by a respondent, ending financing to coal mining companies may be a good practice for environmental objectives, but it may have potential detrimental effects from a social perspective. Moreover, as mentioned by another respondent, a combined view may be needed to align risk management processes to external stakeholder expectations. These contrasting views emphasise the importance of balancing granular and tailored approaches to ESG risk with a holistic focus.

**Principles of best practice based on stakeholder perspectives**

**The ESG risk strategy should be clearly communicated and have measurable objectives expressed through specific KPIs and KRIs, including interim ones, and include explicit timelines.** An ESG risk strategy, should include details on how the bank plans to address and mitigate ESG risks. Such strategy should be formally documented and consider short, medium, and long term ESG risks to ensure a comprehensive approach. Measurable objectives and initiatives should be formulated along a clear timeline, including interim targets where relevant (e.g. for Paris pathway alignment or net zero strategies), supported by quantitative and qualitative KPIs to allow for monitoring. ESG risk objectives could be set in alignment with international agreements such as the Paris Agreement. In support of their ESG risk strategy, banks should also define and communicate their ESG risk integration strategy.

**The ESG risk strategy should align with the broader business strategy and explicitly take into account the double materiality perspective.** Illustratively, separate ESG risk strategies and approaches may be developed by banks to address the financial materiality, on one hand, and the environmental and social materiality, on the other hand. As suggested by stakeholders,

the environmental and social materiality view should be more closely integrated within the wider sustainability and CSR strategy.

**Approaching ESG risks under one ‘umbrella’ enables a comprehensive and coordinated integration, helping identify potential ESG trade-offs.** ESG risks are more easily analysed and measured when broken down in their specific pillars. However, formulating a holistic ESG risk strategy allows banks to bring together all ESG-relevant considerations and coordinate objectives. Governance should also be considered as part of sustainability rather than being treated as a standalone compliance topic only. Moreover, a holistic view on ESG risks integration across organisational processes may help identify similarities and synergies across ESG pillars. Banks can set different levels of ambition across different ESG pillars, choosing to prioritise specific themes (e.g. climate risk).

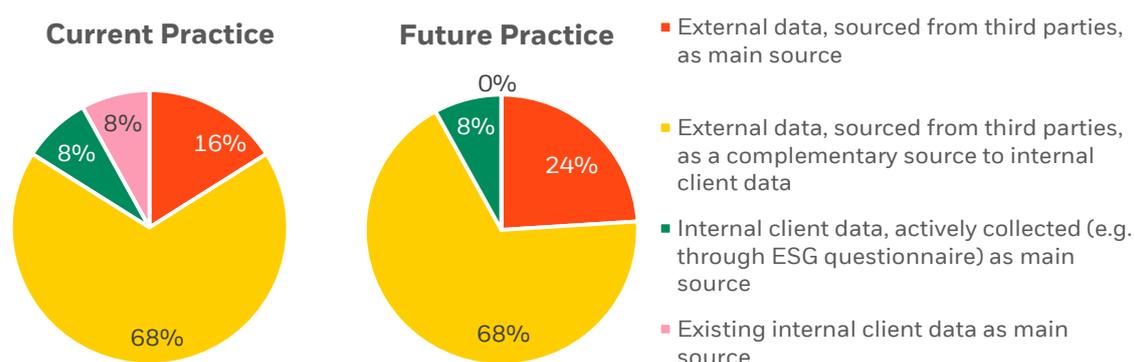
### 3.3.3 ESG risk management processes and tools

#### 3.3.3.1 Measurement and assessment

##### 3.3.3.1.1. Data taxonomy, standardisation and sourcing

Adequate data is required for effectively measuring and assessing a bank portfolio’s exposure to ESG risks. At a high level, ESG data includes both quantitative information and metrics, and qualitative information. ESG data include, among others: i) Raw metrics and KPIs which provide granular data on ESG-related practices and outcomes (e.g. carbon emissions, E&S incidents, workforce diversity, gender pay-gap), ii) other transaction-level data not necessarily ESG-related but relevant for measurement purposes (e.g. asset-location, restrictions on use of proceeds), iii) ESG labels and standards of public domain that indicate whether certain ESG criteria are met (e.g. energy efficiency labels), iv) scenario-related data depicting possible future outcomes (e.g. technology evolution on volume/price/cost, Representative Concentration Pathway (RCP) scenarios<sup>107</sup>), and v) consolidated ESG scores or indexes for listed corporates, sovereigns and/or traded instruments (e.g. ESG rating, forced labour indexes).

Figure 19: Sources of data used to measure ESG risks<sup>108</sup>



Source: BlackRock FMA analysis

Even though very few banks publicly disclose their data sourcing practices, interviews clarified that the majority of banks currently use a mix of internal client data and externally sourced data

<sup>107</sup> RCPs are “scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases (GHGs) and aerosols and chemically active gases, as well as land use/land cover”. See also: IPCC (n.d.). *Representative Concentration Pathways (RCPs)*. Available at: [https://www.ipcc-data.org/guidelines/pages/glossary/glossary\\_r.html](https://www.ipcc-data.org/guidelines/pages/glossary/glossary_r.html).

<sup>108</sup> Question: Which sources and types of data do you use, or plan to use in the near future, to measure ESG risks? Sample size: 25.

from third party providers for ESG risk management purposes (see *Figure 19*). All G-SIB respondents mentioned the sourcing of external data, either using it as a main source or complementary source to internal data. On the other hand, non-G-SIBs tend to rely more strongly on internal client data.

In the future, the majority of interviewed banks plan to either actively enrich their data, by developing or expanding client questionnaires to collect relevant information (68%), or complement it by sourcing additional data from third party data providers (24%). As mentioned by multiple banks, the expectation for the future is that external data providers will play a more central role in the ESG data landscape, providing standardised and centralised data points (where possible) that various banks can use.

Where externally sourced data is used, this serves either to verify existing information, or to gather more granular data points for specific portfolio measurement exercises. As found in other stocktaking exercises<sup>109</sup>, banks that use external data usually rely on a range of data providers. The number of ESG data providers, ratings and rankings has significantly expanded in the last years, with 600+ ESG ratings and rankings existing globally as of 2018 and continuing to grow.<sup>110</sup> Banks can therefore source data from multiple sources. Some of the providers most commonly quoted by interviewed banks include MSCI, Refinitiv, Sustainalytics, RepRisk, and Rhodium, which are used for scores, ratings and underlying key performance indicators (KPIs). Some banks also mentioned sourcing scenario-related data from intergovernmental bodies, research institutes, or agencies such as the Intergovernmental Panel on Climate Change (IPCC), the International Institution for Applied System Analysis, and the International Energy Agency.

Interviews with data providers indicated a structured approach to identify and quantify ESG risks within an industry or firm. As illustrated during interviews, ESG scoring methodologies capture both the exposures of businesses, products, and geographies to certain risks, as well as counterparties' capabilities to manage these risks, for instance, through the development of policies to restrict activity in sensitive areas. Moreover, it is common practice for these ESG ratings to capture the double materiality perspective (e.g. through capturing a counterparty's emissions).

However, reliance on these data points is not always seen as the end-goal for banks, and some respondents raised concerns over the differences between underlying data aggregation approaches and a preference for the development of own methodologies. As further elaborated by a civil society respondent, ratings on corporate impact are sometimes characterised by an unclear measurement approach that bundles together different types of data points, which should instead be treated differently (e.g. mixing together forward-looking statements, with backward-looking information on implemented procedures and outcomes). The expectation for data providers to improve transparency on their ESG rating methodologies has also been raised in other market surveys.<sup>110</sup>

Academic research has also widely explored differences in rating methodologies. As illustrated in a paper by the Massachusetts Institute of Technology (MIT), there is significant divergence in ESG measurement approaches among data providers.<sup>111</sup> This is evidenced by the weak correlation between ESG ratings of prominent ESG rating agencies compared to the stronger

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<sup>109</sup> See, for example: EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

<sup>110</sup> The SustainAbility Institute by ERM (2020). *Rate the Raters 2020: Investor Survey and Interview Results*. Available at: <https://www.sustainability.com/globalassets/sustainability.com/thinking/pdfs/sustainability-ratetheraters2020-report.pdf>.

<sup>111</sup> Berg F., Koelbel J., Rigobon R. (2019). *Aggregate Confusion: the Divergence of ESG Ratings*. MIT Sloan School Working Paper 5822-19. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3438533](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3438533).

correlation seen among traditional credit ratings. This point was further emphasised in an interview with a civil society organisation, who argued that standardisation in ESG measurement methodology is required to reduce noise and strengthen the credibility of ESG risk measurement. As suggested by the respondent, the output of any ESG risk assessment (e.g. the score) should clearly distinguish between the impact driven by financial versus environmental and social materiality.

Despite the wide landscape of data providers, they typically do not offer full coverage of all asset-classes, geographies and counterparty types, hence requiring banks to enrich the information with their own datasets. As illustrated in the risk management chapter of the CFRF risk management guide, the low coverage of counterparties in their portfolios and the cost of using multiple providers have led some banks to choose internal options.<sup>112</sup>

Client data is sourced by many banks through dedicated questionnaires during client onboarding or credit application processes (as further detailed in section 3.3.3.2.2). The information sourced can differ significantly across banks and client types. It is usually either related to the use of proceeds, or to the ESG profile of the counterparty. As highlighted by respondents, capturing information on the use of proceeds is common in project finance (e.g. to assess whether the use of funding is restricted to renewable or energy-efficient energy sources). In addition, sometimes there are also restrictions in corporate or retail banking relating to the use of funds for ESG-linked objectives.

Respondents often mentioned that they check for information regarding the attainment of certain ESG standards (e.g. energy-efficiency certifications) to capture the ESG profile of counterparties. With respect to the S and G Pillars, information collected includes, for example, background on the counterparty and its governance practices for 'KyC' purposes (e.g. on management quality), and relevant information on social conduct, such as having incurred fines or penalties due to non-compliance with standards (e.g. on health and safety, labour laws, supply chain standards, accidents and controversies). Information sourced through questionnaires is often tailored both to the client sector as well as client size, factoring in relevance and the concept of proportionality.

As illustrated in *Figure 20*, when asked whether available client information is considered sufficient to assess exposure to ESG risks, the G pillar appeared to be the area with the best coverage, with "good or somewhat good amount of information available", often due to information collected by banks during KyC processes in compliance with national and international requirements. On the other hand, the E pillar related to climate change was flagged as that most characterised by "insufficient information, requiring some improvement" or "strong improvement". One reason mentioned by respondent banks is that climate change data gaps are more evident due to the better understanding of what information is required, as well as the more quantifiable nature of the risk, which is not always the case for the S and G pillars.

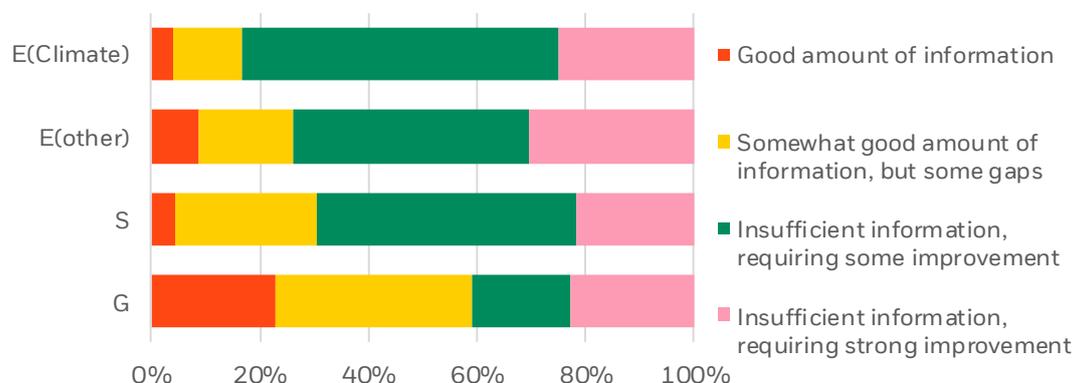
When looking at differences in answers between G-SIBs and non-G-SIBs, G-SIBs are relatively more positive regarding the amount of information available, despite the majority still deeming it insufficient. For instance, more respondents from this group selected "good amount of information" available across some pillars and fewer selected "insufficient information, requiring strong improvement", compared to the non-G-SIBs. This might be related to the fact that they also source information externally, as illustrated above, and have broader exposure to larger and listed counterparties. Respondents, including civil society organisations, also noted the

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<sup>112</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

expectation that data requirements will increase for topics other than climate change once these are better understood and that, at this point in time, information for certain topics is not readily available. Stated examples include circular economy and social risks along the supply chain.

**Figure 20: Level of client information available to assess the risk profile<sup>113</sup>**



Source: BlackRock FMA analysis

As shown in Figure 21, when looking at challenges for defining, identifying, assessing and managing ESG risks, 91% of interviewed banks consider data-related considerations to be the key concern, followed by a lack of standardised approaches – for instance, related to exposure measurement (see section 3.3.3.1.2) –, and varied definitions of ESG risks.

**Figure 21: Challenges for defining, identifying, assessing and managing ESG risks<sup>114</sup>**



Source: BlackRock FMA analysis

When focusing specifically on ESG data-related challenges, as shown in Figure 22, interviewed banks ranked among the top three concerns: i) Data availability and coverage; ii) data reliability and verifiability; and, iii) data comparability and standardisation. As regards the E Pillar, other studies, such as the joint survey from EBF and IIF<sup>115</sup>, have highlighted that challenges related to data availability are a major impediment to developing an explicit climate-risk identification process. Similarly, the consultation published by the EBA also specifies that the lack of data for

<sup>113</sup> Question: Do you think you have enough key information from your clients to assess their ESG risk profile? Sample size: 24 for the E (Climate) pillar, 23 for E (Other) and S pillars, and 22 for the G pillar due to incomplete answers from some respondent banks.

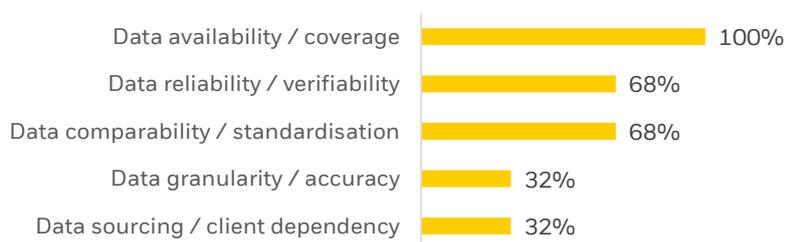
<sup>114</sup> Question: What are biggest challenges your organisation faces while defining, identifying, assessing and managing ESG risks? Please rank the top three factors, with 1 being the most relevant. Sample size: 23.

<sup>115</sup> EBF and IIF (2020). Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure. Available at:

[https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

the identification and measurement of ESG risks is one of the main challenges faced by institutions.<sup>116</sup>

Figure 22: Commonly mentioned data concerns<sup>117</sup>



Source: BlackRock FMA analysis

Data availability and coverage concerns usually relate to non-listed counterparties. Many respondents highlighted the existence of data discrepancies across portfolios due to differences in reporting practices between listed and non-listed or smaller counterparties. As mentioned by many interviewed banks, and in particular those with high exposure to SMEs, the lack of data for these counterparties presents key challenges for portfolio measurement. This often leads to a reliance on averages and development of proxies. Comments related to data availability regarding retail exposures were raised less frequently and were mostly related to the assets backing retail products (e.g. mortgages) rather than characteristics of the borrower.

Data availability concerns that were also mentioned related to geographic coverage, in particular for emerging markets. One of the most-quoted examples among respondents concerned the lack of data on clients' carbon emissions (Scope 1 and 2<sup>118</sup>); as illustrated by one civil society organisation, carbon emission data is not always adequately reported by companies and hence hinders banks' assessment of the carbon footprint of their portfolios.

Moreover, as further detailed in section 5.3.3.1, lack of data is seen as a challenge in the context of the expectation of applying the EU Taxonomy to banks' lending books. Multiple respondents, including civil society organisations mentioned that the application of the EU Taxonomy may be a challenge, given the granularity of information and technical understanding of underlying activities required. However, as also mentioned by an academic, the EU Taxonomy can be an important tool for banks to better understand the business of the counterparties they finance and establish more structured dialogues with clients to gather data.

The second key issue raised by respondents relates to data reliability and verifiability. As mentioned by respondent banks, requesting data from clients can be done in a reasonably standardised way (e.g. through dedicated questionnaires). However, verifying the accuracy and reliability of the data provided is perceived as an auditing task, and hence not necessarily one that banks see themselves equipped to perform. Hence, respondent banks often mentioned external data as a preferred option under this perspective, thus shifting the burden of verifying its accuracy to an external party. This point was also emphasised by an academic, suggesting that

<sup>116</sup> EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>117</sup> Question: *With respect to data, which considerations are you most concerned about and how do these differ among the E/S/G pillars?* Sample size: 19.

<sup>118</sup> Defined as: Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy.

the self-reporting nature of ESG data may lead to biased, imperfect, and contradicting data points which would benefit from validation by a third party.

Lastly, low comparability and standardisation of data also appear as a key concern. As also reported by some data providers, the level of quality and relevance of information provided by securities' issuers can vary significantly, even for the same issuer across time.<sup>119</sup> Moreover, fragmented and divergent reporting practices, as well as a lack of agreement on key metrics to be used, seem to pose challenges for cross-counterparty analysis.

These topics were identified as key concerns across both G-SIBs and non-G-SIBs. However, data concerns related to granularity and accuracy were mostly mentioned by non-G-SIBs, suggesting that their client information is often at a more superficial level and hence does not provide sufficient insights to distinguish among counterparties or assets with similar characteristics.

On the other hand, as suggested by an international organisation, data-related challenges should not act as a deterrent to banks in their advancement on ESG risk. As suggested by other stakeholders, these challenges may be addressed with the use of emerging technologies. For example, as illustrated in a paper by the WWF, the adoption of novel spatial data methods within the financial sector, combined with the growth in new satellites and machine learning, are opening new possibilities for the generation of timely and consistent global climate and environmental datasets.<sup>120</sup>

Figure 23 illustrates some of the key comments made with respect to data sourcing practices and key considerations.

Figure 23: Illustrative comments on data sourcing

**Do you think you have enough key information from your clients to assess their ESG risk profile? What is missing and/or could be improved?**

*"The geographic dimensions, social and economic contexts and also sectoral profiles may impact the availability of more granular data"*

*"There is not a lot of data on SMEs, and more generally on non-listed counterparties, so they require additional data gathering efforts"*

[When looking to measure physical risks], *"even the best asset level database, with clients' asset locations, is not complete"*

*"Requesting additional information from clients however may create transaction costs"*

*"Usually the critical information is received from the client dialogues, without particular chance to audit and validate them"*

*"In terms of data comparability from different sources, a few metrics were defined to compare across sources and capture inconsistencies"*

*"Accurate carbon data availability remains an issue"*

*"The quality of the data and information we receive from both our clients but also from rating agencies is insufficient. In particular with respect to the latter, information appears often to be inconsistent. Regulation of these agencies and standards would be required"*

In order to address data gaps, especially as regards non-listed counterparties, many respondents mentioned the importance of collaborating with corporates and other stakeholders to develop and standardise data. There are expectations by some stakeholders, including banks and civil

<sup>119</sup> Fitch Ratings (2020). *ESG in Credit*. Available at: <https://your.fitch.group/esgwhitepaper.html>.

<sup>120</sup> WWF (2020). *Climate & Nature Sovereign Index – Introducing a framework for a clear assessment of environmental risk*. Available at: [https://www.wwf.org.uk/sites/default/files/2020-07/Climate\\_%26\\_Nature\\_Sovereign\\_White\\_Paper.pdf](https://www.wwf.org.uk/sites/default/files/2020-07/Climate_%26_Nature_Sovereign_White_Paper.pdf).

society organisations, that the revision to the NFRD (i.e. the CSRD) may provide a stimulus in this respect (see section 3.3.4.2 for further details). At the same time, the need to follow the proportionality principle, i.e. tailoring reporting requirements to companies' sizes to avoid excessive administrative burden (e.g. for SMEs) was also mentioned by respondents.

### Principles of best practice based on stakeholder perspectives

**Banks should develop a sound understanding of the various types of ESG data available, as this is key to developing ESG risk measurement capabilities. More granular data points allow for the development of more tailored measurement methodologies and, as such, banks should aim to continually increase their ESG data basis.** As illustrated in *Figure 24*, there are different types of data that can be relevant for ESG risk measurement purposes. Whilst considering the level of sophistication and capabilities of the bank to gather and analyse data, focus should be placed on data points that provide a greater level of granularity and methodological flexibility in ESG score development and risk analysis. As noted by stakeholders, the lack of transparency on external ESG scoring methodologies limits their application in banking activity.

#### Figure 24: Illustrative ESG risk relevant data considerations

The framework below illustrates high level considerations on the different types of ESG data relevant for risk measurement exercises. These include:

- i. ESG raw metrics and KPIs (e.g. CO2 emissions, employee turnover metrics) as well as other relevant data that may not necessarily related to ESG practices but may be relevant (e.g. covenants on use of proceeds, collateral postcode data);
- ii. ESG labels and standards that provide information on ESG performance levels achieved (e.g. energy efficiency labels) and/or information on the underlying activity financed (e.g. the EU Taxonomy or the Green Bond Standards);
- iii. Scenario-related data (mostly relevant for climate risk) which includes climate scenarios, such as representative concentration pathways, as well as socio-economic pathways which describe different levels of achievement of SDGs, and others;
- iv. Consolidated ESG indicators (such as ratings, rankings, scores, indexes) which are typically sourced by external data providers.

Overall, all these data points come with specific considerations regarding their availability and coverage, reliability and verifiability, accuracy and granularity as well as comparability.

Type	Source		Sub-type		Illustrative Examples	Considerations [non-exhaustive]
	Client	External	Qualitative	Quantitative		
ESG Raw Metrics/ KPIs <i>Examples below</i>	✓	✓	Qualitative	Quantitative	CO2 emissions	Availability / Coverage
Other relevant data	✓				% of employee turnover	
Labels	✓	✓	Performance label		Energy Efficiency A+	Reliability / Verifiability
			Activity label		EU Taxonomy Compliant Activity	
Scenarios		✓	Climate scenarios		RCP 2.6 <sup>1</sup>	Accuracy / Granularity
			Socio-economic pathways		SSP 1 <sup>2</sup>	
ESG Indicators		✓	Ratings / Ranking		AAA -Leader	Comparability
			Score / Indexes		19.6/40 – Low Risk Child Labour Index	

1 Representative Concentration Pathway (RCP) is a greenhouse gas concentration (not emissions) trajectory adopted by the IPCC

2 Shared Socioeconomic Pathways (SSPs) are scenarios of projected socioeconomic global changes up to 2100. They will be used to help produce the IPCC Sixth Assessment Report on climate change, due in 2021.

Illustrative and non-exhaustive examples of ESG raw metrics and KPIs that banks can use, for example to develop ESG scores, are summarised below.<sup>121</sup> The table provides examples of common KPIs that may be relevant across different sectors, however, there are other sector specific KPIs (not included) that could also be captured.

Factors	Illustrative quantitative KPIs (not exhaustive)	
	<i>Metrics can either be total (absolute value) or an intensity/relative value (%) – for example per unit of revenue, employee, unit of production, etc.</i>	
E	GHG emissions	% or total tonnes of CO2 % of CO2 emissions per unit of production (e.g. MWh for power sector)
	Energy efficiency	% or total gigawatts consumed % or total of renewable sources of energy use
	Resource Use	% or total tonnes of water used
	Pollution	% or total weight in tonnes of hazardous waste
		% or total weight in tonnes of air pollutants % or total weight in tonnes of water pollutants
S	Training	% of trained employees per annum/total employees Average expenses on training per employee per annum
	Staff Turnover	% of employees leaving per annum/total employees

<sup>121</sup> Illustrative metrics drawn from multiple sources. See also: EFFAS (2009). *KPIs for ESG: A Guideline for the Integration of ESG into Key Performance Indicators for Environmental, Social & Governance Issues Financial Analysis and Corporate Valuation*. Available at:

<https://ec.europa.eu/docsroom/documents/1547/attachments/1/translations/en/renditions/native>.

See also: EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

E	Workforce	Age structure/distribution (number of employees per age group, 10-year intervals) Average gender pay-gap Ratio of men vs women in total workforce Number/rate of accidents, injuries, fatalities frequency
	Customer protection	Number of incidents of product recalls/withdrawals
	Human Rights	Donations or investments in poverty reduction/aid programmes
	G	Litigation risk
Corruption		Percentage of revenues in regions with TI corruption index below 6.0

Source: BlackRock FMA analysis

**ESG data can be sourced directly from clients as well as from external data providers, with the latter taking preference, in particular for traded instruments and/or listed companies.**

Overall, there is no clearly preferred data sourcing approach, and what is seen as most practical is to rely on both internal and external data. Sourcing of data from external providers is suitable for corporate books, traded instruments and sovereigns as it fosters greater comparability and standardisation across banks. Client data should be actively collected through structured and tailored questionnaires, for example, during loan origination and due diligence. The questionnaires should require more complex information for larger or riskier counterparties. Information collected should capture information on strategies in place to mitigate ESG risks and be focused on capturing data not provided by external data sources or publicly disclosed.

**Due to challenges related to data availability, proxies and simplified measurement approaches relying on reduced datasets can be temporarily used. Nonetheless, methods of retrieving additional data directly from clients should be explored and implemented.** Data availability challenges are particularly prominent for SMEs and smaller counterparties. These challenges could be solved indirectly, by using proxy approaches for ESG risk measurement purposes, as well as by enhancing client and transaction information requirements. Specifically, additional data requirements could be designed to be more prominent for new lending activity, hence reducing the implementation burden of rolling out questionnaires to existing clients.

**Standardised ESG data quality assurance and control processes should be set-up.** Given the lack of standardisation and the self-reporting nature of ESG data, information provided by vendors and clients should be reviewed and challenged by banks. The establishment of standardised data control processes is required to ensure data quality and consistency.

### 3.3.3.1.2. Portfolio ESG risk measurement and scenario analysis

The focus of respondent banks in relation to measuring and quantifying ESG risks is currently primarily on climate change. As mentioned by some respondents, ad-hoc portfolio exercises have been conducted to quantitatively model and measure, through scenario analysis or alignment to science-based targets, exposure to climate change or climate impact. The ad-hoc nature of these exercises is also mentioned in other studies, which highlight that only few financial institutions run climate risk scenario analysis regularly and, even when these exercises are performed, they do not feed into day-to-day processes.<sup>122</sup> Other ESG risks – i.e. beyond climate change – were

<sup>122</sup> GARP (2020). *Second Annual Global Survey of Climate Risk Management at Financial Firms*. Available at: [https://climate.garp.org/wp-content/uploads/2020/05/GRI\\_ClimateSurvey\\_051320.pdf](https://climate.garp.org/wp-content/uploads/2020/05/GRI_ClimateSurvey_051320.pdf).

found to be embedded into risk processes (e.g. transaction due diligence) with varying levels of sophistication, rather than actively measured at portfolio level through quantitative approaches.

Some banks mentioned using external frameworks and tools, such as the E&S Risk Management Toolkit provided by the European Bank for Reconstruction and Development (EBRD)<sup>123</sup>, to derive risk scores for customers based on industry classifications and pre-defined criteria across the E&S Pillars. Other banks mentioned using external data providers to consolidate a view of their loan-book's ESG profile, by aggregating ESG scores at counterparty level. However, banks also mentioned that, whilst this provides a good understanding of the current portfolio exposure to ESG risks, it does not provide any forward-looking insights, which is the approach increasingly taken by larger institutions that perform or plan to perform climate change scenario analysis or scenario alignment.<sup>124</sup>

Approaches seeking to quantify climate-related issues can assess the impact of banking activity on the external environment, capturing the environmental and social materiality perspective – through Paris/pathway alignment or net zero exercises –, or the climate risks to which the bank is exposed and that may be financially relevant – by assessing exposure to transition and physical risk. Exercises can either focus on measuring the current exposure to these risks or use scenario analysis or science-based targets to assess the evolution of the portfolio under different climate scenarios. These different approaches are also illustrated in the EBA discussion paper on the management and supervision of ESG risks, which presents three methods: i) Portfolio alignment, ii) risk framework (as further detailed in 4.3.3.1.1), and iii) exposure method.

In recent years, several voluntary banking pilots were set-up – such as those launched as part of the UNEP Finance Initiative – aimed at co-building methodologies to assess loan-books' exposure to climate-related risks and opportunities. Almost half of the analysed banks (41%) joined one of the two banking pilot phases launched by UNEP FI to co-develop climate risk measurement capabilities.<sup>125</sup> As mentioned in the risk management chapter of the CFRF guide, working with external experts to fill the internal knowledge and expertise gaps may be needed in order to develop tools to identify and assess physical and transition risk.<sup>126</sup> Only a limited number of analysed banks (15%) have launched their own climate risk measurement exercises to test specific and well-defined scenarios (e.g. assessing the impact of a carbon tax on their loan-book) without having participated in the above mentioned voluntary pilots.

Similarly, exercises to capture the impact of banking activity on the climate, which are considered by many respondent banks as the environmental and social materiality perspective of ESG risks, have been advanced by several initiatives. Examples include the Science Based Targets Initiative (SBTi)<sup>127</sup> or the Transition Pathway Initiative<sup>128</sup>, focused on developing methodologies to align portfolios to the goals of the Paris Agreement or net zero objectives. As highlighted by interviewed banks, these exercises usually focus on a well-defined segment of the portfolio, such as high carbon intensity sectors. As further argued by an interviewed civil society organisation, given that these approaches require sector-specific methodologies to be developed, the focus should be on carbon-intensive sectors first, and subsequently expanded.

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<sup>123</sup> EBRD (n.d.). *EBRD Environmental and Social Risk Management Manual (E-Manual)*. Available at: <https://www.ebrd.com/who-we-are/our-values/environmental-emanual-toolkit.html>.

<sup>124</sup> Fitch Ratings (2020). *Banks' Risk Management Embraces ESG*. Available at: <https://www.fitchratings.com/research/banks/banks-risk-management-embraces-esg-04-12-2019>.

<sup>125</sup> UNEP FI (n.d.). *Pilot Projects on Implementing the TCFD Recommendations for Banks*. Available at: <https://www.unepfi.org/banking/tcfd/>.

<sup>126</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>127</sup> Science Based Targets Initiative (n.d.). *Resources*. Available at: <https://sciencebasedtargets.org/methods-2/>.

<sup>128</sup> Transition Pathway Initiative (n.d.). *The TPI tool*. Available at: <https://www.transitionpathwayinitiative.org/>.

Figure 25 summarises high-level comments provided by respondent banks on portfolio risk measurement exercises, including their scope, approach and level of advancement.

Figure 25: Illustrative comments on portfolio risk measurement exercises

**How do you quantify/assess your portfolio exposure to ESG risks?**

*“Risk assessment exercises are focused on climate risk, transition and physical, whereas the approach for other ESG risks is more soft-wired”*

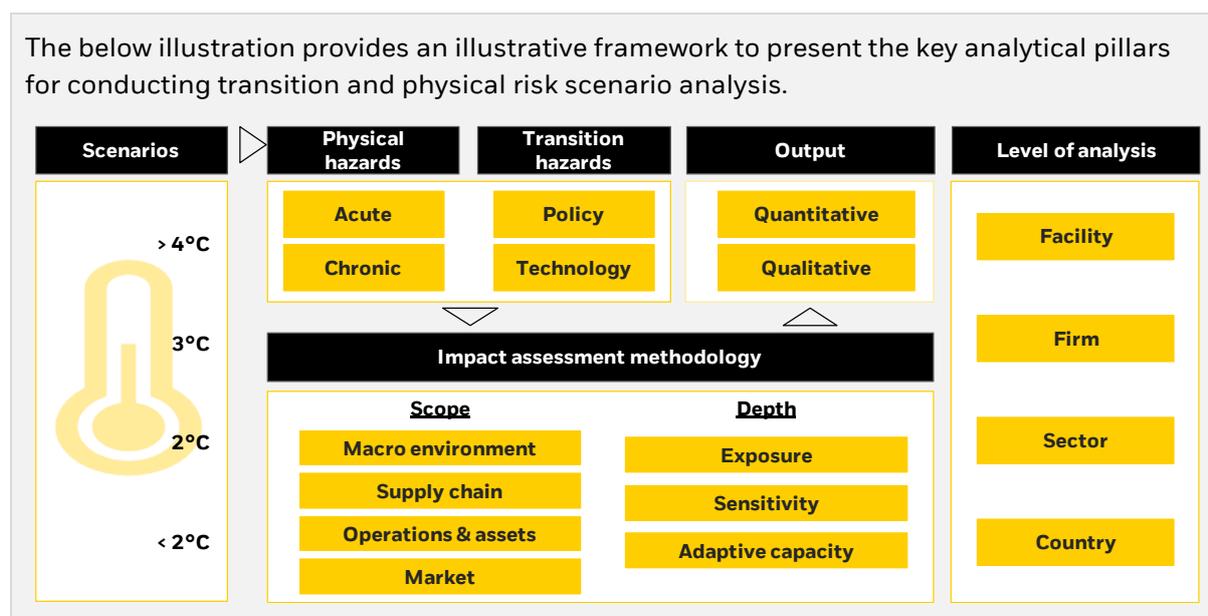
*“Quantification efforts have been more bespoke and ad-hoc rather than integrated into business as usual exercises. That’s where we would like to get to”*

*“It’s more difficult to try and quantify the double materiality perspective compared to single materiality”*

[The bank] *“has identified seven sectors in the wholesale portfolio that are sensitive to climate risks - such as coal, gas, power, steel, transport - and two sectors under the retail balance sheet, which are the mortgage portfolio and the consumer portfolio related to auto-financing business”*

*“We are developing an internal model to measure and monitor the carbon intensity of our Energy and Power portfolios, including defining short/medium/long term targets [...] for aligning to Paris”*

Figure 26: Case study on methodologies for climate scenario analysis



Source: Vivid Economics – framework re-adapted

The key analytical pillars for conducting climate risk exercises to assess financial materiality are illustrated in Figure 26. These include: i) Scenarios used, ii) physical and transition hazards examined, iii) impact assessment methodology developed, iv) outputs produced, and v) the level of analysis (and impacted counterparties) of the risk examined.<sup>129</sup>

Physical risk exercises are usually performed on the corporate loan book, commercial real estate and mortgage books and may consider the impact of both incremental shifts in climate

<sup>129</sup> UNEP FI (2019). *Changing Course: A comprehensive investor guide to scenario-based methods for climate risk assessment, in response to the TCFD*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2019/05/TCFD-Changing-Course-Oct-19.pdf>.

conditions and changes in extreme events.<sup>130</sup> Analysis of incremental shifts, i.e. chronic hazards, is less common, as methodologies to date are more developed on acute extreme weather events<sup>129</sup>, for instance, looking at commercial real estate and commercial mortgage backed securities exposure to hurricane and flood risk.<sup>131</sup>

Physical risk exercises adopt different approaches based on the underlying portfolio in scope. For real estate portfolios, whether commercial or retail, exercises assess the impact of weather events on property values and, subsequently, on metrics such as loan-to-value ratios.<sup>132</sup> Exercises on corporate portfolios tend to focus on sectors that may be impacted by weather changes (e.g. agriculture or energy sector). These usually follow specific steps, including: i) Assessing sector productivity, given the impact of weather events, ii) deriving changes in revenues and cost of goods sold, across homogeneous sectoral and geographic segments, and iii) estimating changes in credit risk of individual borrowers.<sup>132</sup> For these exercises, methodologies cover the impacts of physical hazards on counterparties' operations and assets (e.g. asset impairment and business interruption), and in some cases, such as the case study in *Figure 27*, cover the broader value chain impact.

Insurance protection against natural hazards can help mitigate the effects of extreme weather events on borrowers and should hence be factored in physical risk measurement analysis. As illustrated by the Prudential Regulation Authority (PRA), the high penetration of private market insurance makes the net short-term financial risk of flooding in the UK low to moderate.<sup>133</sup> As further illustrated, differences in legal insurance requirements between lending to households versus large companies should also be factored in given that insurance against natural catastrophes is often mandatory for households but not necessarily a requirement for companies. This is the case in multiple countries; for instance, the French residential housing portfolio is also widely protected from natural catastrophes as most of households have underwritten an insurance contract on their house.<sup>134</sup>

Despite the potential relevance of insurance protection, a report by the UNEP FI highlights that these considerations are currently excluded from most analysis conducted by banks, due to uncertainties related to present-day coverage and future changes in insurance availability and pricing.<sup>135</sup> The increase in frequency of extreme weather events, such as floods, may reduce insurance firms' willingness to provide flood insurance at affordable prices or their ability to pay out claims.<sup>136</sup>

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<sup>130</sup> UNEP FI (2018). *Navigating a new climate – Part 2: Physical risks and opportunities*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/07/NAVIGATING-A-NEW-CLIMATE.pdf>.

<sup>131</sup> BlackRock Investment Institute (2019). *Getting physical: assessing climate risks*. Available at: <https://www.blackrock.com/us/individual/insights/blackrock-investment-institute/physical-climate-risks>.

<sup>132</sup> UNEP FI (2018). *Navigating a new climate – Part 2: Physical risks and opportunities*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/07/NAVIGATING-A-NEW-CLIMATE.pdf>.

<sup>133</sup> Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>.

<sup>134</sup> ACPR (2019). *French banking groups facing climate change-related risks: Analyses et synthèses*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/as\\_101\\_climate\\_risk\\_banks\\_en.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/as_101_climate_risk_banks_en.pdf).

<sup>135</sup> UNEP FI (2018). *Navigating a new climate – Part 2: Physical risks and opportunities*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/07/NAVIGATING-A-NEW-CLIMATE.pdf>.

<sup>136</sup> Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>.

Figure 27: Case study on a physical risk pilot of a European G-SIB

A European G-SIB performed a pilot assessment, on a sample of clients in its portfolio, to assess exposure to acute and chronic physical risks, i.e. driven by extreme weather events and weather pattern changes.

The assessment focused not only on direct impacts on clients' assets but also on indirect impacts through supply chains and markets. The outcome of this exercise was a physical risk score between 1 and 100 and was calculated based on three risk factors: operational risks, supply chain risks and risks of market share losses. The exercise was conducted on nine identified sectors highly exposed to physical risks, for which the top 10 clients were selected for each sector.

Sectors	Operations Risk	Heat Stress	Water Stress	Floods	Sea Level Rise	Hurricanes	Market Risk	Supply Chain Risk	Total
Semiconductor	39	39	52	24	9	18	72	66	52.5
Technology & Hardware	41	39	52	25	10	22	63	60	51.8
Pharmaceutical & Biotechnologies	37	41	45	24	9	20	62	60	47.8
...	...	...	...	...	...	...	...	...	...
Total	36	40	44	24	9	18	51	45	<b>41.5</b>

The final score below average, i.e. 50, suggested a low-risk profile. Nonetheless, the analysis revealed disparities between the sectors reviewed. In particular, the semi-conductor and tech and digital sectors had the highest exposure due to the dependence of their value chains on components made in countries with high exposure to physical risks. Differences could also be aggregated at regional level, highlighting greater vulnerability in Southeast Asia compared to North America.

Source: Public reports from banks and BlackRock FMA analysis

Transition risk measurement exercises are most commonly performed on the corporate loan book pertaining to high-carbon sectors and try to reflect how low-carbon policy and technology transition could impact the credit risk of exposures.<sup>137</sup> As illustrated in a PRA report on the UK banking sector, carbon-intensive industries are those where government policy changes can already be observed, which include consumer loans for diesel vehicles and buy-to-let lending, given energy efficiency requirements.<sup>138</sup> However, the primary focus of respondent banks remained on the corporate book.

Transition risk exercises mostly focus on two types of transition hazards (or shocks), through multiple forces. The first are policy-driven and describe the additional costs or revenues that could arise from changes in the policy environment. These could manifest as a direct price on carbon, – for instance, through a carbon tax or emissions trading systems –, or as an indirect carbon cost – for example, through coal production restrictions. The second type of hazards are technology-driven, and could manifest as changes in relative prices of services – for instance, through falling costs of renewable energy generation or storage. In addition, shifting consumer

<sup>137</sup> UNEP FI (2018). Extending our Horizons – Part 1: Transition-related risks & opportunities. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/04/EXTENDING-OUR-HORIZONS.pdf>.

<sup>138</sup> Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>.

preferences towards low-carbon products and changing consumption patterns (e.g. greater use of paper as a plastic substitute) may also present substantial market effects in certain sectors.<sup>139</sup>

Overall, there is an emerging body of research on the fundamental uncertainties associated with the transition to a low carbon economy and the challenges that this presents for scenario analysis and modelling.<sup>140</sup> As illustrated in a paper from the Institute for Climate Economics (I4CE), the assessment of climate risk is subject to a high degree of socio-economic uncertainty, which includes, for example, the different perceived likelihoods of specific political and economic scenarios, as well as the lack of transparency on the global economy's greenhouse gas emissions trajectory.<sup>141</sup>

As illustrated in the case study in *Figure 28*, transition risk exercises performed by banks usually follow specific steps, namely: i) Choice of reference scenarios ii) definition of in-scope sectors and client segments, iii) identification of risk factor pathways, to reflect how the chosen scenarios may impact sectors differently, and iv) determination of borrower-level calibration points, by selecting representative sample of borrowers, contextualising the scenario impact for them and translating this into Probability of Default (PD) changes.

**Figure 28: Case study on a transition pilot of a non-European G-SIB**

A non-EU G-SIB performed a pilot transition risk assessment on its utilities sector portfolio.

### **1. Scenario choice**

The 2°C scenario within the Regional Model of Investment and Development - Model of Agricultural Production and its Impacts on the Environment (REMIND-MAGPIE) integrated assessment model (IAM), developed by the Potsdam Institute for Climate Impact Research (PIK) was used. Assumptions of this scenario include: i) Carbon price increases starting at USD 2/tCO<sub>2</sub>eq in 2020 and rising to 100/CO<sub>2</sub>eq by 2040, ii) middle of the road world, where socio-economic patterns continue on historic trends, iii) energy mix transitions rapidly from fossils to renewables, and others.

### **2. Sector definition and segmentation**

The exercise was conducted for the utilities sector in Europe and US, including power generation, power transmission & distribution, integrated utilities, electricity production & distribution. These were segmented into four homogeneous groups: regulated high-carbon, regulated low-carbon, unregulated high-carbon, unregulated low-carbon.

### **3. Identification and analysis of risk factor pathways**

Sensitivities to the scenario through risk factor pathways were determined for all segments, for instance through direct emission costs, indirect emissions costs, low/carbon capex and changes in revenues.

### **4. Borrower level calibration**

<sup>139</sup> UNEP FI (2019). *Changing Course: A comprehensive investor guide to scenario-based methods for climate risk assessment, in response to the TCFD*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2019/05/TCFD-Changing-Course-Oct-19.pdf>.

<sup>140</sup> See for example: Chenet, H., Ryan-Collins, J., van Lerven, F. (2020). *Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy*. Ecological economics. Available at: <https://www.sciencedirect.com/science/article/pii/S092180092100015X>.

<sup>141</sup> I4CE (2019). *Towards an alternative approach in finance to climate risks: Taking uncertainties fully into account*. Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers\\_20p-va-web.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers_20p-va-web.pdf).

Probability of default calibration was undertaken to understand how the transition scenarios could impact the credit standing of entities assessed. Companies were segmented and grouped together with similar characteristics. The stress was only applied to exploration and production sub-sets. The approach used a bottom-up, quantitative-based stress test supported by qualitative assumptions where required.

### Results

Results from this exercise showed that under the 2040 2° scenario the climate stressed exposure to default-weighted average portfolio PD was:

2.2x greater in the US relative to 2017

2.3x greater in the EU relative to 2017

However, given that the majority of utilities were investment grade, stressed average PDs resulted in portfolio remaining largely in the investment grade area.

*Source: Public reports from banks and BlackRock FMA analysis*

Lastly, when looking at ESG risk assessment from the environmental and social materiality perspective, most banks discussed Paris/pathway alignment or net zero strategy exercises, given growing public commitments to align lending and investment activities with science-based targets. The case study in *Figure 29* provides an overview of the approach undertaken by five banks that publicly pledged to develop a methodology to measure the climate alignment of their lending portfolios under the Katowice commitment in 2018.<sup>142</sup> Since the launch of this initiative, more banks have committed to aligning the portfolio, for instance by joining the Collective Commitment to Climate Action.<sup>143</sup>

More recently, principles related to the development of net zero strategies' have been developed, for example by the SBTi. As outlined in their principles, net zero strategies require banks to achieve a scale of value chain emissions (scope 1, 2 and 3) so that "reductions are consistent with the depth of abatement in pathways that limit warming to 1.5°C". In addition, banks are required to neutralise the impact of any source of residual emission by permanently removing any equivalent volume of atmospheric CO<sub>2</sub>.<sup>144</sup> This can be achieved, for example, by purchasing high-quality carbon credits or providing direct financial support to projects that generate positive impact such as investments in net emissions technologies (e.g. carbon capture).

Figure 29: Case study on credit portfolio alignment<sup>145</sup>

For the banking business, aligning with the Paris Agreement implies reorienting financial instrument products or portfolios away from non-consistent activities and/or scaling-up consistent activities as the alignment determines how much and by when should green, transitioning and brown activities be developed or financed. The alignment approach

<sup>142</sup> 2° Investing Initiative (2019). *The Katowice commitment: one year on*. Available at: <https://2degrees-investing.org/the-katowice-commitment-one-year-on/>.

<sup>143</sup> UNEP FI (2019). *33 banks commit to immediate action towards aligning with global climate goals*. Available at: <https://www.unepfi.org/news/industries/banking/collective-commitment-to-climate-action/#:~:text=The%20Collective%20Commitment%20to%20Climate,Paris%20Agreement%20on%20Climate%2C%20including%3A&text=being%20publicly%20accountable%20for%20their%20climate%20impact%20and%20progress%20on%20these%20commitments.>

<sup>144</sup> Science Based Targets Initiative (2021). *Net-Zero Criteria Draft for Public Consultation*. Available at: <https://sciencebasedtargets.org/resources/files/Net-Zero-Criteria-Draft-for-Public-Consultation-v1-0.pdf>

<sup>145</sup> 2° Investing Initiative (2020). *Credit Portfolio Alignment- An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative*. Available at: <https://2degrees-investing.org/wp-content/uploads/2020/09/Katowice-Banks-2020-Credit-Portfolio-Alignment.pdf>.

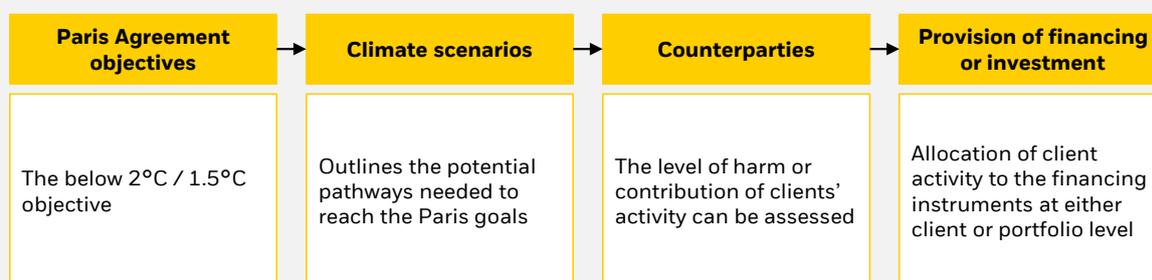
undertaken by banks under the Katowice commitments follows the process of measuring, setting targets, steering and progress tracking.

### **Measuring alignment:**

Firstly, the Paris Agreement goals (which aims to ensure a well below 2°C – and preferably 1.5°C – increase in average temperatures relative to pre-industrial levels) can be translated into usable data and indicators using a climate scenario that outline the potential pathways needed to reach the Paris goals.

For climate scenario analysis, Paris Agreement Capital Transition Assessment (PACTA) tool<sup>146</sup> is used by banks under the Katowice commitment to quantify a financial portfolio’s exposure to a 2°C benchmark in relation to a series of climate-related technologies. In doing so, it provides a ‘misalignment’ or ‘alignment’ indicator that measures the extent to which current and planned production profiles, investments, greenhouse gas (GHG) emissions, are aligned to the trajectory.

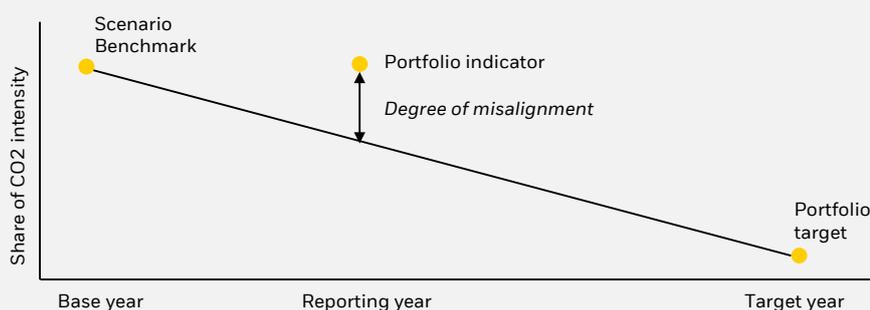
### Illustrative approach to measuring alignment



### **Target-setting:**

Secondly, scenario benchmark<sup>147</sup> and long-term targets need to be set based on the end goal and trajectory for the portfolio to be consistent with the Paris Agreement’s goals. The financial instrument is considered as ‘aligned’ if the level of the indicator is below (respectively above) that of the benchmark from a climate scenario for brown activities (respectively green activities). Alignment can be measured at portfolio, client or asset level.

### Illustrative alignment at portfolio level



### **Steering:**

Finally, by closely examining the gaps between banks’ lending portfolios and climate benchmarks, banks can reorient the financial instrument so that it stays on track with the

<sup>146</sup> 2° Investing Initiative (n.d.). PACTA. Available at: <https://2degrees-investing.org/resource/pacta/>.

<sup>147</sup> Defined as physical and financial metrics that reflect the specific transition pathways for a given activity (a technology, a commodity, a process or an industrial sector), depending on the sector and activity.

trajectory. Steering can be achieved at portfolio level, either by accompanying existing counterparties to align their activities, or by adjusting the customer base.

Source: 2° Investing Initiative (2020)

Despite the relatively nascent status of this field, various approaches are being developed to define and set the underlying science-based portfolio targets. In particular, a trend towards using sector-specific approaches such as the Sectoral Decarbonisation Approach<sup>148</sup> can be observed. These approaches rely on the development and use of emission-based physical intensity metrics, namely energy or carbon intensity metrics that use a physical unit denominator and are applicable to a specific sector (e.g. kgCO<sub>2</sub>/MWh for the power sector and MWh/m<sup>2</sup> for real estate).<sup>149</sup> In addition, efforts are being undertaken to develop disclosure metrics that indicate the implied temperature rise (ITR), which attempts to estimate the global temperature rise associated with the emissions of (a portfolio of) companies.<sup>150</sup> However, as stated by respondents, such ITR metrics are still subject to significant challenges, such as a lack of robustness or consensus in terms of methodology, as well as coverage limitations.

Civil society organisations highlighted the importance of setting sector-specific targets as it would be misleading to set an overall target on carbon emissions for the entire portfolio. For example, overweighting healthcare in the portfolio can improve the overall carbon physical intensity figure; however, it does not help to reduce emissions in the real economy. Instead, civil society organisations advocate methodologies that assess the degree of portfolio alignment with a given climate scenario to establish a forward-looking view. While the scope of portfolios measured should be broad, outcomes should remain at sectoral level and not be aggregated. Additional examples of methodologies developed by industrial bodies for setting targets aiming at assessing a portfolio's alignment with low-carbon trajectories are summarised in *Table 6*.

Table 6: Various approaches for measuring Paris Alignment<sup>151</sup>

Methodology	Approach	Metrics
<b>Sector Decarbonization Approach (SDA)</b>	<ul style="list-style-type: none"> <li>Approach developed by SBTi for brown sectors such as energy/power</li> <li>Sector-level carbon emissions allocation approach based on production intensity</li> </ul>	<ul style="list-style-type: none"> <li>Depending on sector, e.g., kgCO<sub>2</sub>/ kWh</li> </ul>
<b>GHG Emissions per unit of Value Added (GEVA)</b>	<ul style="list-style-type: none"> <li>Approach developed by SBTi for 'non-brown' sectors (e.g. IT)</li> <li>A carbon budget is equated to global GDP and a company's share of emissions is determined by its gross profit</li> </ul>	<ul style="list-style-type: none"> <li>kgCO<sub>2</sub>/ gross value-added</li> </ul>
<b>Absolute Emissions</b>	<ul style="list-style-type: none"> <li>Approach developed by SBTi</li> <li>The percent reduction in absolute emissions required by a given scenario is applied to all companies equally</li> </ul>	<ul style="list-style-type: none"> <li>Absolute kgCO<sub>2</sub> emissions</li> </ul>

<sup>148</sup> Science Based Targets Initiative (2015). *Sectoral Decarbonisation Approach: A method for setting corporate emission reduction targets in line with climate science*. Available at: <https://sciencebasedtargets.org/wp-content/uploads/2015/05/Sectoral-Decarbonization-Approach-Report.pdf>.

<sup>149</sup> Science Based Targets Initiative (2020). *Financial sector science-based targets guidance*. Available at: <https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf>.

<sup>150</sup> Banque de France (2020). *Responsible Investment Report 2019*. Available at: [https://www.banque-france.fr/sites/default/files/media/2020/06/26/rapport-annuel-investissement-responsable\\_2019\\_en.pdf](https://www.banque-france.fr/sites/default/files/media/2020/06/26/rapport-annuel-investissement-responsable_2019_en.pdf).

<sup>151</sup> Institut Louis Bachelier et al. (2020). *The Alignment Cookbook - A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-carbon Trajectories or Temperature Goal*. Available at: <https://www.louisbachelier.org/wp-content/uploads/2020/07/rapport-0607.pdf>.

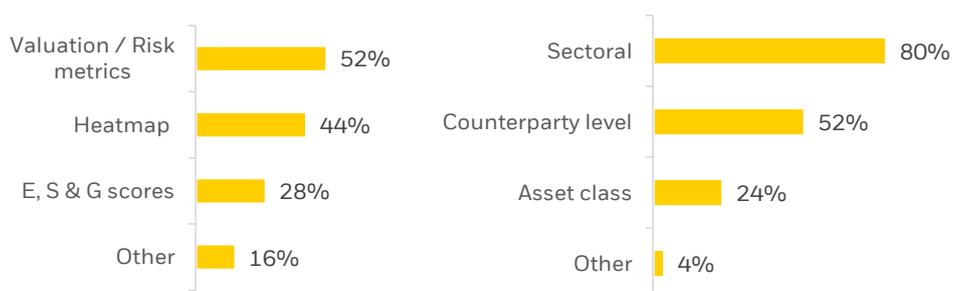
Methodology	Approach	Metrics
<b>Fair-share approach</b>	<ul style="list-style-type: none"> <li>Each technology-specific element (technology share, production volume) is set to change at a rate consistent with the climate scenario (e.g. power, fossil fuels)</li> </ul>	<ul style="list-style-type: none"> <li>Rate of change of absolute production by technology</li> </ul>
<b>Firm strategy-based</b>	<ul style="list-style-type: none"> <li>Carbon impact ratio is determined based on bottom-up strategy assessment of individual firms</li> <li>Sector specific calculation principles for high-stakes sectors (energy, equipment suppliers with low carbon potential, carbon intensive and financial) to compute induced emissions and emission savings</li> </ul>	<ul style="list-style-type: none"> <li>Carbon Impact Ratio (Emission Savings/ Induced Emissions)</li> <li>Carbon/ EV, Carbon/ GDP</li> </ul>

Source: Institut Louis Bachelier et al. (2020) and BlackRock FMA analysis

Overall, interviews highlighted that G-SIBs are more likely to perform portfolio transparency exercises (compared to non-G-SIBs), in particular on corporate books for transition risk and mortgage books for physical risks. As illustrated in *Figure 30*, the outputs of these exercises can vary significantly and most often result in i) Valuation and risk metrics, such as adjusted PDs, LGDs, Loan to value (LTV) and Value at Risk (VAR) ratios, ii) heatmaps, representing sectoral or geographic exposure to transition or physical risk, and iii) in aggregated scores, resulting in signals of ESG riskiness. Specifically, valuation and risk metrics are the most common output for interviewed G-SIBs, whereas heatmaps are the most common among interviewed non-G-SIBs. The level of granularity of these exercises often goes down to counterparty level (52% of banks), however the majority often opt for an aggregated analysis at sectoral level.

As noted in the EBF and IIF report, results of these pilot exercises are not always published<sup>152</sup> and differ based on the nature of the exercise. Many banks report that there are no significant risks identified across their portfolios, even though there is evidence of certain sectors being more or less exposed to these risks.

**Figure 30: Output of ESG risk measurement exercises and coverage<sup>153</sup>**



Source: BlackRock FMA analysis

As mentioned by many banks, results obtained through these exploratory assessments have the potential to be further enhanced and refined, particularly in light of the current challenges faced in their refinement. As illustrated in an interview with a data provider, ESG risk measurement challenges can either be driven by theoretical complexity or lack of data. As further detailed, transition risk modelling is characterised by significant theoretical uncertainties, related to the

<sup>152</sup> EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

<sup>153</sup> Question: *What is the output of your ESG risk measurement exercises and what is the portfolio coverage?* Sample size: 25. Percentages do not add up to 100% as multiple entries were allowed.

underlying economic policy and technology scenarios adopted, which require complex political forecasting and may be based on subjective assumptions. On the physical risk side, however, the problem is found to be more data driven, and the same asset, assessed by different parties, could lead to directionally different results.

As highlighted in the previous section, data availability issues were among the most quoted challenges, and these also manifest with different nuances across transition and physical risk assessment exercises. For instance, access to borrower-level data can be restricted due to privacy rules, particularly for retail mortgages.<sup>154</sup> Banks also often lack data on the locations and production characteristics for commercial borrowers (e.g. to understand the revenue mix of borrowers which is relevant for transition risk assessment).

Moreover, banks lack historical data with which they can assess the impact of climate risk on credit losses. As illustrated in the UNEP FI paper, no long-term policy experiments have been rolled out at the scale required for a 2°C transition, and “the financial impacts of more binding policy constraints on industries, including those reliant on fossil fuels, for example, remain untested”.<sup>155</sup> As further outlined in a report by the Institute for Climate Economics (I4CE), there are various challenges when conducting such measurement exercises, as these risks, which are long-term, difficult to associate with a probability, and for which there is limited historical data, are often difficult to reconcile with standard risk processes based on probabilities established from the past.<sup>156</sup>

Third, as also mentioned in other reports, time frames are a critical challenge in the assessment of climate-related risk; for instance, banks mentioned that if the timeframe is too long, the results are too intangible to be of use, particularly for banks, where the lending horizon is normally 1 to 5 years.<sup>157</sup> However, if the timeframe is too short, the results will not inform strategic decision-making, indicating the importance of clarity on the time frame at the beginning of any assessment.<sup>157</sup>

As highlighted by an interviewed civil society, however, the long-term nature through which climate risks manifest should not hinder their current assessment, as many events are already having concrete manifestations in the short term through policy changes – such as the set-up of emissions trading systems– as well as through acute weather events. Even though some physical risks are foreseen in a time horizon of 10-15 years, they should not be underestimated in the short term; for example, chronic changes such as low water levels in Europe during the 2018 summer significantly disrupted river transport and supplies in Germany or Switzerland.<sup>158</sup> Moreover, as previously mentioned in section 3.3.1, the assessment of ESG risks from the double materiality perspective should go beyond the term of financing and consider the time horizon over which the financed asset will be used, to more accurately reflect its impact on the environment.

Lastly, there remains an open question as to the need for standardisation of scenarios, methodologies, and outputs of scenario-based assessments. Scenarios used are often different across risk measurement exercises; for example, physical risk methodologies often focus on a

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<sup>154</sup> UNEP FI (2018). *Navigating a new climate – Part 2: Physical risks and opportunities*. Available at:

<https://www.unepfi.org/wordpress/wp-content/uploads/2018/07/NAVIGATING-A-NEW-CLIMATE.pdf>.

<sup>155</sup> UNEP FI (2018). *Extending our Horizons – Part 1: Transition-related risks & opportunities*. Available at:

<https://www.unepfi.org/wordpress/wp-content/uploads/2018/04/EXTENDING-OUR-HORIZONS.pdf>.

<sup>156</sup> I4CE (2019). *Towards an alternative approach in finance to climate risks: Taking uncertainties fully into account*.

Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers\\_20p-va-web.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers_20p-va-web.pdf).

<sup>157</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*.

Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>158</sup> ACPR (2019). *French banking groups facing climate change-related risks: Analyses et synthèses*. Available at:

[https://acpr.banque-france.fr/sites/default/files/medias/documents/as\\_101\\_climate\\_risk\\_banks\\_en.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/as_101_climate_risk_banks_en.pdf).

4°C ‘business-as-usual’ scenario, while transition risk scenarios often focus on a 2°C scenario.<sup>159</sup> Moreover, as banks currently choose the reference scenarios to use in their exercises, results are not easily comparable. To address this challenge, as mentioned by civil society organisations and data providers, and as further detailed in section 4.3.3.1.1, supervisors should provide banks with the reference scenarios to input into their models.

### Principles of best practice based on stakeholder perspectives

**Banks should conduct portfolio ESG risk measurement exercises to assess current and forward-looking exposure to ESG risks. Scenario-based methodologies focusing on climate change can initially be prioritised for forward looking assessment, while all ESG pillars should be considered in current exposure assessments.** Given their more quantifiable nature, climate-related risk exercises make use of scenario analysis to assess exposure and alignment of counterparties, transactions and sectors to climate risks. As illustrated in *Figure 31* there are three main types of assessment that can be performed: i) Transition risk assessments, aiming to capture the impact of climate-related technology, policy and consumer demand changes, ii) physical risk assessments, capturing the impact of chronic and acute weather changes, and iii) pathway alignment exercises assessing portfolios alignment to climate-related goals such as the Paris agreement. The other ESG pillars can be explored through ESG scoring approaches, to provide current views on portfolio ESG risk exposure. Banks can choose to develop their own methodologies for weighting qualitative and quantitative ESG indicators into a unique ESG score, or source these scores externally. Scenario analysis methodologies modelling social factors (e.g. pandemic, social unrest) could also be explored and gradually developed.

**Figure 31: Illustrative portfolio ESG risk measurement and scenario analysis**

The below presents a high-level framework to summarise the approaches to ESG risk measurement<sup>160</sup>, illustrating the key outputs. Most of the current market activity is on the climate pillar, as seen by the different exercises that are being conducted in this space. Generally, exercises can either measure the current exposure to ESG risks (A) or provide forward-looking insights (B).

- i. The measurement of current exposure can result in, for example, the development of physical or transition risk scores and heatmaps, the measurement of financed emissions<sup>161</sup> – i.e. GHG emissions financed by loans and investments of financial institutions –, or the ESG scoring of the portfolio
- ii. The forward-looking view uses scenarios-analysis to assess the financial impact of climate risk under different scenarios, for transition and physical risk, and it can also show the evolution and alignment of the portfolio to desired pathways (e.g. net zero)

<sup>159</sup> UNEP FI (2019). *Changing Course: A comprehensive investor guide to scenario-based methods for climate risk assessment, in response to the TCFD*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2019/05/TCFD-Changing-Course-Oct-19.pdf>.

<sup>160</sup> In line with framework provided by the EBA according to which methodological approaches for assessing and evaluating ESG risks include the: i) exposure method, ii) risk framework method and iii) portfolio alignment method

<sup>161</sup> For example, the Partnership for Carbon Accounting Financials (PCAF)'s standard provides methodological guidance to measure financed emissions of six asset classes: listed equity; business loans and unlisted equity; project finance; commercial real estate; mortgages; and motor vehicle loans. For instance, in the case of mortgages, financial institutions should cover absolute scope 1 and 2 emissions related to the energy use of the property financed through the mortgage. When calculating financed emissions, a building's annual emissions are attributed to the mortgage provider using a loan-to-value approach; that means that the attribution is equal to the ratio of the outstanding amount at the time of the GHG accounting to the property value at loan origination. The financed emissions are then calculated by multiplying this attribution factor by the emissions of the building (which are calculated as the product of a building's energy consumption and specific emission factors for each source of energy consumed). See Partnership for Carbon Accounting Financials (n.d.). *The Global GHG Accounting and Reporting Standard for the Financial Industry*. Available at: <https://carbonaccountingfinancials.com/standard#the-global-ghg-accounting-and-reporting-standard-for-the-financial-industry>.

commitments) under a range of scenarios. With respect to other ESG risks, there are currently no observed forward-looking or scenario analysis-based approaches

		Activity focus		
Focus	Data	A Measurement (current)	B Scenario analysis (forward-looking)	
<b>Climate</b>	<b>Physical Risk</b>	Geo-location, climate maps/scenarios	<b>Physical risk score / heatmap</b> at sectoral or counterparty level	<b>Financial impact of physical risk</b> under different scenarios
	<b>Transition Risk</b>	Emissions across value chain, sector-specific output, Paris aligned scenarios	<b>Transition risk score / heatmap</b> at sectoral or counterparty level	<b>Financial impact of transition risk</b> under different scenarios
	<b>Climate Impact</b>		<b>Financed emissions of the portfolio and emissions intensity</b>	<b>Alignment and evolution of portfolio</b> (e.g. Net Zero) under different scenarios
<b>ESG</b>	<b>ESG/E&amp;S risk</b>	ESG scores or E/S/G KPIs	<b>ESG score of the portfolio</b> (related to listed companies and traded instruments)	Area to be further developed

Each of the above-mentioned risk measurement exercises has its own measurement methodologies.

For instance, Paris Alignment portfolio measurement exercises follow specific steps, illustrated in the approach below. These are supported by high-level principles, which include:

- i. Adopt sector-based approaches to account for different technology roadmaps to achieve climate targets (e.g. automotive to move to zero emission vehicles and power generation to shift to renewables)
- ii. Prioritise asset-level data for accurate and granular measurement of portfolio impact

<b>Key Steps</b>	<b>Perimeter</b>	<b>Select</b> sectors based on carbon relevance and identify <b>part of the value chain</b> generating most climate impact
	<b>Measuring Portfolio emissions</b>	<b>Measure sector specific CO2 absolute financed emissions and/or CO2 intensity metrics</b> , normalised <b>per unit of production</b> e.g.: <ul style="list-style-type: none"> <li>• <b>Power generation</b> (gas-fired, coal-fired, renewables): <ul style="list-style-type: none"> <li>– Exposure weighted production capacity by type of power production type -&gt; financed emissions and/or emissions intensity per megawatt hour using emission factors per power type</li> </ul> </li> </ul>
	<b>Target setting</b>	<b>Set targets</b> on CO2 absolute financed emissions and/or CO2 physical intensity for each sector (e.g. based on IEA SDS and NGFS orderly scenarios data) and derive <b>convergence pathways</b>
	<b>Steering</b>	<b>Steer portfolio to align to desired target state</b> <ul style="list-style-type: none"> <li>• <b>Review exposure to counterparties</b> (incl. their current/future technology used, preparedness to transition) <b>and shift allocation of financing to achieve desired target state</b></li> </ul>

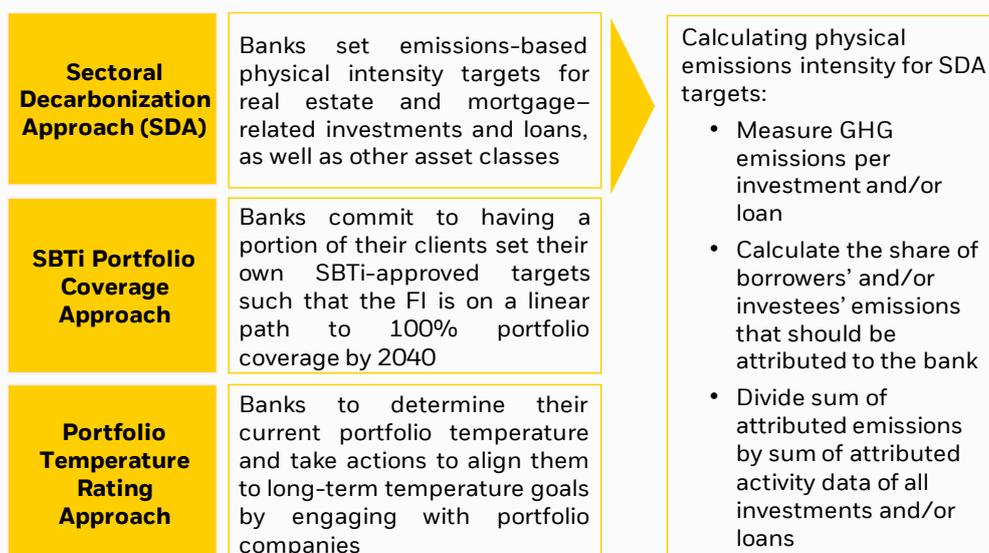
## Monitoring

**Monitor portfolio evolution** and alignment through use of a **specific dashboard**

Each of these steps requires specific decisions to be taken. For instance, when setting targets there are different approaches that can be followed. As illustrated in the Science-based target initiative report<sup>162</sup>, potential approaches to be adopted by banks include:

- i. Sectoral Decarbonization Approach (SDA);
- ii. SBT Portfolio Coverage Approach;
- iii. Portfolio Temperature Rating Approach.

An overview is provided in the summary below, with a deep dive on SDA approach for calculating physical emissions intensity.



Source: SBTi and BlackRock FMA analysis

**Transition risk and physical risk measurement exercises help banks assess the financial materiality of climate-related risks, while pathway alignment or net zero approaches capture the environmental and social materiality perspective.** Transition risk and physical risk exercises seek to measure the impact of climate change on, for example, credit risk and valuation metrics, and hence are relevant from a financial materiality viewpoint. Pathway alignment and net zero exercises are carried out from an environmental and social materiality perspective, which is most relevant for reputational and strategic risk. These exercises should be performed regularly, in particular where public commitments are in place.

**Exercises can be conducted starting with the most relevant or the highest ESG risk share of the portfolio. However, the scope should be continuously expanded to cover additional segments and asset classes, eventually covering all relevant parts of the portfolio.** Generally, measurement methodologies should be tailored to capture the specificities of an asset class and specific ESG risks (e.g. transition vs. physical risk). Whilst developing measurement methodologies and capabilities, ESG risk assessments can initially focus on the most relevant share of the portfolio. This should include sectors or geographies where ESG risks are more concentrated, such as high carbon sectors for transition and coastal and

<sup>162</sup> Science Based Targets Initiative (2020). *Financial sector science-based targets guidance*. Available at: <https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf>.

riverside areas for physical risk. Measurement methodologies should be gradually expanded to all other relevant segments and asset classes.

**Outputs from these exercises, which should be mostly quantitative and scenario-based, can be combined to create holistic views on an institution's overall ESG risk exposure.** The output from ESG risk measurement exercises can be both quantitative and qualitative. The former should be prioritised as it allows for more granular and actionable insights for portfolio steering. Quantitative outputs could consist of, for example, climate adjusted PDs and LGDs for climate risk measurement, and sector-specific physical carbon-intensity metrics for pathway alignment exercises. On the other hand, qualitative outputs can be used as an approximate starting point to determine future direction. Illustratively, to consolidate views at portfolio level, these outputs can be combined to provide a financial materiality view (e.g. combining transition and physical risk outputs) and an environmental and social materiality view (based on pathway alignment). Comparability of results, among banks, can be fostered through adoption of common input scenarios.

**Results from portfolio exercises should be integrated into risk processes, with a focus on portfolio monitoring and steering.** Results from ESG risk measurement exercises should be taken into account across the entire risk framework. Specifically, forward-looking KPIs related to portfolio exposures (e.g. portfolio exposure in absolute terms to sectors with high physical carbon intensities) can be defined and allocated to divisions within the business planning process.

### 3.3.3.2 Integration into risk processes

#### 3.3.3.2.1 Risk appetite framework/statement

It is a regulatory requirement that financial institutions have in place a risk appetite framework (RAF) that considers all the material risks to which the institution is exposed, that is forward-looking, and aligned with the strategic planning horizon set out in the business strategy.<sup>163</sup>

There are three observed methods to approach ESG risk, namely: i) Treating it as a standalone, principal risk type, ii) including it as a risk within other existing risk types (i.e. a “cross-cutting” risk), or iii) doing both.<sup>164</sup> As further illustrated in the CFRF report, if climate risk is considered a standalone risk category, the risk appetite includes both a high-level statement and qualitative or quantitative metrics that link back to it. If climate risk is instead considered within other existing risk categories, the risk appetite may not have a specific statement on ESG risks but should have metrics that can be clearly linked back to it.

Most banks that include ESG risks in their RAF fall under the second category, meaning they consider ESG risk as a transversal risk driver. ESG risks have so far mostly been included under reputational, operational and compliance risk, in particular for governance aspects such as fraud, compliance and corporate governance. Even though few banks already integrate climate risks under credit risk, many acknowledge its relevance and plan to advance integration efforts for this risk type going forward.

As detailed in *Figure 32* interviews showed that 48% of banks have not integrated ESG within their RAF; however, the majority plan to do so in the future. On the other hand, 28% and 24%

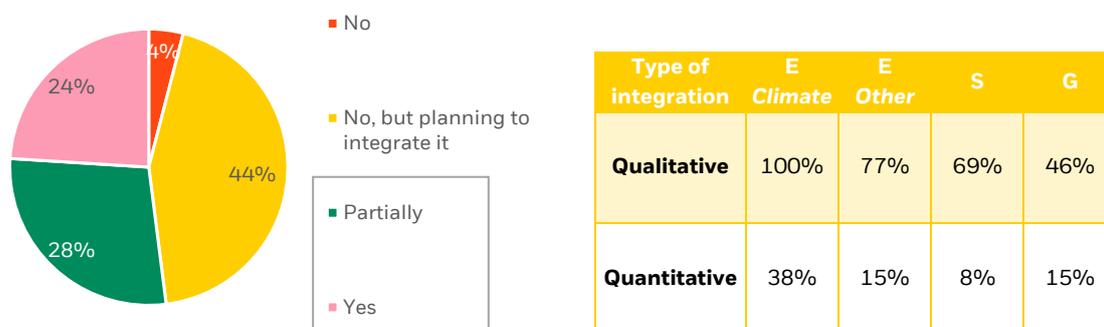
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<sup>163</sup> EBA (2018) *EBA Final Report - Guidelines on the revised common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing (EBA/GL/2018/03)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/2282666/6c2e3962-6b95-4753-a7dc-68070a5ba662/Revised%20Guidelines%20on%20SREP%20\(EBA-GL-2018-03\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/2282666/6c2e3962-6b95-4753-a7dc-68070a5ba662/Revised%20Guidelines%20on%20SREP%20(EBA-GL-2018-03).pdf).

<sup>164</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-summary.pdf>.

have fully or partially integrated it. For the subset of interviewed banks that stated that they have integrated it, all respondents mentioned that they have included it as a qualitative statement, and only some have integrated it with quantitative metrics for selected ESG pillars. Climate risk is the most advanced with 38% of banks claiming to have integrated quantitative metrics related to this topic in their RAF at least partially.

Figure 32: ESG integration within risk appetite framework/statement<sup>165</sup>



Source: BlackRock FMA analysis

Risk metrics are designed to ensure that portfolios stay within the limits outlined in the RAF and are further enforced in sectoral position statements and policies. Usually, these metrics have an associated set of thresholds, proposed by the business and set by the institution’s board, which allow clear monitoring through a Red Amber Green (RAG) status (or similar) and constitute an early warning system which can prompt action as required.<sup>166</sup> ESG-related metrics can either be backward-looking or forward-looking indicators and are usually tailored to the business model and complexity of the bank.<sup>167</sup>

An example of quantitative integration, provided by a respondent, is the definition of risk acceptance parameters for exposures to selected sensitive industries, which ensure that concentrations remain within tolerance at a portfolio level. An example of qualitative integration in RAF, illustrated by some respondents, consists of the referencing of sectoral lending and investment policies and forward-looking targets (e.g. exiting coal within a certain time frame).

Many banks argued that the qualitative integration into RAF is often an intermediate step, as more time is needed to solve data-related challenges and develop appropriate quantitative metrics for further integration. Banks that mentioned plans to integrate ESG quantitatively into RAF, in most cases, focus on climate risk for now.

Figure 33 illustrates some of the comments provided reflecting the stage of integration of ESG factors into RAF.

<sup>165</sup> Question: *Is ESG integrated within your Risk Appetite Statement/Framework (RAF). If yes, how (sub-risk type, principal risk, what limits)?* Sample size: 25 (pie chart), 13 (table).

<sup>166</sup> Climate Financial Risk Forum (2020). Climate Finance Risk Forum Guide 2020 – Risk Management Chapter. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>167</sup> EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

Figure 33: Illustrative comments on ESG integration into RAF

**Is ESG integrated within your Risk Appetite Statement/Framework (RAF). If yes, how (sub-risk type, principal risk, what limits)?**

[the RAF] “states that the bank covers E and S risks in specific policies; essentially, it is only a reference to the respective policy”

“Risk acceptance parameters are also in place for sensitive industries which have a higher level of inherent environmental, social and governance risks. These parameters ensure that portfolios stay within the prohibitions or requirements outlined”

“ESG risk is already integrated into the risk appetite; however, to be further integrated, data is needed”

**Principles of best practice based on stakeholder perspectives**

**ESG risks should be included within the RAF under existing risk types. In addition, ESG risk could be included as a principal risk type.** ESG risks should be included within the RAF under multiple risk types, including among others, reputational risk and credit risk. ESG risks can also be treated as a principal risk type for organisational and analytical purposes (e.g. to set portfolio targets) or, for example, until capabilities to map ESG risks to existing risk types are refined.<sup>168</sup> Risks across all three ESG pillars can be included within the RAF. Climate-related risks may be prioritised given their more quantifiable nature.

**Adopting the double materiality perspective entails that the environmental and social materiality, at a minimum, should be captured under reputational risk; however, it may also be integrated as a principal risk type.** While financial materiality should be integrated within existing risks, the environmental and social materiality may only be partly covered by existing risk types, such as reputational and strategic risk. If needed, it may also be captured as a principal risk. Despite the environmental and social materiality view being interconnected to financial materiality, it should be clearly differentiated.

**Integration of ESG risks into the RAF should be quantitative, at a minimum for environmental risks.** Integration into the RAF should progress towards quantitative metrics as they allow to better monitor and steering of the portfolio. As noted by stakeholders, this is particularly relevant for climate-related and environmental risks, due to their more quantifiable nature. Examples of quantitative metrics are provided in *Figure 34*. On the other hand, qualitative integration of ESG risks within the RAF can be advanced, for example, by referencing sectoral lending policies and reiterating cross-sector standards. In addition, the RAF can include high-level portfolio commitments, such as net zero ambitions or commitments to Paris pathway alignment.

Figure 34: Illustrative climate risk RAF quantitative metrics

The below graphic summarises illustrative and non-exhaustive quantitative metrics that could be included by banks in their RAF.

<sup>168</sup> In line with guidelines from the Climate Financial Risk Forum, according to which climate risk may be a standalone risk category or considered within other existing risk categories. See also: Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

Illustrative quantitative integration into RAF		
Financial materiality	Environmental & Social materiality	
Credit risk	Reputational risk	Strategic risk
<b>Transition (TR) + Physical (PR) risk</b> <ul style="list-style-type: none"> <li>• <b>Exposure to high TR/PR risk sectors/ countries</b></li> <li>• <b>TR and/or PR score</b> at counterparty and portfolio level</li> <li>• <b>TR and/or PR financial statement impact</b> at counterparty and portfolio level</li> <li>• <b>Impairment impact</b> in next 1,5 &amp;10 years across scenarios</li> </ul>	<b>ESG risks</b> <ul style="list-style-type: none"> <li>• <b>Exposure and underwriting to high ESG risk sectors/ single names</b> (as per sectoral policies)</li> <li>• <b>Average/distribution of ESG score of portfolio</b></li> </ul>	
<b>Other</b> <ul style="list-style-type: none"> <li>• <b>Green asset ratio</b></li> </ul>	<b>Pathway alignment</b> <ul style="list-style-type: none"> <li>• <b>Scope 3 financed emissions</b></li> <li>• <b>Weighted average carbon physical intensity per sector</b></li> <li>• <b>% of portfolio aligned to specific climate pathway</b> (e.g. Paris Agreement)</li> <li>• <b>% deviation from Pathway Alignment</b> committed by Bank</li> <li>• <b>% of portfolio committed to Pathway Alignment</b> (e.g. Paris)</li> </ul>	

Source: BlackRock FMA analysis

**When setting metrics, it is important to consider the long-term nature of climate-related risks. To this end, the RAF could leverage scenario analysis for KPI setting and monitoring.**

Given that climate-related risks have implications beyond traditional strategic planning horizons, scenarios and scenario analysis can be used to set KPIs and monitor the portfolio.

**Cascading ESG risk limits down to business functions ensures an adequate implementation and monitoring of the RAF and inclusion in business decision making.** This can be achieved by developing current and forward-looking targets for different divisions and/or product-lines related to ESG risk. These ESG risk targets should be aligned with the broader ESG risk portfolio exposure limits and metrics defined in the RAF.

#### 3.3.3.2.2. Lending and investment policies, processes and strategies

ESG Risks can affect key aspects of the credit risk management process, including but not limited to: i) Lending and investment policies, often referenced in the risk appetite and connected to high-level position statements, ii) client onboarding and transaction due diligence, iii) portfolio monitoring, and iv) credit strategies and portfolio steering.

Table 7 summarises respective percentages of respondents that have integrated ESG within these processes. The majority of banks stated that they have integrated some aspect of ESG risks in their lending policies and applications, with fewer having done so in portfolio monitoring and credit strategies. For example, 69% of respondents claim to have developed environmental lending policies, but less than 38% have defined strategies to steer the portfolio towards desired levels (e.g. through portfolio sell-offs, securitisation strategies).

Table 7: Overview of ESG integration in credit portfolio processes<sup>169</sup>

Risk Management Tool/Process	E Climate	E Other	S	G
<b>Credit policies</b>	69%	69%	62%	46%
<b>Credit application and due diligence</b>	81%	69%	77%	54%
<b>Credit portfolio monitoring</b>	50%	31%	35%	27%
<b>Credit strategies and portfolio steering</b>	38%	31%	31%	31%
<b>Investment policies</b>	23%	27%	27%	23%
<b>Investment application and due diligence</b>	23%	27%	31%	27%
<b>Investment portfolio monitoring</b>	12%	8%	12%	12%
<b>Investment strategies and portfolio steering</b>	12%	8%	12%	15%

Source: BlackRock FMA analysis

Overall, the integration into credit application and due diligence is more frequent than integration into credit policies. This may be due to the fact that integration into due diligence may be implemented by adding selected questions or requirements for clients (e.g. not having been involved in any legal disputes or misconduct) and may therefore not translate into a more articulated and formalised credit policy.

Integration of ESG factors in investment processes<sup>170</sup>, which includes the treasury portfolio, capital markets underwriting activity (e.g. green bonds) as well as off-balance sheet activity (e.g. advisory), is less advanced across all of the processes. For instance, the integration of environmental factors in investment policies is implemented by 23% of banks according to interview responses; for strategies and portfolio steering, the corresponding number is 12%. Moreover, integration into investments is often restricted to certain types of instruments or portfolios (e.g. project finance transactions only under capital markets' products).

Interviews showed that many banks have defined high-level E&S risk policies, often referenced within their broader credit policy, that lay-out rules for credit analysis and define cross-sector standards which apply to financing and banking activities (e.g. a requirement for compliance with the United Nations Universal Declaration of Human Rights). These cross-sector standards often lead to the development of lists of prohibited activities (e.g. the prohibition of the undertaking of any kind of banking or lending activity related to the production of and/or trade in controversial weapons).

Most banks have also developed sectoral lending policies related to high E&S risk industries (see also section 5.3.4.) which may be applicable to both project financing and client-level financing. These sector-specific policies, which can be very technical, may define mandatory thresholds for determined E&S criteria or conditions and their associated time horizons (e.g. a condition to only finance clients whose reliance on coal in their energy mix is below 10% and who have a strategy to reduce this percentage to below 5% by 2025). One of the most common sector policies concerns coal financing, with most analysed banks (i.e. 72%) having developed a policy to restrict financing activity in this space. In addition to these exclusion criteria, policies may also indicate

<sup>169</sup> Question: *To what extent and how is ESG integrated within your existing lending and investment policies and processes? Please add a tick where relevant and, if applicable, provide additional details including the relevant E/S/G pillar(s) under consideration.* Sample size: 25.

<sup>170</sup> Investment processes does not include investments on behalf of clients (i.e. asset management/private banking activity and associated products).

evaluation criteria to further guide the assessment of the relative ESG profile during the due-diligence process. *Figure 35* provides an illustration of these different elements in one sectoral policy.

Changes in risk and business landscape, as well as external pressure from stakeholders require regular updates of these policies. For instance, work from civil society organisations such as ShareAction seems to have fostered discussions on the current adequacy of banks' sectoral policies; as found in their banking report "policies in relation to high-carbon sectors are currently still insufficient to ensure alignment with the goals of the Paris Agreement".<sup>171</sup> Specifically, for example, coal policies are found to prohibit coal-related project finance, but exclusions of companies reliant on coal are still limited. Similarly, an assessment from WWF found that, despite some good practices, no major global bank had robust enough policies in place to safeguard World Heritage sites.<sup>172</sup> In some cases, civil society engagement with banks on this front led to banks tightening or publishing dedicated policies.

Figure 35: Case study on sector policy on coal fired power generation

Illustrative example of a bank that restricts its financing to coal-fired power plants and clients operating in the sector.

**Exclusion Criteria**

*A. Dedicated/Project Financing*

- The Bank will not participate in dedicated financing for the development of new coal-fired power plants or their expansions, regardless of the country.
- For coal-fired power plants already in operation (brownfield), the Bank will not participate in any dedicated refinancing.
- The Bank may finance investments intended for carbon capture on existing facilities in order to facilitate energy transition

*B. Clients significantly active in operation of coal-fired power plants*

- The Bank will not develop a relationship with companies that generate more than 25% of their turnover in the thermal coal industry and have not adopted a transition strategy consistent with the objectives of the Paris Agreement
- The Bank will not enter into relationships with companies increasing or planning to increase their thermal coal capacities
- Companies that have no coherent climate-friendly transition path and fail to provide a coal phasing out plan by 2021 will be placed in a watchlist portfolio, which will limit the financial services made available to them to the financing of, and investment in, energy transition
- Clients generating more than 50% of their turnover from coal (mining, power plants, infrastructure) are placed in the watchlist portfolio, with the exception of companies exclusively involved in thermal coal extraction, for which no new financial service is possible.

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<sup>171</sup> ShareAction (2020). *Banking on a Low-Carbon Future II - A ranking of the 20 largest European banks' responses to climate change*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

<sup>172</sup> WWF (n.d.). *Convincing major banks to save our heritage*. Available at: <https://www.wwf.org.uk/success-stories/convincing-major-banks-save-our-heritage>.

### **Methodology and Evaluation Criteria**

- The transition path will be assessed starting in 2021 on the basis of the transition scoring developed by the Group on all its counterparties, including the existence of a coal phasing out plan as a decisive factor
- The transition path will have to be materialised at least by the existence of a diversification strategy, demonstration of the desire to exit coal industry, or a commitment to reduce the absolute share of coal in the company's activities.

Source: Public reports from banks and BlackRock FMA analysis

Depending on the specifics of banks' above-described policies, clients often have to undergo an ESG or Environmental Social Risk (ESR) assessment processes or due diligence for banks to grant and renew credit. A report by the Organisation for Economic Co-operation and Development (OECD) states that due diligence is "preventive" and can help banks avert or address adverse impacts related to human and labour rights, the environment, and corruption associated with their clients, as well as to avoid financial and reputational risks.<sup>173</sup> This process usually applies to wholesale and corporate banking clients only, and some banks may apply it to all transactions, while others apply it to limited sectors or product types. As derived from *Table 7*, on average<sup>174</sup> 79% of banks stated that they have integrated E&S factors in their due diligence, while this percentage is lower with respect to the G pillar (56%).

Typically, due diligence is conducted by banks in two instances: i) Extending/reviewing credit to a new client or ii) extending credit to an existing client with ongoing or pre-existing relationship.<sup>173</sup> In the first case, there needs to be a client onboarding process (KyC) during which the bank evaluates a counterparty's profile and assesses if there are any discrepancies with internal policies. As mentioned by some respondents, ESG factors can be directly integrated in the KyC process, where relevant elements related to the G pillar are already captured or assessed through a parallel process. Additionally, transaction due diligence is conducted and a rating is typically produced and associated with specific lending terms.<sup>173</sup> Similarly to KyC, ESG factors can either be integrated within this assessment or give rise to a dedicated E&S risk assessment process, as illustrated in *Figure 36*.

### **Figure 36: Case study on ESR transaction due diligence**

Illustrative example of a bank that implements E&S transaction due diligence for wholesale clients.

The first step is completing the client assessment and if this yields low or medium risk, the E&S transaction assessment is performed. Following the results of the E&S transaction assessment, an additional evaluation by the ESR team or client engagement dialogue is activated in cases of medium or high E&S risk.

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<sup>173</sup> OECD (2019). *Due Diligence for Responsible Corporate Lending and Securities Underwriting: Key considerations for banks implementing the OECD Guidelines for Multinational Enterprises*. Available at: <http://mneguidelines.oecd.org/Due-Diligence-for-Responsible-Corporate-Lending-and-Securities-Underwriting.pdf>.

<sup>174</sup> Average calculated across the E(climate), E(other) and S pillars.



Source: Public reports from banks and BlackRock FMA analysis

Based on the results of the transaction assessment, decisions on whether to proceed with the transaction (or not) are made. As mentioned by some respondents, if medium or high ESG-related risks are identified, additional evaluations are conducted, and a second due-diligence screen may be applied to all transactions (or to selected transactions falling above specific thresholds). This enhanced due diligence may often involve the client, and decision-making might then involve specialised units within the bank (e.g. the Environmental and Social Risk unit or CSR unit).

Banks often mentioned that, when conducting enhanced due diligence, they rely on external frameworks to assess certain types of transactions. For instance, the Equator Principles, which are based on International Finance Corporation (IFC)'s Performance Standards<sup>175</sup>, are used by 54% of analysed banks as a framework to assess selected financial products<sup>176</sup> related to project finance transactions. Project finance transactions also appear to be the type of transaction where due diligence can be conducted at the highest-level of granularity, as the use of proceeds is well defined. For corporate general-purpose loans, this is often not the case, in particular for non-listed counterparties, who, as mentioned by several respondents, often lack data and require more time to gather needed information as part of the due diligence.

Responses highlighted that ESG considerations are less integrated in credit portfolio monitoring, and mostly focus on climate risk. As observed among some analysed banks, reviews are usually performed with a certain frequency, which may also be related to the risk profile of the counterparty or transactions. For instance, Low-Risk clients may be re-assessed from an ESG risk perspective every three to five years, whereas high-risk clients may be re-assessed annually.

As also noted in an OECD paper, while some banks require an update on ESG issues for all clients, other banks include such criteria only for select clients (prioritised if reputational issues or if allegations of adverse impacts have arisen), or for specific sectors. Beyond annual credit reviews, the monitoring of clients on ESG issues appeared limited when not required by specific criteria

<sup>175</sup> Equator Principles (2020). *The Equator Principles – July 2020*. Available at: <https://equator-principles.com/wp-content/uploads/2020/05/The-Equator-Principles-July-2020-v2.pdf>.

<sup>176</sup> Equator principles apply to selected number of transactions with relevant thresholds and criteria for application; these include 1) Project Finance Advisory Services, 2) Project Finance, 3) Project-Related Corporate Loans, and 4) Bridge Loans and 5) Project-Related Refinance, and Project-Related Acquisition Finance.

integrated in covenants or risk prioritisation criteria by sector or geography as outlined in a bank's policy.<sup>177</sup>

When looking at credit portfolio strategies, ESG integration appears even less advanced, with only few banks mentioning credit strategies to steer their portfolio towards lower ESG risk exposure. A small number of banks mentioned Paris Alignment tools to steer portfolios towards lower levels of emissions (this is discussed in more detail in section 5.3.3). Often, banks think of portfolio strategies from a strategic and product driven point of view, rather than as a risk mitigation technique. For instance, banks have stopped providing certain products (e.g. derivatives related to coal-based trading, physical inventory management transactions in coal and crude oil) or prioritised other types of assets (e.g. mortgage and Buy-To-Let transactions to properties with high-energy efficiency ratings) as part of their strategy.<sup>178</sup> This strategic choice has indirectly resulted in a risk mitigation strategy.

Figure 37 provides a selection of comments from respondents with respect to the various phases of credit granting and monitoring, illustrating various considerations that come into play along the process.

Figure 37: Illustrative comments on ESG integration into credit processes

**To what extent and how is ESG integrated within your existing lending and investment policies and processes?**

*"All customers whose activities fall within the sectors covered by the E&S risk policy must be assessed for E&S risk management and compliance with the policies as part of the annual review and credit assessment"*

*"KYC, AML, anti-corruption, anti-bribery policies already provide basis for managing S and G factors. E factors are mostly dependent on the company and transaction profile"*

*"Where an obligor is rated as medium or high, the details are referred to the Environmental Risk Management team, a dedicated team in the Group Credit Risk Management function, who conduct enhanced due diligence"*

*"We perform an ESG risk screening as part of KYC onboarding and monitoring process resulting in an ESG score that is integrated in all product offering approval process"*

*"All the Project Finance deals have action plans that are monitored during the term of the deal"*  
[Have] *"integrated environmental and climate change risks into Mandate and Scale annual credit portfolio reviews for different sectors"*

**Principles of best practice based on stakeholder perspectives**

**ESG factors should be integrated into cross-sector standards to define minimum baseline screens or a list of prohibited activities. In addition, detailed sectoral policies should be developed to guide financing to specific industries.** Cross-sector standards set minimum ESG requirements for clients and transactions. These standards usually apply to all transactions and independently of the sector or geography of the client. Beyond these standards, granular sector policies should be developed, initially prioritising sectors with high ESG risk (e.g. carbon-intensive sectors). Input could be gathered from subject-matter experts, civil society organisations, international frameworks and standards, among others.

<sup>177</sup> OECD (2020). *OECD Business and Finance Outlook*. Available at: <http://www.oecd.org/finance/Sustainable-and-resilient-finance.htm>.

<sup>178</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-summary.pdf>.

**Criteria established within these policies should cover different time horizons and financial instruments.** ESG risk thresholds or criteria could change based on the referenced time horizon and be designed to become stricter over time. In addition, as demanded by some stakeholders, the scope of application of these policies should cover all lending and investment activity including off balance sheet activity such as advisory and arranging. Limited exceptions to sector policies could be included but should require active client engagement and commitments, hence enabling banks to support high ESG risk clients through their transition.

**Dedicated ESG risk due diligence processes should be established. These may involve specialised teams for their approval and be complemented by external standards/guidelines.** ESG risk due diligence processes should be developed or strengthened and conducted as part of due diligence. A systematic and standardised ESG risk scoring process could be performed on relevant counterparties, also based on criteria defined in sectoral policies. Consequently, an enhanced due diligence could then be executed for clients or transactions above a certain ESG risk threshold.

**Information captured as part of enhanced due diligence should be focused on assessing counterparties' exposure to ESG risks, as well as their capabilities to mitigate and manage these risks.** As part of the enhanced transaction and client review process, banks should assess whether counterparties have sustainability-related strategies and commitments in place. In addition, banks should assess the potential impact on collateral, for example, from physical risks. As suggested by stakeholders, enhanced due diligence could be performed for projects perceived to have high environmental and social materiality.

**ESG risks should be monitored regularly in the context of transactions reviews and through aggregated portfolio views.** The continuous monitoring of ESG risk at transaction and portfolio level is required. As noted by stakeholders, the frequency of transactions reviews could follow that of standard review processes and/or could be enhanced based on sectors' ESG risk sensitivity or incident track record (e.g. incidents occurring in that sector/geography).

**Loan terms, including pricing considerations, could be actively adjusted to reduce or mitigate exposure to ESG risks where relevant.** Managing and mitigating ESG risks could be achieved by modifying loan terms and conditions, including pricing considerations, maturities and covenants.<sup>179</sup> For example, when dealing with high ESG risk transactions this could be achieved by, among others: i) Adjusting tenor downwards, ii) adjusting interest rates based on client/transactions current ESG risk score or linking them to achievement of ESG goals, iii) applying collateral haircuts or demanding additional collateral, iv) reducing credit limits granted to a counterparty, and v) incorporating termination rights in loan agreements based on ESG goals to mitigate counterparties' risk exposures.

#### 3.3.3.2.3. Risk parameters and models

An important precondition for the integration of ESG risk in risk management processes is the quantitative integration of ESG risks in risk parameters, which inform, for example, credit ratings and capital requirements. As argued by respondents, however, ESG considerations are so far typically not integrated in models used for the calculation of capital requirements due to i) The lack of regulatory guidance, ii) limited evidence of ESG risk materiality and impact, as well as iii)

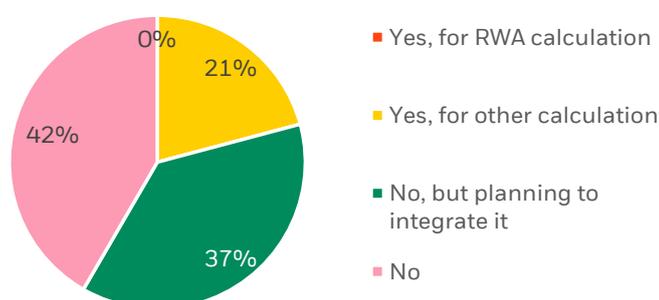
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<sup>179</sup> In line with the guidelines provided in the CFRF, according to which affirmative and negative covenants could be progressively introduced in loan documentation (e.g. disclosures (per TCFD), level of carbon footprint with reductions linked to business plan, etc. See: Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

concerns related to quantification methodologies under different time horizons (as further detailed in section 3.3.3.2.4).

Hence, only a very limited number of banks have directly integrated ESG factors within internal risk parameters and models. As illustrated in *Figure 38*, 21% of respondents mentioned that they have integrated ESG risks, while the remaining banks are somewhat evenly split across those who are planning to integrate it in the near future, and those who have not yet decided. Those respondents who stated that they have integrated ESG factors into models mentioned that they have done so in models with an impact on credit ratings (and ultimately on pricing); however, this was often through some form of qualitative integration. The findings are in line with results from the GARP survey on climate risk management, according to which most financial institutions think that climate risk has either been partially priced or totally omitted from market pricing.<sup>180</sup>

**Figure 38: Direct incorporation of ESG risks into existing parameters/models<sup>181</sup>**



Source: BlackRock FMA analysis

With respect to credit models, and specifically for PD and LGD assessment, a two-step approach is seen as more practical in the current state. This firstly requires a traditional model-driven credit rating PD/LGD assessment, and secondly a macro-climate overlay by expert judgement “notching and de-notching” ratings.<sup>182</sup> This is in line with some respondents’ plans to apply a qualitative or quantitative overlay to their rating models. On the other hand, some banks mentioned that they have integrated ESG considerations indirectly through input factors into existing PD models for corporate lending, for instance in the qualitative obligor assessment (e.g. management quality is a G factor).

Correspondingly, ESG risk considerations do not yet impact risk-driven pricing considerations in a structured way among interviewed banks. This may be due to the fact that, on average, the majority of interviewed banks mentioned that they have not collected any consolidated evidence as to how different asset classes are affected by ESG risk.<sup>183</sup> As illustrated in *Figure 39*, corporate lending is the segment on which most insights have been collected, with 38% of banks stating that they have collected evidence on the impact of ESG risks. Debt capital markets and mortgages to individuals or microbusinesses follow, with 23% banks having collected evidence on the ESG

<sup>180</sup> GARP (2020). *Second Annual Global Survey of Climate Risk Management at Financial Firms*. Available at: [https://climate.garp.org/wp-content/uploads/2020/05/GRI\\_ClimateSurvey\\_051320.pdf](https://climate.garp.org/wp-content/uploads/2020/05/GRI_ClimateSurvey_051320.pdf).

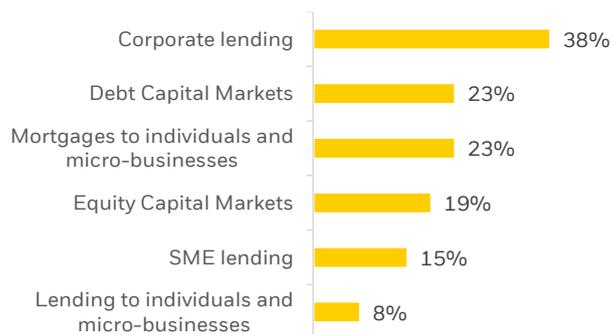
<sup>181</sup> Question: *With regards to risk models (e.g. credit risk), do you incorporate ESG risks directly into any existing parameters/models?* Sample size: 24.

<sup>182</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-summary.pdf>.

<sup>183</sup> Question: *Do you have any evidences on how different asset classes are affected by ESG risk (e.g. in terms of solvency of the counterparty or asset valuation)?* Average calculated based on evidences collected across 5 asset classes, namely: Corporate lending, SME lending, Lending to individuals and micro-businesses (mortgages), Lending to individuals and micro-businesses, Equity Capital Markets, Debt Capital Markets.

riskiness of these asset classes. It is worth specifying that most evidence collected is qualitative in nature.

Figure 39: Evidence collected on ESG risks impact on asset classes<sup>184</sup>



Source: BlackRock FMA analysis

This finding is in line with the stocktake conducted by the NGFS on banking institutions, which found that most banks have not established any strong conclusions on a risk differential between green and brown assets.<sup>185</sup> Lack of such evidence was mentioned by respondent banks as inhibiting the integration of ESG considerations into pricing, as well as their integration into risk parameters. As illustrated in Figure 40, some interviewed banks mentioned that ESG factors impacting pricing, not from a risk-based perspective, but more as a strategic tool to foster positive behaviour within their clients, for instance, through products such as ESG-linked loans (as further described in section 5.3.3.2).

It is worth mentioning that the exercise of collecting evidence on the risk return characteristics of ESG instruments has been conducted via various academic and market studies. For example, a report developed as part of the Horizon 2020 Energy Efficient Data Protocol & Portal Project (EeDaPP) analysed a portfolio of Italian mortgages and found a negative correlation between properties' energy efficiency and owners' probability of default.<sup>186</sup> Additional details on this study, and other risk-return evidences across instruments, are provided in section 5.3.3.2.

Figure 40: Illustrative comments on ESG integration into parameters and models

**With regards to risk models (e.g. credit risk), do you incorporate ESG risks directly into any existing parameters/models?**

*“As our capabilities and understanding of the risk develops, we intend to factor these into pricing to accurately reflect the cost of risk”*

*“The integration of ESG risks has an influence on pricing in some cases, when the rating is impacted. In other cases, the pricing can be used by the bank to provide incentives to the client (e.g. Sustainability Link Loans)”*

*“ESG considerations are incorporated in the qualitative assessment of the obligors. The final outcome of the credit rating systems is a combination (based on an algorithm) of quantitative and qualitative data”*

<sup>184</sup> Question: Do you have any evidences on how different asset classes are affected by ESG risk (e.g. in terms of solvency of the counterparty or asset valuation)? Sample size: 26.

<sup>185</sup> Network for Greening the Financial System (2020). A Status Report on Financial Institutions' Experiences from working with green, non-green and brown financial assets and a potential risk differential. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_status\\_report.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf).

<sup>186</sup> Energy Efficiency Data Protocol & Portal Project (2020). Final report on correlation analysis between energy efficiency and risk (D5.7). Available at: [https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP\\_D57\\_27Aug20-1.pdf](https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP_D57_27Aug20-1.pdf).

“We are implicitly covering ESG risks in our internal rating scorecards (via parameters such as “Special risks” and “Industry outlook”), and thereby, indirectly impacting risk metrics”

“Rating can from time to time be adjusted downward according to ESG criteria”

“Once a year, these [climate scores] are used as an overlay to credit metrics based on expert judgment” [...] “What we achieve is to make some differentiation but not quantification”

### Principles of best practice based on stakeholder perspectives

**Financial materiality of ESG factors, in particular climate risk, should be assessed for integration in internal models for RWA, pricing, and credit risk assessment.** Integration of ESG risks into models can be both quantitative and qualitative and should be mostly driven by a clear evidence of a link to ESG risks and risk parameters. For example, this can include merging traditional model-driven credit rating PD/LGD assessment with a dedicated ESG scoring. Focus can be initially placed on climate risk due to its quantifiable nature. Other ESG factors already potentially assessed as part of traditional credit rating, such as governance factors, should be clearly identified, to avoid overlap with the ESG scoring methodology.

**The difference in time horizons between ESG-driven risks and other financial risks can be addressed in different ways.** Even though ESG risks mostly manifest over longer time horizons, they can also lead to price corrections in the short term, which may lead to a potential under-estimation of their materiality. To avoid this, banks can, for example: i) expand time horizons of financial-risk models and frameworks, and ii) take into consideration abrupt transition scenarios (e.g. sudden policy changes) to reflect potential short-term effects of ESG risk. Generally, differences in horizon should not be used as a deterrent for integration into models.

#### 3.3.3.2.4. Stress testing, ICAAP and ILAAP

The EBA, the ECB and the PRA (as examples), have started to define expectations on the integration of climate-related risks into stress testing frameworks and their inclusion in the ICAAP (see section 4.3.3.2). Consequently, institutions have started to explore forward-looking approaches such as scenario analysis and stress testing, seeking to evaluate which methods and metrics are the most suitable for them, considering their strategy and overall approach to ESG risks.<sup>187</sup>

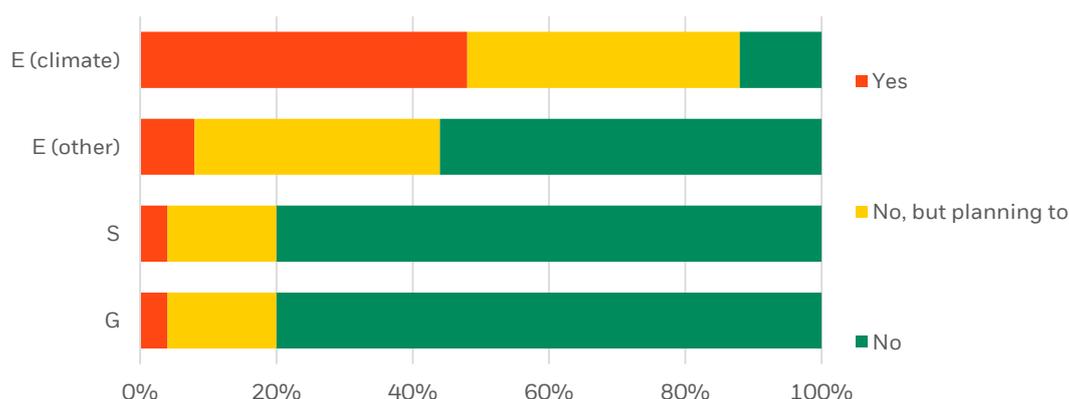
As illustrated in *Figure 41*, climate-related risk is the pillar for which integration into stress testing is most advanced, with banks using scenario analysis to quantify the impacts from transition or physical risk in their portfolio, as described in section 3.3.3.1.2. More specifically, all interviewed G-SIBs mentioned that they have run, or are planning to run in the near term, a climate risk stress test, unlike non-G-SIBs, for which some have no current plans.

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<sup>187</sup> EBA (2020). *EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

Figure 41: Stress testing and scenario analysis performed on ESG risks<sup>188</sup>



Source: BlackRock FMA analysis

Overall, respondents within certain jurisdictions, namely those subject to regulatory activity from EBA, Autorité de Contrôle Prudentiel et de Résolution (ACPR) and Bank of England (BoE), mentioned plans to develop such capabilities in the future and to participate in ongoing exploratory pilots on climate scenarios. For those banks which stated they were not planning to integrate climate-related risks into these exercises, most mentioned they have not done so as climate-related risks were not found to significantly impact financial planning in the short- to medium-term time horizon (e.g. up to 5 years).

Few banks conduct these exercises at group-wide or total balance sheet level; rather, these are often focused on specific carbon-intensive sectors. With respect to the other S and G pillars, no clear examples for stress testing were provided, besides one bank that mentioned that they conducted a stress test for COVID-related scenarios, which they considered to be related to the S pillar.

Figure 42 provides an illustration of a group-wide climate stress test exercise conducted by an analysed bank. It illustrates the scenario narrative, expanding over a three-year time horizon, and describes the macro-economic shocks and portfolio impact of climate-risk. The final outcome of this exercise consists in assessing the P&L contribution by risk type.

Figure 42: Case study on climate-risk stress testing

To understand the impact of a potential market shock driven by a sudden shift in climate change policy, a non-EU G-SIB performed a group-wide stress test in 2019.

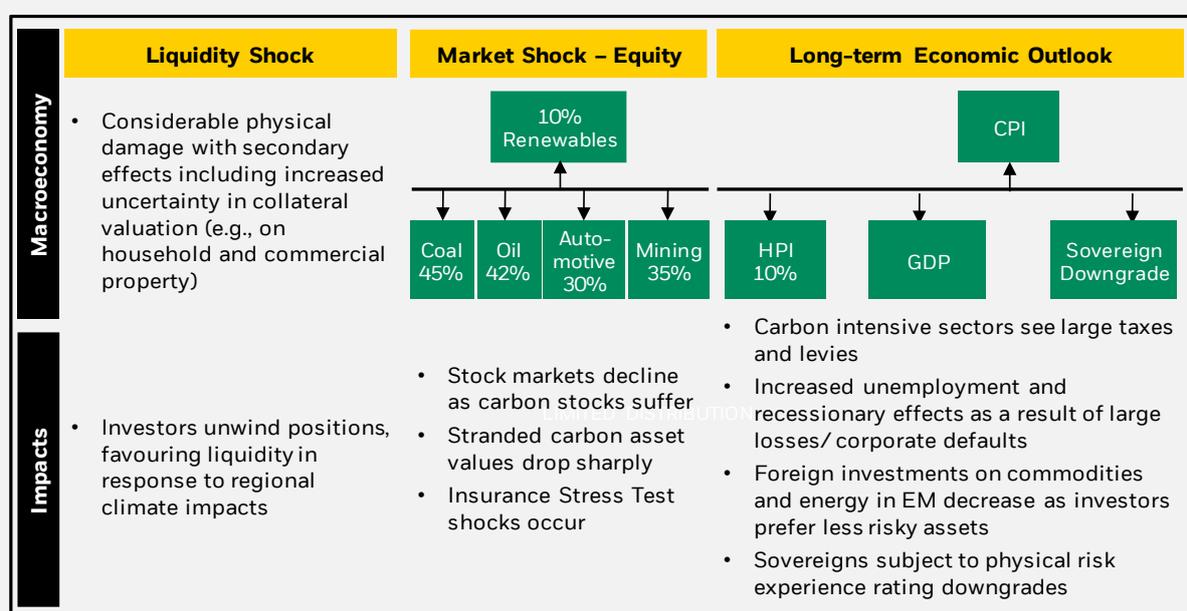
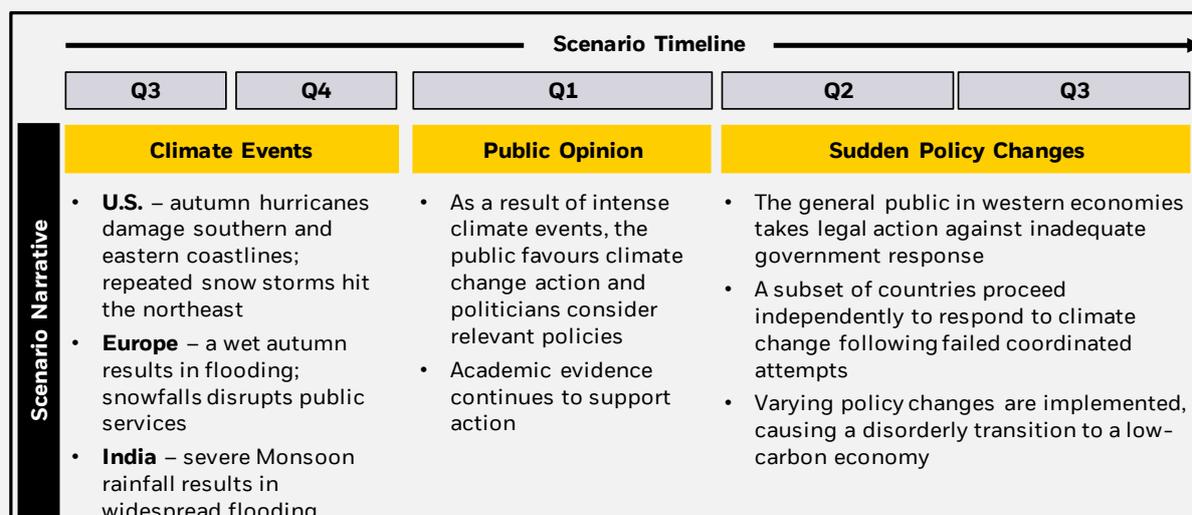
The bank leveraged a severe near-term climate scenario based on a representative concentration pathway (RCP), in which global temperatures were capped to 2.3°C, developed by the Intergovernmental Panel on Climate Change (IPCC). Using a three-year scenario beginning in 2019, as summarised in the illustration below, the bank deployed its stress testing tools and climate risk framework to consider potential impacts to its portfolios within each scenario phase as well as any second-order effects.

A number of assumptions were made to simplify the exercise, for instance, assuming that major household insurance providers remained solvent throughout the forecast horizon.

The outcome of the exercise, which is an approximation, provides an indication of potential climate risk impacts in terms of P&L contribution by risk type (physical, transition and connected risk). The higher contribution to P&L was associated with transition risk, which was analysed with

<sup>188</sup> Question: Do you perform any scenario analysis/stress testing on ESG risks? Sample size: 25.

respect to i) Corporate downgrades and defaults in high carbon sectors, ii) market-related movements and iii) other impacts (e.g. operating costs).



Source: Public Reports from banks and BlackRock FMA analysis.

Generally, in the context of assessing the feasibility of stress testing processes, the complexity of climate stress testing compared to traditional stress testing was highlighted by multiple respondents, who acknowledged that significant enhancements need to be made to be able to implement climate stress testing at group-wide level. As also mentioned in an EBA discussion paper, climate stress tests conducted to date remain less comprehensive than conventional stress tests and their results should be analysed with caution.<sup>189</sup> Nonetheless, despite the work in progress, respondents also highlighted the value and insights brought by these exercises, as they

<sup>189</sup> EBA (2020). EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

provide ideas for new business opportunities and strengthen understanding of clients' business models.

Banks that stated that they have conducted exploratory stress tests on climate risk mentioned the various challenges encountered, ranging from IT and data (e.g. lack of historical data) to methodological uncertainties (e.g. scenario design techniques, long time horizons). For instance, the lack of historical data relating to the relationship between climate risk and credit losses means that banks need to develop proprietary approaches to determine the impact of climate risks on expected loss of borrowers in a given sector, leading to varying results.<sup>190</sup>

An issue raised by multiple respondents, including civil society organisations and data providers, is related to the reference scenarios used in the assessment. As illustrated by respondents, reference scenarios vary among banks, and some may develop in-house assumptions that are not publicly disclosed. As further noted by civil society organisations, scenarios need to be carefully chosen and they should include granular sectoral dimensions, given that they depend on sector-specific carbon intensity metrics as well as on sectors' ability to develop alternative low-carbon technologies. In addition, as noted by respondents, banks should not choose scenarios that are more favourable to their specific portfolio. For example, in a 1.5° scenario coal power capacity declines much slower than in a 2° scenario, and banks with high exposure to coal could have an incentive to use this scenario.

According to respondents, the effective and standardised use of scenarios will play a crucial role in a successful system-wide stress testing framework, and this work will have to be led by supervisors by providing a common basis. As suggested, supervisors should provide reference scenarios including guidance on policy changes expected to be considered by banks. This would foster standardisation of stress testing and scenario analysis exercises and allow for greater comparability of results. For example, the work from the NGFS, that has published reference climate scenarios, can be used as a starting point (see section 4.3.3.1.1 for further details).<sup>191</sup> Nonetheless, these scenarios could be further improved and their limitations should be taken into account. For instance, scenarios could highlight more precautionary mitigation pathways, and rely less strongly on the use of carbon dioxide removal (CDR) solutions.<sup>192</sup> In addition, as argued by civil society respondents, whilst scenarios should be provided, a degree of freedom in the modelling approach should also be granted to banks, rather than opting for full standardisation of stress testing approaches. This would allow for banks to tailor the exercises to their portfolios, and it would also provide an incentive to improve methodologies. However, banks should provide full transparency on their modelling methodologies and assumptions.

Despite the above-mentioned data-related and methodological challenges that hinder the climate stress testing feasibility, modelling and analytical capabilities are gradually being developed by banks. As stated by a respondent, the existence of data gaps at this point in time should not preclude institutions from conducting stress tests, as data proxies or assumptions can be applied. Moreover, banks can develop modelling capabilities through a phased approach, as not all banking activities and instruments are expected to be covered right from the beginning. For example, as part of the Bank of England Climate Biennial Exploratory Scenario counterparty-

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<sup>190</sup> Bank Policy Institute (2020). *Challenges in Stress Testing and Climate Change*. Available at: <https://bpi.com/wp-content/uploads/2020/10/Challenges-in-Stress-Testing-and-Climate-Change-.pdf>

<sup>191</sup> Network for Greening the Financial System (2020). *Guide to climate scenario analysis for central banks and supervisors*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_scenario\\_analysis\\_final.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf).

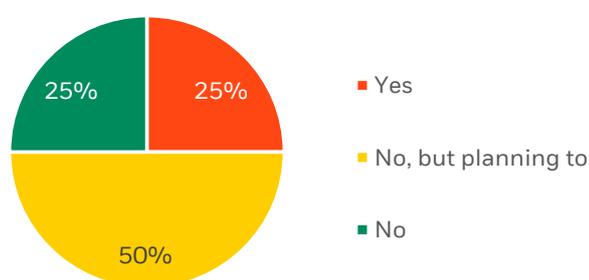
<sup>192</sup> Oil Change International & Reclaim Finance (2021). *NGFS Scenarios: Guiding Finance Towards Climate Ambition Or Climate Failure?* Available at: <http://priceofoil.org/content/uploads/2021/02/NGFS-scenarios-final.pdf>

level analysis is expected on a restricted sample of large corporates and not requested for all banking activity (e.g. excluding trading book).<sup>193</sup>

The majority of interviewed banks (75%), have not yet integrated ESG risks within ICAAP or ILAAP (see Figure 43). Those who have integrated it thus far mentioned that they had done so within ICAAP only and mostly from a top-down sector-based perspective, rather than bottom-up counterparty level analysis.

For banks that covered ESG risks in their ICAAP, many mentioned that they have not found them to be material. This is in line with the ECB’s report on banks’ ICAAP practices, which found that 78% of banks had either not integrated climate-related risks in their ICAAP or had done so, but found them to be non-material.<sup>194</sup> As further illustrated in the report, the criteria used for the materiality assessment are not well elaborated and are mostly of a qualitative nature. Hence, no additional capital was set aside.

Figure 43: ESG risk integration into ICAAP, ILAAP and capital planning<sup>195</sup>



Source: BlackRock FMA analysis

Considerations raised by interviewed banks with respect to the challenges faced in the integration of ESG risk into ICAAP (see Figure 44) include the difference in time horizons (i.e. often three years for the ICAAP), with climate-related risks often assumed to materialise over a much longer time horizon. For instance, the PRA found that financial risks from climate change have a tendency to be beyond banks’ typical planning horizons, which were found to be averaged at 4 years in the UK banking sector, hence, creating a mismatch between the horizon considered and that needed for risks to be fully realised.<sup>196</sup>

Figure 44: Illustrative comments on ESG integration into ICAAP, ILAAP and Stress Testing

**Are ESG risks covered in your in ICAAP, ILAAP and capital planning?**

*“If we talk about ESG risks, these have a time horizon of 10-15 years. But the ICAAP framework is developed on a one-year time horizon, so ESG doesn’t really fit in there”*

*“In the context of integrating ESG factors further into ICAAP/ILAAP, the problem of the long-time horizon of ESG risks could be solved by scenario analysis”*

<sup>193</sup> Bank of England (2020). *Update on the Bank’s approach to the Climate Biennial Exploratory Scenario in selected areas*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2020/update-on-the-banks-approach-to-the-climate-biennial-exploratory-scenario.pdf?la=en&hash=B864270BA6D35453A7700990B1DEE809FB8B29A1>

<sup>194</sup> European Central Bank (2020). *ECB report on banks’ ICAAP practices*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.reportbanksicaappractices202007~fc93bf05d9.en.pdf>.

<sup>195</sup> Question: Are ESG risks covered in your in ICAAP, ILAAP and capital planning? Sample size: 24.

<sup>196</sup> Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>.

As raised by a civil society respondent, and mentioned in section 3.3.1.3, some climate risks can also have an impact in the short term, as policy changes can materialise much earlier. Hence, they argue that differences in time horizons should not be used as a deterrent for the integration of these risks into regulatory processes.

The short-term horizon of capital requirements was also presented as a key issue by civil society respondents, many of whom call for changes in regulatory frameworks to extend this. It is worth noting that, even though few banks adopt long-term time horizons in their ICAAP, this does not necessarily have implications for capital requirements and is instead used for portfolio steering.

### Principles of best practice based on stakeholder perspectives

#### **ESG risks should be included in the ICAAP, using an extended time horizon where relevant.**

ESG risks should be included within the annual risk identification process, to assess their materiality and potential impact. This should include a detailed description of how materiality is assessed, and the time horizons taken into consideration should extend beyond those required in the ICAAP. If ESG risks are deemed to be material, capital buffers should be put in place as well as mitigation measures to manage these risks and steer the portfolio.

**ESG risks, at a minimum climate change risks, should be integrated into the stress testing infrastructure.** ESG risk, and in particular climate change risk, should be integrated within group-wide level stress testing across relevant risk types. To this end, time horizons should be extended to go beyond the traditional ones considered in stress testing (e.g. extending to 30 years or more) to fully capture climate risk implications. While eventually all risk types should be covered, initial focus can be placed on credit risk in order to gradually develop modelling approaches.

**Stress testing should leverage scenario analysis capabilities to develop decision-relevant insights.** In particular, climate stress testing can leverage scenario analysis to inform risk-identification processes and understand the short and long-term financial risks to the business model and calibrate forward-looking climate risk appetite limits.

**Development of climate stress testing infrastructure can be achieved either within existing model infrastructure or through the set-up of a dedicated infrastructure.** Illustratively, the set-up of a dedicated infrastructure for climate risk would require calculating climate risk impacts within transition risk and physical risk models. Existing stress testing models would then be used to calibrate PDs/ rating shifts (e.g. Merton Model) or valuation impact, ultimately calculating the impairment impact. Understanding how climate risk parameters impact the P&L, balance sheet and asset valuation of a bank is required to be able to evaluate the impact on solvency.

**Stress test modelling approaches should address different counterparty types and asset classes. Proxy and simplified approaches could be used to enhance the feasibility of stress testing and overcome data and methodological challenges.** As illustrated in *Figure 45*, modelling for large corporates could be granular and determine the impact on earnings from transition and physical risk. On the other hand, stress tests on the SME and micro-business loan-book, could rely on proxy approaches. For these segments of the portfolio, expert judgement could be used to apply overlays. Modelling of the mortgage loan book could assess LTV and impairment impact of physical and transition risk.

**Scenarios should be selected based on guidance from supervisory and other external bodies and should be further expanded and developed.** Scenarios used in stress testing can range from reference climate scenarios, provided by recognised scientific bodies and illustrating different climate pathways, to shared-socio-economic pathways. These could

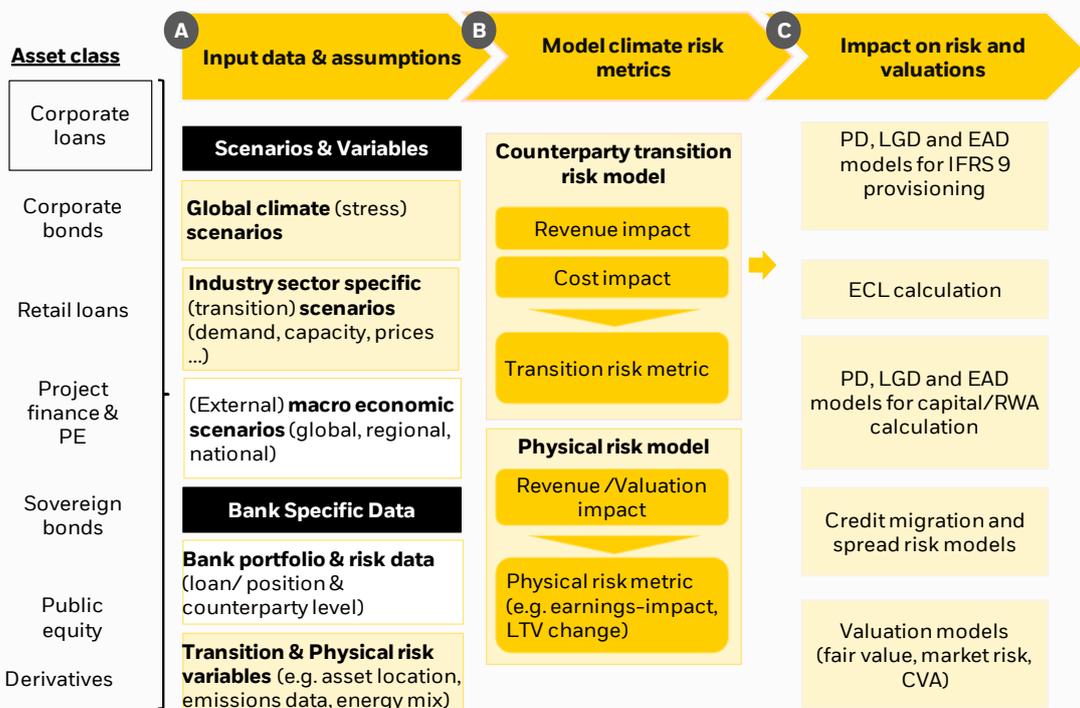
include, for example, orderly and disorderly transition scenarios. Public scenarios should be expanded by banks to fit within their modelling infrastructure and adapted based on portfolio specificities.

**While capabilities are being developed, banks should employ stress testing approaches in advance of supervisory requirements, as they can already provide valuable insights.** As noted by banks, the development of stress testing approaches and capabilities is to a large degree driven by supervisory expectations. However, advanced banks look for means, other than internal or regulatory capital requirements, to steer their portfolio and assess risks over long-term time horizons. Despite methodological capabilities still presenting significant room for refinement, climate risk stress test results can already signal possible avenues for reducing exposure to climate risk and support in the identification of concrete portfolio steering initiatives. As practices evolve from climate risk to ESG more broadly, including other environmental risks, it is important to balance the pace of such evolution with the desired granularity and insights obtained.

**Figure 45: Climate risk stress testing framework on corporate loans**

The below illustration presents an illustrative framework to summarise stress testing considerations across corporate loans. This illustrates the potential set up of a dedicated stress testing infrastructure with transition risk and physical risk models. In particular:

- A. Input data includes both scenarios and variables as well as bank specific data, which includes both traditional portfolio and risk data (positions at counterparty level for example) as well as data relevant for transition and physical risk (for instance asset location, energy mix, etc.)
- B. Different modules are developed, for instance with a model for counterparty transition risk, looking at impact on revenues and costs
- C. The impact on risk and valuation is assessed by measuring how risk metrics, e.g. PD, LGD and EAD models for credit risk, are impacted



Source: BlackRock FMA analysis

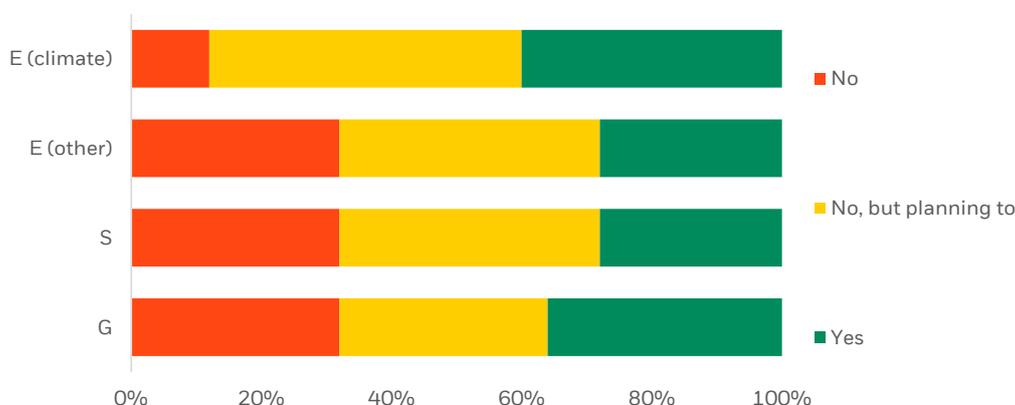
### 3.3.4 ESG risk reporting and disclosure

#### 3.3.4.1 Reporting and disclosure type and audience

In accordance with regulation, banks are expected to establish regular and transparent reporting mechanisms in order to ensure timely, accurate, concise, understandable, and meaningful reporting, which enables the sharing of relevant information on the identification, assessment, monitoring, and management of risks.<sup>197</sup> Reporting infrastructures can be used for internal monitoring purposes, to inform management and the board about risks, and to aggregate information for external disclosures; hence, they play a key role in reducing information asymmetry.<sup>198</sup> In fact, and as referenced in a paper by the IIF, recent years have seen increased stakeholder demand for more consistent, granular, and comprehensive disclosure of information relevant to ESG factors.<sup>199</sup> Calls for improved disclosure of ESG risks have been particularly strong from civil society organisations. Change Finance, a civil society network mobilised by Finance Watch, has publicly stated that “we need to change the behaviour of our corporations, including financial firms. This starts with measuring and disclosing the impacts that businesses have on the planet”.<sup>200</sup>

As highlighted in *Figure 46*, the majority of interviewed banks have not yet integrated ESG risks within their internal risk reporting framework. A significant number (~50%) plan to integrate climate risk in the near future. However, this may not necessarily be carried out as part of bank-wide risk reporting. Overall, G-SIBs appear more advanced than non-GIBs across all ESG pillars; in particular, all G-SIBs mentioned that they have already integrated, or have plans to integrate, climate risk in their internal risk reporting, whereas the same does not apply to non-G-SIBs.

**Figure 46: ESG risk integration within internal risk reporting**<sup>201</sup>



Source: BlackRock FMA analysis

Interviewed banks with ESG risk reporting in place stated that it is often conducted at a sectoral level in order to monitor exposure to sensitive or high-risk sectors. As an example, one respondent described how industry reviews are carried out on a yearly basis to assess portfolio exposure to ESG risks. This analysis results in comprehensive risk reports, which are then shared internally

<sup>197</sup> See, for example: EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf).

<sup>198</sup> In this study, the term reporting refers mainly to internal and regulatory reporting, whereas disclosure refers to all other ESG-related publications (e.g. ESG/CSR/Sustainability Reports, etc).

<sup>199</sup> See, for example: IIF (2020). *Building a Global ESG Disclosure Framework: a Path Forward*. Available at: [https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20\(June%202020\)%20final.pdf](https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20(June%202020)%20final.pdf).

<sup>200</sup> Change Finance (n.d.). *Saving our planet*. Available at: <https://www.changefinance.org/it/solution/saving-our-planet-2/>.

<sup>201</sup> Question: *Is ESG risk integrated within your internal risk reporting?* Sample size: 25.

within the bank. Results from such exercises can be integrated in risk reporting and flagged or discussed in committees when results are deemed critical or falling outside the bank's risk appetite.

With respect to public disclosures, ESG risk related information is usually included within banks' broader ESG disclosure practices, which can come in the form of a variety of reports with differing nomenclature, including 'Integrated', 'CSR', 'Sustainability', 'Non-Financial', or 'ESG' Reports<sup>202</sup>. The majority of analysed banks mention ESG risk or climate-related risks within at least one of the above-mentioned yearly disclosures, while a smaller subset of banks also publishes dedicated climate-risk focused reporting. Many banks highlighted that their annual disclosures (e.g. integrated annual reports/sustainability reports) are a key tool to illustrate how impacts of banking activity on the external environment (i.e. environmental and social materiality) are addressed and mitigated. On the other hand, there is less communication and disclosure on the financial materiality aspect, which is usually covered within risk-focused sections and centred on climate-related risks.

The case study in *Figure 47* provides an overview of the different disclosure types and formats of a bank. Generally, few banks provide such an extensive coverage of their approach to ESG-risk integration.

**Figure 47: Case study on ESG risk disclosure formats and types**

A European bank communicates on its ESG risk integration strategy and current status through different disclosure formats, which disclose information on topics with varying levels of detail.

Dedicated Climate Risk Report following the NFRD guidelines and TCFD recommendations

- Climate risk relevance for strategy (based on materiality)
- Relevance of scenario analysis for portfolio allocation and assessment

Exercise	Scenario used	Horizon
<b>Coal reduction target</b>	International Energy Agency (IEA) 2 Degrees Celsius and IEA 450 scenarios	Up to 2020
<b>Transition risks (credit)</b>	IEA Sustainable Development Scenario (SDS) scenario	Up to 2040/2050
<b>Portfolio alignment (multiple sectors)</b>	IEA SDS scenario	
<b>Shipping alignment</b>	International Maritime Organisation (IMO) target	

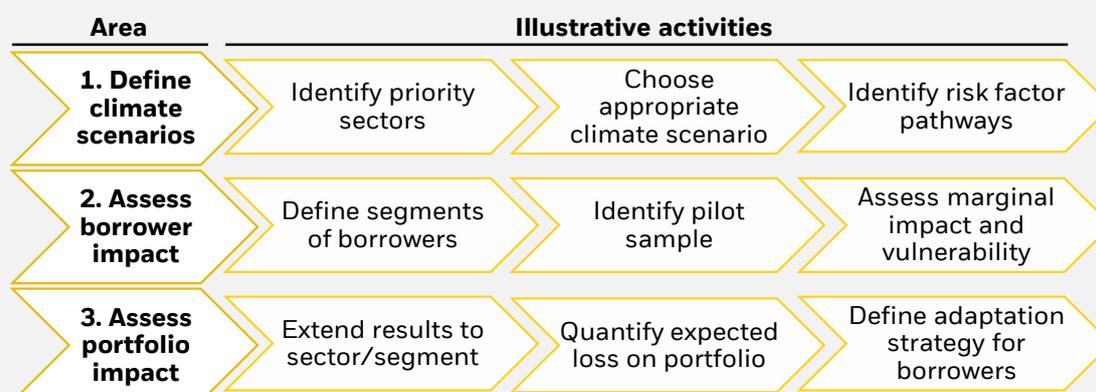
- Governance arrangement, including board of directors, general management, business and service unit, and frameworks
- Training of resources and remuneration to foster ESG objectives and mitigate risks
- Approach to managing financial climate risk detailing risk terminology, integration of climate risk into standard risk assessment and normative frameworks, process for identifying and managing risks
- High-level illustration of methodology to develop internal metrics to assess exposure to ESG risk (in particular transition risk)
- Different metrics to quantify exposure to climate risks, including:
  - o Distribution of exposures across sensitive sectors to transition risks per year
  - o Financed emissions expressed in metric tons of carbon dioxide equivalent (MT CO<sub>2</sub>e) per year

<sup>202</sup> The naming of these reports can change among institutions, and their format and content is also shaped by national legislation.

- Coal power share within financed energy mix portfolio (current and target)
- Outstanding related credit exposure to coal mining (current and target)

Annual Financial Report:

- ESG risks relevance within market outlook
- Risk measurement approach for climate transition risk within sensitive sector portfolio (the following chart presents an example of such an approach)



- Voluntary commitments and frameworks used with relevance for ESG Risks
- ESG risk achievements (e.g. establishment of responsibilities within first, second, and third line of defence)
- Approach to managing climate impacts and portfolio alignment tools to limit and positively steer activity
- Engagement model with clients to drive positive impact through financing solutions
- ESG-risk relevant metrics and targets (e.g. managing transition risk, credit portfolio alignment, financing targets)

Appendix of non-financial risk factors and emerging risks

- Summary of all ESG-risk factors, mitigation measures and indicators, in table format (with strong focus on operational risks)

Integrated Report:

- Objectives for ESG risk integration within banking activity discussed alongside other group-wide strategic targets
- Relevance of ESG risks and their identification, management and mitigation approaches

Consolidated excel of key ESG figures

- Grouping of all relevant KPIs and metrics monitored for ESG purposes, including those related to ESG risk management

Source: *Public Reports from banks and BlackRock FMA analysis*

At this point in time, ESG risk-related information is less integrated within regulatory reporting. A review of banks' publications showed that only a small number of analysed banks (10%) acknowledge ESG risks within their Pillar 3 reports, and this is mostly done at a high-level as a generic statement. This in line with findings from an EBA staff paper, according to which only 6% of banks acknowledged ESG risks in their Pillar 3 reports.<sup>203</sup>

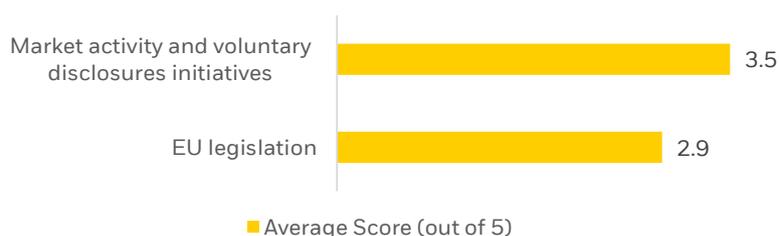
However, this will change following the amended Capital Requirements Regulation (CRR) which includes requirements for large institutions to disclose information on ESG risks, in particular

<sup>203</sup> EBA (2020). *Sustainable Finance: Market Practices (Staff Paper Series)*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Sustainable%20finance%20Market%20practices.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf).

transition and physical risks from climate change.<sup>204</sup> To this end, as part its mandate, the EBA has published the consultation paper on draft ITS on Pillar 3 disclosures, specifying the disclosure requirements that will need to be complied with from June 2022 (as further detailed in section 4.3.4.1.1).<sup>205</sup> Such requirements will also contribute to the harmonisation of disclosures.

Interviews with banks showed that, to-date, ESG risk focused disclosure practices have significantly evolved as a response to market activity and voluntary initiatives. As shown *Figure 48*, the legislative context has exerted, to date, a lower influence, even though this is expected to change in light of the previously mentioned regulatory activity ongoing. Specifically, the difference in score provided for each of these elements is largely driven by G-SIBs, as they attribute a stronger focus to market activity compared to non-G-SIBs.

**Figure 48: Influence of legislative and market context on ESG risk reporting<sup>206</sup>**



Source: BlackRock FMA analysis

One of the most commonly mentioned initiatives by respondents was the TCFD due to its focus on risk management compared to other initiatives, such as the PRB, which are more strategic in nature. Other initiatives mentioned by respondents include CDP<sup>207</sup>, GRI<sup>208</sup>, PCAF<sup>209</sup>, – which support the development of standards for measuring and reporting on sustainability and climate-relevant information –, as well as the SASB Materiality Framework, which provides sector-specific guidance for a broad range of ESG topics.

### Principles of best practice based on stakeholder perspectives

**ESG risk should be integrated within internal risk reporting.** A robust internal risk reporting, supported by adequate KPIs, allows for internal alignment on the ESG risk strategy. Among other things, ESG-risk reports should provide details on portfolios’ current exposure to ESG risks. ESG risk reports should be fully integrated within the existing risk reporting

<sup>204</sup> Regulation (Eu) 2019/876 Of The European Parliament And Of The Council  
REGULATION (EU) 2019/876 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012. OJ L 150/1, 7.6.2019, p. 1–225 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0876>.

<sup>205</sup> EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf)

<sup>206</sup> Question: i) To what extent has EU legislation (e.g. Non-Financial Reporting Directive) influenced your bank’s current ESG risk practices and reporting? and ii) To what extent has market activity and voluntary disclosures initiatives (e.g. TCFD) influenced your bank’s current ESG risk practices and reporting? Please tick the relevant score, with 0 being not influenced and 5 being strongly influenced. Sample size: 23.

<sup>207</sup> CDP (n.d.). What we do. Available at: <https://www.cdp.net/en/info/about-us/what-we-do>.

<sup>208</sup> Global Reporting Initiative (n.d.). *The global standards for sustainability reporting*. Available at: <https://www.globalreporting.org/standards/>.

<sup>209</sup> Partnership for Carbon Accounting Financials (n.d.). *Enabling financial institutions to assess and disclose greenhouse gas emissions of loans and investments*. <https://carbonaccountingfinancials.com/>.

infrastructure. They can be structured through multiple risk views and provide a detailed breakdown of exposures at geography, sector, and client-type level, as well as potentially one-on-one insights for the largest clients and/or product types. In addition, dedicated reports on ESG risks may be produced to support specific functions or use-cases.

**Comprehensive disclosures should inform external stakeholders on the state and evolution of ESG risk management practices and provide them with information relevant for decision making.** An important component of ESG risk disclosures is communicating to external stakeholders on the advancement of the adopted ESG risk framework and strategy, as well as providing transparency on any future plans. For instance, disclosures could include details on how ESG risks have been included within governance, RAF, and lending policies, and further detail plans such as the development of climate stress testing capabilities.

**ESG risk disclosures should be complementary to ESG business disclosure practices.** ESG risk disclosures help users of information more adequately evaluate banks and assess their ESG positioning. Integrating ESG risk disclosures within broader business reporting would provide a holistic view and help understand how banking activity is developed and managed whilst mitigating ESG risks.

**ESG risk disclosures may be presented in different formats and target a wide and diverse audience. The ultimate structure should be based on regulatory guidance.** In addition, reporting formats will need to evolve to take into account sustainability reporting standards, such as the proposed CSRD as part of the revision of the NFRD, and regulatory technical standards developed in due course, such as the draft ITS for Pillar 3 disclosure of ESG risk.<sup>210</sup> Users of information on ESG-related topics include a wide range of stakeholders, ranging from investors, clients, employees, civil society organisations, rating agencies, data providers and others.

**The double materiality perspective should be clearly captured in disclosures, in line with NFRD, EU Taxonomy and external stakeholder expectations.** In their disclosures, banks should clearly describe whether and how ESG matters are deemed relevant from both the financial, and the environmental and social materiality perspective. In this respect, disclosure of ESG risks should include two types of views. The financial risk view would serve the purpose of communicating on how ESG risks are avoided and managed, and the environmental and social view would serve the purpose of communicating ESG-related strategic goals of the bank, including its approach to mitigating potential negative impacts on the environment.

**External disclosure frameworks should be endorsed and adhered to.** As noted by stakeholders, in order to foster comparability of disclosures, external frameworks should be used and referenced, including GRI, UN PRI and PRB, CDP, TCFD, SASB and WEF- IBC among others. These frameworks could be used as guidance to structure disclosure chapters and/or may be produced as dedicated reports. However, as further illustrated in section 5.4.3, greater standardisation across the multitude of voluntary initiatives would reduce implementation complexity and divergence of external disclosures. The proposal to revise the NFRD requirements (i.e. the CSRD) envisages the adoption of sustainability reporting standards that would build on existing international standards and foster greater comparability of reported information.

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<sup>210</sup>EBA (2021). *Draft Implementing Technical Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf)

### 3.3.4.2 Information type, granularity and transparency

Comparability of banks' disclosures is particularly important for market participants. However, ESG risk disclosure observed among banks can vary significantly in terms of depth and scope. Regulatory and legislative requirements and guidelines are drivers of disclosure standardisation; in particular, ESG practices have been widely influenced by the NFRD. For instance, the supplement on reporting climate-related information (2019/C 209/01)<sup>211</sup> provides banks with detailed guidance on how to report with respect to climate risk.

The NFRD, which came into effect in 2014, requires certain large companies with more than 500 employees – including listed companies, banks, and insurance companies – to include a non-financial statement as part of their annual public reporting obligations since 2018 (for financial year 2017).<sup>212</sup> Specific guidelines are provided for financial institutions. Required disclosures include companies' business model, policies, outcomes, risk management, and KPIs that are relevant to the four sustainability issues identified – environment, social and employee issues, human rights, and bribery and corruption. In June 2019, as part of the Sustainable Finance Action Plan<sup>213</sup>, the European Commission published additional non-binding guidelines on reporting climate-related information which integrate the TCFD recommendations.<sup>214</sup>

As a recent development, the Commission has proposed a Directive on Corporate Sustainability Reporting to revise the requirements of the NFRD (i.e. the CSRD), in order to strengthen the foundations for sustainable investment. The proposed enhancement of existing sustainability reporting requirements include the following key aspects: i) An expansion of the scope of entities subject to the requirements to all large companies and all companies listed on regulated markets, except micro-companies, ii) the audit of all reporting information, iii) the introduction of more detailed reporting requirements as well as the requirement to report in line with mandatory EU sustainability reporting standards, and iv) the requirements for companies to digitally tag reported information, enabling it to be machine readable. The proposal also clarifies that the double materiality perspective must be adopted, “removing any ambiguity about the fact that companies should report information necessary to understand how sustainability matters affect them, and information necessary to understand the impact they have on people and the environment”.<sup>215</sup> The European Financial Reporting Advisory Group (EFRAG) was mandated to undertake preparatory work for the adoption a comprehensive set of EU sustainability reporting standards, as part of the proposed revision of the NFRD.<sup>216</sup> In February 2021, EFRAG published a

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<sup>211</sup> Communication from the Commission – Guidelines on non-financial reporting: Supplement on reporting climate-related information. OJ C 209/1, 20.6.2019, p. 1–29 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29>.

<sup>212</sup> European Commission (n.d.). *Non-financial reporting*. Available at: [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en).

<sup>213</sup> European Commission (n.d.). *Renewed sustainable finance strategy and implementation of the action plan on financing sustainable growth*. Available at: [https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy\\_en](https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en).

<sup>214</sup> Communication from the Commission – Guidelines on non-financial reporting: Supplement on reporting climate-related information. OJ C 209/1, 20.6.2019, p. 1–29 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29>.

<sup>215</sup> European Commission (2021). *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN>.

<sup>216</sup> EFRAG (2020). *EFRAG mandated to provide recommendations on possible European non-financial reporting standards*. Available at: <https://www.efrag.org/News/Public-243/EFRAG-mandated-to-provide-recommendations-on-possible-European-Non-Financial-Reporting-Standards>.

report outlining technical recommendations and a roadmap for the development of a comprehensive set of EU sustainability reporting standards.<sup>217</sup>

Recently, activity by the EBA, ESMA, and EIOPA has led to the development regulatory technical standards with regard to the content, methodologies and presentation of sustainability-related disclosures.<sup>218</sup> Though these guidelines are relevant for investment-product related disclosures, which are out of scope in this study, they provide insights into the potential future evolution of ESG risk disclosures that banks will have to comply with. For example, the obligations established to foster ESG investment product transparency – such as the publication of pre-contractual information on how an ESG products meet sustainability characteristics –, may be expanded to different financial instruments, including loans, in the future.

A report published by the EBA, advising the Commission on KPIs and methodologies for disclosure by credit institutions (detailed in section 4.3.1.3), provides guidance on the content of disclosures related to environmentally sustainable activities. In particular, it elaborates on the KPIs that institutions should disclose, the scope and methodology of calculation as well as additional qualitative information that banks should provide.<sup>219</sup> Furthermore, the EBA recently launched a public consultation on draft ITS on Pillar 3 disclosures (see section 4.3.4.1.1 for further details).<sup>220</sup>

Besides regulation and legislative measures, voluntary initiatives also play a role in standardising content of disclosures. For example, the NFRD voluntary climate guidelines provide clarity on how to comply with European requirements while meeting the recommendations of the TCFD. As further illustrated in the remainder of the section, disclosures are more developed with respect to climate risk compared to other ESG themes. Other ESG themes, however, are often covered as part of broader disclosure practices focused on strategy and banking activity.

To coordinate and align reporting practices, five framework and standard setting entities – namely, CDP, Climate Disclosure Standards Board (CDSB), GRI, International Integrated Reporting Council (IIRC), and SASB – have recently issued a shared statement of intent to work towards this goal. They will work jointly with key actors, including the World Economic Forum International Business Council (IBC), towards the definition of a corporate reporting system that integrates sustainability reporting with mainstream financial disclosures.<sup>221</sup>

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<sup>217</sup> EFRAG (2021). *Final Report: Proposals for a relevant and dynamic EU sustainability reporting standard-setting*. Available at:

[https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRAG%2520PTF-NFRS\\_MAIN\\_REPORT.pdf](https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRAG%2520PTF-NFRS_MAIN_REPORT.pdf).

<sup>218</sup> ESMA, EBA, EIOPA, and Joint Committee of the European Supervisory Authorities (2021). *Final Report on draft Regulatory Technical Standards - with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a(3), Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088*. Available at:

[https://www.esma.europa.eu/sites/default/files/library/jc\\_2021\\_03\\_joint\\_esas\\_final\\_report\\_on\\_rts\\_under\\_sfdr.pdf](https://www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf).

<sup>219</sup> EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf).

<sup>220</sup> EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

<sup>221</sup> CDP (2020). *Statement of Intent to Work Together Towards Comprehensive Corporate Reporting - Summary of alignment discussions among leading sustainability and integrated reporting organisations CDP, CDSB, GRI, IIRC and SASB*. Available at: <https://www.cdp.net/en/articles/media/comprehensive-corporate-reporting>

Most banks have one or several reports containing ESG information, but so far there are no consistent standards. Guidance has been developed in the climate space with multiple standards emerging (see section 5.3.3.3). Of the interviewed banks, approximately 61% stated that TCFD has influenced or is influencing their current or foreseen ESG risk practices and reporting. However, as outlined below, the implementation of TCFD by banks is still incomplete (e.g. see Figure 49). Table 8 provides an overview of the disclosure recommendations, which is also referred to in the NFRD guidelines.<sup>222</sup>

Table 8: TCFD disclosure recommendations<sup>223</sup>

<b>Governance</b>	<b>Strategy</b>	<b>Risk Management</b>	<b>Metrics &amp; Targets</b>
Organization’s governance around climate-related risks and opportunities.	Actual and potential impacts of climate-related risks and opportunities on the organisation’s businesses, strategy, and financial planning where such information is material.	How the organization identifies, assesses, and manages climate-related risks.	Metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Board’s oversight of climate-related risks and opportunities. Management’s role in assessing and managing climate-related risks and opportunities.	Climate-related risks and opportunities the organization has identified over the short, medium, and long term. Impact of climate related risks and opportunities on the organization’s businesses, strategy, and financial planning. Resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Processes for identifying and assessing climate-related risks. Processes for managing climate-related risks Processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.	Processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management. Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks Targets used by the organization to manage climate-related risks and opportunities and performance against targets

Source: TCFD (2018)

Initiatives focused on financial materiality have promoted standardisation of climate-related risk disclosure by defining key focus areas and minimum disclosure requirements. As highlighted by a respondent, such initiatives have greatly supported and influenced banks’ reporting practices, providing a more consistent, comparable, and understandable format for external stakeholders. As further iterated in ShareAction’s banking survey, requirement for TCFD public disclosure “has prompted work streams generating material improvements in climate-related risk management”. However, further improvements need to be made as “no bank has so far fully implemented all of

<sup>222</sup> Based on the question “To what extent has market activity and voluntary disclosures initiatives (e.g. TCFD) influenced your bank’s current ESG risk practices and reporting?” from the questionnaire, 14 out of 23 banks that answered explicitly referred to the TCFD framework and its influence on their ESG risk practices and reporting.

<sup>223</sup> TCFD (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at: <https://www.fsb-tcf.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>.

the recommendations”.<sup>224</sup> Furthermore, an interviewed civil society organisation stated that the speed of its adoption across banks is not sufficient, given that three years have already passed since its launch.

Analysis of ESG risk reporting among banks highlighted a substantial variety in terms of information type (e.g. metrics disclosed, scope), level of granularity, and methodology, illustrating that there are significant disclosure gaps and standardisation issues to be addressed (see *Figure 49*). This in line with findings from the ECB with respect to “sparse and heterogeneous [climate risk] disclosure practices”. In addition, as suggested in the ECB guidelines and in line with the findings of this study, the comprehensiveness of disclosures is positively correlated with size of the institution.<sup>225</sup>

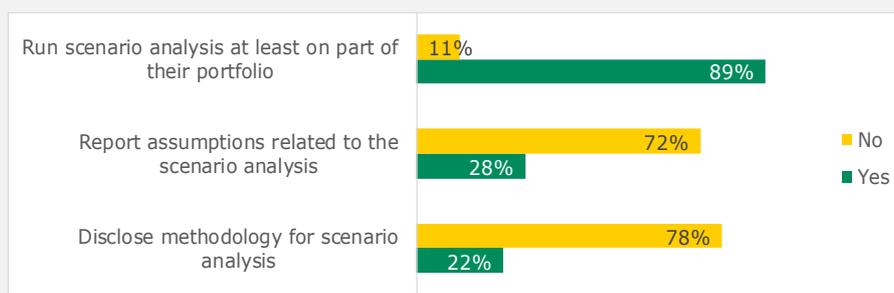
As found in a report by Four Twenty-Seven and Vigeo Eiris, banks are most advanced in terms of governance-related disclosures, with the majority including descriptions of climate change related responsibilities assigned to management level positions and processes to escalate climate related issues to the executive suite.<sup>226</sup> However, improvements in reporting have to be made, in particular concerning underlying methodologies and assumptions for risk measurement, scenario analysis, and metrics and targets.

**Figure 49: Case study on climate-related disclosures among G-SIBs**

As part of a review of climate risk disclosures of G-SIBs included in this study, TCFD alignment was assessed along the four categories of the framework.

**Governance:** Reporting on governance arrangements appears as one of the most advanced areas observed among banks on a relative basis, with almost all banks disclosing roles and responsibilities for individuals responsible for climate change, presence of committees addressing the topic, and board oversight.

**Strategy:** Reporting on strategy often includes a wide range of information, although the level of detail and transparency can be improved. For instance, most banks state that they currently perform climate-related scenario analysis. However, that analysis is usually performed only on part of their portfolio and few clearly disclose their methodology (22%) or related assumptions (28%).



**Risk Measurement:** Most banks describe how climate-related risks are integrated into overall risk management and how these are managed. However, only a limited number provide details

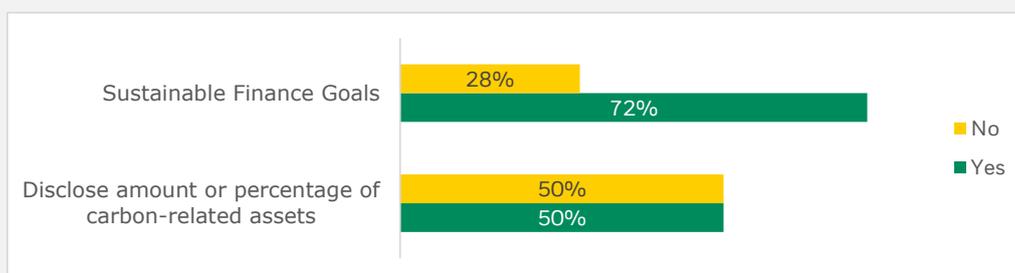
<sup>224</sup> ShareAction (2020). *Banking on a Low-Carbon Future II - A ranking of the 20 largest European banks' responses to climate change*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

<sup>225</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>226</sup> Four Twenty-Seven and Vigeo Eiris (2020). *Measuring TCFD Disclosures*. Available at: <http://427mt.com/wp-content/uploads/2020/09/Measuring-TCFD-Disclosures.pdf>.

on their current exposure to physical and transition risk or provide forward looking plans to evolve their risk management practices.

**Metrics and Targets:** The majority of banks (i.e. 72%) disclose their sustainable finance goals, and 50% disclose the amount or percentage of carbon-related assets (i.e. related to high carbon sectors) relative to total assets. However, there is little transparency provided on other metrics (e.g. alignment to 2° scenario, carbon physical intensity).



Source: Public reports from banks and BlackRock FMA analysis

A significant portion of broader ESG risk reporting practices observed among banks – in particular ‘Governance’, ‘Strategy’, and ‘Risk Management’ – is qualitative in nature. Interviews with banks show that the biggest challenges concern ‘Metrics and Targets’, as there are no clear guidelines on how to identify and calculate these metrics.

As also illustrated in a study by 2° Investing Initiative and UNEP FI,<sup>227</sup> there are a wide range of metric categories that can be used to report on banks’ climate progress; cited examples include carbon emissions accounting, sector specific energy metrics, and green/brown metrics.<sup>227</sup> In particular, carbon emissions (scope 3) accounting for banks was repeatedly mentioned by civil society respondents as an important metric to measure and report on, as it requires banks to go beyond the currently observed scope 1 and 2 reporting, which is related to own operations.

These various metrics are characterised by specific advantages and disadvantages, for instance, concerning the applicability of a metric, which may be relevant for the whole portfolio or for a selected segment only. Nonetheless, as argued in the same paper “there is likely no universal approach to how to best measure [them]” given the different stakeholder perspectives that need to be taken into account as well as the large differences in bank business lines and types of financial intermediation. Moreover, current disclosures do not support such standardisation, as only a limited number of banks provide a sufficient level of transparency on the methodology used to calculate their underlying ESG risk metrics.

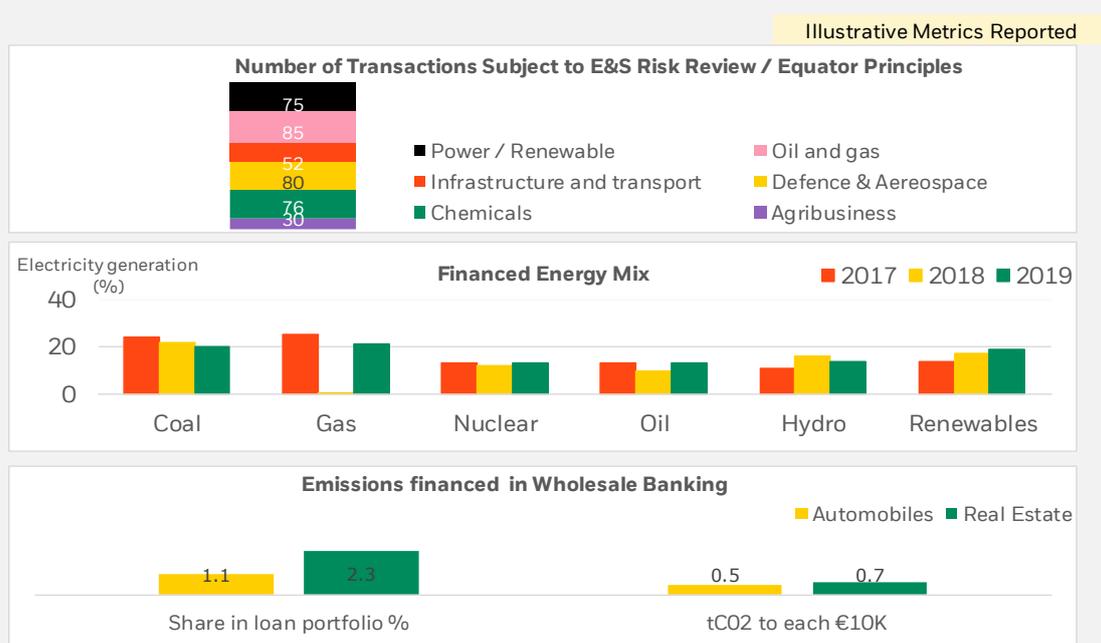
There are different types of risk-relevant metrics currently disclosed by banks, of which selected examples and their illustration are presented in *Figure 50*. Common metrics observed among banks include: i) Number of transactions subject to E&S risk review or Equator Principles (for project finance), ii) credit exposure to high ESG risk sectors or carbon-related assets, iii) carbon-emissions of financed activities or assets, and iv) financed energy-mix. Less common examples of metrics disclosed include average energy label mortgage portfolio, total loans advances in high/medium/low flood risk postcodes, and P&L contribution by ESG risk type (physical and transition), among others.

<sup>227</sup> 2° Investing Initiative, UNEP FI, World Research Institute (n.d.). *Portfolio Carbon Initiative – Exploring metrics to measure the climate progress of banks*. Available at: <https://ghgprotocol.org/sites/default/files/standards/Exploring%20Metrics%20to%20Measure%20the%20Climate%20Progress%20of%20Banks.pdf>.

Figure 50: Illustrative examples of ESG risk metrics disclosed

The below charts represent illustrative graphics used by banks to report on ESG risk portfolio related metrics<sup>1</sup>. In particular:

- The first graphic shows the breakdown of transactions that were subject to E&S risk review or assessed according to the Equator Principles, showing the most sensitive sectors (e.g. power and oil and gas)
- The second graphic provides an illustration of the breakdown of the financed energy mix across years, showing an increase in renewables and decrease in coal
- The third graphic shows the breakdown of emissions financed in wholesale banking book across vehicles and real-estate exposures



<sup>1</sup> The numbers are dummy variables used for illustrative purposes only.

Source: Public reports from banks and BlackRock FMA analysis

Despite the wide range of possible metrics, the majority of these are backward-looking and are mostly focused on climate. Only a limited number of banks disclose forward-looking metrics, for instance, related to future planned exposures to certain sectors (e.g. percentage of coal in electricity mix financed until 2050) or describing portfolio composition under specific scenarios. This is in line with results from a joint EBF and IIF survey, which found that assigning targets on climate risk metrics and usage of limits to assess climate-related asset/liability risks and opportunities is not a common practice.<sup>228</sup> As detailed in the survey findings, while 36% of the firms use metrics to identify exposure to climate-related risks (e.g. carbon foot-print, carbon physical intensity, brown share, etc.), assigning targets related to these metrics is done by 20% of respondents, and 11% use limits. This point was further emphasised by an interviewed civil society, who argued that even metrics such as carbon-footprint are ultimately irrelevant for forecasting and planning, as they are, by nature, backward looking.

<sup>228</sup> EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

Another civil society respondent highlighted the absence of metrics that can be used for multiple purposes and in different contexts. As argued, carbon-footprint metrics are not well suited for risk management purposes, as accurate data on emissions of financed counterparties is lacking; hence, reliance on estimation models leads to non-reliable results. Nonetheless, other respondents noted that backward-looking metrics, such as financed emissions, can help banks understand their current impact and hence serve as a starting point for the development of more advanced metrics.

Overall, most banks stated that they have plans to enhance their ESG risk reporting, subject to enhancing their ESG risk measurement and assessment capabilities. Some comments raised with respect to future disclosure expectations and strategies are illustrated in *Figure 51*. One civil society respondent suggested that the key focus for banks should be to disclose their risk management strategy and chosen metrics, providing transparency on the limitations of their chosen approach.

Figure 51: Illustrative comments on ESG risk disclosure plans

**What is your overall strategy for ESG risk disclosure and what are your plans for future reporting?**

*“Most of our reporting is qualitative except for some specific issues, such as energy mix”*

*“We will develop new metrics and KPIs as part of the ECB guidelines implementation”*

*“The plan is to expand on ESG risk disclosures as assessments mature and allow for more types of risk metrics to be disclosed”*

*“[Future reporting] will disclose carbon-related assets in the loan portfolio and the financial impacts based on the results of scenario analysis”*

Most respondents stated that they have concrete plans to integrate more quantitative metrics within their climate-related disclosures, based on relevant examples illustrated within the ECB Guidelines (e.g. weighted average carbon intensity)<sup>229</sup>. In contrast, no specific comments were raised with respect to metrics related to the S and G pillars. As noted by a respondent, these dimensions are not always quantifiable on a granular basis and are subject to cultural bias. Nonetheless, the non-exhaustive list of ESG factors and indicators provided in an EBA discussion paper also cover the S and G pillars and may provide banks with guidance in this respect.<sup>230</sup> The metrics proposed, which include, for example “number/rate of accidents, injuries, fatalities” or “lack of a diversity strategy in place”, can be applied by banks and then aggregated to develop insights at portfolio level.

### Principles of best practice based on stakeholder perspectives

**ESG risk disclosures should include both qualitative and quantitative information. Details on how their materiality is defined and assessed should be provided.** As part of ESG risk disclosures, banks are expected to disclose information regarding five key aspects: business model, policies and due diligence processes, outcomes, risks and risk management and

<sup>229</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>

<sup>230</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

KPIs.<sup>231</sup> Banks should specify how ESG risks are defined and how their materiality is assessed. Generally, both quantitative and qualitative disclosures are considered complementary. For example, to provide additional context on portfolio-related metrics (described below), banks could include information on plans in place to steer their portfolio and mitigate ESG risks.<sup>232</sup>

**A wide range of granular KPIs are included to complement qualitative descriptions. These should be aligned to external expectations and include backward-looking, as well as scenario-based and commitment-related metrics.** Metrics disclosed should be aligned to guidance provided by supervisors and regulators, such as indication recently published by the EBA<sup>232</sup>, as well as other external stakeholders. Scenario based and forward-looking metrics are considered more advanced, as they provide forward looking insights into the evolution of the portfolio. ESG risk metrics can include, among others: i) Exposure metrics (e.g. green asset ratio, %, of assets related to sectors that contribute to climate change)<sup>233</sup>, ii) risk-based metrics (e.g. % of book subject to high transition/physical risk, portfolio ESG score distribution), iii) financial impact metrics (e.g. expected impairment caused by transition/physical risk scenarios) and iv) alignment and impact metrics (e.g. % portfolio aligned or deviating from Paris commitment, physical carbon intensities by sector). Illustrative examples are provided in *Figure 52*. Generally, standardisation of ESG-risk relevant metrics is ensured through alignment to external expectations, for example ECB guidelines and EU Taxonomy, as well as other standard-setting initiatives.

**For banks that make public commitments (e.g. net zero), interim targets should be set, progress should be regularly communicated, and transparency on banking activities in scope of the commitment should be provided.** Metrics that measure progress towards public commitments are particularly valuable as they provide forward-looking information and foster portfolio steering and accountability. For example, metrics related to pathway alignment or net zero, as well as other portfolio targets (e.g. exposure to certain high carbon risk sectors), can be strengthened by providing interim targets. In addition, for these metrics, transparency on the activities and portfolios in scope should be provided, alongside the breakdown of commitments.

**Disclosed metrics can be prioritised based on considerations related to: i) Data availability, ii) transparency and robustness of measurement methodology, iii) relevance for decision-making and materiality, and iv) range of applicability. Details should be provided on their calculation methodologies, definition and criteria, in particular for those estimated on a best effort basis.** As described in an EBA consultation, KPIs disclosed can evolve over time and be developed in sequential order. In addition, thresholds can be set to delimit which institutions

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<sup>231</sup> Applies to European banks supervised under the Single Supervisory Mechanism. See: European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>232</sup> For details on content of disclosures see templates provided by the EBA as part of its consultation paper. See: EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf)

<sup>233</sup> EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf).

have to disclose certain information (e.g. relating to their trading book).<sup>234</sup> However, as further highlighted, transparency on the underlying methodologies and criteria used for calculation should be provided across metrics as initially these may be calculated on a best-effort basis, using estimates and ranges.

Figure 52: Illustrative ESG risk portfolio disclosure metrics

The below illustration summarises portfolio related ESG risk metrics banks could disclose, based on regulatory guidance as well as examples observed among banks.

**Illustrative metrics – not exhaustive**

*Metric can be quantitative or qualitative, backward-looking or forward-looking*

<b>E</b>	<ul style="list-style-type: none"> <li>• % or volume of transactions subject to enhanced environmental risk due diligence</li> <li>• % or volume of green exposure within portfolio/green asset ratio</li> <li>• % or volume of carbon-related assets within portfolio</li> <li>• % or volume of exposures by sector of counterparty</li> <li>• Weighted average carbon intensity of portfolio</li> <li>• Electricity mix financed</li> <li>• % book subject to high transition/physical risk (as defined per internal methodology)</li> <li>• Volume of credit risk exposures and collateral by geography/country of location with indication of high physical risk countries</li> <li>• Expected impairment caused by transition/physical risk scenarios</li> <li>• Volume of portfolio aligned and/or deviating from pathway commitments (e.g. Paris)</li> <li>• Implied portfolio temperature path</li> </ul>
<b>S</b>	<ul style="list-style-type: none"> <li>• Transactions subject to enhanced social risk due diligence</li> <li>• Volume of exposures in countries subject to high human rights violation risks</li> <li>• Volume of exposures with counterparties with low inclusion and diversity standards</li> <li>• Average unadjusted gender pay-gap of exposures</li> </ul>
<b>G</b>	<ul style="list-style-type: none"> <li>• Transactions subject to enhanced KyC process</li> <li>• Volume of exposures in countries with high corruption indexes</li> <li>• Lending to counterparties with governance incidents reported</li> </ul>
<b>ESG</b>	<ul style="list-style-type: none"> <li>• Portfolio average/distribution of ESG risk score</li> <li>• % improvement of portfolio ESG risk score</li> </ul>

Source: BlackRock FMA analysis

<sup>234</sup> EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

#### 4. Modalities of integrating ESG risks into EU prudential supervision<sup>235</sup>

This section first provides an overview of the research focus areas covered within this study objective, as defined in the tender specifications and further refined during initial focus groups. Subsequently, a summary of the stocktake findings on national supervisory frameworks and practices for the integration of ESG risks into prudential supervision is provided. The remainder of the section provides a detailed description of the findings for each focus area, followed by an overview of principles of best practice for each topic in order to provide a forward-looking view of the tools and mechanisms for the integration of ESG risks into EU prudential supervision.

##### 4.1 Overview of focus areas for research

For the purpose of this study, the following key elements of the integration of ESG risks into EU prudential supervision were analysed, as further illustrated below:

- ESG risk definition and identification;
- ESG governance and strategy;
- Supervisors' assessment of ESG risks;
- ESG requirements, guidelines and engagement initiatives.

This list of focus areas served as a structure to systematically gather input and data during the research. The key focus areas analysed under this objective are illustrated in *Table 9* and the following sections present the results of the stocktake exercise along the identified sub-focus areas.

Table 9: Objective 2 focus areas and their respective sub-focus areas

<b><i>Focus Area</i></b>	<b><i>Sub-Focus Area</i></b>	<b><i>Description</i></b>
<b>ESG risk definition and identification</b>	<b>ESG risk definition</b>	Definition of ESG risks and their sub-pillars from a bank supervision standpoint, including focus on double vs. single materiality <sup>236</sup>
	<b>ESG risk transmission channels</b>	Relevance of ESG risk to traditional risk types of banks (e.g. the impact of ESG risks on credit, market, operational, reputational risk, among others) and transmission channels (e.g. lower corporate profitability, changes in consumer demand), as seen by supervisors
	<b>Quantitative and qualitative assessment of supervised banks</b>	Quantitative KPIs used by supervisors to monitor and assess supervised banks' exposure to ESG risks, as well as qualitative elements considered by supervisors, for example, to assess whether supervised banks have a sound risk management process in place to manage ESG risks (e.g. definition, integration into risk processes, integration in business strategy)

<sup>235</sup> In line with the Tender Specifications, the focus of this section is on microprudential supervision. Systemic risk assessments and macroprudential policies are not considered.

<sup>236</sup> As defined in section 4.2.2.

<b><u>Focus Area</u></b>	<b><u>Sub-Focus Area</u></b>	<b><u>Description</u></b>	
<b>ESG governance and strategy</b>	<b>ESG risk prudential supervision strategy</b>	Strategic objectives of supervisors and regulators to foster ESG integration within supervised banks, as well as efforts to promote ESG-related capabilities	
	<b>Internal ESG risk capabilities</b>	In-house expertise of supervisors and regulators, including dedicated resources, subject matter experts, models and data, as well as training and development	
<b>Supervisors' assessment of ESG risk</b>	<b>Measurement and assessment</b>	<b>ESG risk measurement and scenario analysis methodology</b>	Definition of approaches and related expectations for how banks and/or supervisors measure banks' exposure to ESG risks, including scenario analysis considerations
		<b>Categorisation of assets based on ESG risk</b>	Approaches to categorise banks' assets based on their risk profile (e.g. green vs. grey vs. brown)
	<b>ESG integration into supervisory/regulatory Processes</b>	<b>Pillar 2 review processes and onsite supervision</b>	Integration of ESG risk considerations into Pillar 2 processes such as SREP and other supervisory review processes, including current initiatives and forward-looking plans
		<b>Supervisory stress testing</b>	Integration of ESG risk considerations into supervisory stress testing, such as development of climate stress tests, including current initiatives and forward-looking plans
<b>ESG requirements, guidelines and engagement initiatives</b>	<b>Regulatory requirements</b>	Regulatory requirements for supervised institutions, e.g. for ESG-related disclosure or capital requirements	
	<b>Supervisory guidance and expectations</b>	Guidance and expectations on banks' ESG-related risk management, strategy and disclosure	
	<b>Supervisory engagement activities</b>	Activities and methods with the aim of fostering capacity building, increasing awareness, and building know-how related to ESG risk management within supervised banks	

## 4.2 Summary of key takeaways

The following key takeaways present the results of the stocktake exercise conducted on the previously defined perimeter of external stakeholders. Insights related to principles of best practice are based on the analysis of the data collected and provide a forward-looking view on the potential evolution of such practices.

### 4.2.1 ESG risk definition and identification

All supervisors mentioned the importance of ESG risks for prudential supervision. Nevertheless, a clear definition of ESG factors and risks on a granular level is often not in place, and no common definition of ESG exists. ESG risks in scope of supervision vary across supervisors, with a focus on climate-related risk most frequently seen at present. The different pillars of ESG are often considered separately, rather than from a holistic viewpoint. The governance component is currently primarily focused on banks' (as opposed to clients') governance and topics related to compliance. Beyond climate-related risk, limited research has been conducted into the way in which ESG risks propagate through existing risk types; however, credit risk and reputational risk are generally seen as having the most relevance across all ESG pillars.

A majority of supervisors (72%) acknowledge the importance of the double materiality concept, consistent with feedback from most banks and other stakeholders including civil society organisations. However, they see difficulties in integrating it into the supervisory framework due to the traditional focus on the impact of financial and non-financial risk on banks, as set within their mandate. Many supervisors state that they typically treat ESG risks as drivers of traditional risk types like credit, market, and operational risk, rather than as a principal risk type. Several participants in EU-based jurisdictions indicated the intention to await further developments at a national and international level, including the mandates of the EBA which will i) consider the potential inclusion of ESG risks in the supervisory review and evaluation process (SREP), ii) assess how ESG disclosures should be considered in CRR 2 Pillar 3 disclosures, and iii) determine whether a dedicated prudential treatment of ESG risks would be appropriate.<sup>237</sup>

A significant part of supervisors' assessments of whether sound processes to manage ESG risks are in place is based on qualitative elements. To this end, the integration of ESG risks in a bank's business strategy, as well as risk governance and risk strategy, were mentioned as being among the most important elements. The majority of supervisors interviewed do not yet have any quantitative indicators in place to monitor and assess the exposure of supervised banks to ESG risks, and development of such indicators is seen to be at an overall early stage.

#### Summary of principles of best practice based on stakeholder perspectives

Supervisors should develop, and continually update, a definition entailing a granular list of underlying factors for each ESG pillar. They should also provide guidance to banks with respect to an overarching definition framework. Clarity and cohesiveness on the view of the materiality of ESG risks would aid in the provision of guidance and give more clarity on any future approach to ESG integration.

Further research is required by supervisors to delineate a comprehensive mapping of ESG themes to existing traditional financial and non-financial risk types, as this is necessary to advance the understanding and management of ESG risk integration within the banking

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<sup>237</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

sector. Relevant transmission channels for ESG risks should be identified and analysed across the E, S, and G pillars.

Common quantitative indicators and methodological approaches among EU-based and global supervisors are necessary for the quantitative assessment of ESG risks in supervised institutions. The identification and analysis of such indicators should be facilitated and further promoted by supervisors. Proportionality should be applied in terms of supervisors' expectations from banks, and ESG risk management within supervised institutions should be assessed in a holistic manner, as is done for other risk types.

#### 4.2.2 ESG risk governance and strategy

The majority of interviewed supervisors expect an increasing emphasis on the integration of ESG risks into prudential supervision in the near future, but few supervisors have communicated an explicit ESG strategy. Differences exist in terms of ambition, prioritisation, and scope. While some supervisors approach the topic from a holistic standpoint across E, S & G, others have decided to focus on the E pillar for now, and often on climate specifically. Only a minority of interviewed supervisors have a formalised internal ESG risk strategy in place with an ambition to actively drive the integration of ESG risk.

#### **Summary of principles of best practice based on stakeholder perspectives**

Supervisors should have a dedicated prudential supervision strategy in relation to ESG risks in place, with publicly stated measurable objectives, priorities, and timelines. EU-based supervisors should closely follow and incorporate the work of the EBA in relation to their ESG mandates. Supervisors should be proactive in their approach to the integration of ESG risks, and not necessarily await the outcomes of other initiatives before taking action. Approaching ESG risks under one 'umbrella' can enable a comprehensive and coordinated integration and help identify potential ESG risk trade-offs. Specific topics may be prioritised depending on their immediate relevance.

Membership in international fora and associated working groups will be key to harmonisation and joint development of supervisory approaches to ESG. Supervisors should be appropriately resourced to successfully implement a prudential supervision strategy in relation to ESG risks. Other capabilities, such as ESG-related methodologies and data, should be developed and enhanced within the organisation and be aligned with common or international approaches.

#### 4.2.3 Supervisors' assessment of ESG risk

A limited number of supervisors (14%) state that they have explicitly integrated ESG risk considerations in Pillar 2 processes, although some respondents highlighted that ESG risks are often drivers of traditional risk types, and hence should be considered by banks if deemed material. Across the researched jurisdictions, a minority of supervisors (23%) claim to have integrated ESG risks explicitly into day-to-day and on-site prudential supervision. Going forward, a large proportion of interviewed supervisors plan to integrate ESG considerations into the SREP and will expect supervised institutions to consider ESG risks in their ICAAP/ILAAP. A number of respondents expressed the view that Pillar 2 processes are the most appropriate tool within the supervisory toolkit to address ESG risks from a supervisory standpoint.

The identification of suitable quantitative ESG risk indicators is a key challenge, with no supervisory authority having an established set of indicators in place at this point. However, a majority of respondents agree on the relevance of a quantitative assessment of banks' risk management practices, to enable comparability of results across banks, as well as the aggregation of relevant metrics at various levels. Beyond the employment of scenario analysis for

climate-related risk, risk measurement approaches for ESG risks in general appear to be still in their infancy, mirroring the early stage of developing quantitative ESG metrics.

A minority of supervisors (14%) state that they have integrated ESG risks into supervisory stress testing, although more have indicated that they are planning to do so within the next three years. Work in this area is currently focused on climate-related risk only. All interviewed supervisors, and many civil society organisations, highlighted the importance of scenario analysis, especially in the context of climate-related risk, given the associated uncertainty and long-term time horizons. The NGFS climate scenarios were frequently referenced in this context as being useful for providing a common starting point.

EU-based supervisors consistently stated that the categorisation of assets based on their ESG risk profile makes use of – or will make use of – the EU Taxonomy. However, many supervisors believe that a more granular taxonomy – i.e. including brown and grey (i.e. neither green nor brown) sectors, as well as a social component – will ultimately be required. While respondents believe that the current taxonomy represents a step in the right direction towards the provision of a common standard and heightened comparability, several supervisors expressed the view that the EU Taxonomy, in its current form, may need to be enhanced and expanded.

#### Summary of principles of best practice based on stakeholder perspectives

Scenario analysis should be a central component of the supervisory toolkit to inform ESG risk assessment and identification, in particular for climate-related risk given the current state of advancement. Supervisors should require banks to actively engage with counterparties to ensure that ESG risks are understood, assessed, measured, and mitigated. A degree of methodological freedom can remain advocated by supervisors in relation to supervised banks' measurement and assessment of ESG risks; however, this should be accompanied by sufficient guidance to banks to ensure comparability and robustness. Supervisors should develop approaches to categorise assets based on their ESG risk profile. An expanded and more granular EU Taxonomy – including grey and brown activities and sectors, as well as social objectives – would support supervisors in such an exercise.

ESG-related risks should be captured under the Pillar 2 framework, and supervisors should make use of the full range of Pillar 2 instruments in the case of unsatisfactory ESG risk integration by banks. Longer time horizons associated with ESG risks should be incorporated within the SREP, and ESG risks should be considered across the four elements of SREP.<sup>238</sup> Supervisors should expect banks to consider ESG in their ICAAP. An ESG risk perspective should be incorporated in day-to-day and on-site supervisory processes. The principle of proportionality should be applied, taking into account size, geography, business model, and complexity of operations.

Climate risk is currently prioritised over other types of ESG risk in the context of stress testing. Climate stress testing is a critical tool to assess climate-related risk in banks and the broader financial system. Regular climate stress tests should be mandatory for relevant supervised banks and should also aim to develop capabilities within banks. Such stress tests should make use of reference scenarios, and time horizons should be longer than in conventional stress tests. Supervisors should contribute to the development of such scenarios, and multiple scenarios should be developed given the multiple pathways associated with a transition to a

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<sup>238</sup> The four elements of the SREP are: i) Business model, ii) internal governance and risk management, iii) risks to capital, and iv) risk to liquidity.

net zero/Paris aligned world. In the absence of requisite data, supervisors should require banks to make use of suitable proxy data or assumptions.

#### 4.2.4 ESG requirements, guidelines and engagement initiatives

According to interviewed civil society organisations, any regulation and guidance must encourage sector participants to take a proactive approach to incorporating ESG risks in business strategies and internal processes, as it can provide an effective mitigation tool for such risks, especially over the long-term.

According to EU-based respondents, environmental and social risk considerations are implicitly captured as drivers for existing risk types. In the EU, supervisors intend to await the outcome of the EBA mandate to assess whether a dedicated prudential treatment of ESG exposures is justified. Outside of the EU, and particularly in emerging markets – for example, in Brazil –, supervisory authorities have begun using the existing regulatory framework to specifically address these risks.

As to the question of whether capital requirements are a possible way to address climate-related risks (e.g. through a green or brown factor for RWA calculation), opinions differ among respondents. Most supervisors are of the view that any capital requirements should be risk-based<sup>239</sup>, and that robust quantitative evidence of a risk differential is important. Some other stakeholders including civil society organisations see the increase of capital requirements for brown exposures as a key tool to incentivise banks to re-direct capital, and would therefore advocate, for example, the adoption of a brown penalising factor (BPF) as a precautionary measure.

All interviewed supervisors agree that consistent disclosures by banks on ESG risks are increasingly important – a view also shared by other stakeholders, including civil society organisations and academics. Beyond mandatory disclosure requirements, almost all respondents indicated that, for climate-related risks specifically, they expect supervised institutions to adhere to TCFD disclosure standards.

All interviewed supervisors mentioned the need to increase awareness of ESG risks and foster capacity building for the proper treatment of ESG risks in supervised institutions. A number of supervisors have already published guidance on the integration of climate-related risk or broader ESG factors in banks' risk management practices. Overall, the perception is that banks are willingly embarking on this journey alongside supervisors.

#### **Summary of principles of best practice based on stakeholder perspectives**

The EBA mandates in relation to Pillar 3 disclosures and a dedicated prudential treatment of ESG risks (Pillar 1), should be closely monitored and supported by supervisors. However, whilst awaiting the outcomes of these mandates, supervisors should remain proactive in their approach to the integration of ESG risks. Building on the NFRD and other legislative measures, additional disclosure requirements, at a minimum on climate-related risks, should be developed and made mandatory for banks. Supervisors should also require banks to adhere to relevant disclosure frameworks, while advocating greater standardisation across the multitude of voluntary initiatives and frameworks. Supervisors should examine their own stance on a dedicated prudential treatment of ESG risks.

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<sup>239</sup> When supervisors used the term 'risk-based' in this context, it refers to a linkage to credit risk, i.e. the impact of potential credit risk on the bank.

Where supervisory guidance is not available (e.g. from national or supranational regulatory authorities), supervisors should issue such guidance and/or expectations in relation to ESG-related risks. They should foster awareness of ESG risk-related issues in supervised banks and ensure that banks understand the nature such risks pose to their business models and balance sheets.

### 4.3 Detailed stocktake findings and principles of best practice

The remainder of the section provides the detailed findings for each research focus area and sub-focus area. Findings from the stocktake are presented, based on data gathered through desk research, interviews/questionnaires, focus groups, and workshops. Subsequently, principles of best practice are formulated. These principles are forward-looking in nature, and either describe selected practices observed among advanced supervisors or propose approaches not yet implemented and to be further developed. The definition of best practices seeks to reflect not only the desired level of ambition expressed by supervisors, but also external stakeholder expectations, including banks, civil society organisations, and other stakeholders.

#### 4.3.1 ESG risk definition and identification

##### 4.3.1.1 ESG risk definition

To explore the integration of ESG risks into EU prudential supervision, it is necessary to understand how supervisors define ESG risks or, indeed, whether supervisors recognise ESG risks at all. To this end, it was found that 42% of analysed supervisors referenced the term “ESG risk”, “sustainability risk”, or “climate risk” in their annual report. Typically, such terms were mentioned infrequently, with few supervisors covering the topic explicitly their reporting. This reflects the relatively early stage of the coverage of these risks in the supervisory sphere.

At this point, there is no common definition that could be observed among supervisors for the factors and risks underlying the E, S, and G pillars. This is a view also expressed by the EBA. A recent discussion paper on the management and supervision of ESG risks highlights that “most international frameworks and standards have refrained from establishing a single definition of ESG factors. While there is general agreement that ESG factors represent the main three pillars of sustainability, the lack of a single definition of ESG factors complicates its understanding and management in a consistent way”.<sup>240</sup>

The majority of interviewed supervisors stated that they have not yet decided whether to explicitly define ESG risks. EU-based supervisors indicated their intention to await progress being made in this space, for instance by the EBA, who was instructed to assess the development of a uniform definition of ESG risks including physical risks and transition risks as part of the mandate set out in Article 98(8) of CRD 5, which calls on the EBA to assess the potential inclusion of ESG risks in the supervisory review and evaluation process performed by competent authorities.<sup>241</sup>

The discussion paper published by the EBA on the management and supervision of ESG risks first sets out a definition of ESG factors as “environmental, social or governance characteristics that may have a positive or negative impact on the financial performance or solvency of an entity, sovereign or individual”, and subsequently defines ESG risks as the negative materialisation of these factors, stating that “ESG risks materialise when the ESG factors affecting institutions’ counterparties have a negative impact on the financial performance or solvency of such

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<sup>240</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

<sup>241</sup> In this context, in October 2020, the EBA published a discussion paper on the management and supervision of ESG risks. The paper outlines common definitions of ESG factors and risks, provides an overview of current evaluation methods, outlines recommendations for the integration of ESG risks into business strategies, governance and risk management, as well as supervision, and invites feedback from interested stakeholders by 3 February 2021. Given the significant overlap between the aims of Objective 2 of this study and those of the EBA discussion paper, this study seeks to convey the core messages of the discussion paper only, while inviting readers to peruse the discussion paper for more in-depth details.

institutions.”<sup>242</sup> The paper sets out a detailed, though non-exhaustive, list of ESG factors, as well as associated indicators and metrics. Other supervisors have published their own ESG-related non-binding guidelines – for example, the ECB (focusing on climate and environmental related risks specifically), Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin), and Österreichische Finanzmarktaufsichtsbehörde (Austrian FMA) – which also include guidance with respect to ESG risk definition.

Of those supervisors that provide guidance or state that they have a definition in place, some have high-level and comprehensive definitions of ESG risk, which focus on all three pillars based on the expectation that all areas should be addressed. Other supervisors have definitions in place that focus on one particular element within ESG risk (usually climate or environmental-related risk, as further detailed below). Some respondents highlighted that focusing on a specific ESG risk element has certain benefits given the different nature of the factors (e.g. time horizons over which they manifest) and their different transmission channels. In addition, given that most banks are at an early stage of ESG risk integration, some respondents believe that a definition and focus on a certain risk type might be more feasible and easier to implement for banks and supervisors alike. According to one participant, focusing on climate-related risk for now allows them to build capacity and capabilities which could then potentially be transferred to other ESG risks. *Figure 53* highlights some illustrative comments by supervisors on the definition of ESG risks.

Figure 53: Illustrative comments on ESG risk definition

**How do you define ESG risks?**

*“ESG risks are not a homogenous category and each pillar will need to be tackled separately”*

*“While we believe that the S and G are also two relevant risks in the area of sustainable finance, for the time being, we have focused on the environmental risk and climate change risk”*

*“E, S, and G risks are interconnected and interrelated. They are therefore, in our supervision, generally treated as a full package”*

*“Sustainability risks are environmental, social, or governance events or conditions, which, if they occur, have or may potentially have significant negative impacts on the assets, financial and earnings situation, or reputation of a supervised entity”*

*“Guidance and information from European institutions/regulators would be welcome”*

*“We intend to follow the EBA recommendations and apply an ESG definition which will be consistent with the one proposed by the EBA”*

*“Key drivers of ESG risk are multiple and this is a non-exhaustive list: climate change, policy changes, technological advances, shift in public sentiment”*

Similarly to the question posed to banks, and as described in section 3.3.1, supervisors were asked to assess the relevance of identified themes of ESG risks, as well as the most common ESG factors falling under each theme. The majority of interviewed supervisors (79%) did not provide a ranking of the ESG themes. Reasons given for this included the view that all themes and associated factors should be considered equally important, and therefore ranking these elements would be inappropriate. Others argued that it is not within the remit of a supervisor to prioritise such elements, and that this decision and prioritisation should be left to the banks themselves, as the relevance of the elements can depend upon the business model or portfolio composition

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<sup>242</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

of the bank. This sentiment is echoed in the aforementioned EBA discussion paper, which states that “the relevance of ESG factors for institutions depends on their business activities and on the type of assets (e.g., sectors and geographic location of counterparties, issuers of invested financial instrument) and liabilities (e.g., issuance of financial instruments, funding profile) that the institutions hold.”<sup>243</sup>

Overall, where rankings were provided by respondent supervisors, climate change was most frequently ranked as the ESG theme with highest relevance, followed by natural resources and pollution. Within the E pillar, climate change (including transition and physical risks) was mentioned as the core focus by supervisors in multiple jurisdictions, which is also in line with the responses provided by banks. This has also manifested in various supervisory publications over the past years. The PRA, in its 2019 Supervisory Statement on enhancing banks’ and insurers’ approaches to managing the financial risks from climate change, provided a definition of climate-related risks, and their decomposition into physical and transition risks.<sup>244</sup> In addition, the ECB Guide on climate-related and environmental risks identifies the two main drivers of climate risks as physical and transition risk.<sup>245</sup>

Natural resources and pollution was mentioned as the second most relevant ESG theme by supervisors. For instance, biodiversity is increasingly being discussed in terms of how it relates to prudential supervision. In June 2020, De Nederlandsche Bank (DNB) published a report exploring biodiversity risks in the Dutch financial sector, which recommended that financial institutions should identify the physical, transition, and reputational risks associated with biodiversity loss, as well as the development of consistent standards for measurement and reporting these risks.<sup>246</sup> This is in contrast to views provided by interviewed banks, where natural resources and pollution was deemed the third least relevant theme. Although banks and supervisors alike consider climate change to be the most relevant ESG theme, it is worth noting that other viewpoints consider biodiversity to be just as much of a risk, if not more so, in the short term. For example, a recent independent report on the economics of biodiversity noted that “at least as grave a danger facing humanity as global climate change is the unprecedented rate of loss in biological diversity now taking place”.<sup>247</sup>

The two next most highly ranked ESG themes fall under the G pillar, namely board quality and corporate behaviour. Interviewed supervisors consider the G pillar relatively well understood, with underlying key drivers being regulation and legislation. That said, the focus of supervisory definitions and guidance has been on banks’ own governance practices, rather than on the governance of counterparties.

ESG themes falling under the S pillar – external and internal stakeholder management – received the lowest scores from supervisors in terms of relative ranking. External stakeholder management

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<sup>243</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>244</sup> Bank of England (2019). *Enhancing banks’ and insurers’ approaches to managing the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>.

<sup>245</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>246</sup> De Nederlandsche Bank (2020). *Indebted to nature: Exploring biodiversity risks for the Dutch financial sector*. Available at: [https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20\\_tcm47-389172.pdf](https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20_tcm47-389172.pdf).

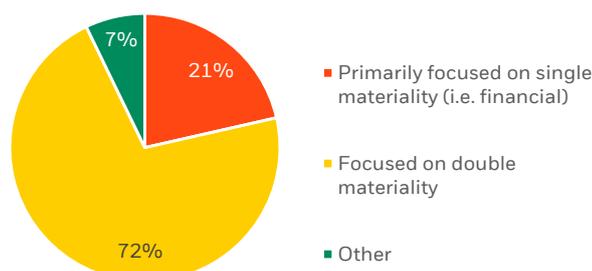
<sup>247</sup> Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/962785/The\\_Economics\\_of\\_Biodiversity\\_The\\_Dasgupta\\_Review\\_Full\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf).

was ranked lowest, in contrast to the perception from banks, where it was ranked as third most relevant. These topics are currently not highlighted as a major area of further focus in prudential supervision by most respondents. In contrast, some supervisors, particularly in emerging markets, have historically placed emphasis on the S pillar. An example of this is Banco Central do Brasil (the Central Bank of Brazil), as evidenced by the enactment of Resolution no. 4,327 in 2014, which assigned guidelines for financial institutions that must be observed in the establishment and implementation of the Social and Environmental Responsibility.<sup>248</sup>

The majority of interviewed supervisors stated that they define ESG risks through the double materiality perspective, which takes into account the impact of banking activities not only on the bank itself but also on the external environment and societal context. Most interviewed banks stated that this is the approach they abide by, as well as being the approach advocated by many civil society and international organisations (as described in section 3.3.1). The EBA has acknowledged the double materiality perspective, which includes:

- i. “financial materiality, which may arise from such economic and financial activities throughout their entire value chain, both upstream and downstream, affecting the value (returns) of such activities and therefore typically of most interest to institutions; and
- ii. environmental and social materiality, stemming from the external impact of those economic and financial activities, typically of most interest to citizens, consumers, employees, business partners, civil society organisations and communities.”<sup>249</sup>

**Figure 54: ESG definition by materiality approach**<sup>250</sup>



Source: BlackRock FMA analysis

However, while most respondent supervisors acknowledged the relevance of the double materiality perspective, as shown in *Figure 54*, they also mentioned that it would not necessarily be taken into account in all aspects of prudential supervision given their stated mandated focus on traditional financial and non-financial risk.

Of the 21% of supervisors who primarily focus on single materiality, most stated that, while they acknowledge the importance of double materiality from a holistic societal perspective, their mandate is to focus on financial materiality. As noted by one interviewed civil society

<sup>248</sup> Banco Central Do Brasil (n.d.). Webpage: *Social and environmental responsibility*. Available at: <https://www.bcb.gov.br/en/about/socialresponsibility>.

<sup>249</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>250</sup> Question: *Does your above definition of ESG risk focus on single or double materiality?* Sample size: 14. “Other” relates to the following answer: The respondent believes that more clarification on the need for banks to monitor their portfolios from the angles of both the financial risk and impact of their activities would be justified in light of potentially elevated transitional and reputational risks going forward.

organisation, the CRR currently focuses mostly on financial materiality, and it would require a substantial legislative change for the double materiality perspective to be considered in regulation. It was also remarked that the NFRD, or revisions thereof, could be used to complement the CRR disclosure requirements and enhance the double materiality view. Change Finance believes that it is a responsibility of central banks to focus on the societal context, stating that they “should play a more active role by aligning their policy with long-term society needs.”<sup>251</sup>

Some respondent supervisors also raised the question as to what double materiality should, or would, entail for a supervisor’s role. As mentioned by one respondent, it may be seen as a method for supervisors to dictate the way banks should orientate their business models – which could be seen as going beyond the mandate of a supervisor – and may be better addressed via other measures, such as fiscal and legislative measures. One interviewed bank remarked that it will be interesting to see how supervisors will position themselves in this context, and believes that a balance needs to be struck between traditional analysis and integration of ESG risks into supervisory processes, such as the ICAAP, and any attempt to help define the end goal for the economy and society.

Overall, according to several EU-based supervisors, the extent to which the concept of double materiality will be addressed by supervisors is dependent on guidance provided by European institutions, such as the EBA and the Commission. That said, most EU-based supervisors expect that the double materiality view on banking activities will increasingly be adopted by both supervisors and banks, given developments at national and EU level. For instance, the NFRD already requires banks to change reporting to focus more on the impact of their lending, underwriting and investing activity, rather than the impact on their own operations. One interviewed civil society stated that the purpose of financial regulation is not only to stabilise the financial system but also to safeguard societal interests and, therefore, the double materiality perspective must be applied. As also noted in section 3.3.1, several supervisors mentioned that they consider the concepts of single and double materiality to be interlinked. For example, if a bank grants credit to a counterparty contributing in a negative way to an ESG issue, this can translate into financial risk – for example, through reputational risks for the bank.

All respondent supervisors agree that financial risks from climate change fall under the remit of regulation and supervision. This is also recognised in other reports, such as an NGFS report whereby it is stated that NGFS members acknowledge that “climate-related risks are a source of financial risk. It is therefore within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks.”<sup>252</sup> Regarding other ESG issues, some supervisors stated that these cannot be considered within the remit of supervision as long as they are not considered to imply direct financial risks.

Among civil society organisations, discussions on the topic are ongoing, with some proposing that the European Commission renew and link the mandates of the European Supervisory Agencies (ESAs) to enable a co-ordinated approach to climate-related risk.<sup>253</sup> As specified in a paper by the Centre for Research on Multinational Corporations (SOMO), while some supervisors deem ESG risk supervision relevant for financial stability, and thus already included in their current supervisory mandate, many supervisors regard an explicit mandate necessary to “actually

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<sup>251</sup> Change Finance (n.d.). *Saving our planet*. Available at: <https://www.changefinance.org/it/solution/saving-our-planet-2/>.

<sup>252</sup> Network for Greening the Financial System (2019). *A call for action – Climate Change as a source of financial risk*. Available at: <https://www.banque-france.fr/en/financial-stability/international-role/network-greening-financial-system/first-ngfs-progress-report>.

<sup>253</sup> See for example: E3G (2020). *A vision for sustainable finance in Europe*. Available at: [https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe\\_Full-Report.pdf](https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe_Full-Report.pdf).

go and apply ESG supervision”.<sup>254</sup> As further detailed in the paper, current proposals to review EU laws on establishing the ESAs may not be sufficient; amendments of supervisory “tasks, powers, activities and functioning” would also be useful.

#### Principles of best practice based on stakeholder perspectives

**Supervisors should develop, and continually update, a definition entailing a granular list of underlying ESG factors for each ESG pillar.** Such a definition would enhance the understanding and management of ESG-related risks for supervisory purposes. The definition should be regularly reviewed and expanded, with input gathered from external parties, such as civil society organisations and supervised banks.

**Supervisors should provide guidance to banks with respect to an overarching definition framework.** They should engage with banks to ensure that they understand the risks to which the banks may be exposed. Supervisors should allow definitions within banks to remain flexible, allowing for geographic and business model specificities to be built in.

**Clarity and cohesiveness on the view of the materiality of ESG risks would aid in the provision of guidance on any future approach to ESG integration.** Differing opinions exist among supervisors as to whether ESG risks should be viewed through a single or double materiality lens, although generally there is consensus in the EU that double materiality is in focus.<sup>255</sup> Most supervisors believe that ESG risk should be viewed through the double materiality lens, be captured – at a minimum – under reputational risk, and interlinked with financial materiality. Others believe that these risks should be viewed via the single materiality perspective, by virtue of the current prudential supervisory mandate. Stakeholders believe that agreement on this topic between legislators, supervisors and banks would enable a common basis for the understanding and treatment of ESG risks in the financial system. Regardless of the adopted viewpoint, supervisors should be aware of whether banks adequately assess their impact on the broader environment.

#### 4.3.1.2 ESG risk transmission channels

Understanding the transmission channels of ESG risks is the basis for analysing the relevance of ESG risks for prudential supervision, and how they impact the financial system and banks. According to respondent supervisors, these risks typically materialise through traditional risk types. *Table 10* provides an overview of the relevance of ESG risks for traditional risk types based on responses from supervisors. Credit risk was considered the risk type for which ESG risks are perceived as most relevant, with respondents noting that financial institutions are being exposed to credit risk from environmental issues in particular. This was followed by concentration risk and reputational risk, which were deemed by supervisors as equally relevant. Next follows market risk, legal risk/conduct/compliance risk, and strategic risk, which, on average, were also scored quite highly and considered as equally relevant. Lastly, operational risk, and liquidity risk were perceived as least relevant.

Comparing the responses from supervisors with those from banks (see section 3.3.1.3), two observations stand out. Both supervisors and banks consider ESG risks as most relevant to credit

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<sup>254</sup> Centre for Research on Multinational Corporations (SOMO) (2018). *Supervising the environmental, social and governance impact of Finance - How to reinforce the role of European and national supervisory authorities?* Available at: <https://www.somo.nl/wp-content/uploads/2018/08/ESAs-and-national-supervisors-role-for-sustainability-final-version.pdf>.

<sup>255</sup> The single materiality perspective – also known as financial materiality – focuses only on the relevance of ESG considerations representing financial risk to an entity. The double materiality perspective – which is acknowledged by the EBA –, however, encompasses financial materiality as well as social and environmental materiality, i.e. the impact of an entity’s actions on the environment and broader society.

risk. One notable difference is that supervisors consider ESG risks, on average, as being more relevant for each risk type. This is reflected in supervisors' scores, which range from 3.1 to 4.9, whereas respondent bank scores range from 1.7 to 4.0.<sup>256</sup> Overall, respondent supervisors repeatedly highlighted that scores and opinions shared in relation to these topics are based on judgement rather than empirical evidence. In addition, some supervisors felt unable to score these transmission channels, citing a lack of sufficient work in this area to establish a coherent viewpoint.

**Table 10: ESG relevance to risk types<sup>257</sup>**

Risk Relevance	Score	Description	Illustration (not exhaustive)
<b>Credit risk</b>	4.9/5	Loss due to the failure of a counterparty to meet its agreed obligations to pay the bank	ESG component may affect PG/LGD calculation (e.g. damages to borrowers' assets may reduce their collateral value/ability to pay loans)
<b>Concentration risk</b>	4.3/5	Potential for loss in a bank's portfolio due to concentration to a single counterparty, sector or country	Rapid increase in risk exposure across certain ESG friendly asset classes through thematic investments lacking diversification (e.g. renewables)
<b>Reputational risk</b>	4.3/5	Loss of earnings or market capitalisation as a result of stakeholders taking a negative view of the organisation	Decrease in corporate valuation due to scandals/increased scrutiny by clients and customers on ESG issues (e.g. pollution, investments in controversial sectors, etc)
<b>Market risk</b>	4.0/5	Loss of earnings or economic value due to adverse changes in financial market rates or prices	Asset valuations as well as risk-returns across equity, bonds, commodity affected by ESG (e.g. energy and commodity prices by low-carbon transition)
<b>Legal risk/ Conduct/ Compliance Risk</b>	4.0/5	Loss due to the breach of contractual obligations or loss due to a breach of regulatory practices and/or code of conduct and result into civil fines, sanctions, etc	Incurrence of fines due to lack of consideration on compliance with "E&S international standards and regulation on G"
<b>Strategic Risk</b>	4.0/5	Loss due to poor business decision management or from pursuit of an unsuccessful business plan	Failure to account for rising ESG factors, leading to misalignment of business model to market best practice (e.g. not being able to finance the environmental transition)
<b>Operational, IT &amp; Cyber Security</b>	3.3/5	Loss resulting from inadequate procedures, systems or policies and/or from a breach of confidentiality, integrity of information systems	Fraudulent activity within the bank and/or fraud in relation to improper utilisation of financing, originally granted for the ESG scope support.

<sup>256</sup> It should be noted that a number of respondents declined to score the relevance of the various risk types, as no quantitative analysis has been conducted to back up such an assessment.

<sup>257</sup> Question: Where do you consider ESG as a significant driver of risk among traditional risk types? Please provide a score on ESG relevance to each risk type on a scale from 0 to 5, with 0 being not relevant and 5 being very relevant). The score illustrated is the average score provided by respondents. Sample size: 11. Please note not all respondents scored all risk types.

Risk Relevance	Score	Description	Illustration (not exhaustive)
<b>Liquidity risk</b>	3.1/5	Loss due to the failure of a bank to meet short term financial demands	ESG asset classes/instruments may be prioritised above traditional asset classes and instruments affecting the bank's liquidity or funding

Source: BlackRock FMA analysis

Figure 55 lists some comments provided by supervisors in relation to transmission channels for ESG risks.

Figure 55: Illustrative comments on ESG relevance for risk types

**What approach is your organisation taking to map ESG topics and their relevance to traditional financial and non-financial risk types?**

Credit Risk: “We have assessed the mortgage performance linked to energy efficiency and flood risk. Both LGDs and PDs are likely to be impacted by ESG”

Concentration Risk: “The more an institution is exposed to specific vulnerable sectors and counterparties, the higher the impact from ESG risks will be if these materialise”

Market Risk: “Increased volatility and abrupt corrections of market prices of bonds and equities of issuers due to the impact of ESG issues may lead to market losses”

Strategic Risk: “We see the strategic response to climate change as the key mitigant to the future crystallisation of risk. It is vital that firms respond by adjusting their business models appropriately, both from a single and double materiality perspective”

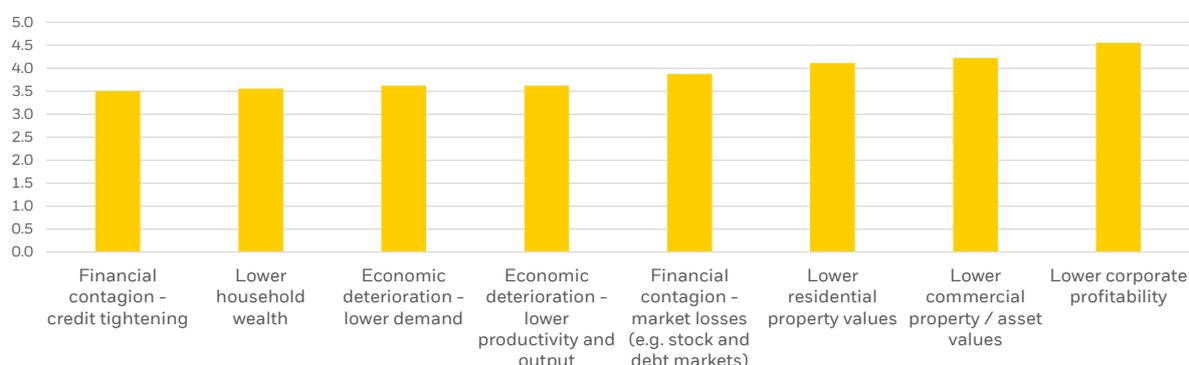
Operational Risk, IT & Cyber Security: “Financing carbon intensive industries may cause adverse publicity, leading to damages in the institution's premises and disruption of its operations from activists' movements and stakeholders' protests”

ESG risks may impact banks' balance sheets and the broader economy through various transmission channels. As shown in Figure 56, on average, respondent supervisors consider lower corporate profitability to be the most important transmission channel for ESG risks, which is in line with banks' perceptions (see section 3.3.1.3). In addition, lower commercial property/asset values, as well as lower residential property values, were identified by interviewed supervisors as the most relevant transmission channels for ESG risks.

An example provided by a respondent illustrated that individuals subject to physical and transition risks (e.g. those working in carbon-intensive sectors) may likely face higher unemployment due to structural changes, which ultimately may lead to higher credit default risk. In addition, supervisors mentioned that regulation related to energy efficiency – which could result in stranded assets –, or physical damages to buildings from weather events, may result in lower commercial asset values, ultimately increasing LGDs. In this context, an interviewed academic highlighted that stranded assets are likely to pose a major threat to banks and to the financial sector going forward, given that ESG risks – and climate-related risks, in particular – are not yet sufficiently reflected in existing risk management models. In addition, the former governor of the Bank of England, Mark Carney, has warned of a climate ‘Minsky moment’, whereby a

disorderly transition towards decarbonisation could bring about the sudden recognition of the scale of stranded assets.<sup>258</sup>

Figure 56: Main transmission channels of ESG risks mentioned by supervisors<sup>259</sup>



Source: BlackRock FMA analysis

At the same time, many respondents highlighted the challenges of understanding and assessing transmission channels for ESG risks. Several supervisors stated that no quantitative analysis has been conducted on this matter so far due to the complexity of the topic given the high interconnectedness of the mentioned transmission channels. From a prudential supervision standpoint, it was highlighted that the materiality and transmission of ESG risks depend strongly on individual institutions' circumstances, including balance sheet composition and geographical exposure.

In addition, respondents stated that the relative importance of transmission channels may vary across the E, S, and G pillars, and that any predictions on the way ESG factors manifest in transmission channels would be hard to predict, given that the consequences of ESG factors are uncertain due to their long-term nature. In addition, many respondents mentioned that there may be additional, yet unidentified, transmission channels.

Finally, although interviewed participants acknowledged the impact ESG risks can have on financial and non-financial risks, and view this as a transversal risk – as opposed to considering ESG risk as a standalone (or principal) risk type – the magnitude of this impact is unclear and, in general, this discussion is still at an early stage. The double materiality concept adds the impact on broader society, which is not covered via traditional risk types.

### Principles of best practice based on stakeholder perspectives

**Further research is required by supervisors to delineate a comprehensive mapping of ESG factors to existing traditional financial and non-financial risk types, as this is necessary to advance the understanding and management of ESG risks within the banking sector.**

Supervisors must develop a thorough understanding of how ESG factors translate into risks, and how they interact with traditional financial and non-financial risk types. This understanding should be established regardless of whether ESG risk is considered as a principal risk type or as a transversal risk.

<sup>258</sup> Bank of England (2020). *The road to Glasgow*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/the-road-to-glasgow-speech-by-mark-carney.pdf?la=en&hash=DCA8689207770DCBBB179CBADBE3296F7982FDF5>.

<sup>259</sup> Question: *What do you believe to be the main transmission channels for ESG risks? Please provide a score on the relevance of these transmission channels on a scale from 0 to 5, with 0 being not relevant and 5 being very relevant.* Scores were aggregated to calculate averages. Sample size: 9.

**Transmission channels for ESG risks should be identified and analysed across the E, S and G pillars.** Qualitative and quantitative analysis should be conducted on the transmission channels to financial risks and financial stability. Further research and analysis by supervisors on ESG risk transmission channels and how they manifest in the financial system is necessary.

#### 4.3.1.3 Quantitative & qualitative assessment of supervised banks

An assessment of the exposure of supervised banks to ESG risks by supervisors should include quantitative and qualitative elements, in line with other risk types.<sup>260</sup> Many supervisors mentioned that there is a need for robust metrics and methodologies by which financial institutions can measure and disclose sustainability related information. This need for commonly adopted quantitative indicators and methodological tools is also noted in the EBA discussion paper on the management and supervision of ESG risks, which recognises their importance for the “incorporation of sustainability-related aspects into financial decision-making and supervision as well as to ensure a level-playing field, prevent the risks of 'green washing' and enhance transparency, customer protection and disclosures”.<sup>261</sup>

However, the majority of interviewed supervisors do not yet have quantitative indicators in place to monitor and assess the exposure of supervised banks to ESG risks. Many supervisors stated that developments on the E pillar, while advancing in particular for climate, are still at an early stage, whereas those related to the S and G pillar are more qualitative in nature and thus more difficult to quantify from a risk perspective. To this end, despite the relatively early stage of advancement, the findings of the Basel Committee on Banking Supervision (BCBS) survey on current initiatives in relation to climate-related financial risks show that an “overwhelmingly large share of members have conducted research related to the measurement of climate-related financial risks”.<sup>262</sup>

However, data issues prevail. Several supervisors referenced the challenge that data poses – including data availability and reliability, comparability of data, and standardisation of data –, which can act as an impediment to the effective quantitative assessment of supervised banks. Data-related challenges are also acknowledged by other stakeholders, including civil society organisations and academics<sup>263</sup> and have also been observed in other surveys.<sup>264</sup>

Several European supervisors emphasised that they are currently involved in working groups at an international and European level to identify and develop quantitative risk indicators for the assessment of ESG risks, with the work performed by the NGFS and BCBS repeatedly referenced. For example, in its guide on climate-related and environmental risk, the ECB “acknowledges that the management and disclosure of climate-related and environmental risks, and also the methodologies and tools used to address them, are currently evolving and are expected to mature

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<sup>260</sup> See, for example, the EBA SREP guidelines. EBA (2014). *Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP)*. Available at:

[https://eba.europa.eu/sites/default/documents/files/documents/10180/935249/4b842c7e-3294-4947-94cd-ad7f94405d66/EBA-GL-2014-13%20\(Guidelines%20on%20SREP%20methodologies%20and%20processes\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/935249/4b842c7e-3294-4947-94cd-ad7f94405d66/EBA-GL-2014-13%20(Guidelines%20on%20SREP%20methodologies%20and%20processes).pdf).

<sup>261</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>262</sup> Basel Committee on Banking Supervision (2020). *Climate-related financial risks: a survey on current initiatives*. Available at: <https://www.bis.org/bcbs/publ/d502.pdf>.

<sup>263</sup> See for example ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

<sup>264</sup> See for example EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

over time”.<sup>265</sup> In this respect, the ECB is currently in the process of expanding its quantitative risk indicators to include climate-related and environmental risks – for example, by trying to translate aspects, such as intensity of carbon emissions or exposure to transition risk, into risk indicators.<sup>265</sup> Examples of climate-related and environmental KPIs used by banks include, among others, the carbon intensity of assets and the average energy label of their mortgage portfolios.

Various supervisors also highlighted the importance of the NGFS within this context, whose stocktake exercise provides a general understanding of the type of indicators looked at by supervisors. As illustrated in the NGFS study<sup>266</sup>, there are currently three main types of indicators used by supervisors: i) Metrics related to sector exposure, ii) metrics related to country exposure, and iii) metrics related to ESG standards achievement. Examples of these include: i) Carbon-intensive sectors to which regulated financial institutions are exposed, ii) countries vulnerable to climate change<sup>267</sup> in which their activities are located, iii) energy label distribution within the commercial real estate portfolio of a financial institution, and iv) exposure of financial institutions and households to flood.

The conducted interviews and research indicate that, while supervisors are currently experimenting with underlying methodologies – for instance, assessing vulnerability based on exposure to sectors with different levels of GHG emissions intensity and location of collateralised household exposures –, there is no established standard at this point, and according to many respondents, the identification of risk indicators is still at an early stage.

However, there has been a noted increase in momentum in recent months. In March 2021, the EBA published their response to the Commission’s call for advice on KPIs and related methodologies for the disclosure of information on environmental sustainability activities aligned to the EU Taxonomy by credit institutions and investment firms.<sup>268</sup> The green asset ratio (GAR) has been determined by the EBA as the most suitable KPI by which credit institutions should disclose to what extent financing activities are aligned with the EU Taxonomy, and thereby aligned with the Paris Agreement and SDGs.<sup>269</sup> The GAR represents the proportion of a credit institutions’ assets invested in taxonomy-aligned activities compared with overall eligible assets. GAR is defined for the various on-balance-sheet portfolios and objectives (i.e. including climate change mitigation, climate change adaptation and other environmental objectives), as well as at an aggregate level. Banks should also estimate and disclose the percentage of total on-balance-sheet assets covered by the GAR. Metrics are also proposed for off-balance-sheet exposures, the trading portfolio, as well as fees and commission income.

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<sup>265</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>266</sup> Network for Greening the Financial System (2020). *Guide for Supervisors Integrating climate-related and environmental risks into prudential supervision*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf).

<sup>267</sup> According to, for example, the Notre Dame Global Adaptation Initiative (ND-GAIN) Index or Standard & Poor’s methodology.

<sup>268</sup> EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf).

<sup>269</sup> EBA (2021). *Advice to the Commission on KPIs and methodology for disclosure by credit institutions and investment firms under the NFRD on how and to what extent their activities qualify as environmentally sustainable according to the EU Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM\\_Disclosure%20Article%208%20Taxonomy.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM_Disclosure%20Article%208%20Taxonomy.pdf).

In addition to the quantitative assessment – and equally important –, a significant portion of supervisors’ assessments of banks is based on qualitative elements, which are needed to assess whether sound processes to manage ESG risks are in place. To this end, the integration of ESG risks in a bank’s business strategy, as well as risk governance and risk strategy, were mentioned as being among the most important elements by respondents<sup>270</sup>, which is consistent with guidelines from the EBA<sup>271</sup>, according to which institutions should take into account material factors when determining their business strategy. This is further reiterated in the ECB Guide on climate-related and environmental risks which states that, when determining and implementing their business strategy, “institutions are expected to integrate climate-related and environmental risks that materially impact their business environment in the short, medium or long term.”<sup>272</sup> Another area being assessed by supervisors relates to the definition and identification of ESG risks by supervised banks. For example, according to the ECB Guide, when evaluating their business environment, institutions are expected to identify risks arising from climate change and environmental degradation.<sup>273</sup>

In their qualitative assessment of supervised banks, some supervisors plan to take into account current measurement, assessment, and risk management approaches of ESG risks. For instance, one supervisor stated to assess whether climate-related risk has been included in the risk processes, including risk appetite, and whether specific scenario analyses are being conducted for climate-related risk. One supervisor specified that it undertakes the ESG risk assessment in a qualitative manner using the institutions’ ICAAP reports and the disclosures in the annual reports on Corporate Social Responsibility.

Finally, in the aforementioned response to the Commission’s call for advice on KPIs and related methodologies, the EBA also indicated proposed areas for the qualitative assessment of banks, by outlining advice on qualitative disclosures in the form of “contextual information to help stakeholders understand the quantitative indicators”.<sup>274</sup>

### Principles of best practice based on stakeholder perspectives

**Common quantitative indicators and methodological approaches among EU-based and global supervisors should be used for the quantitative assessment of ESG risks. The identification and analysis of such indicators should be facilitated and further promoted by supervisors.** It is recognised that the development of quantitative indicators will progress in tandem with the development of methodologies. Nevertheless, supervisors should build out a base of common indicators and indicative thresholds. EU-based supervisors should pay

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<sup>270</sup> Question: What are the key elements you consider in order to assess whether supervised entities have a sound risk management in place to manage ESG risks? Please provide a score on the relevance of these elements on a scale from 0 to 5, with 0 being not relevant and 5 being very relevant.

<sup>271</sup> EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at: [https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf).

<sup>272</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>273</sup> European Central Bank (2018). *ECB Guide to the internal capital adequacy assessment process (ICAAP)*. Available at: [https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap\\_guide\\_201811.en.pdf](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap_guide_201811.en.pdf).

<sup>274</sup> EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf).

particular attention to recent work by the EBA regarding quantitative KPIs.<sup>275,276</sup> The existence of common indicators and methodological approaches will enable comparability of results across banks, as well as the aggregation of metrics. Certain higher risk sectors could be prioritised. Stakeholders also consider scenario analysis and stress testing as core components of the quantitative assessment of banks.

**Proportionality should be applied in terms of supervisory expectations of banks.** A core standard set of indicators should be defined by supervisors by which all banks can reasonably be expected to comply, while an additional set of indicators could be defined for larger banks or those deemed to be exposed to a higher level of risk.

**ESG risk management within supervised institutions should be assessed in a holistic manner, as for other risk types.** This would cover, for example, ESG risk governance and strategy, ESG risk definition and identification, as well as ESG risk measurement and assessment. If ESG risk is not treated as a principal risk type, a clear articulation of how ESG risks are assessed transversally across traditional risk types should be provided.

### 4.3.2 ESG governance and strategy

#### 4.3.2.1 ESG risk prudential supervision strategy

As described in the NGFS guide for supervisors published in May 2020, supervisors' own governance and set-up in order to adequately address climate-related and environmental risks is an important element of supervisory advancement of ESG topics.<sup>277</sup>

All respondent supervisors mentioned the increasing importance of ESG risks, and the need to further integrate ESG risks into prudential supervision, although few have communicated an explicit strategy. Consequently, all interviewed supervisors stated that they have plans to further integrate ESG risks within the scope of their definition (as outlined in section 4.3.1.1), into prudential supervision in the future. Despite differing approaches adopted, and varying levels of advancement on the path of ESG integration, most supervisors stated that further improvements are required, as prudential supervision in the context of ESG risk is at an early stage. One supervisor noted that supervisors, regulators, and supervised banks alike are all learning by doing. Of the sample of analysed supervisors, 33% have indicated plans to integrate ESG risk into their prudential supervision strategy.

In terms of the approach adopted towards integration of ESG risks into prudential supervision, broadly two groups seem to exist. The first group comprises supervisors that have an ESG strategy, specific initiatives, and explicit timelines in place, and who aim to drive the topic of ESG

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<sup>275</sup> EBA (2021). *Advice to the Commission on KPIs and methodology for disclosure by credit institutions and investment firms under the NFRD on how and to what extent their activities qualify as environmentally sustainable according to the EU Taxonomy Regulation*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM\\_Disclosure%20Article%208%20Taxonomy.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20Tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM_Disclosure%20Article%208%20Taxonomy.pdf).

<sup>276</sup> EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

<sup>277</sup> The paper also provides an overview of recommended approaches to governance for supervisors; in particular, the report recommends that "a supervisors' board of directors is fully on board and provides a clear steering", and also advocates for dedicated organisational structures, giving examples as networks, internal hubs, and dedicated units. See: Network for Greening the Financial System (2020). *Guide for Supervisors Integrating climate-related and environmental risks into prudential supervision*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf).

integration within prudential supervision as well as other elements of their remit more actively, where relevant. Within the EU, these tend to be mostly supervisors from larger jurisdictions. Rationales provided for this approach include: i) The belief that addressing the topic rather sooner than later allows one to influence developments on a wider scale, ii) the need to address specific ESG risks – such as risk from climate change – in the short term, as well as iii) the need to address an increasing number of requests or ESG-related expectations from major stakeholders, including governments and civil society organisations. Other supervisors outside of the EU, for example, the Monetary Authority of Singapore (MAS), are working on a comprehensive, long-term strategy.

The other group maintains a ‘wait and see’ approach and intends to take more action once further guidance and regulation has been published. Reasons for this approach mentioned by respondents include limited resources to dedicate to the topic, and concerns around the need for potential revisions of their strategic approach in the future given the various differing developments on the treatment of ESG risks that may arise, for example, on EU level. This group entails mostly supervisors from smaller EU jurisdictions. For example, many EU-based supervisors indicated the intention to await further EU legislative and regulatory developments, specifically the EBA mandates in the context of the revision of the CRR 2<sup>278</sup> and CRD 5<sup>279</sup>. As part of this mandate, the EBA will assess the potential inclusion of ESG risks in the supervisory review and evaluation process performed by competent authorities, “specify ESG risks’ disclosures as part of the comprehensive technical standard on Pillar 3”, and “assess whether a dedicated prudential treatment of exposures related to assets or activities substantially with environmental and/or social objectives would be justified (as a component of Pillar 1 capital requirements).”<sup>280</sup>

There are notable differences in terms of scope and prioritisation of ESG risks among the supervisors who expressed that they have some form of ESG risk strategy in place. The approaches adopted by supervisors can be in the form of guidance or good practice publications, as well as the existence of specific programs or action plans focused on, for example, green finance. Examples of entities who have adopted a broad ESG-focused strategy include BaFin (published guidance on sustainability risks<sup>281</sup>), and the Austrian FMA (published a cross-sector guide for handling sustainability risks<sup>282</sup>).

Other supervisors are prioritising the E pillar for now, and within that pillar there is often an emphasis on climate. Examples of entities with an E focus include the ECB (who published a guide on climate-related and environmental risks<sup>283</sup>), the DNB (who has maintained focus on

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<sup>278</sup> EBA (n.d.) *Interactive Rulebook – Capital Requirements Regulation 2 (CRR 2)*, Available at: <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/100427>.

<sup>279</sup> Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures. OJ L 150/253, 7.6.2019, p. 253–295 Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC).

<sup>280</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

<sup>281</sup> BaFin (2019). *Guidance Notice on Dealing with Sustainability Risks*. Available at: [https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung\\_191220\\_MB\\_Nachhaltigkeitsrisiken\\_en.html](https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung_191220_MB_Nachhaltigkeitsrisiken_en.html).

<sup>282</sup> Österreichische Finanzmarktaufsichtsbehörde (2020). *FMA guide for managing sustainability risks*. Available at: <https://www.fma.gv.at/en/fma/fma-guides/>.

<sup>283</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

climate and biodiversity-related issues<sup>284,285</sup>), the MAS (who launched a Green Finance Action Plan – where one of the aims is to provide environmental risk management guidelines to the banking sector – alongside proposed guidelines on environmental risk management for banks<sup>286,287</sup>), and the Magyar Nemzeti Bank (the Central Bank of Hungary, who launched a Green Program to promote environmentally friendly financial practices<sup>288</sup>). Finally, examples of supervisory authorities who have opted to first advance on a climate-focused strategy include the ACPR (who published a guide on good practices for the governance and management of climate-related risks<sup>289</sup>), and the PRA (who set out supervisory expectations on how firms should manage the financial risks from climate change<sup>290</sup>).

Some supervisors currently have a climate-related risk strategy with a plan to translate this into a more granular supervisory strategy at a later point. One stated reason for this approach is that tackling climate-related risk and or environmental issues alone is already a challenge for supervised institutions, and that it might be more effective for supervised institutions to develop capabilities in one area, such as climate, before broadening and extending the coverage to other ESG areas. Another reason stated by supervisors for focusing on environmental issues is that they see key differences in the characteristics of the different ESG pillars. For example, climate-related risk is seen as comparably easier to quantify than other ESG risks at this point. One supervisor stated that, as ESG risks are not a homogenous category, each pillar will need to be tackled separately, and that the way to address each pillar will probably require more regulatory and supervisory emphasis going forward.

As shown in *Figure 57*, 22% of interviewed supervisors stated that they have expanded the scope of their prudential supervision to explicitly include ESG risks in all three pillars – with another 21% having expanded the scope to include one pillar specifically – and accordingly they will increase expectations of banks in the coming years in this context. The remainder stated that they plan to expand the scope of their prudential supervision to cover ESG risks, although they did not specify associated time horizons. Within the expansion, several supervisors described the ambition to increase engagement with the industry to raise awareness, build knowledge, and formulate supervisory expectations, particularly on environmental issues. Others, who already incorporate climate-related risks, mentioned plans to potentially expand their prudential risk work to cover broader environmental issues such as biodiversity. Whilst most respondents have started with a qualitative assessment, several supervisors plan to introduce more quantitative elements and conduct stress tests.

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<sup>284</sup> De Nederlandsche Bank (2020). *Good practice: Integration of climate-related risk considerations into banks' risk management*. Available at: <https://www.dnb.nl/media/a4gdcovq/consultation-document-good-practice-integration-of-climate-related-risk-considerations-into-banks-risk-management-nov-2019.pdf>.

<sup>285</sup> De Nederlandsche Bank (2020). *Indebted to nature: Exploring biodiversity risks for the Dutch financial sector*. Available at: [https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20\\_tcm47-389172.pdf](https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20_tcm47-389172.pdf).

<sup>286</sup> Monetary Authority of Singapore (n.d.). Webpage: *Sustainable Finance*. Available at: <https://www.mas.gov.sg/development/sustainable-finance>.

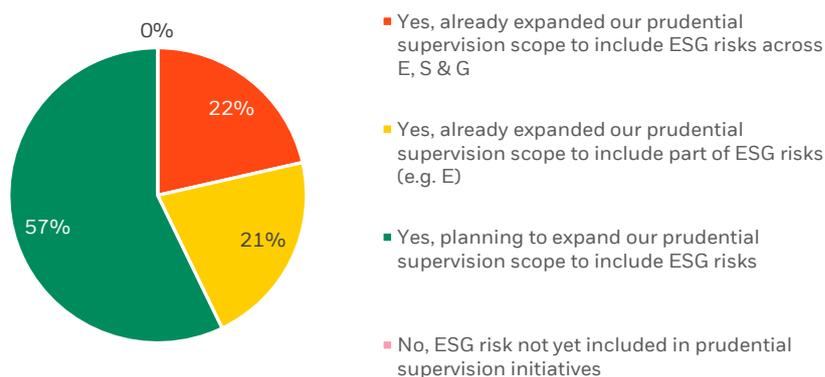
<sup>287</sup> Monetary Authority of Singapore (2020). *Proposed Guidelines on Environmental Risk Management (Banks)*. Available at: <https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Consultation-Papers/2020/Consultation-Paper-on-Proposed-Guidelines-on-Environmental-Risk-Management-for-Banks.pdf>.

<sup>288</sup> Magyar Nemzeti Bank (2019). *MNB Green Program*. Available at: <https://www.mnb.hu/letoltes/mnb-green-program-en.pdf>.

<sup>289</sup> ACPR (2020). *Governance and management of climate-related risks by French banking institutions: some good practices*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525\\_synthese\\_gouvernance\\_anglais.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525_synthese_gouvernance_anglais.pdf).

<sup>290</sup> Prudential Regulation Authority (2019). *Supervisory Statement | SS3/19 Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>.

Figure 57: Ongoing initiatives to expand scope of prudential supervision<sup>291</sup>



Source: BlackRock FMA analysis

Overall, respondent supervisors mentioned, among others, the following areas as priorities in the context of ESG integration into banking supervision: i) Understanding the impact of ESG risks on supervised institutions, ii) developing know-how within the supervisory institutions, as well as banks, and participating in standard setting, iii) enhancing supervision & supervisory guidance, reporting and disclosure, and iv) conducting engagement activities, both with supervised banks in order to raise awareness, as well as with international bodies and working groups.

#### Principles of best practice based on stakeholder perspectives

**Supervisors should have a dedicated prudential supervision strategy for ESG risks with publicly stated measurable objectives, priorities, and timelines.** Such a strategy entails initiatives that consider the integration of ESG risks into supervisory frameworks and practices. Strategies – and associated objectives, priorities, and timelines – should be defined in formal documents. The prudential supervision strategy should be aligned with other elements of the overall ESG strategy.

**EU-based supervisors should closely follow and incorporate the work of the EBA in relation to their ESG mandates. Furthermore, supervisors should be proactive in their approach to the integration of ESG risk, and not necessarily await the outcomes of other initiatives.** The EBA mandates relate to the potential inclusion of ESG risks within the SREP, the assessment of a dedicated prudential treatment of exposures associated with environmental and social objectives, and the specification of ESG risks’ disclosures as part of Pillar 3. Consequently, EU-based supervisors should be prepared to act upon any outcomes from these mandates and also ensure that supervised banks are prepared. However, awaiting the results of the EBA mandates should not preclude supervisors from advancing research into ESG topics, publishing ESG-related guidance, or integrating ESG considerations into existing frameworks.

**Approaching ESG risks under one ‘umbrella’ would enable a comprehensive and coordinated integration and help identify potential ESG trade-offs. Specific topics may be prioritised depending on immediate relevance to supervised banks.** At the same time, it is acknowledged that a grouping of the three pillars is not always the most appropriate approach in the supervisory context, and that ESG risks should also be assessed across the risk

<sup>291</sup> Question: What sub-categories (of E/S/G) do you focus on? Please tick E/S/G themes considered relevant from a risk management perspective and rank from 1 (highest focus) to 6 (lowest focus) the ESG thematic pillars. Sample size: 14.

framework more broadly, due to trade-offs and commonalities. For example, guidance or expectations from supervisors need not always relate to ESG holistically – and can focus on one or more pillars or themes, such as AML under the G pillar or climate change under the E pillar –, while the internal strategy remains broader. This way, ESG themes which are perceived to be more relevant or urgent can be addressed in a timelier manner. In addition, capabilities developed for individual pillars or themes can be expanded and adapted to address other ESG topics in the future.

#### 4.3.2.2 Internal ESG risk capabilities

When asked about their assessment of their own internal ESG capabilities, approximately half of the interviewed supervisors stated that they have sufficient capabilities, but often commented that the needs and requirements could change significantly once ESG becomes more integrated within supervisory processes. In this context, supervisors highlighted three main areas for required capabilities: i) More (and more specialised) resources ii) additional and higher quality data, and iii) new methodologies for ESG risks.

Currently, most supervisors do not have dedicated teams or individuals allocated to ESG, but rather use existing set-ups and resources to address the topic. It was also stated by some respondents that even if there is a sufficient number of employees involved in ESG topics, they are often in different teams across the organisation, with dual roles and no direct lines of reporting. Another supervisor emphasised the need for ESG specialists (e.g. climate scientists), which are not too numerous and usually not employed in the financial sector. Another respondent believes that, although capabilities and resources might currently be sufficient, as activities in relation to ESG risks are still considered at a more conceptual and design level, resources will quickly turn out to be insufficient once ESG risks become further integrated into day-to-day supervisory approaches. Many respondents expressed the benefits of having an internal senior sponsor for the topic.

Another obstacle related to internal ESG capabilities, which affects supervisors and supervised institutions alike, is the lack of ESG-related data. Most supervisors mentioned that consolidation of ESG-related data, and identifying and addressing data gaps, would be a key element in developing internal capabilities. To do so, one supervisor has decided to develop an internal bespoke sustainable finance hub. Another supervisor proposed the central and public pooling of raw sustainability data, which could be contributed to by all relevant stakeholders.

An example of data availability challenges for supervisors is outlined in the NGFS guide for supervisors on integrating climate-related and environmental risks, where it is stated that in order to measure transition risks accurately, there is a “need for firm-by-firm carbon data” but that “carbon-emissions data are available only for some of the larger listed companies.”<sup>292</sup> The Commission’s CSRD proposal may help to bridge this data availability gap, as it expands the scope of the existing NFRD (see section 3.3.4.2 for further details).

The importance of the development and definition of standardised methodologies for ESG risks was highlighted by many supervisors. This is considered by most respondents to be at an early stage, with the focus mostly on climate-related risk at this point in time. For example, one respondent stated that it is difficult to adapt frameworks which have previously been applied to other topics – such as the conventional stress test framework – to a topic like climate change due to the associated long-term time horizons and other methodological challenges. The time

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<sup>292</sup> Network for Greening the Financial System (2020). *Guide for Supervisors Integrating climate-related and environmental risks into prudential supervision*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf).

horizon of a conventional stress test is typically two to three years<sup>293</sup>, whereas proposed climate stress tests span decades (see section 4.3.3.2.2 for further details on proposed climate stress tests).

To enhance ESG capabilities, supervisors consider two key enablers as relevant: i) In-house ESG knowledge development and associated trainings, as well as ii) international cooperation. With respect to the former, many supervisors have formed internal working groups in order to enhance and consolidate knowledge on ESG topics, while others are providing specialised trainings focused on supervisory, regulatory and financial stability topics related to ESG to their employees.

All respondents agree that international cooperation such as membership and interaction with other organisations, including national and international working groups (e.g. via NGFS, EBA, SSM, FSB, or the Basel task-force, to name a few) is important for driving the integration of ESG risk into prudential supervision, and harmonising various views and approaches. Most supervisors referenced the NGFS in this context, which currently consists of 87 members and 13 observers.<sup>294</sup>

Collaboration between supervisors and regulators, as well as between supervisors and their supervised banks, is seen as an important element of a successful supervisory ESG strategy. For example, the non-binding recommendations of the NGFS for supervisors “aim to contribute to developing an international approach that is as harmonised as possible”.<sup>295</sup> Respondent banks and supervisors alike seem to agree that harmonisation and collaboration in this developing field is critical for its success.

Many participants stated that they already see evidence of a good level of collaboration between supervisors and banks, something which is not always observed to a similar extent in the context of other supervisory initiatives. One supervisor mentioned that a cooperative stance is frequently encountered with the aim to collectively solve the challenges of this difficult topic. For instance, the PRA and Financial Conduct Authority (FCA) jointly established the Climate Financial Risk Forum (CFRF) – including banks, insurers, and asset managers, as well as trade bodies – in order to “build capacity and share best practices to advance financial sector responses to the financial risks from climate change.”<sup>296</sup>

### Principles of best practice based on stakeholder perspectives

**Membership in international fora and associated working groups will be key to harmonisation and joint development of supervisory approaches to ESG.** Stakeholders believe that this is important for driving the integration of ESG risk into prudential supervision and harmonising approaches. Regular updates regarding activity in various networks should be shared internally with relevant parties, to foster organisational alignment on ESG topics. A key example of such a forum in the supervisory context is the NGFS. Collaboration between supervisors and regulators, as well as between supervisors and banks, is also seen as an important element of a supervisory strategy. An open dialogue with, and consideration of the views of, civil society organisations and other relevant organisations is continually fostered.

<sup>293</sup> Bank for International Settlements (2017). *Supervisory and bank stress testing: range of practices*. Available at: <https://www.bis.org/bcbs/publ/d427.pdf>.

<sup>294</sup> As of 15 February 2021.

<sup>295</sup> Network for Greening the Financial System (2020). *Guide for Supervisors Integrating climate-related and environmental risks into prudential supervision*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf).

<sup>296</sup> Prudential Regulation Authority (n.d.). Webpage: *Climate Financial Risk Forum*. Available at: <https://www.bankofengland.co.uk/climate-change/climate-financial-risk-forum>.

**Supervisors should be appropriately resourced to successfully implement a prudential supervision strategy in relation to ESG risks. Other capabilities, such as ESG-related methodologies and data, should be developed and enhanced internally and be aligned with common or international approaches.** There should be adequate staff and teams dedicated to the topic, including staff with requisite specialised knowledge. As ESG risks often relate to topics not (yet) addressed in standard supervisory activities, different skillsets may be required, such as climate risk specialists. Sufficient financial resources should be allocated to the development and enhancement of ESG-related capabilities. Supervisors should stay abreast of developments and observed best practices in this context. This should also be maintained through participation in international fora and national and international cooperation.

### 4.3.3 Supervisors' assessment of ESG risk

#### 4.3.3.1 Measurement and assessment

##### 4.3.3.1.1. ESG risk measurement and scenario analysis methodology

Based on supervisors' responses, ESG risk measurement approaches prescribed by supervisors are at an early stage, with reasons given being, among others, a lack of a shared definition of ESG risk and a simultaneous lack of quantitative and qualitative metrics in this field. All interviewed supervisors indicated that, apart from a general expectation that supervised institutions adequately measure their exposure to ESG risk, there is little prescribed guidance, with methodological freedom advocated by most respondents at this point.

Instead, many supervisors intend to guide supervised institutions on elements to be considered in their risk management approach. Such factors to be considered are typically communicated through supervisory expectations, guidelines, or good practice publications, and some supervisors indeed have issued such publications (see section 4.3.4). Others have chosen not to publish guidance, and in the EU specifically await the outcome of the EBA mandates (see section 4.3.4).

Some EU-based supervisors indicated that banks should follow the recommendations of the EBA Action plan, meaning, in the context of sustainable finance, that strategies and risk management, disclosure of key metrics, and scenario analysis should already be factors under consideration by banks prior to the completion of the EBA mandates. Furthermore, supervisors in the EU highlighted the expectation that banks follow the final EBA Guidelines on loan origination and monitoring, whereby institutions are required to include ESG factors in their risk management policies, including credit risk policies and procedures.<sup>297</sup> The EBA discussion paper on the management and supervision of ESG risks delineates three core tools for the assessment and evaluation of ESG risks: i) Portfolio alignment method (see section 3.3.3.1.2), ii) risk framework method (including climate-stress testing) (see later in this section and section 4.3.3.2.2), and iii) exposure method, which is "a tool that banks can apply directly to the assessment of individual clients and individual exposures".<sup>298</sup> This section focuses on the risk framework method.

All interviewed supervisors identified scenario analysis and stress testing as core components of an effective ESG risk measurement strategy, as these tools assist supervisors and supervised

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<sup>297</sup> EBA (2020). *Guidelines on loan origination and monitoring*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20GL%202020%2006%20Final%20Report%20on%20GL%20on%20loan%20origination%20and%20monitoring.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20GL%202020%2006%20Final%20Report%20on%20GL%20on%20loan%20origination%20and%20monitoring.pdf).

<sup>298</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

institutions alike in their understanding of vulnerabilities of supervised institutions to ESG risks, and how they affect a bank's business model, strategy and risk management. Considerations relating to the integration of ESG risks into supervisory stress testing are addressed in section 4.3.3.2.2. Scenario analysis was seen by respondents as particularly important in the context of climate risk, as a forward-looking perspective is deemed to be essential. As highlighted by respondents, given that many of the risks associated with climate change are unprecedented and have complex and non-linear effects, the modelling of these risks poses challenges as historical data are of limited use to predict the future.

The NGFS guide to climate scenario analysis for central banks and supervisors also mentions that distinct characteristics of climate change “are not captured by risk assessment approaches that rely on top down modelling and historical trends”.<sup>299</sup> As such, some supervisors stated that at this point, scenario analysis is the most appropriate tool to quantify the impact of climate change on banks. Indeed, some supervisors have included – or plan to include – scenario analysis considerations in supervisory guidelines or expectations. A recent report by the BIS notes that forward-looking approaches can allow financial institutions to “test the resilience of corporations in their portfolios to potential materialisations of physical and transition risks, their impact on KPIs and the adaptive capacities of these firms”, although the report further qualifies that “it is critical for central banks, regulators and supervisors to assess the extent to which these forward-looking, scenario-based methodologies can ensure that the financial system is resilient to climate-related risks and green swan events”.<sup>300</sup>

The PRA, in its supervisory expectations on banks' and insurers' approaches to managing the financial risks from climate change, explicitly sets scenario analysis apart from risk management as one of the four key expectations. Specifically, where proportionate, firms are expected to use scenario analysis to inform business strategy setting, and risk assessment and identification. Supervised institutions must assess a range of different scenarios associated with the transition to a low-carbon economy, as well as a path where no transition occurs. Analysis is expected to be conducted via a short-term assessment – i.e. the financial impact from climate change within a firm's existing business planning horizon – as well as via a long-term assessment; this latter assessment should consider a range of climate-related scenarios – for example, an average global temperature increase in excess of 2 °C, as well as the impact of a disorderly transition to a low-carbon economy – and should span a period of decades. The PRA expects this to be a qualitative exercise to “inform strategic planning and decision making”.<sup>301</sup>

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<sup>299</sup> Network for Greening the Financial System (2020). *Guide to climate scenario analysis for central banks and supervisors*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_scenario\\_analysis\\_final.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf).

<sup>300</sup> Green swan risks or events are defined as potentially extremely financially disruptive events that could be behind the next systemic financial crisis. See: Bank for International Settlements (2020). *The green swan: Central banking and financial stability in the age of climate change*. Available at: <https://www.bis.org/publ/othp31.pdf>.

<sup>301</sup> Prudential Regulation Authority (2019). *Supervisory Statement | SS3/19 Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>.

Other supervisors have similarly set out specific expectations in relation to scenario analysis and stress testing, including the ECB<sup>302</sup> and BaFin<sup>303</sup>, and the EBA has been mandated to develop a dedicated climate stress test and scenario analyses.<sup>304</sup> One interviewed civil society, while welcoming guidelines on the use of scenario analysis, believes these should be more stringent. The participant stated that some banks are using a below 2-degree scenario to test how physical risks will impact their activities – which they deem insufficient – and believes that scenarios representing a 3 to 4-degree rise in global temperature should be adopted. Other participants also highlighted the importance of any developed scenarios being suitably stringent and/or ambitious. One example provided is that banks should avoid scenarios that incorporate negative emissions technologies (NETs). A report by the European Academies Science Advisory Council (EASAC), – while acknowledging the positive impact NETs can already have in the removal of CO<sub>2</sub> from the atmosphere, as well as the value of further research, development, and investment in such technologies going forward – warns against unrealistic expectations of the future capacity of NETs to adequately compensate for the implementation of poor emissions mitigation measures now, and thus the credibility of scenarios which rely on NETs to achieve net zero targets.<sup>305</sup>

The use of scenarios in the context of climate stress testing is explored in section 4.3.3.2.2. *Figure 58* provides insight into the climate scenarios developed by the NGFS.

**Figure 58: Case study on NGFS climate scenarios**

The NGFS developed the NGFS Climate scenarios, based on existing research literature, to provide a common starting for the analysis of climate-related risks. This first set of climate scenarios for forward-looking climate-related risk assessment was developed primarily for the use of supervisors and central banks, although they may be useful for a wider set of stakeholders.

Two key dimensions were identified for the formulation of these scenarios:

- i. whether the transition occurs in an orderly or disorderly manner (transition pathway);
- ii. the level of action taken to limit greenhouse gas emissions (strength of response).

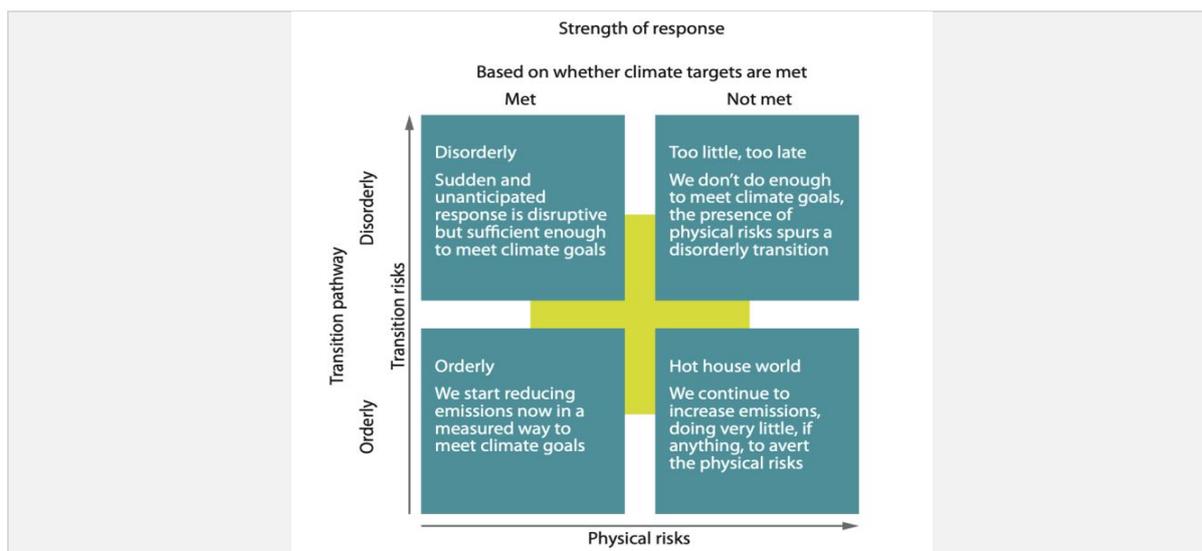
This is presented in the below climate scenario framework.

<sup>302</sup> “Institutions with material climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing, with a view to incorporating them into their baseline and adverse scenarios”. European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>303</sup> “Stress tests may include specific sensitivity and scenario analyses to examine the entity’s ability to withstand adverse events or scenarios caused by physical and transition risks. Stress tests should therefore also take account of scenarios reflecting plausible future developments, and make greater use of long-term scenario analyses”. BaFin (2019). *Guidance Notice on Dealing with Sustainability Risks*. Available at: [https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung\\_191220\\_MB\\_Nachhaltigkeitsrisiken\\_en.html](https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung_191220_MB_Nachhaltigkeitsrisiken_en.html).

<sup>304</sup> “The mandate in Article 98 of CRD 5 also requires from the EBA to develop appropriate qualitative and quantitative criteria, such as stress testing processes and scenario analyses, to assess the impact of ESG risks under scenarios with different severities”. EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

<sup>305</sup> EASAC (2018). *Negative emission technologies: What role in meeting Paris Agreement targets?* Available at: [https://unfccc.int/sites/default/files/resource/28\\_EASAC%20Report%20on%20Negative%20Emission%20Technologies.pdf](https://unfccc.int/sites/default/files/resource/28_EASAC%20Report%20on%20Negative%20Emission%20Technologies.pdf)



Three reference scenarios were selected from the confluence of these dimensions:

- **An orderly transition:** assumes climate policies are introduced early and become gradually more stringent. Net zero CO<sub>2</sub> emissions are achieved before 2070, giving a 67% chance of limiting global warming to below 2°C. Physical and transition risks are both relatively low;
- **A disorderly transition:** assumes climate policies are not introduced until 2030. Since actions are taken relatively late and limited by available technologies, emissions reductions need to be sharper than in the Orderly scenario to limit warming to the same target. The result is higher transition risk;
- **A “Hot house world” scenario:** assumes that only currently implemented policies are preserved. Nationally Determined Contributions are not met. Emissions grow until 2080 leading to 3°C+ of warming and severe physical risks. This includes irreversible changes like higher sea level rise.<sup>306</sup>

Five alternate scenarios were also produced to explore different underlying assumptions, such as different temperature targets, policy responses (e.g. considering all pledged but not yet implemented policy measures) and/or technology pathways (e.g. limited use of CDR technologies).

Source: Network for Greening the Financial System

Observations relevant for the banking sector can also be drawn from the insurance industry<sup>307</sup>, as stress testing and scenario analysis have long been considered important aspects of the work of insurers.<sup>308</sup> In recent years, the European Insurance and Occupational Pensions Authority (EIOPA) has published two discussion papers in relation to methodological considerations of bottom-up insurance stress testing.<sup>309 310</sup> In addition, in October 2020, EIOPA launched a consultation on the supervision of the use of climate change scenarios in insurer’s own risk and

<sup>306</sup> Network for Greening the Financial System (2020). *NGFS Climate Scenarios for central banks and supervisors*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/820184\\_ngfs\\_scenarios\\_final\\_version\\_v6.pdf](https://www.ngfs.net/sites/default/files/medias/documents/820184_ngfs_scenarios_final_version_v6.pdf).

<sup>307</sup> Only topics directly covered via banking regulation have been covered for the purposes of this study; this excludes insurance industry perspectives.

<sup>308</sup> Moody’s Analytics (2013). *Moody’s Analytics Risk Perspectives | Stress Testing European Edition | Volume I*. Available at: <https://www.moodyanalytics.com/-/media/article/2013/2013-01-09-risk-perspectives-v01-stress-testing-european-edition.pdf>.

<sup>309</sup> EIOPA (2019). *Methodological principles of insurance stress testing*. Available at:

[https://www.eiopa.europa.eu/content/methodological-principles-insurance-stress-testing\\_en](https://www.eiopa.europa.eu/content/methodological-principles-insurance-stress-testing_en).

<sup>310</sup> EIOPA (2020). *Second Discussion Paper on Methodological Principles of Insurance Stress Testing*. Available at: [https://www.eiopa.europa.eu/content/second-discussion-paper-methodological-principles-insurance-stress-testing\\_en](https://www.eiopa.europa.eu/content/second-discussion-paper-methodological-principles-insurance-stress-testing_en).

solvency assessment (ORSA).<sup>311</sup> An issues paper jointly published by the International Association of Insurance Supervisors (IAIS) and the Sustainable Insurance Forum (SIF) highlighted that views diverge as to how best to engage with the industry to develop robust approaches for climate-related scenario analysis. The study highlighted that there could be benefits for supervisors in coming up with a harmonised view on the core elements of scenario analysis, such as clear expectations and guidance, e.g. “on how to consider climate risk impacts across different types of business areas”.<sup>312</sup>

A selection of comments in relation to supervisors’ assessment on the importance of scenario analysis is presented in *Figure 59*.

Figure 59: Illustrative comments on scenario analysis

**To what extent and how do you think supervised entities should use scenario analysis to quantify the impact of ESG risks on their portfolio?**

“The use of scenario analysis by supervised entities is a key element in the process of including the ESG risks”

“Stress testing and scenario planning are essential parts of the general risk management framework”

“As past data will not be representative of the future, due to the unprecedented nature of climate change, scenario analysis is the only realistic approach to quantify the impact of climate change on financial risks”

**Principles of best practice based on stakeholder perspectives**

**A supervisory strategy should aim to foster ambition and development of ESG risk measurement and assessment capabilities within banks through supervisory exercises.**

This could set further incentives to banks to enhance data and methodologies. An effective ESG measurement strategy should include scenario analysis and stress testing as core elements. Supervisors should require banks to perform ESG risk measurement exercises to assess their current and forward-looking exposure to ESG risks. Due to the more quantifiable nature of the risk, the initial focus of these exercises is typically on the E pillar, and on climate risk in particular.

**Scenario analysis should be a central component of the supervisory toolkit to inform ESG risk assessment and identification, in particular for climate-related risk.**

Reference scenarios – such as those produced by the NGFS– should be utilised by supervisors to define a common base, with adjustments made for any relevant (e.g. geographical) idiosyncrasies. Supervisors, in conjunction with other organisations, such as the NGFS, should play a role in the definition of a range of reference climate scenarios, in order to capture the multiple possible pathways associated with a transition to a net zero/Paris aligned world. The scenarios developed should be suitably severe and ambitious; for example, scenarios should not rely too extensively on negative emissions technologies.<sup>313</sup> This could also help to ensure that banks use sufficiently stringent scenarios and enhance comparability of results. In addition,

<sup>311</sup> EIOPA (2020). *Consultation Paper on draft Opinion on the supervision of the use of climate change risk scenarios in ORSA*. Available at: [https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-20-561-cp\\_draft\\_opinion\\_climate\\_scenarios\\_in\\_orsa.pdf](https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-20-561-cp_draft_opinion_climate_scenarios_in_orsa.pdf).

<sup>312</sup> IAIS & SIF (2020). *Issues Paper on the Implementation of the Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at: [https://b9ea8c1e-dc19-4d5f-b149-9b1ea4b8d050.filesusr.com/ugd/eb1f0b\\_365cc83062254d509c20d79313143868.pdf](https://b9ea8c1e-dc19-4d5f-b149-9b1ea4b8d050.filesusr.com/ugd/eb1f0b_365cc83062254d509c20d79313143868.pdf).

<sup>313</sup> Oil Change International & Reclaim Finance (2021). *NGFS Scenarios: Guiding Finance Towards Climate Ambition Or Climate Failure?* Available at: <http://priceofoil.org/content/uploads/2021/02/NGFS-scenarios-final.pdf>.

scenarios must be sufficiently granular (e.g. projecting demand and prices at sector/geography level by technology type).

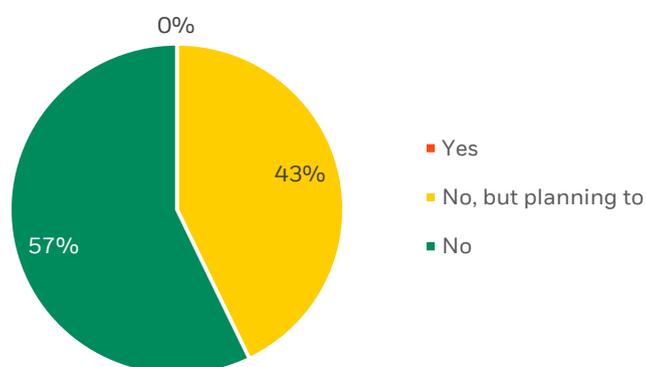
**Supervisors should require banks to actively engage with counterparties to ensure that ESG risks are understood, assessed, measured, and mitigated.** Banks should be able to demonstrate to supervisors that this understanding is promoted through ongoing dialogue with counterparties. In particular, in relation to climate-related risk, supervisors should ensure that banks adequately discuss costs and risks associated with the low carbon transition with relevant stakeholders.

**A certain degree of methodological freedom can remain advocated by supervisors in relation to banks' measurement and assessment practices for ESG risk; however, this should be accompanied by sufficient guidance and methodological constraints, to help enable banks to adequately measure and assess ESG risk while ensuring consistency across EU banks.** Given the early stage of advancement in this space, it might be too early to introduce a prescriptive approach. Alternatively, supervisors should provide principles-based guidance to ensure that banks develop and apply robust methodologies, similar, for example, to those provided to banks with respect to internal models. Supervisors should ensure that methodologies strike a balance between flexibility and robustness and allow for comparability.

#### 4.3.3.1.2. Categorisation of assets based on ESG risk

As of yet, there is little to no evidence of supervisors progressing on exercises to categorise assets based on their ESG risk profile. Although this is considered an important task, respondent EU-based supervisors have not yet developed their own approach for this categorisation. However, as shown in *Figure 60*, 43% of interviewed supervisors intend to do so in the future.

Figure 60: Development of approach to categorise assets based on ESG risk<sup>314</sup>



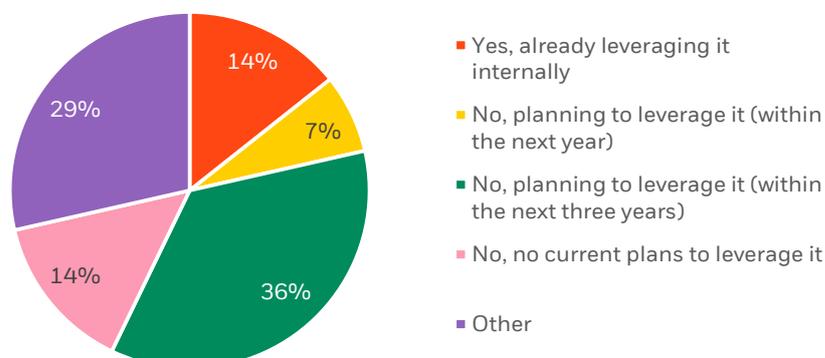
Source: BlackRock FMA analysis

All EU-based supervisors made reference to the EU Taxonomy, with 57% either already utilising it in some form, or planning to use it within the next one to three years to inform their approach to the categorisation of assets, as shown in *Figure 61*. In particular, participants also from other stakeholder groups welcomed the work towards the provision of a common standard in the identification of environmentally sustainable activities, as well as the heightened comparability offered by the taxonomy. One supervisor has commenced an internal mapping exercise, i.e. a

<sup>314</sup> Question: *Have you developed an approach to categorise assets based on their ESG risk profile?* Sample size: 14.

preliminary analysis applying the criteria of the taxonomy to their own internal database to assess to which extent the exposure of the banking sector is concentrated in green sectors.

Figure 61: Planned usage of EU Taxonomy for categorisation of assets<sup>315</sup>



Source: BlackRock FMA analysis

Nonetheless, several supervisors expressed that the taxonomy, in its current form, may need further refinements. A reason given for this is that the current taxonomy is focused on green sectors only, and supervisors believe that a more granular taxonomy, including grey and brown sectors, is required. Some supervisors stated that a brown taxonomy would provide significant value in addition to only a green taxonomy, which would facilitate the assessment of ESG risk as well as improve the understanding of the potential risk differentials between different types of assets. Furthermore, it was stated that, even if a taxonomy was to exist which covers all sectors, the resulting taxonomy may not be suitable as it would not appropriately account for transition considerations, and therefore may only be relevant for classification purposes at a given point in time. It should be noted that one of the tasks of the Commission-mandated Platform on Sustainable Finance is to advise the Commission on the review of the Taxonomy Regulation, and specifically to address whether it should be expanded to “economic activities that do not have a significant impact on environmental sustainability and economic activities that significantly harm environmental sustainability” as well as social objectives.<sup>316</sup>

In addition to the issue of the scope of a taxonomy, the majority of supervisors stated that a major concern is a lack of bank exposure data, as well as the reliability and comparability of such data. One supervisor, while welcoming the taxonomy and acknowledging that it is expected to be introduced into the way exposures are assessed, believes that supervised institutions will find it difficult to apply in practice.

Finally, some supervisors, while welcoming the development of the taxonomy within the EU, stated the importance of any classification being internationally adopted, due to potential issues with comparability across jurisdictions. Figure 62 presents a selection of comments from supervisors in relation to the categorisation of assets based on their ESG profile.

<sup>315</sup> Question: Are you planning to leverage the EU taxonomy for categorisation of assets? Sample size: 14. “Other” relates to the following answers: One respondent awaits governmental guidance; one respondent stated they will use the taxonomy once finalized, and awaits further guidance from the EBA; one respondent stated that no specific work is envisaged beyond ongoing work at the EBA under CRDV/CRR2 mandates; one respondent stated that financial companies and banks will have an obligation to use the taxonomy in any analysis which categorises assets, but that the responsibility of doing this is on the banks, and the role of the supervisor is to see to it that this is done.

<sup>316</sup> European Commission (n.d.). Platform on sustainable finance. Available at: [https://ec.europa.eu/info/publications/sustainable-finance-platform\\_en](https://ec.europa.eu/info/publications/sustainable-finance-platform_en).

Figure 62: Illustrative comments on categorisation of assets

**Have you developed an approach to categorise assets based on their ESG risk profile?**

*“The green taxonomy regulation is a key parameter for this work”*

*“These categorisations are most efficient if done internationally. If not, then there are issues with comparability”*

**Are you planning to leverage the EU Taxonomy for categorisation of assets?**

*“A brown taxonomy would be needed in order to properly differentiate between asset classes and their risk profiles”*

*“To identify exposures of banks, a clear way of knowing what is within brown sector is needed”*

*“... green exposures are an alternative source of profitability for banks. Yet, although green assets seem to grow more than brown, supervisors are mostly interested in classification of the latter to inform their bank risk assessments”*

**Principles of best practice based on stakeholder perspectives**

**Supervisors should develop approaches to categorise assets based on their ESG risk profile.**

Any approach developed should maintain a balance between granularity and ease of implementation. Regarding environmental and climate-related risks, although the categorisation of green and grey assets is important, supervisors should also focus on the categorisation of more harmful or risky brown assets in initial analyses. Developing such approaches would provide a useful resource for supervisors, banks, and other market participants. Effective categorisation could be useful in various contexts including risk management, supervisory assessment, as well as disclosure and transparency. EU-based supervisors see the EU Taxonomy as a tool to support this exercise.

**An expanded and more granular EU Taxonomy would further enable supervisors in the categorisation of assets based on their ESG risk profile.** Such an expansion would entail a taxonomy that goes beyond a green classification; this, for example, would include brown and grey activities and sectors, as well as social objectives. In this context, the work of the Commission-mandated Platform on Sustainable Finance should be closely monitored. As part of its review of the Taxonomy Regulation, analysis will be conducted to assess the expansion of the taxonomy to economic activities which significantly harm environmental sustainability (brown) and activities which have no impact on environmental sustainability (grey), as well as to social objectives.

**4.3.3.2 Integration into supervisory/regulatory processes**

**4.3.3.2.1. Pillar 2 review processes and onsite supervision**

Pillar 2 – the supervisory review process – of the Basel Framework is designed to ensure that banks have adequate capital to support risks they are exposed to, as well as to ensure that banks develop and use appropriate risk management processes and tools to monitor and measure these risks.<sup>317</sup> Under this framework, a bank’s management bears the responsibility of ensuring that the bank is adequately capitalised to support its risks beyond minimum requirements – e.g. via the ICAAP<sup>318</sup> –, while the supervisory authority bears the responsibility of assessing whether the bank

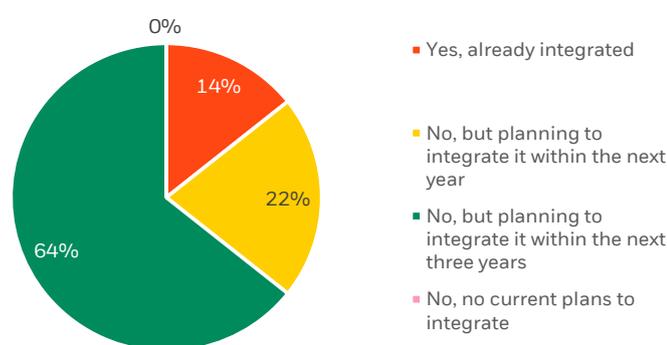
<sup>317</sup> Bank for International Settlements (2019). *Overview of Pillar 2 supervisory review practices and approaches*. Available at: <https://www.bis.org/bcbs/publ/d465.pdf>.

<sup>318</sup> Internal capital adequacy assessment process.

has adequately executed this task – e.g. in the SREP, which may then also be the basis for supervisory measures. In the EU, this is reflected in the Capital Requirement Directive (CRD).<sup>319</sup>

As shown in *Figure 63*, only 14% of interviewed supervisors stated that they currently have explicitly integrated ESG risk considerations into supervisory review processes. Two main reasons were given for this. The first relates, for EU-based supervisors, to the mandate included in Article 98(8) of the CRD 5 that requires the EBA to assess the potential inclusion of ESG risks in the supervisory review and evaluation process by June 2021.<sup>320</sup> Several EU-based supervisors indicated their intention to await further developments and the finalisation of the EBA mandate before taking action. The second key reason mentioned is that Pillar 2 already requires that all material risks are covered in a bank’s approach, regardless of the respective risk type. A number of interviewed supervisors argue that, therefore, ESG risks are already covered and need to be taken into consideration by banks to the extent these risks are considered material.

**Figure 63: Integration of ESG risks in Pillar 2 processes**<sup>321</sup>



Source: BlackRock FMA analysis

As such, given the due date of the aforementioned EBA mandate, all EU-based respondents are planning to integrate ESG considerations into the SREP within at least the next three years, although no precise details were provided as to the mechanics of the integration of ESG risks. However, as stated by the EBA, the existing SREP framework may not be adequate for capturing the long-term nature and impact associated with ESG risks.<sup>322</sup> Accordingly, the EBA sees a need “to introduce a new area of analysis in the supervisory assessment, evaluating whether credit institutions sufficiently test the long-term resilience of the business model against the time horizon of the relevant public policies or broader transition trends”. Time horizons in this context tend to span from three to five years; this would need to be substantially extended.<sup>322</sup> This view is also held by various civil society organisations, with one respondent remarking that current risk

<sup>319</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. OJ L 176, 27.6.2013, p. 338–436 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013L0036>.

<sup>320</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

<sup>321</sup> Question: *Have you integrated ESG risks in Pillar 2 processes (e.g. into SREP)?* Sample size: 14.

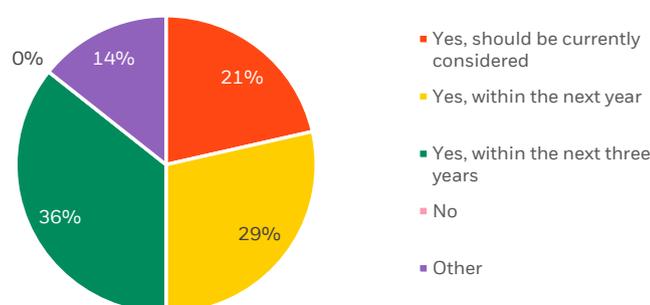
<sup>322</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

management tools are often too short-term in nature, failing to recognise longer-term vulnerabilities.

Concurrently, most supervisors expect supervised institutions to consider ESG risks in their risk management processes already, or in the near future. As shown in *Figure 64* most respondents expect supervised banks to consider ESG risks in their ICAAP/ILAAP<sup>323</sup> within at least the next three years, with 29% of respondents expecting this development within the next year, and 21% expecting these risks to be already considered. Many EU-based supervisors are also awaiting the direction of the described EBA developments to define the scope of ESG risks, which is expected to include references to ICAAP/ILAAP.

Based on supervisors' responses, the current focus of supervisory expectations is largely on the E pillar, where expectations from supervisors on supervised institutions are comparatively higher. The rationale usually provided is that significant institutions in the SSM will be expected to include climate and environmental issues in their ICAAP/ILAAP based on the SSM guidance on climate and environmental risk management and disclosures.<sup>324</sup>

**Figure 64: Consideration of ESG risks in ICAAP/ILAAP<sup>325</sup>**



Source: BlackRock FMA analysis

As seen in *Figure 65*, 23% of respondents have begun the process of ESG risk integration into day-to-day and on-site prudential supervision, with most respondents planning to integrate it within the next three years. Single Supervisory Mechanism (SSM)-based respondents intend to follow developments at ECB-level which they will then adapt for the day-to-day and on-site prudential supervision for less significant institutions. Of those who have already begun incorporating ESG risks into their supervisory examinations, one supervisor mentioned that they had conducted an on-site inspection specifically focused on climate-related risk management, and another supervisor now generally includes climate-related risk in the agenda for continuous assessment meetings with firms.

A number of respondents remarked that Pillar 2 processes are the most appropriate tool within the supervisory toolkit to address ESG risks from a supervisory standpoint, whilst Pillar 1-related capital requirements should remain risk-based. This is further analysed in section 4.3.4.1.1. In addition, it was commented by some respondents that the focus areas for Pillar 2 processes should be governance structures and risk appetite frameworks.

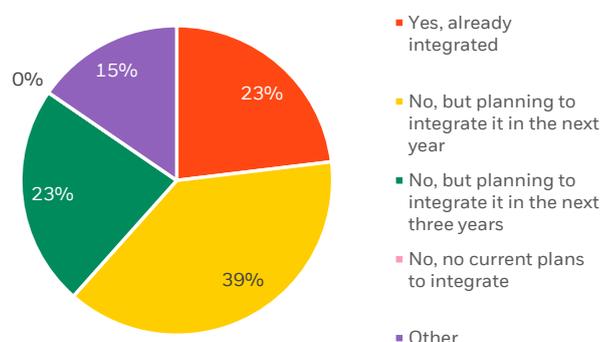
<sup>323</sup> Internal liquidity adequacy assessment process.

<sup>324</sup> European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>.

<sup>325</sup> Question: *Do you expect supervised entities to consider ESG in their ICAAP/ILAAP?* Sample size: 14. "Other" relates to the following answers: One respondent plans to be compliant if/when guidelines for ESG risk are implemented; one respondent has no formal plans at this stage.

Finally, interviewed supervisors made no reference to the existence of dedicated measures for institutions that do not meet supervisory expectations in the context of ESG integration into supervisory processes. However, given that the majority of supervisors expressed the view that ESG risks should be addressed using Pillar 2 processes, it follows that the full spectrum of measures utilised in cases of non-compliance under Pillar 2 could play a role. Such measures exist in the form of qualitative or quantitative ‘corrective actions’, as for other risk types.<sup>326</sup> In the EU under the SREP – and as delineated in the EBA guidelines – such measures can be adopted under Articles 104 and 105 of the CRD.<sup>327</sup> Quantitative measures under Pillar 2 can entail the application of additional capital measures, such as requiring the institution to use net profits to strengthen own funds, or restricting/prohibiting distributions or interest payments of the institution, as well as liquidity measures, such as imposing specific liquidity requirements, including restrictions on maturity mismatches between assets and liabilities. Qualitative measures can involve the requirement to reinforce an institution’s arrangements, processes and strategies, to submit a plan to restore compliance with supervisory requirements, or to make changes to remuneration policies, among others.<sup>328</sup>

Figure 65: Integration of ESG risks into day-to-day and onsite prudential supervision<sup>329</sup>



Source: BlackRock FMA analysis

### Principles of best practice based on stakeholder perspectives

**ESG-related risks should be captured under the Pillar 2 framework.** In particular, the SREP should be used to assess and measure ESG-related risks in individual banks. Whilst the EBA mandate relating to the inclusion of ESG-related risks in the SREP should be closely monitored, supervisors should be proactive in the inclusion of ESG-related risks in the SREP in advance of

<sup>326</sup> Basel Committee on Banking Supervision (2019). *Overview of Pillar 2 supervisory review practices and approaches*. Available at: <https://www.bis.org/bcbs/publ/d465.pdf>.

<sup>327</sup> EBA (2014). *Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP)*. Available at: <https://www.eba.europa.eu/sites/default/files/documents/10180/935249/4b842c7e-3294-4947-94cd-ad7f94405d66/EBA-GL-2014-13%20%28Guidelines%20on%20SREP%20methodologies%20and%20processes%29.pdf?retry=1>.

<sup>328</sup> Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. OJ L 176, 27.6.2013 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013L0036>.

<sup>329</sup> Question: *Have you integrated / do you plan to integrate ESG risks into day-to-day and onsite prudential supervision? And if so, how would you do so?* Sample size: 13. “Other” relates to the following answers: one respondent has no formal plans at this stage; another respondent stated that the topic of sustainable finance is currently being integrated into ongoing supervision and, as a next step, they intend to integrate the assessment of ESG risks in offsite supervision. Depending on the further developments, the assessment of ESG risks will be integrated in the day-to-day onsite prudential supervision as well.

the conclusion of the EBA mandate. Supervisors should provide clear guidance to banks on their expectations in this context.

**Supervisors should make use of the full range of Pillar 2 instruments in case of unsatisfactory ESG risk integration by banks.** This can include Pillar 2 Requirement (P2R) and Pillar 2 Guidance (P2G). Supervisors should consider the use of quantitative and qualitative measures – as set out in the CRD – when faced with measures of non-compliance within supervised entities, such as the requirement to submit a plan to restore compliance with supervisory requirements.

**Supervisors should incorporate longer time horizons into the SREP in line with horizons associated with ESG risks.** EU-based supervisors should closely follow the work of the EBA, particularly in relation to the potential incorporation of a long-term resilience assessment as a new aspect of the supervisory assessment. This should be reflected by extended time horizons embedded within scenario analysis and stress testing processes.

**Within the SREP, ESG risks should be considered across the four existing elements.** ESG risks should be treated similarly to traditional risk types, and assessed across the following elements: i) Business model, ii) internal governance and risk management, iii) risks to capital, and iv) risk to liquidity.

**Supervisors should expect banks to consider ESG in their ICAAP.** ESG risks should be factored into all aspects of the ICAAP, as is done for traditional risk types. If ESG risks are determined to manifest through other traditional risk types, this should be clearly documented. In the SSM, climate and environmental related risks are already expected to be considered in the ICAAP, as set out in the SSM guide on climate-related and environmental risks.

**ESG risks should be incorporated within day-to-day and on-site supervisory processes, regardless of the level of advancement of the bank regarding ESG integration.** On-site inspections should include ESG risks within the scope, with inspections remaining risk-based, proportionate, and intrusive.

**The principle of proportionality should be applied in the supervisory review of ESG risk in banks, taking into account size, geography, business model, and complexity of operations.** This is in line with standard approaches for other risk types.

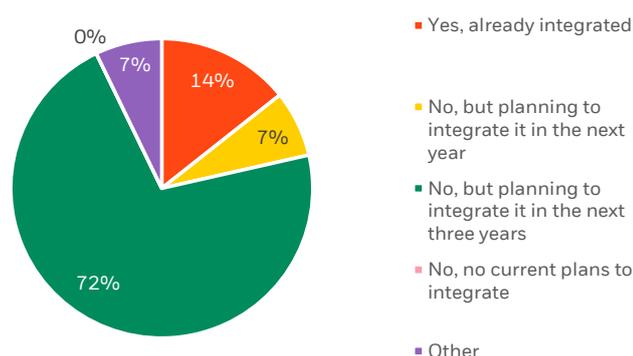
#### 4.3.3.2.2. Supervisory stress testing

The primary aim of traditional micro-prudential supervisory stress testing is to evaluate the capital adequacy of banks. Typically, capital ratios are stressed under a number of scenarios – including an adverse scenario – and the results of this exercise feed into capital and liquidity assessments.<sup>330</sup> As shown in *Figure 66*, most participating supervisors have not yet integrated ESG risks into supervisory stress testing, although many have indicated that they are planning to do so within the next three years. Notable exceptions to this include, for example, the PRA and ACPR. According to interviewed civil society organisations, climate scenario provision and climate-related risk stress testing should play a core prudential role in the ESG context. Further details on this topic are presented in section 3.3.3.2.4.

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<sup>330</sup> Bank for International Settlements (2017). *Supervisory and bank stress testing: range of practices*. Available at: <https://www.bis.org/bcbs/publ/d427.pdf>.

Figure 66: Integration of ESG risks into supervisory stress testing<sup>331</sup>



Source: BlackRock FMA analysis

The ACPR launched a voluntary climate stress test pilot exercise in July 2020.<sup>332</sup> The exercise was based on an analytical framework jointly produced by the ACPR and Banque de France.<sup>333</sup> Results published in April 2021 indicated that French banks and insurers have an overall “moderate” exposure to climate risks, although this assessment must be viewed in tandem with the uncertainties inherent in climate change, the assumptions and scenarios used in the exercise, as well as methodological difficulties encountered. The findings state that “considerable efforts must be made to help significantly reduce greenhouse gas emissions by 2050 and to contain the rise in temperature by the end of the century”.<sup>334</sup>

The Bank of England (BoE) announced in 2019 that it will conduct a climate stress test within their climate Biennial Exploratory Scenario (BES).<sup>335</sup> Originally due to be conducted in 2020, the launch of this exercise was postponed until at least mid-2021 due to the impact of COVID-19. The BoE climate BES has been designed to test the resiliency of firms’ business models not only to transition risks but also to physical risks associated with climate change. In addition, MAS<sup>336</sup> has publicly indicated their intention to test banks’ resiliency to climate-related risks. The EBA also plans to develop a dedicated climate stress test “with the main objective of identifying banks’ vulnerabilities to climate-related risk and quantifying the relevance of the exposures that could be potentially hit by physical risk and transition risk.”<sup>337</sup> In the short term, however, the EBA has encouraged institutions to participate in the voluntary sensitivity analysis for climate-related

<sup>331</sup> Question: *Have you integrated / plan to integrate ESG risks into supervisory Stress Testing?*

Sample size: 14. “Other” relates to the following answer: the respondent has published a bottom-up exercise and participation is voluntary.

<sup>332</sup> ACPR (2020). *Scenarios and main assumptions of the ACPR pilot climate exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717\\_main\\_assumptions\\_and\\_scenarios\\_of\\_the\\_acpr\\_climate\\_pilot\\_exercise.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717_main_assumptions_and_scenarios_of_the_acpr_climate_pilot_exercise.pdf).

<sup>333</sup> Banque de France (2020). *Climate-Related Scenarios for Financial Stability Assessment: an Application to France*. Available at: <https://publications.banque-france.fr/en/climate-related-scenarios-financial-stability-assessment-application-france>.

<sup>334</sup> ACPR (2021). *A first assessment of financial risks stemming from climate change: The main results of the 2020 climate pilot exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20210504\\_as\\_pilot\\_exercise\\_climat\\_change.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20210504_as_pilot_exercise_climat_change.pdf).

<sup>335</sup> Bank of England (2019). *The 2021 biennial exploratory scenario on the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/paper/2019/biennial-exploratory-scenario-climate-change-discussion-paper>.

<sup>336</sup> Monetary Authority of Singapore (2020). *Reply to Parliamentary Question on including climate change-related risk in MAS’ annual industry-wide stress test*. Available at: <https://www.mas.gov.sg/news/parliamentary-replies/2020/reply-to-parliamentary-question-on-including-climate-change-related-risk-in-mas-annual-iwst>.

<sup>337</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

risks, being carried out in the second half of 2020; this exercise will focus on transition risks only.<sup>337</sup>

To date, climate stress testing exercises have been posed in the form of pilot exercises, given the varied and numerous challenges associated with their execution, including assumptions made about climate scenarios, the requisite longer-term time horizons – compared with those applied in traditional stress testing exercises –, uncertainties about the nature of climate developments and environmental policies, data availability, and more.<sup>338</sup>

As of yet, no respondent supervisor mentioned plans to use a climate stress test to set capital requirements for banks. This stance has been subject to criticism from some civil society organisations, including during the public consultation process for the ACPR pilot exercise.<sup>339</sup> The PRA intends to use the BoE climate BES to assess the overall UK financial system’s exposure to climate-related risks and therefore “the scale of adjustment that will need to be undertaken in coming decades for the system to remain resilient”.<sup>340</sup> Similarly, ACPR intends to use its climate pilot exercise to raise awareness for supervised institutions related to the risks posed by climate change.<sup>341</sup> It is worth noting that this is an approach advocated by the EBA, which states that the objective of a climate stress test “should be to inform on the resilience of institutions’ own business model and investment strategies” and that “the results of stress tests (quantitative and qualitative) should be used to determine the effectiveness of new and existing business strategies from an ESG risks perspective and the possible impact from transition and physical risk.”<sup>342</sup> Figure 67 provides further insight into the climate stress test exercises proposed by both ACPR and the Bank of England.<sup>343</sup>

**Figure 67: Case study on climate stress test exercises proposed by ACPR and BoE**

The figure below outlines the climate stress test exercises proposed by the ACPR and Bank of England, including objectives, methodological considerations, descriptions of selected scenarios, and outcome metrics of the exercises.

	ACPR	Bank of England
Objectives	<ul style="list-style-type: none"> <li>• <b>Raise awareness</b>, within the French banking and insurance sector, of climate change-related risks and their financial consequences</li> <li>• <b>Assess the exposures and vulnerabilities of the French financial sector</b> against the</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Size firms' financial exposures to climate risk</b>, as well as the financial system more broadly</li> <li>• <b>Understand the challenges to participants' business models</b> from these risks, and</li> </ul>

<sup>338</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>339</sup> ACPR (2020). *Scenarios and main assumptions of the ACPR pilot climate exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717\\_main\\_assumptions\\_and\\_scenarios\\_of\\_the\\_acpr\\_climate\\_pilot\\_exercise.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717_main_assumptions_and_scenarios_of_the_acpr_climate_pilot_exercise.pdf).

<sup>340</sup> Bank of England (2019). *The 2021 biennial exploratory scenario on the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/paper/2019/the-2021-biennial-exploratory-scenario-on-the-financial-risks-from-climate-change.pdf?la=en&hash=73D06B913C73472D0DF21F18DB71C2F454148C80>.

<sup>341</sup> ACPR (2020). *Scenarios and main assumptions of the ACPR pilot climate exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717\\_main\\_assumptions\\_and\\_scenarios\\_of\\_the\\_acpr\\_climate\\_pilot\\_exercise.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717_main_assumptions_and_scenarios_of_the_acpr_climate_pilot_exercise.pdf).

<sup>342</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>343</sup> The finalised Bank of England climate Biennial Exploratory Scenario methodology is yet to be published at the time of publication of this paper, and is expected to be available in early June 2021, at the time of the launch of the exercise.

	<p>background of various climate change scenarios</p> <ul style="list-style-type: none"> <li>• <b>Develop and improve the institutions' capacity to integrate climate risk</b> in their financial risk measurement, assessment and day-to-day management</li> </ul>	<p>understand their likely responses and associated implications on the provision of financial services</p> <ul style="list-style-type: none"> <li>• <b>Assist participants in enhancing their management</b> of climate-related financial risks</li> </ul>
<p><b>Methodological considerations</b></p>	<ul style="list-style-type: none"> <li>• Transition and physical risks are evaluated (with focus on transition risk)</li> <li>• <b>Time horizon:</b> 30 Years</li> <li>• <b>Balance sheet assumption:</b> Participants would assume <b>a static balance sheet for the first 5 years</b> of the time horizon of the scenario. A <b>dynamic balance sheet</b> assumption would be adopted from t=5</li> </ul>	<ul style="list-style-type: none"> <li>• Transition and physical risks are evaluated</li> <li>• <b>Time horizon:</b> 30 Years</li> <li>• <b>Balance sheet assumption:</b> Participants would assume <b>a fixed balance sheet over the time horizon of the scenario</b>. The exercise would test the resilience of t=0 balance sheets to climate-related financial risks at different points in each scenario</li> </ul>
<p><b>Outcome metrics (for banks)</b></p>	<p>The scenarios build on the reference scenarios currently being developed by the NGFS. Three scenarios were selected from the period 2020 to 2050: one reference and two adverse scenarios (also referred to as variants 1 and 2)</p> <ul style="list-style-type: none"> <li>• <b>Reference scenario (baseline scenario):</b> "the representative scenario of the NGFS corresponding to an "orderly" transition including reduced transitional and physical risks"</li> <li>• <b>Late reaction scenario (Variant 1):</b> "[...] the greenhouse gas emission reduction objective is not reached in 2030 and thus requires the implementation of more proactive measures. This scenario reproduces exactly the same emission, GDP and carbon pricing trajectories, at the aggregated level, of the NFGS's scenario that is representative of a "disorderly" transition. Additionally, the included carbon sequestration strategies are presupposed to lack the level of maturity sufficient to offer compensation options."</li> <li>• <b>Scenario of a swift and abrupt transition (Variant 2):</b> "The second adverse variant associated a revision of carbon prices with a productivity shock (with respect to the reference scenario) from 2025. [...] it is assumed that renewable energy production technologies are not as mature as expected in the reference scenario, which translates into higher energy prices requiring new investments [...] Simultaneously, the trajectory of carbon price is unexpectedly revised and calibrated on the data from the alternative scenario for a "disorderly" transition of the NGFS."</li> </ul>	<p>The scenarios build on the reference scenarios currently being developed by the NGFS. Three scenarios were selected from the period 2020 to 2050: early policy action, late policy action, and no additional policy action.</p> <ul style="list-style-type: none"> <li>• <b>Early policy action scenario:</b> " there is early and decisive action to reduce global emissions in a gradual way, with clearly signposted government policies implemented relatively smoothly. Companies and consumers align their behaviour with a carbon-neutral economy gradually over the scenario. Financial markets price in the transition in an orderly fashion and take advantage of the opportunities that the transition provides"</li> <li>• <b>Late policy action scenario:</b> "action to address climate change is delayed by ten years. To compensate for the delayed, start a deeper adjustment is required, as evidenced in a steeper increase in global carbon prices in a late attempt to meet the climate target. Companies and consumers change their behaviour in response to these dramatic shifts, and asset prices see a sharp repricing as a result, leading to a macroeconomic shock"</li> <li>• <b>No additional policy action scenario:</b> "Under this scenario, governments fail to introduce policies to address climate change other than those already announced. Companies and consumers do not change their behaviour to reduce emissions compared to current trends. There is also limited technological transition. As a result, the climate target is not met, and the global average temperature increases substantially by 2080. [...] under this scenario, there are limited transition risks, but physical risks are significant."</li> </ul>
<p><b>Outcome metrics (for banks)</b></p>	<ul style="list-style-type: none"> <li>• The <b>impact of scenarios on banking risks</b>, specifically credit and market risk, will be assessed: i) For credit risk, the impact of scenarios on expected credit losses (ECL), ii) for market risk: i) The revaluation of portfolios at fair value, ii) counterparty risk</li> <li>• Institutions which already report certain climate metrics/indicators are also asked to provide the evolution of said metrics/indicators</li> </ul>	<ul style="list-style-type: none"> <li>• The <b>change in value of bank assets due to the impact of scenarios</b> will be assessed, for the banking book only</li> <li>• The results metric will be the impairment charge</li> </ul>

Source: ACPR and Bank of England

Lack of data, as well as a lack of comparability and reliability of data, were highlighted by a number of respondents as obstacles to the successful execution of a climate stress test exercise. Nevertheless, a number of supervisors, while acknowledging this data challenge, indicated that sufficient data exists to at least perform an initial stress test, with one supervisor suggesting that banks find suitable proxy data or come up with high level assumptions. As this perceived data challenge also impacts various other elements of prudential supervision, this is discussed in more detail in section 4.3.4.1.1.

Although some supervisors are working on the development of their own climate stress test scenarios, the majority of respondents plan to use or build on scenarios developed at EU and international levels, such as the published NGFS Climate Scenarios (see section 4.3.3.1.1), adjusting them to take into account national specificities where appropriate.<sup>344</sup>

One interviewed civil society stated that it is critical that supervisors reference climate scenarios when defining climate stress testing exercises for banks. This view is also touched upon by the EBA in their recent discussion paper, where it is stated that “institutions could leverage on reference scenarios provided by international organisation (i.e. NGFS) as a starting point”.<sup>345</sup> Most respondents perceive that the development of a set of plausible common scenarios will be an important factor in setting common international standards. Indeed, one respondent supervisor noted that, given the complexity of the topic, rather than developing their own scenarios, the most efficient way is to work together with other authorities to develop these tools, and the next step will be to integrate this into their own ongoing work. Another participant stated that regulators should focus on scenarios, as it would lead to more comparability and aggregate information across banks.

As an example, the NGFS workstream on macrofinancial was mandated to publish a set of reference scenarios for use by central banks and supervisory authorities. Respondents also referred to ESRB work on this topic, specifically the report “Positively Green”.<sup>346</sup> The report focuses on transition risks and is based on the transition risk stress test framework of DNB, combined with the banking model of the ECB. The exploratory scenario focuses on two severe scenarios: “The first emphasises the risks of an abrupt policy response in order to meet the goals set in the Paris Agreement, and the second anticipates rapid adaptation to asymmetric technological innovation”.

One interviewed data provider highlighted the role that supervisors could play in creating clarity on economic policy given the complexity and uncertainty of future scenarios. This would enable the comparison of results and provision of aggregate information at various levels. However, the respondent noted the potential trade-off between a very granular scenario definition approach – which would allow for ease of data comparability and aggregation – and a broader approach – which would allow for local idiosyncrasies pertaining to, for example, geography and business model.

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<sup>344</sup> Network for Greening the Financial System (2020). *NGFS Climate Scenarios for central banks and supervisors*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/820184\\_ngfs\\_scenarios\\_final\\_version\\_v6.pdf](https://www.ngfs.net/sites/default/files/medias/documents/820184_ngfs_scenarios_final_version_v6.pdf).

<sup>345</sup> EBA (2020). *EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms*. Available at:

[https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

<sup>346</sup> ESRB (2020). *Positively green: Measuring climate change risks to financial stability*. Available at:

[https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608\\_on\\_Positively\\_green\\_-\\_Measuring\\_climate\\_change\\_risks\\_to\\_financial\\_stability-d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608_on_Positively_green_-_Measuring_climate_change_risks_to_financial_stability-d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26).

## Principles of best practice based on stakeholder perspectives

**Climate stress testing is a critical tool used by supervisors to assess climate-related risk in banks and the broader financial system. Regular climate stress tests should be mandatory for relevant supervised banks, and also aim to foster the development of capabilities within banks.** This should include comprehensive and ambitious guidance on methodological expectations from banks. Supervisory climate stress testing exercises would provide insights to banks that go beyond those generated by other types of stress testing as they foster enhanced client dialogue and awareness of their business models. Climate stress testing should cover both, supervisory exercises as well as prescribed stress testing by banks. Indicative objectives of any climate stress testing exercises are:

- i. raising awareness of climate-related risks;
- ii. quantifying individual banks' exposure to climate-related risks;
- iii. quantifying the wider financial system's exposure to climate-related risks;
- iv. helping banks develop and enhance their understanding of climate-related risks;
- v. informing on the resilience of bank's own business models and strategies in the face of climate-related risks; and
- vi. addressing data gaps and building capabilities at supervised institutions.

Furthermore, an enhanced understanding of the nature of climate-related could accelerate the mitigation of such risks, as well as the alignment of portfolios towards sustainability-related goals.

**Climate risk can currently be prioritised over other types of ESG risk in the context of stress testing.** This is due to a broad consensus, as outlined by stakeholders, on the urgency of addressing the effects of climate change and the more quantifiable nature of climate-related risk.

**Climate stress tests should make use of reference scenarios, and associated time horizons should be longer than those typically used in conventional stress tests; supervisors should contribute to the development of such scenarios.** Given the complexity of the topic, a coordinated response involving the use of reference scenarios is an important factor in setting international standards and fostering comparability of results. Supervisors should play an active role in the development of such scenarios through interaction with relevant stakeholders. Time horizons for climate stress tests should be significantly longer than those used in conventional stress tests – spanning 30 years or more –, given the longer time horizons associated with the materialisation of climate-related risks, associated policy responses, and technological shifts. The short-term impact of climate change caused by, for example, abrupt policy changes, price shocks, or withdrawal of insurers, should also be reflected.

**In the absence of requisite data, supervisors should require banks to make use of suitable proxy data or assumptions to facilitate the successful execution of a climate stress test.** Although data limitations are prevalent, this should not preclude a bank from fulfilling the requirements of a climate stress test. Supervisors provide guidance to banks in the formulation of required proxy data or high-level assumptions.

### 4.3.4 ESG requirements, guidelines and engagement initiatives

#### 4.3.4.1.1. Regulatory requirements

Supervisory and regulatory requirements represent a key supervisory tool and, as such, are an important element in the discussion around supervisory approaches for ESG, which is also reflected by their inclusion in action 8 of the Commission's action plan on financing sustainable

growth.<sup>347</sup> According to interviewed civil society organisations, regulation and guidance must encourage sector participants to take a proactive approach to incorporate ESG risks in business strategies and internal processes as it can provide an effective mitigation tool for such risks, especially over the long-term.

Most EU-based respondents intend to await the outcomes of the EBA mandates on the assessment of a dedicated prudential treatment of exposures related to assets or activities associated with environmental and social objectives, and specification of ESG risks' disclosures as part of the comprehensive technical standard on Pillar 3. Both mandates are elucidated further in this section. Indeed, many supervisors stated that they would consider it premature to attempt any such integration into national or EU-wide regulatory requirements prior to the conclusion of these mandates. Other respondents mentioned that it is too early to define any requirements, given the early stage of data collection and methodology development. Likewise, the BCBS survey on current initiatives in relation to climate-related financial risks indicates that “the majority of members have not factored, or have not yet considered factoring, the mitigation of such risks into the prudential capital framework”.<sup>348</sup>

A number of national authorities, particularly in emerging markets are “already acting to use the existing regulatory framework to address these links”.<sup>349</sup> In 2014, the Central Bank of Brazil enacted Resolution no. 4,327 – in accordance with the National Monetary Council's (CMN) –, thereby assigning guidelines for financial institutions that must be observed in the establishment and implementation of the Social and Environmental Responsibility Policy.<sup>350</sup> This regulation requires supervised institutions to assess their exposure to social and environmental risks, as well as to assess the compatibility of the afore-mentioned policy with their business profile, whilst adhering to the principles of proportionality and relevance – i.e. the degree of exposure to the social and environmental risk of the activities and transactions of the institution.

There is consensus among interviewed supervisors that consistent disclosures on ESG risks are increasingly important to support a well-functioning market. According to respondents, the supervisory approach remains predominantly focused on guidance from the EBA, although other disclosure initiatives are also important. Some supervisors also stated that the scope of entities subject to NFRD reporting should be expanded. This view was also held by other stakeholders: one interviewed academic believes that further regulation for banks would not significantly enhance the status quo; rather, disclosure regulation for banking clients should be increased, which consequently would impact banks' future financing decisions.<sup>351</sup>

Supervisors naturally expect all supervised institutions to adhere to all mandatory regulation in relation to disclosure (Pillar 3), with the EBA mandate being frequently referenced by participants. This mandate, outlined in the revised CRR 2/CRD 5 package, relates to Article 449a of CRR 2, which requires large institutions with publicly listed issuances to disclose information on ESG risks, physical risks and transition risks.<sup>352</sup> In this context, the EBA was tasked with the

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<sup>347</sup> European Commission (2018). *Action Plan: Financing Sustainable Growth*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0097&from=EN>.

<sup>348</sup> Basel Committee on Banking Supervision (2020). *Climate-related financial risks: a survey on current initiatives*. Available at: <https://www.bis.org/bcbs/publ/d502.pdf>.

<sup>349</sup> CISE & UNEP FI (2014). *Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?* Available at: <https://www.cisl.cam.ac.uk/resources/publication-pdfs/stability-and-sustainability-basel-iii-final-repor.pdf/view>.

<sup>350</sup> Banco Central Do Brasil (n.d.). Webpage: *Social and environmental responsibility*. Available at: <https://www.bcb.gov.br/en/about/socialresponsibility>.

<sup>351</sup> The CSRD has since been proposed, which would expand the scope of the current directive. See section 3.3.4.2 for further details.

<sup>352</sup> EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf).

development of draft ITS to facilitate these disclosure requirements. In March 2021, the EBA launched a consultation on the draft ITS, where they proposed a sequential approach for the implementation of prudential disclosure requirements, starting with KPIs and quantitative information on climate related risks (including physical and transition risks, as well as risk mitigating actions), the adoption of a green asset ratio (GAR) on taxonomy aligned activities – as described in section 4.3.1.3 –, and qualitative disclosures for ESG risks. The application of ESG-related disclosures would be expected from June 2022, with disclosure on an annual basis in the first year, and semi-annually thereafter.<sup>353</sup>

In terms of quantitative disclosures, for transition risk, banks would be required to disclose information on exposures to sectors with a high contribution to climate change (including a breakdown of exposures to fossil fuel and other carbon intensive sectors, as well as taxonomy aligned exposures), in conjunction with information on scope 3 emissions per sector. For physical risk, banks would be expected to identify exposures to sectors or geographies exposed to chronic or acute risks associated with climate change events.

In addition, quantitative information related to mitigating actions taken by banks, including GAR, would need to be disclosed. On the qualitative side, a number of disclosure requirements have been proposed by the EBA across each of the E, S, and G pillars and categorised by business strategy and processes, governance, and risk management. Examples of some of these requirements are shown in *Table 11*.

**Table 11: Sample of qualitative disclosure elements proposed by the EBA**

	<b>Environment</b>	<b>Social</b>	<b>Governance</b>
<b>Business strategy &amp; processes</b>	Adjustment of the institution's business strategy to integrate environmental factors and risks, taking into account the impact of environmental factors and risks on institution's business environment, business model, strategy, and financial planning Objectives, targets and limits to assess and address environmental risk in short-term, medium-term and long-term, and performance assessment against these objectives, targets and limits, including forward-looking information in the design of business strategy and processes	Adjustment of the institution's business strategy to integrate social factors and risks taken into account the impact of social risk on the institution's business environment, business model, strategy and financial planning Policies and procedures relating to direct and indirect engagement with new or existing customers on their strategies to mitigate and reduce socially harmful activities	N/A

<sup>353</sup> EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

	<b>Environment</b>	<b>Social</b>	<b>Governance</b>
<b>Governance</b>	<p>Management body's integration of short-, medium- and long-term effects of environmental factors and risks in the risk appetite framework, organisational structure both within business lines and internal control functions</p> <p>Lines of reporting and frequency of reporting relating to environmental risk</p> <p>Alignment of the remuneration policy with institution's environmental risk-related objectives</p>	<p>Responsibilities of the management body for setting the risk framework, supervising and managing the implementation of the objectives, strategy and policies in the context of social risk management covering counterparties' approaches to: i) Activities towards the community and society, ii) Employee relationships and labour standards, iii) Customer protection and product responsibility, iv) human rights</p>	<p>Institution's integration in their governance arrangements</p> <p>governance performance of the counterparty, including committees of the highest governance body, committees responsible for decision-making on economic, environmental, and social topics</p> <p>Institution's accounting of the counterparty's highest governance body's role in non-financial reporting</p>
<b>Risk Management</b>	<p>Definitions, methodologies and international standards on which the disclosures on environmental risks are based</p> <p>Processes to identify, measure and monitor activities and exposures (and collateral where applicable) sensitive to environmental risks, covering relevant transmission channels</p> <p>Results and outcome of the risk tools implemented and the estimated impact of environmental risk on capital and liquidity risk profile</p>	<p>Activities, commitments and assets contributing to mitigate social risk</p> <p>Implementation of risk tools for identification and management of social risk</p> <p>Description of setting limits to social risk and cases to trigger escalation and exclusion in the case of breaching these limits</p> <p>Description of the link (transmission channels) between social risk with credit risk, liquidity risk, market risk and operational risk in the risk management framework</p>	<p>Institution's integration in risk management arrangements</p> <p>the governance performance of their counterparties considering: i) Ethical considerations, ii) Strategy &amp; risk management, iii) Inclusiveness, iv) Transparency</p>

Source: European Banking Authority

Beyond mandatory disclosure requirements, almost all respondents stated that they expect supervised institutions to adhere to TCFD standards. One participant expressed the hope that this requirement would one day move from voluntary to mandatory status, to overcome what the participant considers to be a slow implementation of TCFD by banks. The impact of mandatory disclosure of climate-related risks within financial institution was explored in a recent working paper published by the Banque de France. In France, in the aftermath of the Paris agreement, regulation was implemented that required institutional investors (but not banks) to disclose climate-related exposures and climate-related mitigation policies. For the purposes of the working paper, a control group was defined, made up of French banks and all financial

institutions within other euro area countries. The results of the study showed that, when compared with the control group, the group of institutional investors subject to the new regulation saw a reduction in fossil fuel financing of 39%. The study concludes that “while voluntary moves for enhanced carbon disclosure are welcome, more stringent regulations on carbon reporting are of the essence to effectively speed up the alignment of finance with transition needs”.<sup>354</sup>

Data and methodologies are mentioned by respondent supervisors as a key obstacle to consistent and transparent disclosures. As part of the study, respondents were asked to score a variety of elements which are important to them when considering disclosure initiatives. Consistently, the factors scored as most important were data availability and reliability, data comparability, as well as standardisation of data and methodologies.<sup>355</sup> Proportionality of disclosure requirements was also highlighted by a number of supervisors as something they would support in any adopted disclosure initiative – for both financial and non-financial institutions. This, according to respondents, does not mean that it would exempt smaller firms from reporting at all.

One question currently under discussion is whether capital requirements are an appropriate way to address climate-related risks. As outlined in a report by the Institute for Climate Economics, the debate around this topic – contributed to by banks, supervisors, civil society and experts – has gained more attention since 2019 when the EBA was mandated to consider the prudential treatment of environmental and social objectives.<sup>356</sup> In particular, under article 501c of the CRR, the EBA has been mandated to assess whether “a dedicated prudential treatment of exposures related to assets or activities associated substantially with environmental and/or social objectives would be justified”.<sup>357</sup> In particular, the EBA will assess:

- Methodologies for the assessment of the effective riskiness of exposures related to assets, i.e. understanding any difference in the level of risk for the asset based on the ESG classification;
- Development of appropriate criteria for the assessment of physical risks and transition risks, i.e. risk measurement approach;
- Potential effects of such dedicated prudential treatment, e.g. potential bank responses/actions relating to the change, unforeseen losses and other causes of instability.

Although this mandate is due to be delivered by 2025, one interviewed civil society – who opines that ESG should be considered within Pillar 1 – believes that this deadline is too late; indeed, the respondent believes that supervisors must move with more speed in this space, particularly given that the United Nations Framework Convention on Climate Change<sup>358</sup> was signed almost 30 years ago.

A paper by the University of Cambridge Institute for Sustainability Leadership (CISL) and UNEP FI published as early as 2014 highlights that in the context of Pillar 1 “it is thought that lowering

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<sup>354</sup> Banque de France (2021). *Showing off cleaner hands: mandatory climate-related disclosure by financial institutions and the financing of fossil energy*. Available at: <https://publications.banque-france.fr/sites/default/files/medias/documents/wp800.pdf>.

<sup>355</sup> Question: *How important are the following factors for you when considering disclosure initiatives?*

<sup>356</sup> Institute for climate economics (I4CE) (2020). *Integrating Climate-related Risks into Banks' Capital Requirements*. Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate\\_EtudeVA.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate_EtudeVA.pdf).

<sup>357</sup> EBA (2020). *Article 501c, Capital Requirements Regulation 2 (CRR2)*. Available at: <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/101647>.

<sup>358</sup> UN Climate Change (n.d.). *What is the United Nations Framework Convention on Climate Change?* Available at: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>.

capital and liquidity requirements to benefit environmentally sustainable economic activities may create an undesirable trade-off between financial stability and environmental sustainability” and that instead using Pillar 2 (the supervisory review process) and Pillar 3 (market discipline, including disclosure requirements) of the Basel Framework may “offer some promising avenues”.<sup>359</sup> Nevertheless, many supervisors, banks, and civil society organisations have continued to actively discuss the potential incorporation of ESG risks into capital requirements, for example in the form of green supporting factor (GSF) (to apply lower capital requirements to environmental or climate-friendly lending), or a brown penalizing factor (BPF) to act as a deterrent to lending to more brown activities or sectors such as coal or oil.

A considerable amount of research has been conducted on this topic.<sup>356,360,361</sup> The Institute for Climate Economics, in conjunction with WWF, seeks to contribute to the debate around this topic with their report “Integrating Climate-related Risks into Banks’ Capital Requirements”.<sup>362</sup> The report outlines two distinct approaches to the integration of climate-related risks into capital requirements: The “risk approach”, which aims to increase banks’ resiliency to these risks and hence safeguard financial stability, and the “economic policy approach”, which advocates the use of capital requirements as a policy tool to direct financial flows to a low-carbon economy.

During interviews, several supervisors indicated a preference for the first approach, i.e. a risk-based approach, as “this is way the capital framework was originally designed”. As another example, the ECB response to the Commission survey on climate-related risk strategy stated that any approach taken should be purely risk-based. That said, several supervisors highlighted that at this point there is limited evidence for an inherent difference in risk level between green and brown assets. This is consistent with the findings of a technical document published by the NGFS in May 2020 based on the results of a survey conducted on a select group of financial institutions, which sought to assess whether a risk differential exists between green, non-green and brown assets.<sup>363</sup> It concluded that “the institutions have not established any strong conclusions on a risk differential between green and brown” – an element many supervisors would like to see proven before considering the use of any such factor in the current risk-based framework.

The use of a GSF has been advocated by some stakeholders, albeit to a lesser extent than a BPF. Within the EU, the Hungarian National Bank (Magyar Nemzeti Bank) became the first central bank to introduce a preferential treatment for green lending, through the introduction of a GSF for energy efficient housing loans.<sup>364</sup> Arguments for this move include the belief that “it is in the interest of the national economy to encourage the uptake of renovations aimed at improving energy efficiency and energy efficient properties” and that it “may lead to increased green risk awareness and the development of the green financial market”.<sup>365</sup> This move has been praised by

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<sup>359</sup> CISL & UNEP FI (2014). *Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?* Available at: <https://www.cisl.cam.ac.uk/resources/publication-pdfs/stability-and-sustainability-basel-iii-final-repor.pdf/view>.

<sup>360</sup> 2° Investing Initiative (2018). *The Green Supporting Factor*. Available at: <https://2degrees-investing.org/wp-content/uploads/2018/04/The-Green-Supporting-Factor.pdf>.

<sup>361</sup> Finance Watch (2017). *New pathways: Building blocks for a sustainable finance future for Europe*. Available at: <https://www.finance-watch.org/wp-content/uploads/2018/08/New-Pathways-Building-Blocks-for-a-sustainable-finance-future-for-Europe-GABV-Finance-Watch-M2020.pdf>.

<sup>362</sup> Institute for climate economics (I4CE) (2020). *Integrating Climate-related Risks into Banks’ Capital Requirements*. Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate\\_EtudeVA.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate_EtudeVA.pdf).

<sup>363</sup> Network for Greening the Financial System (2020). *A Status Report on Financial Institutions’ Experiences from working with green, non green and brown financial assets and a potential risk differential*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_status\\_report.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf).

<sup>364</sup> Note that this preferential capital requirement treatment is offered under the Pillar 2 framework.

<sup>365</sup> Magyar Nemzeti Bank (2019). *Green retail lending in Hungary*. Available at: <https://www.mnb.hu/letoltes/green-retail-lending-in-hungary.pdf>.

civil society organisations.<sup>366</sup> However, some interviewed respondents believe that the introduction of a GSF is a political decision, with one stating that there could be unintended consequences for financial stability of such a course of action. A 2017 white paper published by Finance Watch points to the SME supporting factor – introduced into EU policy in 2014 to incentivise lending to small and medium sized businesses – as precedent for the introduction of some form of a supporting factor.<sup>367</sup> However, according to a report by the EBA, there has been no evidence as yet to prove the effectiveness of this measure, and results remain inconclusive and debated.<sup>368</sup> A 2018 report by 2° Investing Initiative argues that “the analysis suggests that a GSF would have an overall limited effect if compared to the SME supporting factor” on overall capital reserve requirements of banks.<sup>369</sup>

A number of stakeholders, mostly civil society organisations, said that they would welcome the adoption of a BPF into the prudential treatment of exposures. One interviewed civil society organisation stated that, while the use of a GSF should be treated with caution, a BPF should be introduced as a precautionary measure as it could help to reflect underlying risk on banks’ balance sheets. In other words, a BPF could be a method of accounting for the longer time horizon of climate and environmental-related risks by “bringing risks back to now”. The participant further stated that the introduction of a BPF could dampen the volume of loans contributing towards climate change, as well as give banks a buffer to withstand climate-related financial losses from the repricing of stranded assets. In addition, the aforementioned report by 2° Investing Initiative concludes that “brown penalty through strengthening capital reserves may have a more noticeable impact on investments in high-carbon assets”, although this is mostly a function of “the larger universe of high carbon assets compared to green assets on which such a penalty would be applied”. Some supervisors raised concerns that the introduction of a BPF might lead to a double counting of capital requirements; although banks are currently factoring climate-related risks in their risk analyses to a limited extent only, this double counting could become an issue in the future.

While most supervisors stressed their preference for a traditional risk-based approach, respondent supervisors generally expressed that they would rather opt for a BPF as opposed to a GSF. Similarly, an interviewed civil society cautioned against a trade-off between green incentives and financial stability or societal well-being, and highlighted a growing interest from stakeholders in an increase of capital risk weights for high-carbon sectors as a more relevant solution. The use of a combination of a green supporting and a brown penalising factor has also been considered. One recommendation of a report by Climate Bonds Initiative in conjunction with the SOAS Centre for Sustainable Finance and WWF is the consideration of a GSF to offset some of the impact of the use of a BPF.<sup>370</sup>

A recent report from Finance Watch advocates the setting of higher capital requirements for fossil fuel reserves within the existing regulatory framework. The report urges immediate action and

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<sup>366</sup> Climate Bonds Initiative (2020). *How the Hungarian Central Bank could help solve the energy efficiency puzzle: MNB goes for green on housing loans*. Available at: <https://www.climatebonds.net/2020/01/how-hungarian-central-bank-could-help-solve-energy-efficiency-puzzle-mnb-goes-green-housing>.

<sup>367</sup> Finance Watch (2017). *New pathways: Building blocks for a sustainable finance future for Europe*. Available at: <https://www.finance-watch.org/wp-content/uploads/2018/08/New-Pathways-Building-Blocks-for-a-sustainable-finance-future-for-Europe-GABV-Finance-Watch-M2020.pdf>.

<sup>368</sup> EBA (2016). *EBA Report on SMEs and SME Supporting Factor*. Available at: <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/1359456/602d5c61-b501-4df9-8c89-71e32ab1bf84/EBA-Op-2016-04%20%20Report%20on%20SMEs%20and%20SME%20supporting%20factor.pdf>.

<sup>369</sup> 2° Investing Initiative (2018). *The Green Supporting Factor*. Available at: <https://2degrees-investing.org/wp-content/uploads/2018/04/The-Green-Supporting-Factor.pdf>.

<sup>370</sup> Climate Bonds Initiative (2019). *Greening the Financial System*. Available at: <https://www.climatebonds.net/system/tdf/reports/cbi-greening-the-financial-system-20191016.pdf?file=1&type=node&id=39836&force=0>.

defines actionable recommendations to policy makers. For instance, policymakers are advised to: i) Calibrate risk weight for banks' exposure to existing fossil fuel reserves at 150%, in line with Article 128 of the CRR<sup>371</sup>, ii) calibrate those for new reserves to 1250%, in order to make new financing entirely equity financed to reflect both micro-prudential and macro-prudential risks, and iii) ensure modified risk weights are reflected in banks' internal models.<sup>372</sup> As suggested further in the paper, to implement this the European Commission should: i) activate Article 459 of the CRR, allowing it to take action to implement the modified risk weights, ii) amend the risk weights for banks' existing fossil fuel exposures in Article 128 of CRR and for new exposures in Article 501 of CRR, and iii) promote the adoption of similar requirements by engaging the Basel Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB).<sup>373</sup>

Several supervisors noted during the interviews that an impact of ESG risks on capital requirements may already indirectly manifest itself through the impact on other risks. In other words, although banks have not explicitly included ESG risks in their internal models, according to supervisors, they may already be implicitly reflected in internal models applied by a bank, such as models for the probability of default, which will affect risk-weights and, ultimately, capital levels. One supervisor stated that regulatory tools are not the appropriate way to tackle this issue and argued that, if taxes or incentives, for example, were to instead be used this would ultimately end up being reflected in risk weights.

Another supervisor noted that climate-related risk appears to affect economic sectors in different ways. This kind of sectoral risk is not factored in current regulation, and additional tools could be considered to address this – an example given of a prospective tool is a sectoral macroprudential systemic risk buffer (SyRB). Finally, although this section is focused on micro-prudential topics, it is worth noting that some participants are of the opinion that this is a systemic issue. One interviewed civil society stated that, at this stage, it is not clear whether micro- or macro-prudential treatment is more relevant or feasible for the topic of sustainability, but that both recourses should be continued to be explored. *Figure 68* provides illustrative comments from respondents with respect to the integration of ESG risk considerations into regulatory requirements.

Figure 68: Illustrative comments on the integration of ESG risk into regulatory requirements

**Are you currently integrating ESG risk considerations into regulatory requirements (including capital and liquidity requirements) to supervised entities?**

*“Due to the ongoing developments in terms of understanding and assessing ESG risks, as well as the ongoing development of the relevant EU prudential framework, we consider [it] premature to integrate ESG risk considerations in our national regulatory and supervisory requirements”*

*“As a prudential supervisor, we expect supervised entities to adhere to all disclosure and reporting requirements that they are legally obliged to adhere to. We encourage supervised entities to voluntarily implement additional (inter)national disclosure initiatives on climate and environmental issues, as well as on other issues”*

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<sup>371</sup> Article 128 of the CRR sets out the requirements for classifying an exposure as an item associated with particularly high risk, which results in an assignment of a 150% risk-weight for the considered exposure.

<sup>372</sup> Finance Watch (2020). *EU has the tools to break the climate-finance doom loop*. Available at: [https://www.finance-watch.org/wp-content/uploads/2020/06/Breaking-the-climate-finance-doom-loop\\_Finance-Watch-report.pdf](https://www.finance-watch.org/wp-content/uploads/2020/06/Breaking-the-climate-finance-doom-loop_Finance-Watch-report.pdf).

<sup>373</sup> In September 2020, the EBA finalised guidelines on the appropriate subsets of exposures in the application of the SyRB. “The guidelines recommend a common framework in which relevant authorities can define subsets specific to their needs. This is done by employing three dimensions: type of debtor or counterparty sector, type of exposure and type of collateral. In addition, if deemed appropriate, duly justified and proportionate when targeting systemic risk, the relevant authorities may supplement these dimensions with three sub-dimensions: economic activity, risk profile and geographical area.”

*“Business model issues should not be solved via regulation; other tools, i.e. fiscal, tax, subsidies, should play a role as well”*

*“Green and brown factors are used to provide incentives, but they are not related to risks. Up to now, there has been a risk-based approach; that’s the way the capital framework was designed”*

### Principles of best practice based on stakeholder perspectives

**The EBA mandate in relation to Pillar 3 disclosures should be closely monitored and supported by supervisors.** EU-based supervisors should be adequately prepared to act upon any outcomes arising from this mandate. They should also ensure that banks are prepared to disclose ESG-related risks by the relevant application date of June 2022. Earlier disclosure of ESG-related risks – independent of the Pillar 3 mandate – should be encouraged by supervisors.

**Building on the NFRD and other legislative measures, additional disclosure requirements on climate-related risks (at a minimum) should be developed and made mandatory for banks.** Requiring banks to report climate-related information and metrics could have a strong impact on portfolio steering. Voluntary disclosure initiatives related to climate-related risks could be utilised. Reporting on climate governance, strategy, risk management and measurable time-bound metrics is critical. A forward-looking element should be incorporated into any climate-related disclosure framework.

**The EBA mandate in relation to a dedicated prudential treatment of ESG risks should be closely monitored and supported by supervisors.** Consequently, EU-based supervisors will be adequately prepared to act upon any outcomes arising from this EBA mandate. The current timeline set to the EBA extends out to 2025; however, some stakeholders advocate for accelerated advancement on this topic. The Pillar 2 framework can provide a mechanism to address ESG risks already.

**Supervisors should examine their stance on a dedicated prudential treatment of ESG risks, for example through a green or brown factor for capital requirements.** Supervisors advocate that the approach should remain risk-based and supported by evidence of a risk differential. This does not necessarily preclude a differentiated prudential treatment of ESG risks using other tools, such as Pillar 2 or macroprudential measures. Other stakeholders see a green or brown factor as a key tool to incentivise banks to re-direct capital. Many participants in this study consider the introduction of a GSF to be a political decision, which might risk conflict with, for example, financial stability objectives for the banking system.

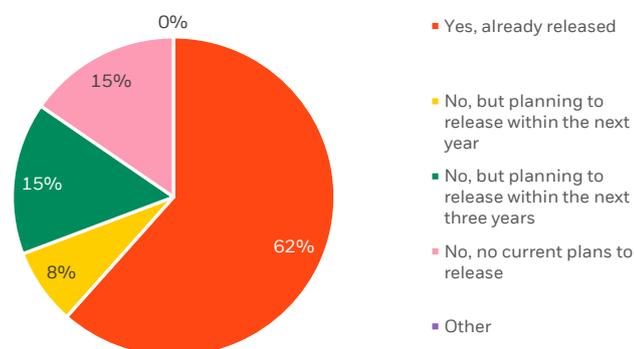
#### 4.3.4.1.2. Supervisory guidance and expectations

The issuance of guidance and setting of expectations was mentioned by several respondents as an important tool for supervisors to facilitate the integration of ESG risks into prudential supervision.

Supervisors who have already published guidance or good practices, or set out expectations, tend to be those with a strategy that focuses on actively driving the topic of ESG integration, as described in section 4.3.4.1.2. As mentioned above, this set of supervisors tends to be based in larger jurisdictions. As seen in *Figure 69*, 62% of supervisors interviewed have already released guidelines around ESG risk considerations, while 8% plan on releasing guidance within the next year, and 15% within the next three years. Those EU-based supervisors with no current plans to release any form of specific guidance mentioned that they expect supervised banks to refer to the EU prudential framework, as well as work by the EBA as set out in their action plan and the EBA Guidelines on loan origination and monitoring. Given the heterogeneity of institution’s practices

in this area, it was noted by civil society organisations that clarity on supervisory expectations should lead to more consolidated practices.

Figure 69: Publication of guidance on ESG risks<sup>374</sup>



Source: BlackRock FMA analysis

Among the entire sample of analysed supervisors, 40% have published some form of guidance related to ESG risks. Table 12 outlines a selection of published guidelines, supervisory expectations, and good/best practices among analysed supervisors, which either focus directly, or indirectly touch upon, ESG risks. Amongst these, there is an almost equal split between those which focus on ESG (or sustainability) across the three pillars, and those who focus on the environmental pillar, with climate-related risk being a particular focus. Core topics addressed relate to governance & strategy, risk management, scenario analysis and stress testing, and disclosure.

Table 12: Examples of published guidance relating to ESG risks

Entity	Title	Summary			
		ESG Risk Definition	Governance & Strategy	Risk Management	Disclosure
Austrian Financial Market Authority (FMA)	Guide for Handling Sustainability Risks (Guidance/ guidelines - Published January 2020)	<ul style="list-style-type: none"> <li>Definition of sustainability factors across all ESG pillars</li> <li>Provision of 26 illustrative sustainability factors across the three pillars</li> </ul>	<ul style="list-style-type: none"> <li>Role description of functions (e.g. risk management, compliance) and bodies (e.g. supervisory board)</li> </ul>	<ul style="list-style-type: none"> <li>General risk management requirements and good practices (e.g. measuring sustainability risks via climate risk heat maps)</li> </ul>	<ul style="list-style-type: none"> <li>Elaboration of disclosures in accordance with the disclosure regulation and non-financial reporting</li> </ul>
Autorité de contrôle prudentiel et de résolution (ACPR)	Governance and management of climate-related risks by French banking institutions: some good practices (Good practices - Published May 2020)	<ul style="list-style-type: none"> <li>Focus on climate-related risks</li> <li>Definition of physical risk and transition risks as per NGFS</li> </ul>	<ul style="list-style-type: none"> <li>Good practices for definition and implementation of climate risk strategy</li> <li>Good practices for organisation (e.g. explicit statement of climate risk responsibilities)</li> </ul>	<ul style="list-style-type: none"> <li>Good practices for risk management tools to address climate risks (e.g. incentive schemes, sectoral policies; description of impact in risk appetite statements)</li> </ul>	<ul style="list-style-type: none"> <li>Good practices for disclosures (recommendation to disclose strategy, organisation and risk management mechanisms)</li> </ul>
China Banking Regulatory	Guiding Opinions of the China Banking and	<ul style="list-style-type: none"> <li>Focus on environmental factors but also covers the social</li> </ul>	<ul style="list-style-type: none"> <li>Encourages banks to improve service and risk management</li> </ul>	<ul style="list-style-type: none"> <li>Encourages banks to establish and improve</li> </ul>	<ul style="list-style-type: none"> <li>Encourages banks to strengthen ESG-related</li> </ul>

<sup>374</sup> Question: Have you released guidelines around ESG risk governance structure, strategy, risk management and disclosure of ESG risks and related metrics/KPIs? Sample size: 13.

Entity	Title	Summary			
		ESG Risk Definition	Governance & Strategy	Risk Management	Disclosure
Commission (CBRC)	Insurance Regulatory Commission on Promoting the High-quality Development of the Banking and Insurance Industry (Guidance/guidelines not specific to ESG - Published January 2020)	and governance pillars	capabilities via establishment of dedicated green finance divisions and branches • Puts emphasis on the development of green financial products	environmental and social risk management systems • Calls for incorporation of ESG requirements into entire credit granting process	information disclosure, reporting and interaction with stakeholders
De Nederlandsche Bank (DNB)	Good Practice: Integration of climate-related risk considerations into banks' risk management (Good practices - Published April 2020)	<ul style="list-style-type: none"> <li>• Focus on climate-related risks</li> <li>• Definition of physical risk and transition risks as per NGFS</li> <li>• Examples of how climate risks can drive conventional risk types</li> </ul>	<ul style="list-style-type: none"> <li>• Two good practices which demonstrates org. structure with well-defined lines of responsibility for management of climate risks</li> </ul>	<ul style="list-style-type: none"> <li>• Good practices for risk identification (e.g. climate scenarios), assessment (e.g. stress testing), mitigation and monitoring (e.g. KRIs)</li> </ul>	<ul style="list-style-type: none"> <li>• Two good practices (disclosing carbon footprint of lending portfolio in annual report; active client engagement to bridge data gaps)</li> </ul>
European Banking Authority (EBA)	EBA Action plan on sustainable finance (Action plan - Published December 2019)	<ul style="list-style-type: none"> <li>• Mandate given to EBA covers ESG related factors and risks</li> <li>• In initial phase, risks stemming from environmental factors and especially climate change receive stronger focus</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages incorporation of ESG factors into business strategy (e.g. via proactive strategies) and establish adequate governance arrangements</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages incorporation of ESG factors into risk management</li> <li>• Encourages adoption of climate change scenarios &amp; usage of scenario analysis to estimate climate risk impact</li> </ul>	<ul style="list-style-type: none"> <li>• Encourages advancement on NFRD disclosures and to prioritise metrics that provide transparency on how climate risks are embedded in strategies and risk management</li> </ul>
	Guidelines on loan origination and monitoring (Guidance/guidelines not specific to ESG - Published May 2020)	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• Recommends the incorporations of ESG risks in credit risk appetite, risk management &amp; credit risk policies, and procedures via holistic approach</li> <li>• Assessment of borrower's exposure to ESG factors, in particular E factors, suggested</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
European Central Bank (ECB)	Guide on climate-related and environmental risks (Supervisory expectations - Published November 2020)	<ul style="list-style-type: none"> <li>• Focus on climate-related and environmental risks</li> <li>• Provision of definitions, characteristics</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations and examples of practices related to incorporation of E risks into strategy and governance (e.g. via allocation of responsibility to</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations and examples of practices related to incorporation of E risks into risk management framework, as well as specific risk types such as</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations relating to disclosure policies, procedures and content (expected to public meaningful key</li> </ul>

Entity	Title	Summary			
		ESG Risk Definition	Governance & Strategy	Risk Management	Disclosure
		and examples of risk drivers	management bodies and within org.)	credit and market risk management, scenario analysis and stress testing	metrics on E risks and financed Scope 3 GHG emissions)
Federal Financial Supervisory Authority (BaFin)	Guidance Notice on Dealing with Sustainability Risks (Guidance/ guidelines - Published December 2019)	<ul style="list-style-type: none"> <li>• Definition of sustainability risks encompassing all ESG pillars and description of characteristics and transmission channels</li> <li>• Provision of 23 illustrative ESG factors across the three pillars</li> </ul>	<ul style="list-style-type: none"> <li>• Description of recommendations for a responsible corporate governance, business organisation (e.g. role of back office, risk control function etc. and for a business strategy review including questions to address</li> </ul>	<ul style="list-style-type: none"> <li>• General requirements for the integration of sustainability risks into risk identification, risk, management and control processes including examples such as introduction of exclusion criteria, positive lists and stress tests incl. scenario analyses</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendation to disclose handling of sustainability risks as well as any criteria for the exclusion or targeted management of certain risk positions</li> </ul>
Monetary Authority of Singapore (MAS)	Guidelines on Environmental Risk Management for Banks (Guidance/ guidelines - Published December 2020)	<ul style="list-style-type: none"> <li>• Focus on environmental risks without providing specific examples</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations related to Board and senior management (e.g. responsibility to develop environmental risk management framework &amp; allocating adequate resources; designated senior management member or committee where environmental risks deemed material)</li> </ul>	<ul style="list-style-type: none"> <li>• Stresses that banks should identify, assess, mitigate &amp; monitor material environmental risk at customer and portfolio level</li> <li>• Examples include sector-specific policies, engagement with high-risk clients; tools and metrics at portfolio level to monitor and assess exposures to environmental risk</li> </ul>	<ul style="list-style-type: none"> <li>• Proposal that banks disclose approach to manage material environmental risk and potential impact, including quantitative metrics such as exposures to sectors with higher environmental risk</li> <li>• Proposes that banks take reference from international reporting frameworks to guide their disclosures</li> </ul>
Prudential Regulation Authority (PRA)	Enhancing banks' and insurers' approaches to managing the financial risks from climate change (Supervisory statement - Published April 2019)	<ul style="list-style-type: none"> <li>• Focus on financial risks from climate change, including examples and description of transmission channels</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations related to governance (e.g. board to understand and assess financial risks from climate change, clear roles and responsibilities for board and sub-committees)</li> </ul>	<ul style="list-style-type: none"> <li>• Expectations with respect to integration of climate risks in RAS (e.g. via risk exposure limits), risk measurement (e.g. via scenario analysis, stress testing and ICAAP) and monitoring (e.g. metrics to monitor progress against overall business strategy)</li> </ul>	<ul style="list-style-type: none"> <li>• Banks to consider disclosures on how climate-related financial risks are integrated into governance and risk management processes</li> <li>• Expectation that banks engage with wider initiatives on climate-related financial disclosures</li> </ul>

Source: Various supervisory guidance and BlackRock FMA analysis

Figure 70 provides further insight into the ECB guide on climate-related and environmental risks.

Figure 70: Case study on ECB guide on climate-related and environmental risks

In November 2020, the ECB published a guide on climate-related and environmental risks.

**Scope and Applications**

The guide is developed jointly by the ECB and the national competent authorities (NCAs) and covers significant Institutions under the supervision of ECB. The guide is applicable as of its date of publication. From end-2020, significant institutions will be asked to inform ECB of any divergence from the guidelines.

**Climate-related and Environmental Risk**

The ECB distinguishes transition and physical risks as drivers of prudential risk, i.e. credit risk, operational risk, market risk and liquidity risk.

**Supervisory Expectations**

Thirteen expectations are delineated across four areas:

<b>Business model &amp; strategy</b>	<p>i. Institutions are expected to understand the impact of climate-related and environmental risks on the business environment in which they operate, in the short, medium and long term, in order to be able to make informed strategic and business decisions.</p> <p>-----</p> <p>ii. When determining and implementing their business strategy, institutions are expected to integrate climate-related and environmental risks that impact their business environment in the short, medium or long term.</p>
<b>Governance &amp; risk appetite</b>	<p>iii. The management body is expected to consider climate-related and environmental risks when developing the institution’s overall business strategy, business objectives and risk management framework, and to exercise effective oversight of climate-related and environmental risks.</p> <p>-----</p> <p>iv. Institutions are expected to explicitly include climate-related and environmental risks in their risk appetite framework.</p> <p>-----</p> <p>v. Institutions are expected to assign responsibility for the management of climate-related and environmental risks within the organisational structure in accordance with the three lines of defence model.</p> <p>-----</p> <p>vi. For the purposes of internal reporting, institutions are expected to report aggregated risk data that reflect their exposures to climate-related and environmental risks with a view to enabling the management body and relevant sub-committees to make informed decisions.</p>
<b>Risk management</b>	<p>vii. Institutions are expected to incorporate climate-related and environmental risks as drivers of existing risk categories into their existing risk management framework, with a view to managing, monitoring and mitigating these over a sufficiently long-term horizon, and to review their arrangements on a regular basis. Institutions are expected to identify and quantify these risks within their overall process of ensuring capital adequacy.</p> <p>-----</p> <p>viii. In their credit risk management, institutions are expected to consider climate-related and environmental risks at all relevant stages of the credit-granting process and to monitor the risks in their portfolios.</p> <p>-----</p> <p>ix. Institutions are expected to consider how climate-related and environmental events could have an adverse impact on business continuity and the extent to which the nature of their activities could increase reputational and/or liability risks.</p> <p>-----</p> <p>x. Institutions are expected to monitor, on an ongoing basis, the effect of climate-related and environmental factors on their current market risk positions and future investments, and to develop stress tests that incorporate climate-related and environmental risks.</p> <p>-----</p>

	<p>xi. Institutions with material climate-related and environmental risks are expected to evaluate the appropriateness of their stress testing with a view to incorporating them into their baseline and adverse scenarios.</p> <p>-----</p> <p>xii. Institutions are expected to assess whether material climate-related and environmental risks could cause net cash outflows or depletion of liquidity buffers and, if so, incorporate these factors into their liquidity risk management and liquidity buffer calibration.</p>
Disclosures	<p>xiii. For the purposes of their regulatory disclosures, institutions are expected, to publish meaningful information and key metrics on climate-related and environmental risks that they deem to be material, with due regard to the European Commission's Guidelines on non-financial reporting: Supplement on reporting climate-related information.</p>

Source: European Central Bank

**Principles of best practice based on stakeholder perspectives**

**Supervisors should issue supervisory guidance and/or expectations in relation to ESG-related risks where such guidance is not available (e.g. from national or supranational regulatory authorities).** This is a critical element needed to support and foster the establishment of good and best practices in banks. Guidance should cover all aspects of ESG and start with the definition of ESG risks. Such supervisory guidance should cover all relevant topics, such as governance and strategy, risk management (including scenario analysis and stress testing), and disclosure, in line with the existing supervisory assessment of institutions. Guidance or expectations should also include a timeline by which banks are expected to comply or define an action plan.

**Beyond mandatory disclosure requirements, supervisors should require banks to adhere to relevant voluntary disclosure frameworks.** Examples could include GRI, UN PRI and PRB, CDP, SASB and WEF- IBC, among others. This is an important tool to accelerate the overall integration of ESG, as well as in enhancing comparability of disclosures. Furthermore, in the formulation of specific disclosure guidance or expectations, supervisors should incorporate elements of market-led disclosure frameworks on ESG-related disclosure.

4.3.4.1.3. Supervisory engagement activities

All interviewed supervisors mentioned the need to increase awareness of ESG risks and foster capacity building for the adequate treatment of these risks in supervised institutions. Many remarked that banks are willingly embarking on this journey alongside supervisors. Although the range of engagement activities varies, usually depending upon the size of the banking sector under supervision, all respondents mentioned that they are actively engaging with their supervised banks. Typically, engagement activities include dialogue, publication of ESG related guidelines and requirements – which have been described above –, participation in industry fora and working groups, as well as the establishment of, and participation in, committees.

An active dialogue with supervised banks is mentioned by many respondent supervisors as one of the initial building blocks in order to raise awareness of the importance of ESG issues. Some supervisors consider themselves still in the initial dialogue phase and are sensitising their supervised banks to ESG issues and ensuring they are prepared for upcoming regulation.

This dialogue is further evolved by supervisors through normal supervisory activities, for example in continuous assessment meetings with key individuals from banks. Concurrently to establishing a dialogue with supervised banks, supervisors also mentioned the active contribution to research in the ESG area, and the associated publication of studies and reports

on the topic of ESG risk by supervisors and central banks. Many respondents expressed the aim of first developing expertise in the ESG field, with a view to then incorporating ESG risks into prudential supervision.

As set out in the previous section, some supervisors have published guidelines or good practices on the management of ESG risks. Engagement with supervised banks is a large element of this process. Good practices published by supervisors also evidence a high level of engagement between market players. The ACPR good practices, for example, are partly derived from a survey of nine banking institutions conducted in 2018.<sup>375</sup>

Participation in industry fora and working groups, as well as interactions with banking associations, were frequently highlighted by respondents as a useful method of advancing engagement. Interaction with the industry in this manner often manifests in the form of workshops, conferences or round tables. An example of this is the EBA & EBF workshop on sustainable finance, held in April 2019 in Brussels, which aimed “to shed some light on institutions, regulators and supervisor’s practices and thinking on how best to incorporate sustainability considerations”.<sup>376</sup> Some supervisors see the establishment of industry or interdisciplinary committees or forums as a critical element in encouraging capacity building and developing awareness.

For example, the PRA and Financial Conduct Authority (FCA) co-convened the Climate Financial Risk Forum (CFRF) with the aim of building capacity and sharing best practice “across financial regulators and industry to advance our sector’s responses to the financial risks from climate change”.<sup>377</sup> Since inception, the CFRF has set up four technical working groups on: i) Disclosure, ii) scenario analysis, iii) risk management, and iv) innovation. In June 2020, they published a guide designed to help the financial industry approach and address the financial risks associated with climate change.<sup>378</sup> The CFRF aims to build on this guide “by developing new materials that progress the management of climate-related financial risks”, and will further engage with firms on the issues they face in this context, as well as to understand their perspectives in order to further develop recommendations.<sup>378 377</sup> The Bank of Greece established the Climate Change Impacts Study Committee (CCISC) with experts from various domains of knowledge, which studies the economic, social and environmental impact of climate change, conducts research, provides policy-relevant expertise, and holds public events such as seminars and round-table discussions.<sup>379</sup> Finally, almost all supervisors mentioned speeches as a powerful tool in fostering engagement with supervised banks.

Most interviewed supervisors mentioned that feedback from significant institutions on their ESG engagement has generally been positive. Supervisors observe that banks are becoming more and more aware of ESG issues as a topic which goes beyond the CSR department, and is understood as an inherent driver of risks by a large majority of banks, especially when it comes to climate-related risks. One supervisor stated that their interaction with supervised banks regarding ESG

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<sup>375</sup> ACPR (2020). *Governance and management of climate-related risks by French banking institutions: some good practices*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525\\_synthese\\_gouvernance\\_anglais.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525_synthese_gouvernance_anglais.pdf).

<sup>376</sup> EBA, EBF (2019). Joint EBA & EBF Workshop on Sustainable Finance. Available at: <https://www.ebf.eu/wp-content/uploads/2019/04/EBA-EBF-Workshop-on-Sustainable-Finance-Highlights-and-summary.pdf>.

<sup>377</sup> Bank of England (n.d.). Webpage: *Climate Financial Risk Forum*. Available at: <https://www.bankofengland.co.uk/climate-change/climate-financial-risk-forum>.

<sup>378</sup> Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>.

<sup>379</sup> Bank of Greece (n.d.). Webpage: *CCISC*. Available at: <https://www.bankofgreece.gr/en/the-bank/social-responsibility/sustainability-and-climate-change/ccisc>.

has contributed to sustainability becoming a topic that is discussed and handled more broadly in the organisation.

#### Principles of best practice based on stakeholder perspectives

**Supervisors should foster awareness of ESG risk-related issues in supervised banks.** They should ensure that banks understand the nature of ESG-related risks posed to their business models and balance sheets. Various tools may be utilised to this effect, including informal dialogue, day-to-day supervisory activities, publication of research, issuance of guidance/expectations, speeches, participation in industry fora, and working groups.

## 5. Modalities of integrating ESG objectives into EU banks' business strategies and investment policies

This section provides an overview of the stocktake exercise on current banks' strategies to integrate ESG factors and foster long-termism in their lending and investment activity in response to green/sustainable funding needs. This includes an analysis of the state of play of green finance and of the market for responsible/sustainable investment at EU and global level, including a mapping of all available green/sustainable financial instruments, products and services and their impact on EU banks' balance sheets.

Furthermore, it provides an overview of the impediments to the development of a well-functioning EU market for green finance and for responsible investment, an overview of the appropriate instruments and strategies to promote the scaling-up of green finance and the market for sustainable financial products, as well as an overview of how to enhance the ability of banks in understanding how ESG objectives can translate into financial opportunities.

For the avoidance of doubt, the term investment/investment activity in this study is used to indicate capital markets activity (e.g. Equity Capital Markets and Debt Capital Markets underwriting, sales and trading activity) as well as treasury portfolio. It does not include investments on behalf of clients (e.g. asset management or private banking activities) and associated products.

### 5.1 Overview of focus areas for research

For the purpose of this study, the following key elements of banks' integration of ESG objectives into their lending and investment activities were analysed, as further illustrated below:

- ESG financial products, services and markets;
- Banks' ESG strategy and governance;
- Banks' ESG measurement, monitoring and disclosure;
- Banks' ESG portfolio steering and business as usual processes.

This list of focus areas served as a structure to systematically gather input and data during the research. The key focus areas analysed as part of the stocktake under each of these elements are illustrated in *Table 13*.

*Table 13: Objective 3 focus areas and their respective sub-focus areas*

<b><u>Focus Area</u></b>	<b><u>Sub-Focus Area</u></b>	<b><u>Description</u></b>
<b>ESG financial products, services and markets</b>	<b>Definition of ESG products</b>	Definition for different categories of ESG products by banks
	<b>Overview of market for green and sustainable financial instruments, products and services<sup>380</sup></b>	Overview of green and sustainable products and services that are currently available/offered by banks in corporate and SME lending, retail businesses, and capital markets
	<b>Debt and Equity Capital Markets</b>	Capital markets activities of banks covering for example bonds, securitisation and derivatives

<sup>380</sup> Only products directly covered via banking regulation have been covered for the purposes of this study; this excludes, for example, insurance and investment management products.

<b><i>Focus Area</i></b>	<b><i>Sub-Focus Area</i></b>	<b><i>Description</i></b>
	<b>Corporate and SME Lending</b>	Corporate and business banking, covering for example corporate and SME loans, project finance, asset finance and leasing
	<b>Lending to individuals and microbusinesses</b>	Retail banking, covering, for example, consumer finance, mortgages, credit cards, and small- and micro-businesses
<b>ESG strategy and governance</b>	<b>ESG strategy and public commitments</b>	Overall level of ambition and strategy of the bank, including qualitative and/or quantitative targets on ESG related activities
	<b>ESG governance structures, board oversight and organisational set-up</b>	Dedicated ESG governance and organisational structures to develop and implement banks' ESG strategies
<b>ESG measurement, monitoring and disclosure</b>	<b>ESG business profile classification, measurement and monitoring methodology</b>	Classification methodologies and data sources used for classification, measurement, and assessment of the bank portfolio's ESG profile
	<b>ESG impact on funding and banks' balance sheet</b>	Impact of ESG products and activities on a bank's balance sheet in terms of, for example, funding or capital, as well as riskiness compared to other assets
	<b>ESG activity disclosure<sup>381</sup> and impact of legislation</b>	Disclosure practices of banks on ESG activity, and impact of legislation and regulation on current ESG disclosure
<b>ESG portfolio steering and business as usual processes</b>	<b>ESG lending and Investment policies and strategies</b>	ESG lending and investment strategies and policies of banks
	<b>Business planning and steering</b>	Commercial planning and steering deployed by banks to achieve ESG related business targets
	<b>Client engagement</b>	Engagement of banks with clients to advance ESG related objectives

<sup>381</sup> ESG risk reporting and disclosure is mentioned in section 4.2.5.

## 5.2 Summary of key takeaways

The following key takeaways present the results of the stocktake exercise conducted on the defined perimeter of external stakeholders. Identification of challenges and enabling factors for the development of a well-functioning EU market for green finance are based on the analysis of the data collected and provide a forward-looking view on the potential enabling factors for implementation.

### 5.2.1 ESG financial products, services and markets

Despite the development of international voluntary principles for some products (e.g. green bonds, social bonds, green loans), respondent banks, as well as other stakeholders including civil society organisations, noted a lack of standards with respect to the definition of ESG products, services, and their respective markets. According to these respondents, there is no consistent approach across banks in terms of their ESG product labelling, and the assessment of market volumes is highly dependent on the exact definition of products beyond their label. However, other market participants, including civil society organisations, argue that although voluntary principles exist, they have not been sufficiently implemented by banks. Study participants would expect the EU Taxonomy to facilitate product labelling standardisation, provided it is expanded to more activities that are financed by banking instruments. Civil society organisations also argued that an expanded taxonomy, which includes and defines grey and brown activities, could further standardise the classification of ESG activities and facilitate a common product labelling.

Products most commonly offered or developed, as mentioned by interviewed banks include green bonds (75%), sustainable bonds (67%), and social impact bonds (58%) for capital markets (mostly provided by G-SIBs)<sup>382</sup>, green project finance (79%) and green loans (75%) for corporate and SME lending, and green/energy efficiency mortgages (71%) for lending to individuals and microbusinesses.

The areas where respondents see most emerging business opportunities for ESG offerings are green loans, sustainability-linked bonds, transition bonds, electric car loans, and green mortgages across business segments. Overall, and according to participants, market demand for ESG offerings is considered to be increasing across all client segments. Demand for ESG products from retail clients is currently seen as relatively low compared to other segments. One reason for this, referenced by respondents, is that corporates are under more pressure from investors and civil society organisations to become more sustainable, compared to retail customers.

Civil society organisations and other stakeholders highlighted the importance of integrating ESG factors across all products and services offered by banks, including off-balance sheet exposures, in order to capture a comprehensive view on banking activity.

### 5.2.2 ESG strategy and governance

The majority of interviewed banks (83%) stated that strategies are in place or under development for the integration of ESG into lending and investments. However, strategies set are usually at a high level and there are seldom comprehensive KPIs or processes in place to monitor their implementation in an in-depth manner. Ambition levels, detailed priorities, and underlying initiatives vary in nature, and these strategies are typically applied to parts of the portfolio only. To this end, while some banks stated that they seek to align their ESG strategy with international agreements, such as the UN Sustainable Development Goals (e.g. 69% of the analysed banks specify the list of SDGs to which they align their strategy) or the Paris Agreement, few banks have

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<sup>382</sup> Respondents did not explicitly mention any equity products for ESG offerings.

publicly specified concrete action plans to achieve such aims and disclose their progress. Only a small number of analysed banks have set a net zero commitment by 2050 or sooner, in line with the Paris Agreement. Civil society organisations and some banks which consider themselves to be more advanced emphasised the importance of setting science-based targets<sup>383</sup> on large parts of banks' portfolios and using sector-specific approaches to align banks' strategies with the goals of the Paris Agreement.

Most interviewed banks (80%) stated that they have established centralised sustainability teams and/or functions to drive group-wide integration and implementation of their ESG strategy. However, the effectiveness of such committees is often seen as limited. Further development of internal capabilities and know-how, as well as alignment among management at executive level, were mentioned as key enablers for the development of ESG products and services.

### 5.2.3 ESG measurement, monitoring and disclosure

The majority of interviewed banks stated that they are able to classify and measure the ESG business profile of their lending and investment portfolios at sectoral (83%) and loan-purpose (79%) level, although often only for parts of the portfolio. Other more granular methodologies, which could support transparency, such as classification by counterparty and ESG product, are not commonly in place. Overall, portfolio measurement seems to be limited to parts of the book. Hence, some respondents stated that they face the challenge of systematically identifying green or sustainable assets on their balance sheet. To address this challenge, some interviewed banks (~20%) have started to develop internal taxonomies, which – in tandem with the EU Taxonomy – enable ESG measurement of the portfolio along multiple dimensions and at different levels of granularity.

An area that has received attention from all stakeholder groups, particularly civil society organisations, is the alignment of a bank's portfolio to international agreements or goals, such as the Paris Agreement. Some financial institutions have undertaken such international commitments, as well as commitments set by their national governments, on parts of the portfolio. However, only one interviewed bank stated that a framework is in place to measure the alignment of their entire portfolio to the goals of Paris Agreement, via the use of a proxy approach. Metrics that could be used by banks in this context include percentage of portfolio aligned to (or deviating from) Paris commitments, carbon physical intensity by sector, financed emissions, temperature metrics, and ESG scoring of the portfolio, among others.

According to respondents, there are limitations in the understanding of the ESG impact on their funding, and most interviewed banks stated that they have not collected comprehensive evidence on the risk-return profile of their ESG lending or investment activities (87% and 84% respectively). Similarly, few banks stated that they have an understanding of the ESG impact on their overall asset composition and quality. Research findings suggest that there is a negative correlation between credit spreads and ESG scores in the markets for sovereign bond and corporate bond issuance, indicating a lower risk premium for issued instruments with better ESG scores. Some findings highlighted that any spread differential observed for green bonds is relatively small and is mostly demand-driven rather than risk-based. However, other studies come to contradicting conclusions, or remain inconclusive. For other product types, there is evidence

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<sup>383</sup> "Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C." See also: Science Based Targets Initiative (n.d.). *How it works*. Available at: <https://sciencebasedtargets.org/how-it-works>.

indicating that a premium is priced in stocks with good ESG performance in several jurisdictions, and green project finance and green mortgages tend to have a lower risk of default compared to those which are non-green. However, there is a greater level of evidence for traded instruments than for lending products.

In relation to banks' ESG reporting practices, most banks publish their ESG strategy, public sustainability commitments, and high-level targets to scale up green finance, where applicable. However, the publication of detailed disclosures regarding banks' ESG-related business activity, as well as detailed quantitative commitments, is less frequently seen. Given the lack of common product labelling standards, coupled with the lack of independent assessments of ESG-related disclosures, a risk of potential green washing by banks was noted by civil society organisations and academics in particular. Civil society organisations also noted that disclosure standards could serve as one of the stimulating factors to push companies towards more sustainable practices. Therefore, some participants call for guidance and regulatory requirements to improve transparency and consistency of disclosures.

#### 5.2.4 ESG portfolio steering and business as usual processes

Many banks lack a holistic and granular approach to measure and monitor the ESG business profile of their lending and investment activity. While most interviewed banks (84%) stated to have policies in place which set assessment criteria for socially and environmentally sensitive industries, these usually apply to a limited set of prioritised sectors only, and often not to the extent expected by civil society organisations. Despite most interviewed banks having begun the integration of ESG considerations into their client screening and credit approval process, few banks cascade sectoral policies further into business origination guidelines/criteria and procedures to actively steer the commercial planning process. Moreover, approximately half of the interviewed banks (52%) stated that they do not have a framework in place for relationship managers to capture ESG-related information from clients.

#### 5.2.5 Impediments to the development of a well-functioning EU market for green finance as well as possible instruments and strategies to promote the scaling-up of green finance

A number of key challenges faced (primarily) by banks in relation to the scaling up and development of a well-functioning market for sustainable and green finance were identified by stakeholders. Data-related issues, a lack of common standards, and limited internal resources, capabilities, and know-how are perceived as the most prevalent challenges for the development of ESG products and services.

A range of potential enabling factors were identified by stakeholders to address these challenges, focusing on instruments that could be adopted or implemented – and continually enhanced – by regulators and supervisors, legislative bodies, and banks themselves. An overview of the enabling factors proposed by stakeholders are presented in *Table 14*. Some of the below measures may be easier to implement than others and, generally, a phased approach could be pursued. Not all measures need to be comprehensively implemented for the scaling up of green finance and sustainable markets.

Table 14: Overview of enabling factors identified by stakeholders in light of key challenges

Challenges	Enabling factors		
	Supervisory and regulatory	Legislative	Other
<p><b>1. Data-related issues</b></p> <p>(Section 5.4.2)</p>	<ul style="list-style-type: none"> <li>• Definition of technical standards on banks' ESG data collection requirements</li> <li>• Requirements or expectations for banks' engagement with clients on ESG topics, including data gathering</li> <li>• Definition of a set of key ESG data and metrics for supervisory reporting and regulatory disclosure requirements</li> <li>• Provision of further regulatory guidance in relation to ESG data required from bank clients</li> <li>• Application of supervisory instruments in case of non-compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of mandatory selected disclosure of firm-level data to smaller corporates subject to materiality and proportionality</li> <li>• Requirements for external validation of self-reported data</li> <li>• Enhancement of reporting standards - similar to accounting standards - for both corporates and banks</li> <li>• Expansion of the EU Taxonomy to include and define grey/brown activities and cover considerations on social dimensions</li> </ul>	<p><u>Banks:</u></p> <ul style="list-style-type: none"> <li>• More engagement with clients by requesting additional data</li> <li>• Enhancements of internal mechanisms/frameworks to compare clients' ESG data across sectors</li> <li>• Integration of ESG data into systems, models, and processes</li> </ul> <p><u>Across stakeholders:</u></p> <ul style="list-style-type: none"> <li>• Development of centralised data collection platform(s) (e.g. public utility ESG database)</li> </ul>
<p><b>2. Lack of standards</b></p> <p>(Section 5.4.3)</p>	<ul style="list-style-type: none"> <li>• Requirements to align banks' ESG products with available standards and labels e.g. the EU Taxonomy and the EU Green Bond Standard</li> <li>• Incorporation of ESG risks into (risk-based) capital requirements to facilitate standard-setting beyond redirecting capital</li> <li>• Provision and enforcement of harmonised ESG disclosure standards (eventually) at a global level</li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of the EU Taxonomy to include and define grey/brown activities and cover considerations on social dimensions</li> <li>• Clear application guidance of the EU Taxonomy for banking products disclosure</li> <li>• Continued review of disclosure requirements e.g. NFRD review</li> </ul>	<p><u>Banks:</u></p> <ul style="list-style-type: none"> <li>• Participation in working groups to develop and refine standards (for example, with respect to ESG product labelling, and disclosures)</li> <li>• Expansion of disclosure practices until common standards are developed</li> </ul> <p><u>Industry bodies:</u></p> <ul style="list-style-type: none"> <li>• Creation of standardised classification frameworks for other product types</li> </ul>
<p><b>3. Limited internal capabilities and know-how</b></p> <p>(Section 5.4.4)</p>	<ul style="list-style-type: none"> <li>• Provision of supervisory guidance, as well as requiring mandatory training for board members and executive management</li> <li>• Request and use of bank data for assessing additional evidence to support risk differentials analysis</li> <li>• Enhancements of the in-house capacity of supervisors and regulators and strengthening collaboration with supervised banks to share understanding and knowledge on ESG</li> </ul>	<ul style="list-style-type: none"> <li>• Legislative changes to incorporate more ESG considerations in governance, for example, enhancements of internal incentives through aligning remuneration for managers with the achievement of sustainability/ESG targets, formulation of directors' duties requiring them to identify and mitigate ESG risks and impacts</li> </ul>	<p><u>Banks:</u></p> <ul style="list-style-type: none"> <li>• Effective organisational set-up for ESG integration including building ESG-related in-house expertise</li> <li>• Development and communication of a comprehensive and specific ESG strategy and monitoring of progress made</li> <li>• Client engagement to increase their awareness on ESG and identify sustainable development needs</li> </ul> <p><u>Other stakeholders:</u></p> <ul style="list-style-type: none"> <li>• Expansion of international efforts and collaboration among various stakeholders</li> </ul>

Challenges	Enabling factors		
	Supervisory and regulatory	Legislative	Other
<b>4. Other challenges</b> <sup>384</sup>  (Section 5.4.5)	<ul style="list-style-type: none"> <li>Requirements for banks to assess the feasibility of integrating ESG factors in product offering (for example assessing cost impact) with the objective of fostering innovation</li> </ul>	<ul style="list-style-type: none"> <li>Alignment of ESG strategies (including at executive and board level) with international agreements, especially for the E pillar (e.g. Paris Agreement) including describing contribution to underlying goals</li> <li>General ESG policies via legislation creating demand for ESG products</li> </ul>	<u>Governments:</u> <ul style="list-style-type: none"> <li>Fiscal incentives to promote the demand for ESG products, e.g. providing subsidies to sectors with a positive impact, introducing tax advantages</li> </ul> <u>Banks:</u> <ul style="list-style-type: none"> <li>Engagement with clients to increase their awareness and stimulate demand</li> </ul>

Source: BlackRock FMA analysis

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<sup>384</sup> Including the potentially lower profitability of ESG products, a lack of product innovation in the ESG space, among others.

### 5.3 Stocktake of current ESG practices

The remainder of the section provides the detailed findings for each research focus area and sub-focus area. Findings from the stocktake are presented, based on data gathered through desk research, interviews/questionnaires, focus groups, and workshops.

#### 5.3.1 ESG financial products, services and markets

Market demand for financial instruments, products, and services geared towards sustainability objectives is increasing. In order to bring global economic growth in line with the Sustainable Development Goals<sup>385</sup> and the Paris Agreement, the OECD estimates that infrastructure investments alone would have to come to USD 6.9 trillion a year by 2030.<sup>386</sup> For the EU, it is estimated that in the period 2021-2030, an additional EUR 350 billion of energy-related investment will be necessary each year to meet the target of reducing greenhouse gas emissions by 55% in 2030 compared to 1990.<sup>387</sup> Since banks are one of the main sources of external finance for the European economy, they are considered to play a vital role in closing the investment gap for the transition to a more sustainable economy by providing adequate financial instruments, products, and services.<sup>388</sup>

Given that current ESG product offerings focus mostly on the E and S pillars and less on the G pillar, this section focuses predominantly on environmental and social aspects.

##### 5.3.1.1 Definition of ESG products

The existence of a wide range of definitions and standards with respect to the definition of ESG products, services, and respective markets hinders the coordinated development of ESG-related (or sustainable) financial products. Many market participants and civil society organisations noted that there is currently no market-wide agreed definition as to what constitutes green or sustainable in financial markets.<sup>389</sup> This is a cause of concern in the market; a recent discussion paper by Imperial College Business School states that “without more holistic standards, green finance is simply cutting the same pie into different slices”.<sup>390</sup>

Different terms and definitions are used – e.g. offerings related to ‘sustainable finance’, ‘responsible finance’, ‘ESG offerings’, and ‘green finance’ –, oftentimes interchangeably. According to the European Commission, sustainable finance generally refers to the process of taking due account of ESG considerations when making investment or financing decisions<sup>391</sup>, which is broader than the concept of green finance, which is confined to climate and environmental protection issues, such as natural resource conservation, biodiversity conservation, and pollution prevention and control.<sup>392</sup> Despite the lack of a common standard, key high-level definitions under sustainable finance and their sources are compared and

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<sup>385</sup> UN (2015). *Sustainable Development Goals*. Available at: <https://sdgs.un.org/goals>.

<sup>386</sup> OECD (2017). *Technical note on estimates of infrastructure investment needs*. Available at: <https://www.oecd.org/env/cc/g20-climate/Technical-note-estimates-of-infrastructure-investment-needs.pdf>.

<sup>387</sup> European Commission (2020). *Stepping up Europe’s 2030 climate ambition*. Available at: [https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com\\_2030\\_ctp\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com_2030_ctp_en.pdf).

<sup>388</sup> Tender Specifications, section 2.1, page 7.

<sup>389</sup> European Federation for Transport & Environment (2019). *EU Commission bids to stem the flow of greenwashing in banking with own ‘green list’*. Available at: <https://www.transportenvironment.org/press/eu-commission-bids-stem-flow-greenwashing-banking-own-green-list>.

<sup>390</sup> Imperial College Business School (2020). *Transition Finance: Managing Funding to Carbon-Intensive Firms*. Available at: <https://www.imperial.ac.uk/business-school/faculty-research/research-centres/centre-climate-finance-investment/research/transition-finance-managing-funding-to-carbon-intensive-firms/>.

<sup>391</sup> European Commission (n.d.). *Overview of sustainable finance*. Available at: [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/what-sustainable-finance\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/what-sustainable-finance_en).

<sup>392</sup> See for example: International Capital Market Association (2020). *Sustainable Finance High-level definitions*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Sustainable-Finance-High-Level-Definitions-May-2020-110520v4.pdf>.

summarised by international organisations and associations, for example, by the International Capital Market Association (ICMA) and within academia (e.g. Imperial College Business School).<sup>392</sup>

At a product level, there is also a lack of standardised definitions in the market. Historically, there has been no uniform standard for green bonds, which are one of the most mature green product types. The lack of clear and comparable definitions for green bonds has been discussed at international forums.<sup>393</sup> In this context, and at EU level, the 2018 report of the EU High-level Expert Group on Sustainable Finance highlighted the need to develop official European sustainable finance standards, to introduce an official EU Green Bond Standard, and to “consider an EU Green Bond label or certificate to help the market to develop fully and to maximise its capacity to finance green projects that contribute to wider sustainability objectives.”<sup>394</sup> In 2019, the Technical Expert Group on Sustainable Finance published a report that proposes the content of a draft EU Green Bond Standard (EU GBS) and provides guidance to the Commission on the proposed way forward for the EU GBS, including the creation of a centralised accreditation scheme for external verifiers.<sup>395</sup> Some civil society organisations, such as Finance Watch, advocate that compliance with the EU GBS should be made compulsory and that implementation should take place via regulation.<sup>396</sup> As further argued by SOMO, “the voluntary nature of this popular green investment instrument contrasts with the urgency of re-orienting capital towards effective positive climate and environmental impact”.<sup>397</sup>

For product offerings related to the S pillar, the lack of conceptual clarity was identified as an issue in the context of providing access to finance for social enterprises<sup>398</sup>, particularly in relation to micro-finance and microcredit.<sup>399</sup>

In general, when factoring ESG criteria into product offerings, banks typically formulate specific requirements either regarding the use of the proceeds (e.g. loans for green purposes), or the characteristics of counterparties (e.g. issuers/borrowers). The analysis of use of proceeds is largely adopted for project finance and real estate financing to determine if a product is considered sustainable; in other words, the funds must be allocated to sustainable projects. However, in a report from the Imperial College Business School, a concern was raised that the ‘use of proceeds’ model may “soon reach its limit to drive change in the financial system” as evaluation of green activities cannot be indefinitely separated from the performance of the entire firm.<sup>400</sup>

For other lending products – for example, general purpose lending – it is often the counterparty itself that is being considered when assessing sustainability based on predefined criteria. For

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<sup>393</sup> See for example: G20 Green Finance Study Group (2016). *Terms of Reference*. Available at: <http://unepinquiry.org/wp-content/uploads/2016/08/Final-GFSG-TOR-2016-01-29.pdf>.

<sup>394</sup> EU High-level Expert Group on Sustainable Finance (2018). *Financing a Sustainable European Economy*. Available at: [https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report\\_en.pdf](https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report_en.pdf).

<sup>395</sup> EU Technical Expert Group (2019). *Report on EU Green Bond Standard*. Available at: [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard_en.pdf).

<sup>396</sup> See for example: Finance Watch (2019). *Response to Invitation for feedback on the TEG preliminary recommendations for an EU Green Bond Standard*. Available at: <https://www.finance-watch.org/wp-content/uploads/2019/04/Finance-Watch-feedback-TEG-report-Green-Bonds.pdf>.

<sup>397</sup> Centre for Research on Multinational Corporations (SOMO) (2019). *Green bond standards?* Available at: <https://www.somo.nl/a-voluntary-eu-green-bond-standard/>.

<sup>398</sup> Defined as businesses that have a social or environmental purpose – they reinvest any surpluses back into the business in order to deliver more of their social or environmental purpose.

<sup>399</sup> Expert group on social economy and social enterprises (2020). *Minutes of the Meeting of the European Commission's Expert Group on Social Economy and Social Enterprises*. Available at: <https://ec.europa.eu/docsroom/documents/42441>.

<sup>400</sup> Imperial College Business School (2020). *Transition Finance: Managing Funding to Carbon-Intensive Firms*. Available at: <https://www.imperial.ac.uk/business-school/faculty-research/research-centres/centre-climate-finance-investment/research/transition-finance-managing-funding-to-carbon-intensive-firms/>.

corporate lending, counterparties can either be assessed based on their industry or sector of operation, or based on their overall sustainability performance as well as their commitment to furthering their sustainability commitments. For lending to individuals, counterparties often need to meet certain criteria, such as belonging to a vulnerable segment in relation to financial inclusion considerations.

As a result, and as further illustrated below, there is no consistent approach to ESG-related (or sustainable) product classification across analysed banks given the lack of baseline principles and standards. Banks’ chosen approaches are often driven by factors such as the bank’s size, its internal ESG-related capacity, and the sophistication of their overall ESG product offering. For example, smaller banks may have loan exposures to green projects or other sustainable purposes, but these are not necessarily publicly promoted or externally labelled as ‘green finance’. On the other hand, larger banks tend to establish an internal framework – sometimes using external or regulatory guidance, such as the EU Taxonomy, or principles such as the Green Bond Principles<sup>401</sup> and Social Bond Principles<sup>402</sup> –, to classify ESG products. In addition, some banks develop their own taxonomies as a basis to manage their ESG products (see section 5.3.3.1).

The lack of consistent classification of green products across banks was also highlighted by ShareAction in their survey, which showed that only 25% of surveyed banks publicly disclose an independent assessment of their low-carbon products, which inhibits comparability across banks and also limits transparency to stakeholders.<sup>403</sup>

### 5.3.1.2 Overview of market for green and sustainable financial instruments, products and services

This study reviews sustainable finance products along three main product segments of banks’ ESG offerings: i) Debt and Equity Capital Markets; ii) Corporate and SME lending; iii) lending to individuals and microbusinesses.

Figure 71 provides an overview of key ESG products that were mentioned by banks during the study; this is further discussed in the following sections.

Figure 71: ESG products map

		<b>ESG Classification</b>		
			Based on use of proceeds (if applicable)/products’ own features	
			Based on ESG objectives or profile of the counterparty	
Division	Instrument type	Products and relevant ESG pillars		
		Environmental	Social	Governance
<b>Debt and Equity Capital Markets</b>	<b>Bonds</b>	Green Bonds	Social Bonds	
		Blue Bonds		
		Transition Bonds		
		Sustainability Bonds		
		Sustainability-linked Bonds		

<sup>401</sup> ICMA (2018). *Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf>.

<sup>402</sup> ICMA (2020). *Social Bond Principles – Voluntary Process Guidelines for Issuing Social Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-Principles-June-2020-090620.pdf>.

<sup>403</sup> ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

Division	Instrument type	Products and relevant ESG pillars		
		Environmental	Social	Governance
	<b>Securitisation</b>	SDG Bonds		
		Green ABS		
		ESG CLOs		
		Capital Relief Transactions		
	<b>Derivatives</b>	Carbon Derivatives		
		ESG-linked Derivatives		
		ESG Futures and Options linked to STOXX or MSCI Index		
<b>Equities</b>	ESG considerations in the context of IPOs			
<b>Corporate and SME Lending</b>	<b>Loans</b>	Green Loans	Social Loans	
		Sustainability-linked Loans/ESG-linked Loans		
		SDG Loans		
		Revolving green credit facilities		
		Sustainability Improvement Loans		
		Green Project Finance	Social Impact Project Finance	
		Sustainable Supply Chain Finance		
<b>Lending to individuals and microbusiness</b>	<b>Mortgages</b>	Green/ Energy Efficiency Mortgages		
	<b>Loans</b>	Electric Car Loans	Loans to vulnerable segments	
		Consumer loans for energy efficiency/ renewable energy instalment		
		Credit for Energy Efficiency		
	<b>Credit Cards</b>	Ethical/Socially responsible Credit Cards		
<b>Others</b>	Green Deposits			

Source: Public reports from banks and BlackRock FMA analysis

Due to the nature of the study, generally, focus is on the supply side of ESG products. However, it was noted by some participants that demand for ESG-related products (e.g. green mortgages) is increasing. Emerging ESG business opportunities mentioned most frequently by participants during interviews are summarised in *Figure 72*, such opportunities are further discussed at business segment level (in section 5.3.1.3, 5.3.1.4, and 5.3.1.5). Currently, according to respondents, there is a strong focus on green loans<sup>404</sup> and sustainability-linked bonds<sup>405</sup>. It was also noted that there is an emerging trend of developing more innovative financial structures. An example of such a structure includes an ‘ESG guarantee’, where the guarantee facility provided

<sup>404</sup> Defined as any type of loan instrument made available exclusively to finance or re-finance, in whole or in part, new and/or existing eligible Green Projects according to the LMA Green Loan Principles. See LMA (2018). *Green Loan Principles*. Available at:

[https://www.lma.eu.com/application/files/9115/4452/5458/741\\_LM\\_Green\\_Loan\\_Principles\\_Booklet\\_V8.pdf](https://www.lma.eu.com/application/files/9115/4452/5458/741_LM_Green_Loan_Principles_Booklet_V8.pdf).

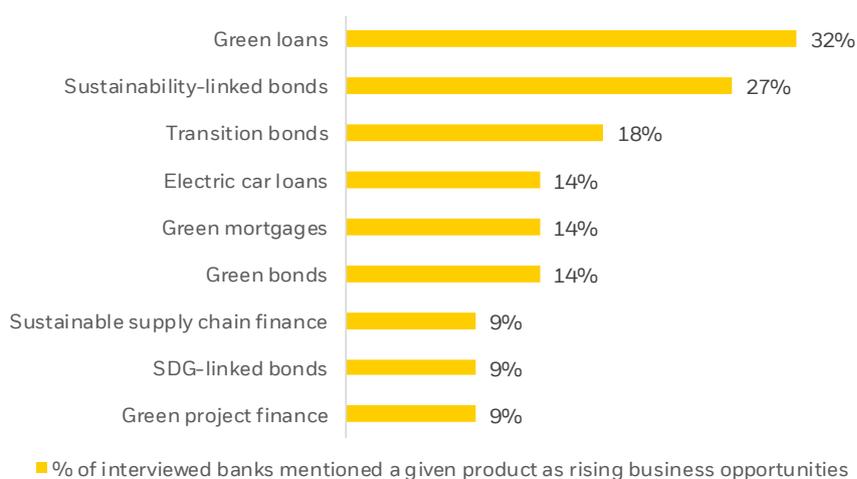
<sup>405</sup> Defined as “bond instrument for which the financial and/or structural characteristics can vary depending on whether the issuer achieves predefined Sustainability/ ESG objectives” according to ICMA Sustainability-Linked Bond Principles. See ICMA (2020) *Sustainability-Linked Bond Principles*. Available at:

<https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Sustainability-Linked-Bond-PrinciplesJune-2020-100620.pdf>.

by the bank allows for the issuance of a series of individual guarantees to support ESG-related projects.

In addition, participants mentioned that products related to the S pillar, such as social impact bonds<sup>406</sup> and Covid-19 bonds<sup>407</sup>, are gaining more prominence, especially in light of the Covid-19 pandemic. Within the E pillar, there are expectations that, in the near future, a broader range of environmental aspects (beyond climate) will become important in product offerings – for example, sustainability-linked loans, where the interest margin is linked to ESG targets (e.g. waste reduction). Some participants also believe that all financial instruments can incorporate ESG characteristics and that there will be an increasing adaptation of existing financial products to create new solutions.

**Figure 72: Rising business opportunities for ESG<sup>408</sup>**



Source: BlackRock FMA analysis

### 5.3.1.3 Debt and Equity Capital Markets

Green bonds play an increasingly important role in financing assets needed for the low-carbon transition. Feedback on the interim report on the EU Green Bond Standard revealed that “currently the investor demand for green bonds outstrips the capacity of issuers to identify eligible green projects and assets for financing”.<sup>409</sup> According to the Climate Bonds Initiative,

<sup>406</sup> According to the OECD, social impact bonds are pay-for-success instruments which make financing conditional upon the delivery of concrete results. Thereby, commissioners (often public authorities or philanthropies) enter into agreements with social service providers, such as social enterprises or non-profit organisations, and investors (typically development finance providers) to pay for the delivery of pre-defined, social outcomes. Social impact bonds are applied to address a range of social issues such as workforce development, education and health. See OECD (2019). *Social Impact Investment 2019*. Available at: <https://www.oecd-ilibrary.org/docserver/9789264311299-en.pdf>.

<sup>407</sup> According to Global Investors for Sustainable Development Alliance (GISD), COVID-19 bond is an innovative social bond to support a sustainable recovery as the society battles the coronavirus pandemic. They should follow the International Capital Markets Association’s (ICMA) Social Bond Principles or Sustainability Bond Guidelines. See UN (2020). *GISD members call for COVID-19 bonds issuance*. Available at: <https://www.un.org/development/desa/financing/post-news/gisd-members-call-covid-19-bonds-issuance>.

<sup>408</sup> Question: What ESG-related product opportunities do you see arising across the E/S/G pillars in the coming years? Sample size: 22. Respondents also mentioned other raising ESG business opportunities (but less than 10% of total responses) that include: sustainability advisory services, carbon credits and/or related certificates for trading, products that support transition to decarbonisation, equity and equity linked thematic finance, SDG bonds, Covid bonds, securitisations, derivatives, etc. for Debt and Equity Markets; sustainable real estate, sustainability-linked loans and credit facilities, etc. for Corporate and SME Lending; and green leasing, ESG guarantees, sustainable credit cards, microfinance and loans to vulnerable segments, etc. for lending to individuals and micro-businesses.

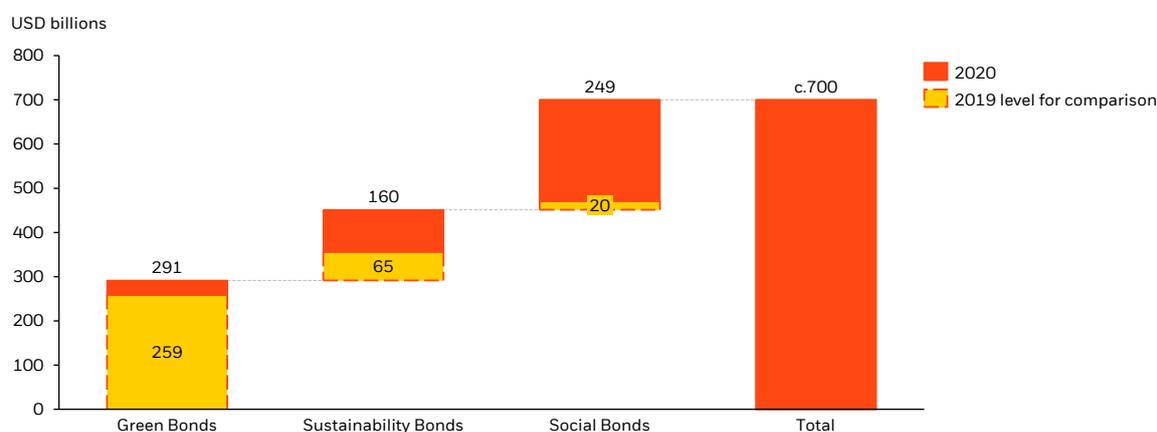
<sup>409</sup> EU Technical Expert Group (2019). *Report on EU Green Bond Standard*. Available at: [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard_en.pdf).

new issuance of green bonds that are aligned to their Climate Bonds Taxonomy<sup>410</sup> reached a record high in 2020 – despite the COVID-19 pandemic – of approximately USD 291 billion, up from the prior record of USD 259 billion in 2019. The volume was primarily driven by the European market, which accounted for 48% of global issuance (see *Figure 73* and *Figure 74*).<sup>411</sup> Use of proceeds from global green bonds issuance in 2020 was mainly for renewable energy (c.35%), green buildings (c.26%), and transportation (c.24%).<sup>412</sup>

The IMF Global Financial Stability Report published in 2020 also showed an increasing trend of green, social and sustainability bond issuance globally since 2014, rising from a single-digit amount to almost USD 200 billion in 2019. While the issuance amounts reported by IMF differ slightly compared with data from Climate Bonds Initiative through the years due to their data differences in perimeters and definitions of the bonds that were taken into consideration, overall trends are aligned.<sup>413</sup>

In emerging markets, a similar trend of an increase in green bond issuance has also been observed. In 2020, and according to the IFC, emerging market green bond issuance amounted to USD 40 billion.<sup>414</sup>

**Figure 73: Overview of sustainable bond issuance in 2019 and 2020<sup>415</sup>**



Source: Climate Bonds Initiative (2021, 2020)

<sup>410</sup> Only bonds with at least 95% proceeds dedicated to green assets and projects that are aligned with the Climate Bonds Taxonomy are included in the Green Bond figures under Climate Bonds Initiative. For instance, sustainability bonds with a wider use of proceeds or bonds which fund large amounts of working capital would be excluded.

<sup>411</sup> Climate Bonds Initiative (2021). *Sustainable Debt Global State of the Market 2020*. Available at: [https://www.climatebonds.net/files/reports/cbi\\_sd\\_sotm\\_2020\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sd_sotm_2020_04d.pdf).

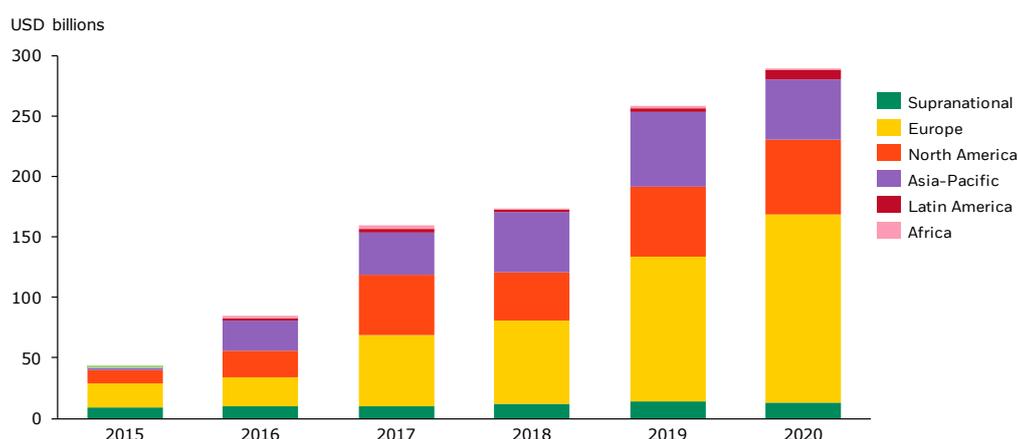
<sup>412</sup> Climate Bonds Initiative (2021). *Record \$269.5bn green issuance for 2020: Late surge sees pandemic year pip 2019 total by \$3bn*. Available at: <https://www.climatebonds.net/2021/01/record-2695bn-green-issuance-2020-late-surge-sees-pandemic-year-pip-2019-total-3bn>.

<sup>413</sup> IMF (2020). *Global Financial Stability Report: Bridge to Recovery*. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2020/10/13/global-financial-stability-report-october-2020#ExecSum>.

<sup>414</sup> IFC (2020). *Emerging Market Green Bonds Report 2020: On the Road to Green Recovery*. Available at: <https://www.ifc.org/wps/wcm/connect/Ofab2dcd-25c9-48cd-b9a8-d6cc4901066e/2021.04+-+Emerging+Market+Green+Bonds+Report+2020+-+EN.pdf?MOD=AJPERES&CVID=nBW.6AT>.

<sup>415</sup> Climate Bonds Initiative (2021). *Sustainable Debt Global State of the Market 2020*. Available at: [https://www.climatebonds.net/files/reports/cbi\\_sd\\_sotm\\_2020\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sd_sotm_2020_04d.pdf). Climate Bonds Initiative (2020). *Green Bonds Global State of the Market 2019*. Available at: [https://www.climatebonds.net/files/reports/cbi\\_sotm\\_2019\\_vol1\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sotm_2019_vol1_04d.pdf). Product classification is based on standards set by Climate Bond Initiative.

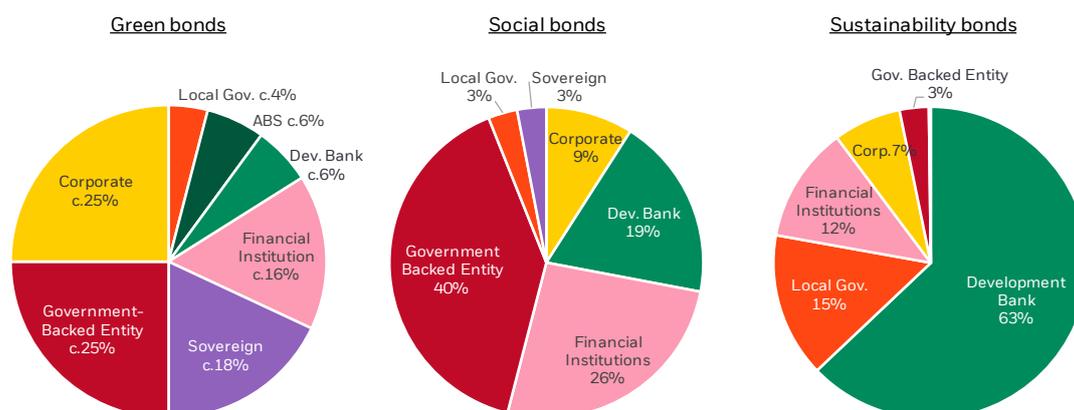
**Figure 74: Evolution of green bond issuance by region<sup>416</sup>**



Source: Climate Bonds Initiative (2021)

As the market continues to mature, the basket of issuers is becoming more diverse, both at European and global level.<sup>417</sup> As further shown in *Figure 75*, in the first half of 2020, green bond issuance had a more diverse set of issuers, sustainability bonds were issued predominantly by development banks (63%), while social bond issuance is led by government backed entities (40%).

**Figure 75: Breakdown of green bond, social bond, and sustainability bond issuance in 1H 2020 by issuer types**



Source: Moody's Investors Service, Climate Bonds Initiative (2020)

It is notable that private sector green bonds – which meet the criteria set out by the Climate Bond Initiative, where proceeds are allocated to environmental projects –, do not have markedly different maturities compared with conventional corporate bonds. However, green bonds issued

<sup>416</sup> Product classification is based on standards set by Climate Bond Initiative; “Other” includes (i) ineligible green bonds that allocate over 5% of proceeds to assets or projects that are not necessarily linked to green or financing for projects that are not aligned with the CBI Green Bond Databased Methodology. For full classification see: Climate Bonds Initiative (2019). *Green Bond Market Summary*. Available at: [https://www.climatebonds.net/system/tdf/reports/2019\\_annual\\_highlights-final.pdf?file=1&type=node&id=46731&force=0](https://www.climatebonds.net/system/tdf/reports/2019_annual_highlights-final.pdf?file=1&type=node&id=46731&force=0).

<sup>417</sup> Climate Bonds Initiative (2019). *Green Bond Market Summary*. Available at: [https://www.climatebonds.net/system/tdf/reports/2019\\_annual\\_highlights-final.pdf?file=1&type=node&id=46731&force=0](https://www.climatebonds.net/system/tdf/reports/2019_annual_highlights-final.pdf?file=1&type=node&id=46731&force=0).

by the public sector tend to have longer maturities than those issued by the private sector.<sup>418</sup> One civil society organisation expressed the view that green bonds are legally the same as other general corporate purpose bonds and do not exhibit characteristics that would indicate different riskiness.

For issuance of green, social and sustainability bonds in 2021, according to Moody's Analytics, the projected total issuance could hit record USD 650 billion, representing a continued and significant increase over issuance in 2020.<sup>419</sup> The volume is expected to be driven by sustained growth and diversification in all these markets potentially reaching USD 375 billion for green bond market, USD 150 billion for social bond market, and USD 125 billion for sustainability bond market. Furthermore, sustainable bonds could represent 8-10% of total global bond issuance in 2021.

Another feature of the green bond market is the increasing relevance of transition bonds, which are designed to help companies that are considered brown in their transition towards becoming more green.<sup>420</sup> The proceeds from these bonds are used to improve the sustainability and environmental profile of the issuer. However, they may not qualify as EU Green Bonds under the EU Green Bond Standards or the Climate Bond Initiative Standards. A number of participants stated that, in their view, transition bonds will be a key growth area in the coming years, as they could facilitate changes within organisations in carbon intensive sectors that may lack green assets to support the issuance of a green bond. However, there are currently no universally accepted definitions for transition bonds, and there are no reliable estimates of the market size. Civil society organisations emphasised the importance of addressing the lack of a common standard for transition bond issuance in the market and suggested that the classification of such activities could be further enhanced in the EU Taxonomy.

The green securitisation and structured finance market is expected to play an increasingly important role to finance green projects, particularly for smaller scale low carbon and climate-resilient assets. Although no formal definition has been adopted for green securitisation, three main types of transactions labelled as green can be identified: i) Securitisations with green collateral, where securities are backed by portfolios of green assets (e.g. electric vehicle loans or mortgages for energy-efficient homes); ii) securitisation with green use of proceeds that will be used for investment in green projects; and iii) capital relief transactions (e.g. synthetic securitisation where the originator uses freed-up capital to invest in green projects).<sup>421</sup> In 2019, the new regulatory framework for securitisation in the EU came into force, defining criteria for "simple, transparent, and standardised" securitisations, and is subject to a comprehensive review by 2022.<sup>422</sup> One respondent bank stated that the current European regulatory framework for securitisation is not effective for small-scale loans, mortgages, and consumer loans. Another bank specifically mentioned that similar programs to the Property Assessed Clean Energy (PACE)

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<sup>418</sup> ECB, ESRB (2020), *Positively green: Measuring climate change risks to financial stability*. Available at:

[https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608\\_on\\_Positively\\_green\\_-\\_Measuring\\_climate\\_change\\_risks\\_to\\_financial\\_stability~d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608_on_Positively_green_-_Measuring_climate_change_risks_to_financial_stability~d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26).

<sup>419</sup> Moody's Investors Service (2021). *Sustainable bond issuance to hit a record \$650 billion in 2021*. Available at: [https://www.moody.com/research/Moodys-Sustainable-bond-issuance-to-hit-a-record-650-billion--PBC\\_1263479](https://www.moody.com/research/Moodys-Sustainable-bond-issuance-to-hit-a-record-650-billion--PBC_1263479).

<sup>420</sup> According to the IFC, transition bonds aim to finance the transition to a low-carbon economy. See IFC (2019). *Emerging Market Green Bonds Report 2019*. Available at: <https://www.ifc.org/wps/wcm/connect/a64560ef-b074-4a53-8173-f678ccb4f9cd/202005-EM-Green-Bonds-Report-2019.pdf?MOD=AJPERES&CVID=n7Gtahg>.

<sup>421</sup> Climate Bonds Initiative (2017). *Green Securitisation: unlocking finance for small-scale low carbon projects*. Available at:

[https://www.climatebonds.net/files/files/March17\\_CBI\\_Briefing\\_Green\\_Securisation.pdf](https://www.climatebonds.net/files/files/March17_CBI_Briefing_Green_Securisation.pdf).

<sup>422</sup> Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012. OJ L 347, 28.12.2017, p. 35–80 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R2402>.

program<sup>423</sup> in the US are lacking at European level, which, among other factors, could support growth of green securitisation in Europe. Nevertheless, respondent banks still believe the demand for green securitisations will continue to grow in the coming years in line with the need for green finance initiatives and high demand of green products.

ESG derivatives were another business opportunity mentioned by participants and can be seen as a response to growth in ESG assets and the ensuing demand to hedge and manage sustainability risk exposure. The German exchange Eurex has listed standardised futures and options to global, regional, and local MSCI and STOXX indices to allow asset holders to manage undesired sustainability risk. Banks have also developed ESG derivatives that allow companies to hedge against moves in interest rates and exchange rates of sustainable or green bonds. For example, some swap products hedging sustainable bonds become more expensive if the company fails to reach its sustainability target under the related sustainable bond. Carbon derivatives, where the underlying commodity are CO<sub>2</sub> emission allowances (e.g. carbon credit, carbon emission certificates, European Union allowances), were also mentioned as an emerging trend as they could help banks hedging risks for corporates.

Compared with green bond issuance and other ESG debt offerings, the range of ESG-related primary equity products is still relatively limited. In fact, very few interviewed banks stated that they currently provide such products. Only one bank stated that they advise clients holistically on broader sustainable finance aspects, including Equity Capital Markets. Selected examples of such offerings include green IPO advisory and the provision of strategic and financial advice to corporate clients on M&A transactions to support their carbon optimisation objectives.

Supervisors and civil society organisations emphasised the importance of integrating more ESG factors and considerations into off-balance sheet transactions including, for example, advisory services, securitisation, derivatives, and trade finance, to further enable the green transition. However, as highlighted by several civil society organisations and other stakeholders, such integration is not commonly observed. For example, loans to unsustainable sectors that were securitised or sold after origination are often not included by banks in relevant disclosures or assessments. Recent developments related to Pillar 3 disclosures may further facilitate such integration (see section 4.3.4.1.1 for further details on developments in Pillar 3 disclosures).<sup>424</sup>

Table 15 provides examples of sustainable products in the Debt and Equity Capital Markets business.

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<sup>423</sup> Property Assessed Clean Energy Programs (n.d.). Available at: <https://www.energy.gov/eere/slsc/property-assessed-clean-energy-programs>.

<sup>424</sup> EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf).

Table 15: Illustrative examples of ESG products in Debt and Equity Capital Markets

Product type	Example
<b>Bonds</b>	
<b>Green Bonds</b> <sup>425</sup>	A German state-owned development bank brought a total of USD9bn worth of green bonds to market. Proceeds will be used to provide financing or co-financing to renewable energy and green building projects.
<b>Social Bonds</b> <sup>426</sup>	The European Commission issued a EUR17bn inaugural social bond to further fund economic relief during the Covid-19 pandemic. Proceeds will be used for EU member states to fund employment initiatives. <sup>427</sup>
<b>Blue Bonds</b> <sup>428</sup>	An investment bank served as an underwriter of a USD10mn blue bond for an international organisation. The bond helped to highlight the growing need to protect the world's oceans as well as the economies that rely upon their health and resilience. The bond – a callable step-up fixed rate bond – was targeting both institutional and individual investors.
<b>Transition Bonds</b>	A gas distribution network agreed to the UK's first transition bond, which has been issued to enable heavy-carbon emitters to access funds to decarbonise. In particular, the proceeds of the bond will be used to replace pipeline to facilitate the transmission of hydrogen and other low-carbon gases and reduce methane leakage.
<b>Sustainability Bonds</b> <sup>429</sup>	A technology company issued a USD5.75bn sustainability bond with proceeds set to support investment in both environmental and social initiatives including eligible pre-defined projects for energy efficiency, clean energy, green buildings, racial equality, and support for small businesses in the wake of Covid-19.
<b>Sustainability-linked Bonds</b>	An Italian energy company paved the way with the world's very first sustainability-linked bond with interest rate adjustments related to sustainability performance targets.
<b>SDG Bonds</b>	An international organisation issued a 10-year global Sustainable Development Goals (SDG) bond to raise awareness of SDG 2, SDG 5, SDG 13, SDG 16 at a total of EUR1.5bn.
<b>Securitisation</b>	
<b>Green Asset-backed Securities (ABS)</b>	A European bank served as structuring agent and bookrunner on two solar securitisation deals, totalling USD575mn.

<sup>425</sup> According to the ICMA Green Bond Principle, green bonds are defined as any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects. Eligible Green Project categories include, e.g., renewable energy and clean transportation. See ICMA (2018). *Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf>.

<sup>426</sup> According to the ICMA Social Bond Principles, social bonds are defined as bonds that the use of proceeds is used to raise funds for new and existing projects with positive social outcomes. See ICMA (2020). *Social Bond Principles – Voluntary Process Guidelines for Issuing Social Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-PrinciplesJune-2020-090620.pdf>.

<sup>427</sup> The issuing consisted of two bonds – a 10-year bond that was priced at 3 basis points above mid-swaps and a 20-year bond that was priced at 14 basis points over mid-swaps, which are listed at the Luxembourg Stock Exchange.

<sup>428</sup> According to IMF, blue bond is a debt instrument issued by governments, development banks or others to raise capital from impact investors to finance marine and ocean-based projects that have positive environmental, economic and climate benefits. See World Bank (2018). *Sovereign Blue Bond Issuance: Frequently Asked Questions*. Available at: <https://www.worldbank.org/en/news/feature/2018/10/29/sovereign-blue-bond-issuance-frequently-asked-questions>.

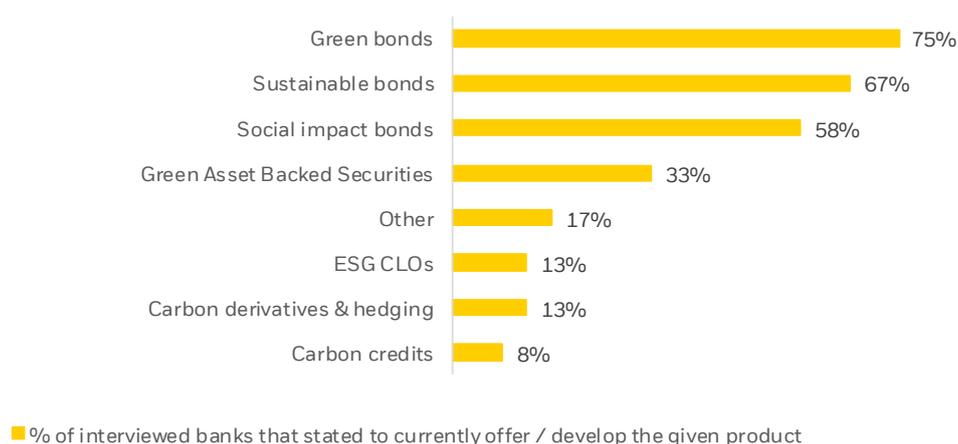
<sup>429</sup> According to ICMA Sustainability Bond Guidelines, sustainability bonds are bonds where the proceeds will be exclusively applied to finance or re-finance a combination of both Green and Social Projects. See ICMA (2018). *Sustainability Bond Guidelines*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Sustainability-Bonds-Guidelines-June-2018-270520.pdf>.

Product type	Example
<b>ESG Collateralised Loan Obligations (CLOs)</b>	A European bank priced the first ESG CLO (EUR410mn) that is fully compliant with ESG best practices utilising a wholly exclusionary loan selection process.
<b>Capital relief transactions</b>	A European bank conducted a synthetic risk transfer to enhance their capacity to finance new socially responsible projects through reallocating the released capital from the legacy loan book. Additionally, the investor will reduce the coupon if the bank manages to redeploy more risk weighted assets than committed towards these projects in the agreed timeframe.
<b>Derivatives</b>	
<b>Carbon Derivatives</b>	A European bank offers structured notes that allow investors to take positions in EU carbon allowances while helping utilities reduce their funding costs.
<b>ESG-linked Derivatives</b>	The first ESG-linked sustainability-improvement derivative was launched in August 2019 which hedges the interest rate risk of the construction of an infrastructure project. The credit spread of the derivative can increase or decrease based on the projects' ESG performance.

Source: Public reports of banks and BlackRock FMA analysis

Among interviewed banks, green bonds are the most commonly offered or developed ESG product, followed by sustainable bonds and social impact bonds (see Figure 76). All interviewed G-SIBs stated that they are offering or developing green and sustainable bonds; this is less commonly observed among non-GISIBs, of which approximately half of the interviewed banks do not offer these products. In addition to ESG products, several banks also stated to provide advisory services to help clients on their capital market issuance, in particular to check their eligibility for labelled bond issuance. Other than ESG bond offerings, other products are still a niche area for non-G-SIBs. For example, within the non-G-SIB group, only one bank has issued or developed Green ABS and carbon credits, while one other bank offers carbon derivatives.

Figure 76: ESG products offered and/or developed for Debt and Equity Capital Markets<sup>430</sup>



Source: BlackRock FMA analysis

In terms of emerging business opportunities, participants mentioned that there may be potential for expansion in 'use of proceeds' and KPI-linked structures for ESG products. To this end, several

<sup>430</sup> Question: What are the key ESG-focused products you are currently offering and/or developing for a given segment/division? Sample size: 24. "Other" includes ESG-linked derivatives, Equity Capital Markets offerings (e.g. Green IPOs), sustainability/ESG-linked bonds, green convertible bonds, Covid bonds, and Capital relief transactions.

participants stated that they are observing a stronger interest in sustainability-linked products, as firms are putting more ESG strategies in place and attempting to link these strategies to debt financing instruments, which they believe may potentially come at lower funding costs. Banks also mentioned notable growth potential for ESG derivatives and hedging solutions, for example, for renewable energy project financing and corporates.

As a recent development, the ECB has announced that they will accept sustainability-linked bonds as central bank collateral from January 2021 and will potentially include them in their asset purchases.<sup>431</sup> In addition, the Swedish Central Bank (the “Riksbank”) has integrated sustainability criteria into their central banks’ asset purchasing programs. The purchase program, between 1 January and 31 March 2021, targeted sovereign and municipal green bonds as well as corporate bonds whose issuers comply with “international standards and norms for sustainability”.

#### 5.3.1.4 Corporate and SME Lending

Green and sustainability-linked loans are a relatively recent innovation, but respondents stated that they have become increasingly relevant for their ESG product offerings. With the release of the Green Loan Principles in 2018<sup>432</sup>, green loans can now be referenced against a set of basic standards, similar to those for green bonds, setting out eligible uses of proceeds, project evaluation, management of proceeds, and reporting standards. Sustainability-linked loans, according to the Sustainability Linked Loan Principles published in 2020<sup>433</sup>, do not set conditions on the purpose of the proceeds, but instead incentivise the borrower to improve its performance against pre-determined ESG criteria.

According to Moody’s, sustainability-linked loans experienced a rapid increase in volume in 2019, driven mainly by European companies and their focus on improving organisation-wide sustainability. The volume surged to USD 134 billion globally in 2019, from USD 34 billion in 2018. Meanwhile, green loans have seen modest growth, with a total volume of USD 22 billion in 2019 vs. approximately USD 18.5 billion in 2018. Green loans have primarily been issued in the form of term loans (83% of issuance volumes in 2018) whereas the majority of sustainability-linked loans are issued as revolving credit facilities (84% of issuance volumes in 2019).<sup>434</sup>

Although issuance was still driven by European companies’ pursuit of sustainability goals, in the first half of 2020 loan issuance volumes were modest for sustainability-linked loans (USD 47.2 billion), and in line with 2019 levels for green volume loans (USD 13.2 billion). As shown in *Figure 77* sustainability-linked loan volumes in the second quarter of 2020 totalled USD 20 billion (down from USD 27.2 billion in the first quarter), and green loan volumes were at USD 6.8 billion (up from USD 6.4 billion in the first quarter), above the quarterly average of 2019.<sup>435</sup>

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<sup>431</sup> ECB (2020). *ECB to accept sustainability-linked bonds as collateral*.

Available at: <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200922~482e4a5a90.en.html>.

<sup>432</sup> LMA (2018). *Green Loan Principles*. Available at:

[https://www.lma.eu.com/application/files/9115/4452/5458/741\\_LM\\_Green\\_Loan\\_Principles\\_Booklet\\_V8.pdf](https://www.lma.eu.com/application/files/9115/4452/5458/741_LM_Green_Loan_Principles_Booklet_V8.pdf).

<sup>433</sup> APLMA, LMA, LSTA (2020). *Sustainability Linked Loan Principles*. Available at:

<https://www.lsta.org/content/sustainability-linked-loan-principles-sllp/>.

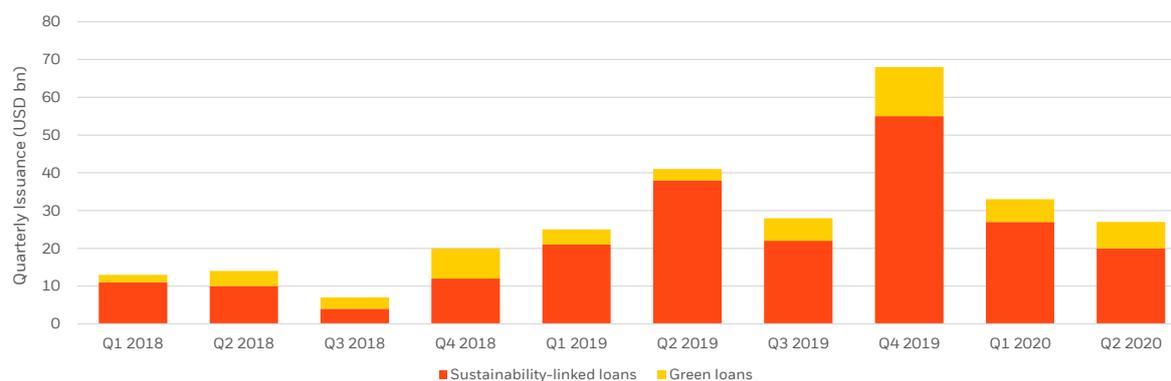
<sup>434</sup> Moody’s (2020). *Sustainable Finance – Global (Sector In-Depth, 3 February 2020)*. Available at:

<https://www.eticanews.it/wp-content/uploads/2020/02/Sector-In-Depth-Sustainable-Finance-Global-03Feb20.pdf>.

<sup>435</sup> Moody’s (2020). *Sustainable Finance – Global (Sector In-Depth, 17 August 2020)*. Available at:

<https://ma.moody.com/rs/961-KCJ-308/images/Record%20sustainable%20bond%20issuance.pdf>.

Figure 77: Quarterly volumes of green loans and sustainability-linked loans until Q2 2020<sup>436</sup>



Source: Moody's Investors Service, Dealogic (2020)

A selection of case studies on sustainable products currently offered by banks in the Corporate and SME lending division is further provided in *Table 16*.

Table 16: Illustrative examples of ESG products in Corporate and SME Lending

Product type	Example
<b>Loans</b>	
<b>Green Loans</b>	A European bank acted as an arranger and conducted a first solar rooftop financing transaction in Asia Pacific for a SGD50mn loan, which was used to finance an approximately 50MW portfolio of rooftop solar projects.
<b>Social Loans</b>	A European bank provides social loans as part of its social impact finance business to support projects that lead to, for example, affordable housing or basic infrastructure improvements.
<b>Sustainability-linked Loans/ ESG-linked Loans</b>	A European bank provided a UK housing association with a five-year GBP50mn sustainability-linked loan for general corporate purposes but incorporating a pricing mechanism linked to the their ESG performance. The UK housing association will benefit from a lower interest rate margin if it gets a predefined number of unemployed residents into work or supports them with work-ready training.
<b>Revolving green credit facility</b>	A Belgian chemical company collaborated with a European investment bank on a EUR2bn revolving credit facility linked to environmental commitments. The cost of credit is linked to a reduction of the company's greenhouse gas emissions.
<b>Sustainability Improvement Loans</b>	A European bank coordinated a sustainability improvement loan in commodity trading for a multinational food and agriculture company. The interest rate of the USD2.1bn loan links to its sustainability performance and rating.
<b>Green Project Finance</b>	A European bank arranged EUR3.9bn in project finance for renewable energy projects generating over 3,480 megawatts.

<sup>436</sup> Moody's (2020). *Sustainable Finance – Global (Sector In-Depth, 17 August 2020)*. Available at: <https://ma.moody's.com/rs/961-KCJ-308/images/Record%20sustainable%20bond%20issuance.pdf>.

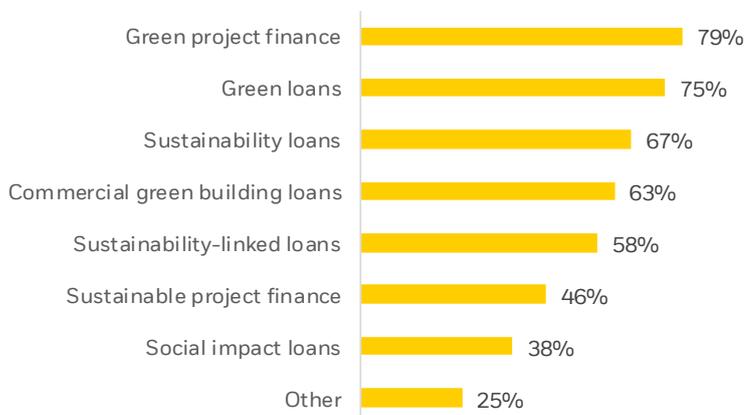
Product type	Example
<b>Social Impact Project Finance</b>	A European bank has undertaken a Social Impact Project Finance initiative to renovate a local residential care home and improve assistance for the elderly, involving a total financing of EUR8mn.
<b>Sustainable Supply Chain Finance</b>	A European bank developed a sustainable supply chain program for a US retailer and pegged a supplier's financing rate to its sustainability credentials, for example, progress on cutting carbon emissions.

Source: Public reports of banks and BlackRock FMA analysis

Among interviewed banks, the lending product most frequently offered or developed by banks is related to green project finance, followed by green loans and sustainability loans (see Figure 78). G-SIBs and non-G-SIBs seem to have a different focus on product offerings. Among non-G-SIBs, green project finance, green loans, and commercial green building loans are most commonly offered, whereas among G-SIBs, sustainability loans, green loans, and sustainability-linked loans/credit facilities are the most frequent product offerings. One bank highlighted that despite witnessing demand for ESG-related lending from its customers, it is not actively promoting such offerings as of now.

In terms of emerging opportunities, banks mentioned the offering of 'green fee' models, where part of the fee generated by the products is used by banks to contribute to sustainable or green purposes.<sup>437</sup> In addition, respondents highlighted that sustainable supply chain financing could connect green lending with global supply chain solutions for clients when they have incorporated eligible social, environmental, and governance criteria into contracts with suppliers or consumers.

Figure 78: ESG products offered and/or developed for corporate and SME Lending<sup>438</sup>



■ % of interviewed banks that stated to currently offer / develop the given product

Source: BlackRock FMA analysis

<sup>437</sup> An example of the 'green fee' model is the case in which a bank uses part of the income generated by corporate loans to plant trees in order to offset carbon emissions; another example could be a bank sponsoring climate change research with revenues generated via project finance activities.

<sup>438</sup> Question: What are the key ESG-focused products you are currently offering and/or developing for a given segment/division? Sample size: 24. "Other" includes solar panel loans, Covid related moratoria and loans, sustainable supply chain finance, ESG-linked cash management service and specific program for social businesses.

### 5.3.1.5 Lending to individuals and microbusinesses

Sustainable products offered to individuals and microbusinesses currently include, among others, green mortgages, electric car loans, loans to vulnerable segments, and sustainable credit cards. However, according to interviewed banks, the current demand for ESG products from retail clients is not as predictable, or as high, as in other segments. One reason for this, mentioned by respondents, is that corporates are more pressured by investors and civil society to become more sustainable, compared to retail customers.

Energy efficiency mortgages have gained significant momentum in the past few years, supported by, for example, the market-led initiative Energy Efficient Mortgage Action Plan (EeMAP), as well as through the creation of dedicated funds at national level.<sup>439</sup> EeMAP aims to create standardised, energy efficient mortgages that offer preferential financing conditions for owners that improve the energy efficiency of their buildings or acquire an energy efficient property. Nearly 40 major banks from across Europe participated in the pilot phase in 2018.<sup>440</sup> Table 17 illustrates examples of sustainable products currently offered by banks in the retail space, by product category.

Table 17: Illustrative examples of ESG products in lending to individuals and microbusinesses

Product type	Example
<b>Mortgages</b>	
<b>Green/Energy Efficiency Mortgages</b>	A Finnish bank joined the pilot project EeMap and will test and implement the framework for energy-efficient home loans, to be launched into existing products and processes.
<b>Loans</b>	
<b>Electric Car Loans</b>	A European bank provides car loans geared toward individuals and freelance workers who wish to buy electric cars with emissions under 75g CO <sub>2</sub> /KM. The electric car loan comes with several specific conditions, e.g. a longer repayment period, a competitive interest rate, and no origination fees.
<b>Loans to vulnerable segments</b>	A European bank offers loans to support vulnerable people in their search for a job.
<b>Consumer loan for energy efficiency/ renewable energy instalment</b>	A European bank provides green housing/energy saving loans to finance home repair or renovation works aimed at upgrading energy efficiency and enhancing energy conservation.
<b>Credit for Energy Efficiency</b>	A revenue service in the US provides residential energy efficient property credit that allows for a credit equal to the pre-determined percent of the cost of a qualified energy efficient property, e.g. qualified solar electric property.

Source: Bank public reports and FMA analysis

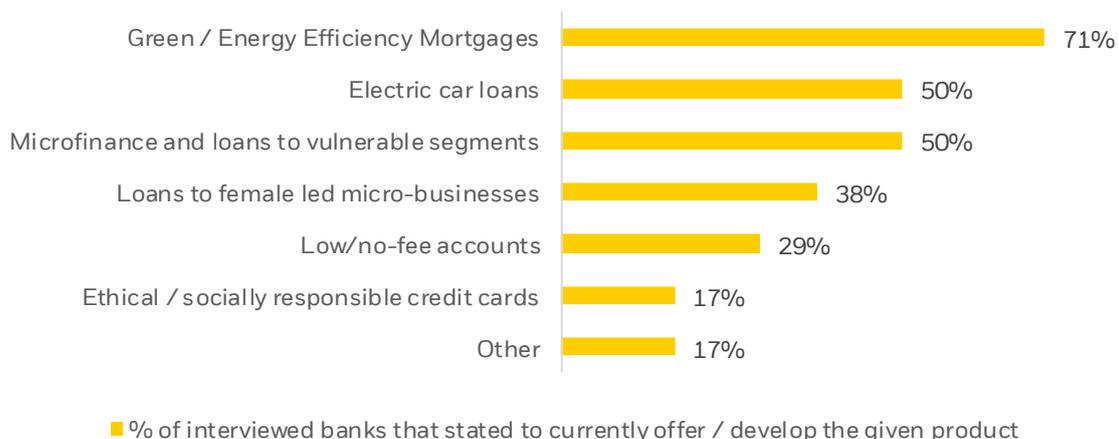
Among interviewed banks, the product most frequently offered by banks is green/energy efficiency mortgages, followed by electric car loans as well as microfinance, and loans to

<sup>439</sup> See for example: CEE Bankwatch Network (2020). *EU Funds For A Green Recovery - Recommendations To Steer EU Regional And Recovery Funding Towards Climate Neutrality*. Available at: <http://www.caneurope.org/docman/climate-finance-development/3625-eu-funds-for-a-green-recovery-report-july-2020/file>.

<sup>440</sup> EeMAP (n.d.). *WELCOME TO THE EeMAP Initiative*. Available at: <https://eemap.energyefficientmortgages.eu/>.

vulnerable segments (Figure 79) In addition, respondents stated that they expect the demand for green building loans and electric car loans to continue to grow.

**Figure 79: ESG-focused products currently being offered and/or developed for lending to individuals and microbusinesses<sup>441</sup>**



Source: BlackRock FMA analysis

In relation to emerging business opportunities, respondent banks expect an increased demand for energy efficiency mortgages, which allow homebuyers or homeowners to finance the cost of improvements that will make their home more energy efficient (e.g. solar energy systems). The demand for energy efficiency mortgages is particularly expected to increase in regions where a stringent environmental policy is implemented by the government.

Carbon neutral products were also mentioned by participants as an emerging trend, an example of which is carbon neutral mortgages. These mortgages would ensure that fees typically paid by borrowers to banks and underwriters upon closing their loans are put towards carbon offsetting projects to fully mitigate the projected carbon footprint of owning and operating the home, for the life of the loan.<sup>442</sup>

### 5.3.2 ESG strategy and governance

#### 5.3.2.1 ESG strategy and public commitments

According to an article from the World Economic Forum (WEF), in recent years, leading banks have started to see sustainability as a priority. For example, banks are considering how to support the transition to a low-carbon economy through the promotion of more sustainable practices, as well as creating appropriate governance structures to address changing needs from consumers and other stakeholders.<sup>443</sup> This is seen by various stakeholders as an important element to support the transition. According to civil society organisations, such as Change Finance, banks can accelerate the transition through choosing to finance sustainable companies and projects

<sup>441</sup> Question: What are the key ESG-focused products you are currently offering and/or developing for a given segment/division? Sample size: 24. "Other" includes 'mobility solutions' for customers e.g. banking app that offers services with easy access to public transport, car sharing, and bicycle renting; 'energy solutions' for customers to support their energy scans, energy renovation studies for private homes.

<sup>442</sup> Carbon Credit Capital (2020). *Carbon Neutral Mortgage*. Available at: <https://carboncreditcapital.com/our-services/for-businesses/carbon-neutral-checkout/carbon-neutral-mortgage/>.

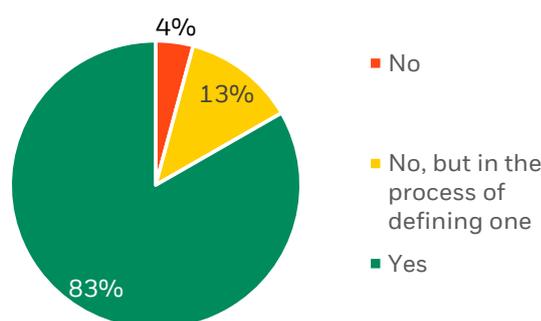
<sup>443</sup> World Economic Forum (2019). *Banking on sustainability - what's next?* Available at: <https://www.weforum.org/agenda/2019/09/how-banks-can-be-more-sustainable>.

that will address these societal issues.<sup>444</sup> Furthermore, in a recent paper, Bruegel expressed the view that “the financial sector can fulfil a stewardship role to steer companies towards sustainable business practices”.<sup>445</sup>

Of those banks interviewed, the majority expressed that they aim to create a positive impact via their ESG strategy. Many stated that they define positive impact, and subsequently their sustainability strategy, based on the concept of double materiality – i.e. they aspire to take into account the ESG impact of their business activities, not only on their own balance sheet but also on the wider community and environment.

As shown in *Figure 80*, 83% of interviewed banks claimed that they have a strategy in place for the integration of ESG into lending and investments with another 13% being in the process of defining such a strategy; all interviewed G-SIBs stated that they have such a strategy in place. However, few banks explicitly stated that they have concrete KPIs or processes in place to monitor the implementation of a strategy in the organisation. In fact, approximately one out of four interviewed banks that stated to have an ESG strategy, clarified that the only element implemented was integration of sustainability criteria into the credit application process. The 4% of banks that neither have a strategy in place to integrate ESG factors, nor plan to develop one, mentioned that they have incorporated ESG factors into the client screening process through negative screening, but do not envisage a more integrated or broader strategic framework.

**Figure 80: Strategies in place for ESG integration into lending and investments**<sup>446</sup>



Source: BlackRock FMA analysis

A commonly used starting point for banks’ development of an ESG strategy is adhering to international agreements on sustainability, such as the United Nations’ Sustainable Development Goals and the Paris Agreement. Within the stakeholder perimeter, 69% of analysed banks explicitly list the SDGs to which they align their strategy. This is consistent with the UNEP FI’s PRB, a major banking sector specific sustainability initiative, which was launched in 2019 and signed by 132 banks.<sup>447</sup> According to these principles, “banks should align business strategy to be consistent with and contribute to individuals’ needs and society’s goals, as expressed in the Sustainable Development Goals, the Paris Climate Agreement and relevant national and regional frameworks”. Other notable international sustainability initiatives that have driven sustainability

<sup>444</sup> See for example Change Finance (n.d.). *Investing not betting*. Available at: <https://www.changefinance.org/solution/investing-not-betting/>.

<sup>445</sup> Schoenmaker, D. (2020). *The impact economy: balancing profit and impact*. Working Paper 2020/04, Bruegel. Available at: [bruegel.org/wp-content/uploads/2020/07/WP-2020-04-Impact-Economy-D.-Schoenmaker.pdf](https://bruegel.org/wp-content/uploads/2020/07/WP-2020-04-Impact-Economy-D.-Schoenmaker.pdf).

<sup>446</sup> Question: Do you have a strategy in place to integrate ESG factors within your lending and investment activity? Sample size: 24.

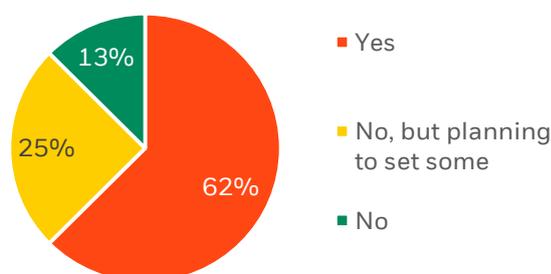
<sup>447</sup> UNEP Finance Initiative (2020). *Signatories*. Available at: <https://www.unepfi.org/banking/bankingprinciples/signatories/>.

integration and promoted ESG strategies within the banking sector include the UN PRI<sup>448</sup> and the GRI<sup>449</sup>.

As part of the growing public commitments to align lending and investment activities with science-based targets, banks have started to consider aligning their financed emissions to the Paris Agreement goal (please see section 3.3.3.1.2 for additional details). Some analysed banks, typically those more advanced in ESG practices, have pledged to reduce financed emissions of their portfolio to net zero by 2050 or sooner, in line with the goals of the Paris Agreement. However, very few banks have concrete action plans to align their business with the Paris Agreement, or net zero commitments, disclose specific metrics they use for monitoring, and subsequently publish their progress towards it. This finding is consistent with outcomes of a survey conducted by ShareAction, which found that while all surveyed banks have a strategy related to climate change, 65% of banks do not have a strategy that is aligned with a specific temperature increase scenario, a key component in ensuring full alignment with the goals of the Paris Agreement.<sup>450</sup>

While most banks state that they have an ESG strategy in place, the nature and degree of ambitions, priorities, and underlying initiatives varies across institutions. In the context of lending and investment activities, two main themes emerged. The first relates to the objective of ensuring that sustainability becomes an integral part of banks' offerings. To meet this objective, 62% of interviewed banks stated that they have set targets for ESG lending and investment across divisions (see *Figure 81*). Similarly, some respondents stated that they have product development plans in place to either introduce, or extend their offering of, sustainable and green products. Across the broader stakeholder perimeter, 64% of analysed banks have set ESG-related forward-looking financing or investment targets, or sectoral phase-out targets. The second theme relates to the objective of further integrating ESG considerations into banks' risk management frameworks, where a strong focus is on climate risk (see section 3.3.4.2).

**Figure 81: Medium/long-term ESG lending and investment targets across divisions**<sup>451</sup>



Source: BlackRock FMA analysis

Moreover, while most banks state that they have an ESG strategy in place, specific ESG-related objectives and commitments related to lending and investment activities are often at a high-level. For example, few banks in the perimeter have publicly made detailed quantitative ESG commitments and provided transparency on the types of financing activities they aim to pursue.

<sup>448</sup> Principles for Responsible Investment (n.d.) *About the PRI*. Available at: <https://www.unpri.org/>

<sup>449</sup> Global Reporting Initiative (n.d.). *The global standards for sustainability reporting*. Available at: <https://www.globalreporting.org/standards/>.

<sup>450</sup> ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

<sup>451</sup> Question: Do you have medium/long term E/S/G lending and investment targets across your divisions (e.g. renewable project financing, lending for financial inclusion)? Sample size: 24.

An example of a bank that has published a more comprehensive ESG strategy that includes quantitative financing targets is shown in *Figure 82*.

**Figure 82: Case study on sustainability strategy**

A European bank has defined four pillars for its sustainability strategy, referring to the workplace, sustainable economic and financial inclusion, digitalisation, and ethical standards. For each pillar, further commitments have been formulated, which are aligned with both the bank’s CSR strategy and the UN Sustainable Development Goals.

The following chart highlights the pillar and commitments that are most relevant for sustainable lending and investments as part of the strategy:

<b>Sustainability Strategy – Delivering on strategic priorities and creating value for all stakeholders</b>	
<b>Selected Pillar</b>	
① Driving sustainable economic growth and financial inclusion	
<b>Selected Commitments</b>	
① Support vulnerable customers	
② Finance a more sustainable future	
③ Be a valuable and sustainable partner	
④ Help the country transition to a low carbon economy and fight climate change	
<b>UN Sustainable Development Goals</b>	
SDG 1, 3, 4, 5, 7, 10, 11, 12, 13, 17	

For each commitment, the bank then defined a series of indicators and reports past performance for these indicators, if available, along with the concrete target formulated for the next year. This information is published annually in its ESG supplement report; the most relevant targets for investments and financing are highlighted below.

<b>Pillar</b>	<b>Commitment</b>	<b>Indicator</b>	<b>Past Performance</b>	
			<b>2020 Objective</b>	<b>2019</b>
①	② Finance a more sustainable future	EUR[.]mn in funding support for the social housing sector	[.]bn EUR	[.]bn EUR
	③ Be a valuable and sustainable partner	EUR[.]mn in funding support for individuals with education, employability and entrepreneurship programmes	-	-
	④ Help the country transition to a low carbon economy and fight climate change	EUR[.]mn in funding to continue supporting renewable energy and other sustainable energy solutions	-	-
		Launch a new green mortgage proposition to improve home movers’ energy efficiency	-	-

Source: Public reports from banks and BlackRock FMA analysis

Sustainable finance targets made by G-SIBs tend to be comparably more detailed and specific, as shown in *Table 18*. However, their ESG lending and investment commitments are not always

aligned with the Paris Agreement and SDGs. Civil society organisations in particular have emphasised the importance of setting science-based targets for banks to align with the Paris Agreement. In some cases, such commitments also go hand in hand with the implementation of a monitoring framework for selected sectors, such as fossil fuels, power, and coal (see section 5.3.3.1). Civil society organisations also highlighted that the EU Taxonomy could be used as a relevant reference for banks' target setting. For example, as also mentioned in a recent EBA discussion paper on the management and supervision of ESG risks, institutions could align more closely with the EU Taxonomy by setting targets associated with activities that qualify as sustainable under the Taxonomy on a certain proportion of their overall credit or investment portfolios.<sup>452</sup>

**Table 18: Examples of ESG investment and lending commitments made by global systematically important banks**

Bank	Geography	Commitment	Timeline	Yearly Commitment	Paris Pathway Alignment	Paris Pathway Sector
Bank 1	EU	Support more than EUR120bn in green finance from 2019 to 2025 and EUR220bn by 2030	2018-2030	EUR18.3bn		
Bank 2	EU	Additional funding of EUR14.6bn from 2018 to 2022 to organisations that help combat climate change	2018-2022	EUR3.7bn	✓	Fossil Fuel, Power, Automotive, Cement
Bank 3	EU	Raise EUR120bn to support the energy transition between 2019 and 2023	2019-2023	EUR30.0bn	✓	Coal
Bank 4	Non-EU	Raise USD5.0bn in client assets to narrow funding gaps needed to reach the SDGs	2017-2021	USD1.3bn		
Bank 5	Non-EU	Provide GBP150bn of environmental and social financing by 2025	2018-2025	GBP21.4bn	✓	Fossil Fuel, Power
Bank 6	Non-EU	Provide and facilitate USD100bn of sustainable financing and investment by the end of 2025	2017-2025	USD12.5bn		
Bank 7	Non-EU	Finance and facilitate USD35bn of clean technology and renewables, USD40bn of sustainable infrastructure by 2024	2020-2024	USD18.8bn	✓	Fossil Fuel, Power, Automotive, Cement
Bank 8	Non-EU	Provide USD300bn in financing by 2030 to low-carbon, sustainable business	2019-2030	USD27.3bn		
Bank 9	Non-EU	Facilitate USD200bn in clean financing by 2025	2016-2025	USD22.2bn		

Source: Public reports from banks and Blackrock FMA analysis

<sup>452</sup> EBA (2020). *EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf).

### 5.3.2.2 ESG governance structures, board oversight and organisational set-up

Effective governance structures and organisational arrangements support the integration and advancement of ESG strategy within banks' business activities. The most impactful governance elements considered by interviewed banks are: i) ESG-focused management and/or executive committees<sup>453</sup>; ii) ESG-focused board level committees; and iii) Corporate Social Responsibility (CSR)/Sustainability teams, as shown in *Figure 83*. Notably, no interviewed bank considered managerial incentive systems with ESG KPIs within the top two most impactful elements listed.

**Figure 83: Ranking of governance structures and organisational arrangements**<sup>454</sup>



Source: BlackRock FMA analysis

While some banks expressed the view that the integration of ESG factors does not require the set-up of dedicated ESG-focused committees and structures, others argued that this would be required to drive the ESG agenda and enhance commitment across the bank. The latter view is supported by academic research, suggesting that a dedicated sustainability committee allows for a more thorough and reliable implementation of sustainability strategies, while at the same time increasing stakeholders' awareness of the bank's ethical values.<sup>455</sup>

While banks assign different names to these committees, as shown in *Figure 84*, 72% of interviewed banks stated that they have set up such ESG-focused board level committees, which are ultimately responsible for approving sustainability strategies, policies, and guidelines. The effectiveness of boards' involvement was questioned in a ShareAction survey that found that board level ESG committees do not play a driving role at 40% of surveyed banks and merely approves climate-related policies.<sup>456</sup> Some interviewed civil society organisations and academics highlighted the importance of making board members and executive management accountable with respect to the integration of ESG factors into business practices.

Moreover, 80% of interviewed banks stated that they have established a centralised sustainability team and function to drive group-wide ESG integration and coordinate with divisions and business units. For the most part, these teams and functions are part of CSR or Corporate and Investment Banking divisions, and, in a few cases, part of Corporate Strategy. The

<sup>453</sup> For further details on the terminology of board level, executive level and management level, please see section 3.2.2

<sup>454</sup> Question: What kind of governance and organisational arrangements do you have in place to advance your ESG business strategy? Rank the top 3 most impactful elements based on your experience. Sample: 17.

<sup>455</sup> Cremona, B.; Passador, M. (2019). *What about the future of European banks? Board characteristics and ESG Impact*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3441784](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3441784).

<sup>456</sup> ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

establishment of dedicated teams and committees for advancing the ESG business strategy among interviewed banks differs from their practices on ESG risk management, where most banks build upon existing teams and committees already in place (see section 3.2.3.1). Generally, it is perceived by stakeholders that the effectiveness of such committees could be further improved.

**Figure 84: Governance structures and arrangements to advance ESG business strategy<sup>457</sup>**



Source: BlackRock FMA analysis

Besides ESG-focused governance bodies and structures, 52% of interviewed banks stated that they have linked their managerial incentive systems with ESG KPIs in order to advance their ESG business strategy, albeit to varying degrees of advancement. Integration within managerial compensation can be based on a multicriteria assessment of various ESG KPIs. As illustrated in *Table 19*, these KPIs can be related to achievement of banks’ lending and investment targets on sustainable finance (e.g. green lending, microfinance), improvement of own ESG practices (e.g. reduction of own energy consumption, employees completing ESG trainings) as well as strategic objectives (e.g. achieving a higher scoring from ESG ratings providers). Additional considerations related to ESG KPI integration within variable remuneration include differentiating targets across segments – for example based on seniority levels and departments –, as well as defining compensation rules – for example, establishing that once predefined ESG targets are exceeded, no additional compensation is provided (i.e. introducing a ceiling).

Responsible Banking Principles outlines that aligning remuneration programmes with the sustainability agenda of a bank creates awareness, delivers action, and demonstrates credibility.<sup>458</sup> There is also academic research analysing whether providing executives with direct incentives for CSR is an effective tool to increase firms’ social performance outcomes. One example of this is a paper published by the *Journal of Business Ethics*, which found evidence that identifies “corporate governance as a determinant of managerial incentives for social performance”.<sup>459</sup>

<sup>457</sup> Question: What kind of governance and organisational arrangements do you have in place to advance your ESG business strategy? Sample size: 23. “Other” includes working groups, environmental and social risk team, action plans, etc.

<sup>458</sup> UNEP FI (2019). *Principles for Responsible Banking*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2019/09/PRB-Guidance-Document-Final-19092019.pdf>.

<sup>459</sup> Hong, B.; Li, Z.; Minor, D. (2016). *Corporate Governance and Executive Compensation for Corporate Social Responsibility*. Available at: <https://link.springer.com/article/10.1007/s10551-015-2962-0>.

A recent survey undertaken by ShareAction found that 35% of the more advanced banks surveyed have set climate-related objectives or KPIs for employees and the executive board and incorporated these into incentive structures.<sup>460</sup>

**Table 19: Illustrative examples of ESG integration in variable remuneration**

Type of ESG KPI	Illustrative examples (not exhaustive)
<b>Portfolio-related</b>	% of loans to companies contributing strictly to the achievement of UN Sustainable Development Goals
	Volume of financing for renewable energy sector
	Number of low carbon products projects financed
	% growth in social impact portfolio
	Volumes of funding/facilitation towards clean technology
	Volume of funding and investment in projects that contribute to the delivery of the Paris Agreement
<b>Own ESG operations</b>	% of employees trained on an ESG-related issue (e.g. ethics)
	Scope 1 and 2 own greenhouse gas emissions
	% of employees having at least 14 weeks of paid maternity leave and/or six days of paid paternity leave
<b>Other</b>	Improvement on ESG score from external data providers
	Improvement in customer satisfaction scores

### 5.3.3 ESG measurement, monitoring and disclosure

#### 5.3.3.1 ESG business profile classification, measurement and monitoring methodology

The ability to effectively classify and measure the ESG business profile of banks’ lending and investment activity<sup>461</sup> - which involves approaches used to analyse banks’ portfolio from an ESG-perspective - is needed to set and monitor forward looking portfolio-related commitments. The main approaches used by banks for such classification and measurement efforts are based on sector, loan purpose, counterparty type<sup>462</sup>, and product type. According to respondents, governance aspects are not commonly measured at portfolio level as they are integrated into the overall credit and compliance process, hence ESG measurement approaches discussed in this section are based more on the E and the S pillars.

As shown in *Figure 85*, the majority of interviewed banks stated that they have a methodology in place to measure the ESG business profile at a sectoral level (83%) or by loan purpose (79%), focusing on the E and S pillars. More specifically, while sectoral classifications, which allows banks to measure the share of their portfolio within certain sectors, are equally adopted among G-SIBs and non-G-SIBs, a distinction by loan purpose is more common in G-SIBs.

<sup>460</sup> ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

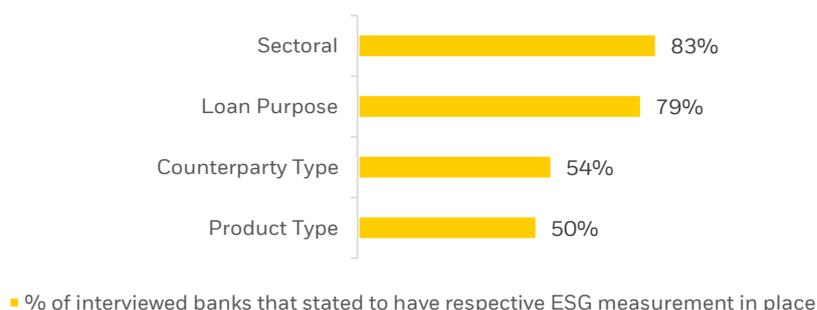
<sup>461</sup> The term investment(s) is used to indicate capital markets activity (e.g. Equity Capital Markets, Debt Capital Markets underwriting, sales and trading activity) as well as treasury portfolio. It does not include investments on behalf of clients (i.e. asset management / private banking activity and associated products).

<sup>462</sup> Counterparty type in this section is defined as portfolio exposure to certain clients and their ESG performance/score.

Fewer banks stated that they have more granular levels of measurement in place. Measurement by counterparty type – i.e. taking into account the ESG performance of a client by looking at, for example, an ESG rating – is performed by 54% of interviewed banks. Product type measurement – i.e. analysing the portfolio based on ESG products offered – is applied by 50% of the banks and predominantly by non-GSIBs instead of G-SIBs. Approximately one third of interviewed banks have a comprehensive measurement approach in place that covers all of the aforementioned levels of granularity. A common reason provided for this limitation is the lack of regulatory guidance to develop such methodologies, as well as a lack of comparable client data for defining the ‘greenness’ of an asset. In this context, interviewed academics highlighted that some form of ‘accounting standard’ for ESG disclosures is currently lacking. Hence, some banks, – and especially smaller ones –, are holding back on any further development of ESG measurement methodologies to avoid misalignment with regulatory requirements that may later unfold.

Additionally, many banks stated that the portfolio coverage of ESG measurement exercises is limited. That is, measurement does not apply to the entire portfolio but to specific aspects only. As an example, differences in the monitoring of green and brown assets were observed in a joint EBF/IFF survey, which found that nearly 50% of surveyed financial institutions monitor the share of green assets in their lending and investment portfolios compared with only 12% of firms that monitor brown assets.<sup>463</sup>

**Figure 85: Measurement of the ESG business profile of banks’ lending and investment activity**<sup>464</sup>



Source: BlackRock FMA analysis

A sectoral view is most prevalent within banks, given that sectoral policies based on environmental and social risks are commonly in place (see section 5.3.4.1). As part of their sectoral policies, banks often stated that they identify the most carbon intensive sectors which are then subject to close monitoring (e.g. the thermal coal industry and the energy sector). The renewable energy sector is one of the most commonly classified as green.

According to respondents, information on loan purpose or underlying economic activities related to corporate loans is not always collected or available, which poses a challenge for measurement. According to banks, examples of ESG products typically measured based on the use of proceeds, include: i) ESG products, where the use of proceeds is examined during the credit process and for

<sup>463</sup> EBF, IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

<sup>464</sup> Question: How do you measure the ESG business profile of your lending and investment activity (e.g. green vs. brown exposures) and what key data points do you rely on? Sample size: 24.

which specific standards are available (e.g. green mortgages)<sup>465</sup>, ii) sustainability-linked products, where borrowers report the use of proceeds to banks on a regular basis in order to comply with pre-defined sustainability targets, and iii) ESG products, where the use of proceeds is characterised by international market standards and practices, such as the ICMA Green Bond Principles<sup>466</sup> for green bonds or the ICMA Social Bond Principles<sup>467</sup> for social bonds, and iv) green/renewable project finance, where information is collected on the underlying asset being financed.

When measuring the ESG business profile at counterparty level<sup>468</sup>, a common practice observed among banks that have such capacity is the application of, and reliance upon, externally sourced environmental and social risk scores/ratings as well as internal counterparty risk assessments. This type of assessment is often only performed after sectoral and loan purpose views have been established as, according to respondents, measurement of the ESG business profile by counterparty requires more granular client information.

Approaches for ESG classification employed by banks vary based on product type and level of available supporting information. According to respondents, project finance in renewable energy and infrastructure financing are most commonly assessed and monitored against ESG criteria, via tracking of volumes and (sometimes) detailed KPIs. Banks also stated that they monitor the volume of products labelled as green (e.g. green loans). For other products, an internal labelling is often not available. However, a number of interviewed banks referenced plans to expand this product-level monitoring. For example, one bank mentioned that it has developed a product approval process that includes the identification of ESG characteristics to allow a volume tracking of financial products through quarterly KPIs.

In order to define a classification of ESG product offerings in a more comprehensive manner, approximately 20% of banks said that they have started to develop an internal taxonomy for ESG criteria – i.e. a framework that allows a measurement along multiple dimensions. An example for such an internal taxonomy is given in *Figure 86*.

**Figure 86: Case study on internal taxonomy for measurement of ESG business profile**

A European bank developed an internal taxonomy for ESG offerings that enables a classification of the portfolio based on use of proceeds, counterparty type, and product type. It specifies the classification logic, the eligibility criteria, the applicable environmental and social due diligence requirements, and the verification process for sustainable finance. It also serves as a basis for defining targets and metrics for sustainable finance to deliver on ESG commitments and sets requirements for reporting.

The classification logic first assesses the use of proceeds, where possible. The eligibility criteria for the use of proceeds focuses on environmental and social aspects and are aligned on a best effort basis with the EU Taxonomy and internationally acknowledged principles (e.g. ICMA Social and Green Bond Principles). If the use of proceeds is not specified or dedicated to

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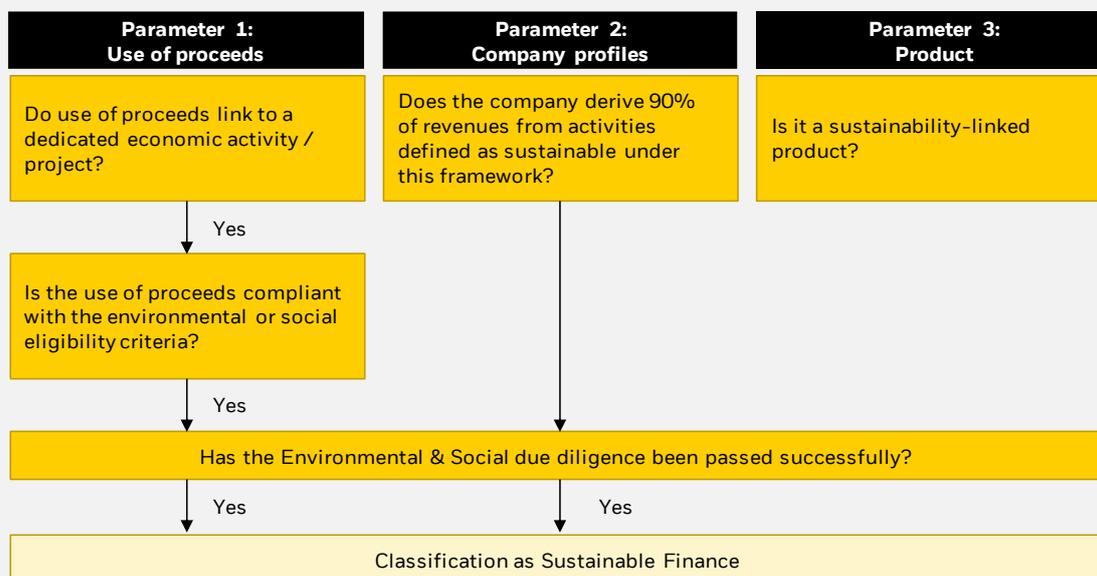
<sup>465</sup> According to EeMAP, definition of existing green mortgages varies among financial institutions. In some cases, specific requirements have to be fulfilled. For example, these requirements might be energy consumption related or they might be based on energy performance certificates (EPCs) where eligibility is limited to energy levels above B (and in some cases A). Interviewed banks mentioned that green mortgages require the property to have a certain energy efficiency rating and customers have to demonstrate the proof of it during credit process.

<sup>466</sup> ICMA (2018). *Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf>.

<sup>467</sup> ICMA (2020). *Social Bond Principles – Voluntary Process Guidelines for Issuing Social Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-PrinciplesJune-2020-090620.pdf>.

<sup>468</sup> “Counterparty Type” is defined as analysing portfolio exposure to certain clients and their ESG performance/score.

facilitating a certain activity (e.g. general corporate purpose), the eligibility of a transaction will be assessed on the basis of the company profile. The final validation is at product type level and tailored to sustainability-linked products.



These environmental and social criteria are aligned with the SDGs. Environmental assessments apply to sectors including manufacturing, energy, water and waste, real estate, and transportation as well as storage. Themes considered for social assessments are affordable basic infrastructure, access to essential services, affordable housing, SME financing and microfinance, and food security. The following example illustrates detailed eligibility criteria for the energy sector.

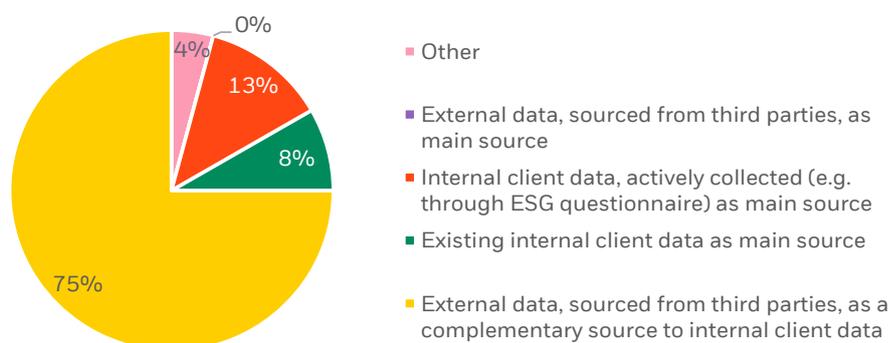
Sector / SDG	Activity	Exemplary eligibility criteria
Energy (supporting SDG 7, SDG 9)	<ul style="list-style-type: none"> <li><b>Renewable energy</b> <ul style="list-style-type: none"> <li>Solar</li> <li>Wind</li> <li>Ocean energy</li> <li>Hydropower</li> <li>Geothermal</li> </ul> </li> <li><b>Gas combustion</b></li> <li><b>Bioenergy</b></li> <li><b>Energy transmission, distribution and storage</b></li> <li><b>Hydrogen storage</b></li> </ul>	<ul style="list-style-type: none"> <li>• Generation of electricity from renewable sources</li> <li>• Hydropower subject to enhanced detailed due diligence of environmental and social impacts</li> <li>• Bioenergy subject to reviewing the feedstock</li> <li>• Infrastructure on or support of a trajectory to full decarbonisation by 2050</li> <li>• Infrastructure directly connecting renewable energy or integrating renewable energy into existing transmission networks</li> <li>• EV charging stations and electric infrastructure for public transport</li> <li>• Other measures dedicated to improve the efficient use of energy, prevent system losses such as e.g. smart grid technologies</li> </ul>

Source: Public reports from banks and FMA analysis

All of the aforementioned approaches used to assess the ESG profile of a bank's lending and investment activity require the use of various data sources. As shown in Figure 87, the majority of respondent banks (75%) use external data sourced from third parties as a complement to internal data. For example, banks often source external data as aggregated ESG ratings to inform the credit assessment, whilst fewer source more granular data points (e.g. data on carbon emissions or production capacity). The main reason given by banks who focus on internal data is the lack of

available external data, especially for non-listed companies (see section 3.3.3.1.1). No interviewed G-SIB cited existing internal client data as their main data source.

Figure 87: Data sources to assess ESG profile<sup>469</sup>



Source: BlackRock FMA analysis

As discussed in section 3.3.3.1.2, an area that has received attention from civil society organisations and industry initiatives is the alignment of banks’ portfolios to international agreements or goals, such as the Paris Agreement or the UN Sustainable Development Goals. This expectation has also been observed within prudential supervision. For example, even though the Bank of England does not require banks and insurers to estimate temperature alignment metrics of their portfolios for the upcoming Climate Stress Test – as a result of insufficient data and other inputs –, banks are expected to continue improving their methodological and data gaps for the disclosure of such metrics in the future.<sup>470</sup>

Since the adoption of the Paris Agreement, financial institutions have undertaken commitments to align their activities with the goals agreed by their national governments.<sup>471</sup> In particular, alignment to the Paris Agreement and recommendations to direct financial flows to facilitate and promote the transition to a decarbonised society have been urged by numerous institutions, including at a geo-political level.<sup>472</sup> Respondents also mentioned that aligning portfolios to the Paris Agreement is very relevant for the double materiality concept of the ESG definition. However, within the broader sample of analysed banks, 54% have not announced plans to align their portfolio, or parts of their portfolio, to the Paris Agreement.<sup>473</sup>

As shown in Figure 88, interviewed banks that stated to have a framework in place usually cover a share of the portfolio, with coverage varying by business segment: corporate and SME lending (39%), lending to individuals and micro-businesses (9%), capital markets (4%), or cross-divisional lending (5%). Only one interviewed bank stated that they have a framework in place to measure the alignment of their entire portfolio to the Paris Agreement, and hence covering both capital markets and corporate and SME lending.

<sup>469</sup> Question: Which data sources do you use to assess the “ESG profile” of lending and investment activity? Sample: 24.

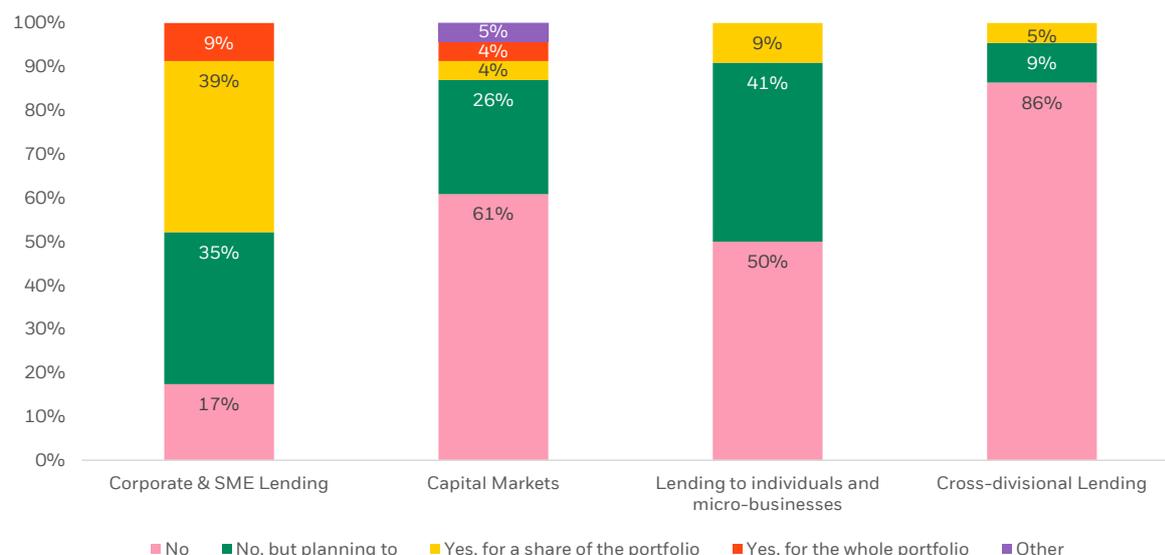
<sup>470</sup> Bank of England (2020). Update on the Bank’s approach to the Climate Biennial Exploratory Scenario in selected areas. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2020/update-on-the-banks-approach-to-the-climate-biennial-exploratory-scenario.pdf?la=en&hash=B864270BA6D35453A7700990B1DEE809FB8B29A1>.

<sup>471</sup> I4CE (2019). A Framework for Alignment with the Paris Agreement: Why, What and How for Financial Institutions? Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2019/09/I4CE%E2%80%A2Framework\\_Alignment\\_Financial\\_Paris\\_Agreement\\_52p.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2019/09/I4CE%E2%80%A2Framework_Alignment_Financial_Paris_Agreement_52p.pdf).

<sup>472</sup> See, for example G20 (2019). Strengthened Actions towards Decarbonised and Climate Resilient Society. Available at: <https://www.g20-insights.org/wp-content/uploads/2019/05/t20-japan-tf3-1-actions-decarbonised-climate-resilient-society-1.pdf>.

<sup>473</sup> This result is an outcome of the desk research according to banks’ public disclosure on their Paris Agreement commitments. Sample size is 42, full list of banks within the desk research perimeter is detailed in Table 23.

**Figure 88: Capabilities of banks to measure alignment of its portfolio to Paris Agreement or other frameworks/benchmarks<sup>474</sup>**



Source: BlackRock FMA analysis

One civil society stated that banks should focus on measuring portfolio alignment for most carbon-intensive sectors rather than the full portfolio. An overview of approaches undertaken by banks to measure the climate alignment of their lending portfolios is presented in section 4.3.3.1.2, specifically in *Figure 29* and *Figure 31*. Key metrics that can be used by banks for continual monitoring of targets set and portfolio alignment include percentage of portfolio aligned to or deviating from Paris commitments, carbon physical intensity by sector, financed emissions, temperature metrics, and ESG scoring of the portfolio (see section 4.3.3.1.2).

### 5.3.3.2 ESG impact on funding and banks’ balance sheet

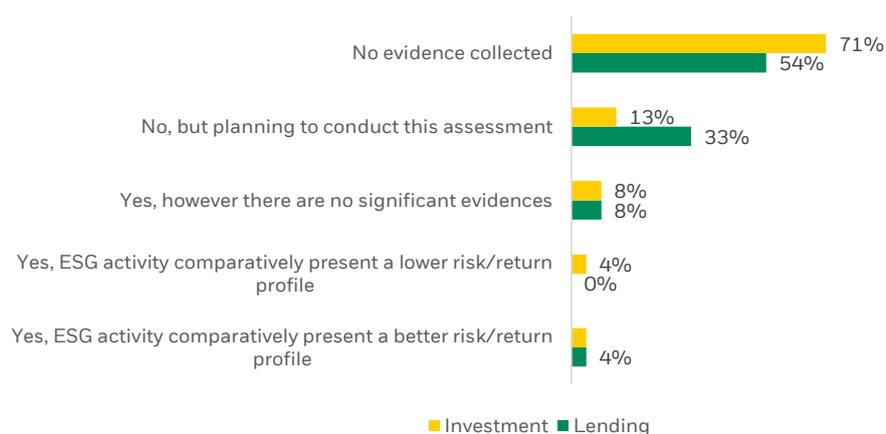
Understanding the risk and return characteristics of ESG products supports expanding and steering banks’ ESG offerings, informing and validating the ESG strategy, and pricing ESG related products and services. However, among the interviewed banks, 87% stated that they have not collected evidence on the risk/return profile of their lending activities, and the same applies for investment activities (84%) (*Figure 89*). This is similar to findings from a recent NGFS Status Report, which states that “respondents have so far not been able to verify a clear corresponding link between greenness and better profitability”.<sup>475</sup>

One interviewed bank stated that ESG lending activity presented a comparatively better risk/return profile. The bank found that governance drivers are more statistically significant for larger companies, while environmental and social drivers are significant across all other companies. Other banks said that they observed lower yields on ESG bonds, driven by high demand.

<sup>474</sup> Question: Do you have any frameworks in place to measure the alignment of your portfolio to the Paris Agreement or other frameworks (e.g. Sustainable Development Goals)? Sample size: 23. “Other” was chosen by one bank given they do not have DCM / ECM portfolios under Capital Markets.

<sup>475</sup> NGFS (2020). *A Status Report on Financial Institutions’ Experiences from working with green, non-green and brown financial assets and a potential risk differential*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_status\\_report.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf).

Figure 89: Evidence on risk/return profile<sup>476</sup>



Source: BlackRock FMA analysis

While interviewed banks and supervisors provided limited evidence or analysis on the risk/return profile of ESG lending, various studies undertaken by academics, market associations, and other market players have provided analysis and insights on this topic.<sup>477</sup> There are also innovative development in the market which are expected to further facilitate the analysis of the premia of green bonds. For example, the German government made the commitment in September 2020 to develop ‘Green Twin Bonds’ – a full green yield curve to be built next to its conventional yield curve, where a green bond is issued with the same maturity and coupon as a conventional bond but with a smaller volume.<sup>478</sup> Overall, a better understanding of the riskiness and risk/return profile of green assets could help banks in determining a pricing differential for ESG offerings, assessing business opportunities, and making more informed decisions for ESG-related lending and investment.

Table 20 provides an overview of key findings from available studies on the riskiness and risk/return profiles of green/sustainable financial instruments, products, and services, compared to that of other instruments. Multiple findings suggest that there is a negative correlation between credit spreads and ESG scores in markets for sovereign bond and corporate bond issuance. Some findings, particularly those from market analysis, highlighted that any spread differential observed for green bonds is relatively small and is mostly demand-driven rather than risk-based.

However, other studies come to contradicting conclusions, or remain inconclusive. For other product types, there is evidence indicating that a premium is priced in stocks with good ESG performance in several jurisdictions, and that green project finance and green mortgages tend to have a lower risk of default compared to those which are non-green. Generally, there is a greater level of evidence available for traded instruments than for lending products.

<sup>476</sup> Question: Have you collected any evidences on the risk/return profile of ESG products vs. traditional lending/investment products? Sample size: 24.

<sup>477</sup> For example: Capelle-Blancard, Gunther and Crifo, Patricia and Diaye, Marc-Arthur and Scholtens, Bert and OUEGHLISSI (2016); Li, P.; Zhou, R.; Xiong, Y. (2020); Simon P., Albert D., Lev D., Anando M. (2016); Julie K., Christopher S. (2019); Halling M., Yu, J., Zechner, J. (2020); Mohamed Ben S., Theo Le G., Thierry R., Takaya S. (2019); Albert D., Lev D., Jay H. (2017).

<sup>478</sup> Credit Agricole (2020). *ESG 2021 Outlook: The new sustainable borders*. Available at: <https://research.ca-cib.com/article/details/e8ba5655-e564-4876-96a9-08247ff96943?email=hugues.delafon@ca-cib.com>.

Table 20: Overview of key findings on riskiness of green/sustainable financial instruments, products, and services compared to that of other assets or exposures

Division	Product	Findings
		<div style="display: flex; justify-content: space-between;"> <div style="width: 20px; height: 15px; background-color: #008000;"></div> Findings are consistent across analyses reviewed           <div style="width: 20px; height: 15px; background-color: #ff4500;"></div> Findings are inconsistent or limited across analyses reviewed         </div>
Debt and Equity Capital Markets	Government bonds	<u>Riskiness</u> <ul style="list-style-type: none"> <li>Negative correlation between a country’s ESG score and the default risk and the bond spreads</li> </ul>
		<u>‘Greenium’<sup>479</sup> driven by demand</u> <ul style="list-style-type: none"> <li>Greenium of c.2-3bps representing lower yields from green bonds versus comparable conventional bonds in the EUR sovereign debt market</li> </ul>
	Corporate bonds	<u>Riskiness</u> <ul style="list-style-type: none"> <li>Negative correlation between a company’s ESG score and the default rate in the European and Chinese markets</li> <li>Negative correlation between ESG ratings and corporate bond spread; however, other views also exist</li> </ul>
		<u>‘Greenium’ driven by demand and institutional reputation</u> <ul style="list-style-type: none"> <li>Mixed findings exist for premia of green bonds on the primary market including: i) A negative premium of varying magnitude, up to 20-30 bps at issuance, ii) no consistent premium or discount by the same issuer</li> <li>Mixed findings for premia of green bonds on the secondary market through the years including evidence for both negative premium (-1.1bps) and positive premium (43bps)</li> <li>Higher premia for bonds that are certified by external verifiers in the US corporate and municipal green bond markets</li> </ul>
Equities	<u>Pricing premia</u> <ul style="list-style-type: none"> <li>A slight premium in pricing associated with good ESG score</li> <li>Negative correlation between climate risk-related pricing factors and associated risk premium</li> <li>A green-to-brown premium driven by the underperformance of brown companies</li> </ul> <u>Profitability</u> <ul style="list-style-type: none"> <li>Positive correlation between strong ESG factors (e.g. companies with stronger gender and ethnic diversity) and profitability of a company</li> <li>Positive correlation between ESG ratings and risk adjusted returns</li> </ul>	
Corporate and SME Lending	Project finance and loans	<u>Riskiness</u> <ul style="list-style-type: none"> <li>Project finance for green projects has a lower default risk</li> <li>Average NPL ratio decreases for companies with high ESG rating during COVID-19 pandemic</li> </ul>
Lending to individuals and micro-businesses	Mortgages	<u>Riskiness</u> <ul style="list-style-type: none"> <li>Negative correlation between energy efficiency and the owner’s probability of default</li> </ul>

Detailed findings across product types are further summarised in *Table 21*.

<sup>479</sup> ‘Greenium’ i.e. the green bond premium, is defined as the difference in yield between a green bond and a conventional bond with identical characteristic if green bonds present lower yields than conventional bonds in the secondary market.

**Table 21: Summary of findings on riskiness of green/sustainable financial instruments, products and services compared to that of other assets or exposures**

Debt and Equity Capital Markets
Government bonds
<p><b><u>Riskiness:</u></b></p> <p>Some academic studies and market analyses have found a negative correlation between credit spread and ESG score in the market for sovereign debt issuance, which means that issuers with poor ESG characteristics<sup>480</sup> need to compensate investors with higher yields.<sup>481</sup> Specifically, a recent working paper from the IMF investigated the link between climate change and sovereign risk and found that countries that are more resilient to climate change have lower bond yields and spreads compared to counterparts with greater vulnerability to climate-change related risks.<sup>482</sup></p> <p>Another empirical analysis from 2016 also concluded that “countries with good ESG performance tend to have less default risk and thus lower bond spreads.” Furthermore, it showed that the relationship between country ESG performance and long-term sovereign bond spreads is stronger than that between a country’s ESG performance and its short-term bond spreads, suggesting that at a country level, ESG performance is a long-lasting phenomenon. Through the examination of the financial impact of separate ESG dimensions, this analysis found that the governance dimension of country ESG performance has stronger financial impact compared to the social and environmental aspects. In addition, country sustainability performance has a more significant impact in the Eurozone than elsewhere among OECD countries, and a stronger influence was also found during crisis periods.<sup>483</sup></p> <p><b><u>‘Greenium’ driven by demand:</u></b></p> <p>There is also growing evidence that green bonds are attracting a ‘greenium’ – the green bond premium reflecting the lower yields from green bonds versus comparable conventional bonds – amid strong investor demand. A recent market analysis from a European bank revealed that the greenium in the EUR sovereign debt market is currently around 2-3 bps.<sup>484</sup></p>
Corporate bonds
<p><b><u>Riskiness for corporate bonds based on ESG ratings:</u></b></p> <p>Various studies found that a negative correlation exists between ESG ratings and corporate bond spread, although contradictory views also exist.</p> <p>An empirical study in 2016 found that corporate bonds with high composite ESG ratings have slightly lower spreads. The study also suggested that bonds with high ESG ratings have modestly outperformed their lower rated peers when controlling for various risks.<sup>485</sup> However, a study in 2017 concluded that no evidence of a negative performance impact was found and that ESG attributes did not significantly affect the price of corporate bonds.<sup>486</sup></p>

<sup>480</sup> ESG dimensions include air quality, water and sanitation, forests, biodiversity, and climate and energy under E pillar, human development, demography, health, gender equality, technology and R&D under S pillar, and democratic institution, safety policy under G pillar.

<sup>481</sup> Capelle-Blancard, Gunther and Crifo, Patricia and Diaye, Marc-Arthur and Scholtens, Bert and OUEGHLISSI. (2016). *Rim, Environmental, Social and Governance (ESG) Performance and Sovereign Bond Spreads: An Empirical Analysis of OECD Countries*. Available at: <https://ssrn.com/abstract=2874262>.

Also see, Patricia C., Marc-Arthur D., Rim O. (2015). *Measuring the effect of government ESG performance on sovereign borrowing cost*. Available at: <https://hal.archives-ouvertes.fr/hal-00951304v3/document>; BlackRock (2019). *Sustainability: the bond that endures*. Available at: <https://www.blackrock.com/corporate/literature/whitepaper/bii-sustainable-investing-bonds-november-2019.pdf>.

<sup>482</sup> IMF (2020). *This Changes Everything: Climate Shocks and Sovereign Bonds*. Available at: <https://www.imf.org/en/Topics/climate-change/green-finance>.

<sup>483</sup> Capelle-Blancard, Gunther and Crifo, Patricia and Diaye, Marc-Arthur and Scholtens, Bert and OUEGHLISSI. (2016). *Rim, Environmental, Social and Governance (ESG) Performance and Sovereign Bond Spreads: An Empirical Analysis of OECD Countries*. Available at: <https://ssrn.com/abstract=2874262>.

<sup>484</sup> Credit Agricole (2020). *ESG 2021 Outlook: The new sustainable borders*. Available at: <https://research.ca-cib.com/article/details/e8ba5655-e564-4876-96a9-08247ff96943?email=hugues.delafon@ca-cib.com>.

<sup>485</sup> Simon P., Albert D., Lev D., Anando M. (2016). *ESG Ratings and Performance of Corporate Bonds*. Available at: <https://doi.org/10.3905/jfi.2016.26.1.021>.

<sup>486</sup> Albert D., Lev D., Jay H. (2017). *Sustainable Investing and Bond Returns*. Available at: <https://cbey.yale.edu/sites/default/files/Sustainable%20Investing%20and%20Bond%20Returns.pdf>.

In 2019, a study indicated that ESG is increasingly integrated into the pricing of corporate bonds and is a consideration when building an investment portfolio.<sup>487</sup>

Lastly, another academic study presented an analysis of the effects of ESG dimensions on corporate bond issue spreads, suggesting a negative relationship between environmental and social ratings and issue spread. The implication of this is that primary bond markets would reward firms for good environmental and social performance. According to the study, the negative relationship is driven mostly by product-related dimensions. The study did not find evidence to prove other dimensions – such as environment, community, or human rights – influence the pricing of corporate bonds.<sup>488</sup>

While the evidence for riskiness of corporate bonds characterised by issuers' ESG performance was limited among some jurisdictions, an empirical study in the Chinese market investigated the impact of industrial bond issuers' ESG governance and financial performance on default risk. The study found that the bond default rate is positively correlated with the company's energy consumption and negatively correlated with its attention to social responsibilities and corporate governance; in other words, the better the ESG performance, the lower the default risk of the corporate bond.<sup>489</sup> In addition, an empirical study in the European market concluded that companies with lower ESG scores tend to have a higher probability of default.<sup>490</sup>

#### **'Greenium' driven by demand and institutional reputation on the primary market:**

'Greenium' of corporate green bonds was also analysed among academic studies and market analyses; however, inconsistent findings exist for both primary market and secondary market figures. The risk of the majority of green bonds issued to date, according to Climate Bonds Initiative, "has been determined by the issuing entity, rather than the underlying green assets".<sup>491</sup>

A paper in 2019 analysed the 'greenium' and found a significant negative premium of 20–30 bps for green bonds on the primary market based on their data sample implying that, at issuance, green bonds are trading at lower yields (i.e. higher price) than their conventional counterparts. According to the study, the premium varies across currencies and issuer types and over time. However, bonds issued by more credible entities have lower yields at issuance.<sup>492</sup>

Another paper published in 2019 examined the yield differential between green bonds and otherwise identical conventional bonds for a sample from 2013 to 2017, and found a small negative premium of 2bps on average for both EUR and USD green bonds. The main determinants of the premium, according to the analysis, are the rating and the issuer type. Negative premia are particularly more significant for financial and low-rated bonds. It also showed that there is a shortage of green bond supply relative to the investment demand in several market segments.<sup>493</sup>

In contrast, some academic findings suggest that there is no noticeable difference between the yields of green bonds and their comparable brown bonds, with one study noting that "positive stock market reaction is unlikely to be driven by a cost of capital argument", and instead attributing markets' propensity to invest in green bonds to the expected ESG-oriented firms' performance.<sup>494</sup> The IMF, in its Global Financial Stability Report, also concluded that there is no consistent premium or discount at issuance between green and non-green bonds by the same issuer.<sup>495</sup>

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<sup>487</sup> Mohamed Ben S., Theo Le G., Thierry R., Takaya S. (2019). *ESG Investing in Corporate Bonds: Mind the Gap*. Available at: <https://ssrn.com/abstract=3683472>.

<sup>488</sup> Simon P., Albert D., Lev D., Anando M. (2016). *ESG Ratings and Performance of Corporate Bonds*. Available at: <https://doi.org/10.3905/jfi.2016.26.1.021>.

<sup>489</sup> Li, P.; Zhou, R.; Xiong, Y. (2020). *Can ESG Performance Affect Bond Default Rate? Evidence from China*. Available at: <https://www.mdpi.com/2071-1050/12/7/2954>.

<sup>490</sup> Claudio F., Joe H. (2018). *The impact of ESG investing in corporate bonds*. Available at: <https://page.ws.fidelityinternational.com/rs/829-LMV-001/images/ESG%20White%20Paper%20FINAL.pdf>.

<sup>491</sup> Climate Bonds Initiative (n.d.). *Improving risk-return profile: Increasing returns or reducing risks*. Available at: <https://www.climatebonds.net/policy/policy-areas/improving-risk-return-profile>.

<sup>492</sup> Julia K., Christopher S. (2019). *(In)-Credibly Green: Which Bonds Trade at a Green Bond Premium?* Available at: [https://ec.europa.eu/jrc/sites/jrcsh/files/4\\_2\\_kapraun\\_paper.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/4_2_kapraun_paper.pdf).

<sup>493</sup> Olivier, Z. (2019). *Is There a Green Bond Premium? The Yield Differential Between Green and Conventional Bonds*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2889690](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2889690).

<sup>494</sup> For example, see: Caroline F. (2020). *Corporate Green Bonds*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3125518](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3125518).

<sup>495</sup> IMF (2019). *Global Financial Stability Report: Lower for Longer*. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019>.

Characteristics of green bonds and their brown counterparts – in terms of premium, liquidity, and volatility – were also analysed and compared across different types of issuers. A recent academic paper found that green bonds from institutional issuers – for example, national governments, municipalities, or supranational institutions – have higher liquidity and negative premia compared with their brown counterparts.<sup>496</sup> On the other hand, green bonds from private issuers have much less favourable characteristics in terms of liquidity and volatility, and have positive premia compared with their brown counterparts, especially if green bonds of private issuers are not verified. According to the paper, the higher premia of green bonds with respect to their brown counterparts mainly reflects exposure to greenwashing risks of bonds issued. Hence, the finding suggests that the issuer's reputation or green third-party verifications are essential in reducing informational asymmetries, avoiding suspicion of greenwashing, and producing relatively more convenient financing conditions.<sup>496</sup> A similar finding was presented by a paper studying the US corporate and municipal green bond markets, which concluded that bonds that are certified by external verifiers – for example, by CBI – exhibit a lower yield.<sup>497</sup>

Additionally, the difference in green bond premia distinguished by issuer types was analysed in a paper published by JRC. A premium was found for green bonds issued by supranational institutions and corporates, while there is no effect for issuance by financial institutions. An explanation provided to the absence of premium for financial institutions is that investors may not be able to “identify a clear link between the green bond issued by a financial institution and a green project”.<sup>498</sup>

#### **'Greenium' driven by demand and institutional reputation on the secondary market:**

With respect to the pricing of green bonds on the secondary market, there was evidence suggesting a slight negative premium of -1.1bps for green bond yields on average, from December 2014 to November 2017, in a selected green bond universe.<sup>499</sup> Two factors that could explain the difference in yield for green and non-green bonds are i) The growing demand from investors on bonds with green features, and ii) lower volatility of green bonds compared to peers, especially in periods of risk aversion, that compensates for its lower yield.<sup>500</sup> In contrast, a more recent paper published in 2019 revealed that, based on a selected database from 2009 to 2018, green bonds issued by corporates have a 43bps (on average) higher yield than conventional bonds on the secondary market.<sup>501</sup>

### **Equities**

#### **Pricing premia:**

Some studies found that investors pay a premium for holding stocks with better ESG performance. For example, a quantitative study from Morningstar found that investors seem to pay a slight premium for holding good ESG stocks in the North American market based on Sustainalytics' ESG Rating.<sup>502</sup> The finding is aligned with a recent working paper published by the Joint Research Centre of the European Commission, which suggests that, for European individual stock returns, there is a negative and significant correlation between climate risk-related pricing factors and the associated risk premium.<sup>503</sup> The finding indicated that, for European stocks, investors would accept a comparatively lower return for

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<sup>496</sup> Maria J. B.; Leonardo B.; Stefano M. (2019). *The Green Bonds Premium Puzzle: The Role of Issuer Characteristics and Third-Party Verification*. Available at: [https://www.researchgate.net/publication/331225715\\_The\\_Green\\_Bonds\\_Premium\\_Puzzle\\_The\\_Role\\_of\\_Issuer\\_Characteristics\\_and\\_Third-Party\\_Verification](https://www.researchgate.net/publication/331225715_The_Green_Bonds_Premium_Puzzle_The_Role_of_Issuer_Characteristics_and_Third-Party_Verification).

<sup>497</sup> Malcolm P.B., Daniel B., George S., Jeffrey W. (2018). *Financing the Response to Climate Change: The Pricing and Ownership of U.S. Green Bonds*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3275327](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3275327).

<sup>498</sup> JRC (2019). *The pricing of green bonds: are financial institutions special?* Available at:

<https://ec.europa.eu/jrc/en/publication/pricing-green-bonds-are-financial-institutions-special>.

<sup>499</sup> The sample included 133 unique labelled green bonds issued by 59 entities from 16 countries and 7 supranational organisations.

<sup>500</sup> NN Investment Partners (2018). *Unravelling the Green Bond Premium*. Available at:

[https://assets.ctfassets.net/y4nxuejkhx03/5xLIB21LkkU0mYsi8gUeKm/40c0e58885f81a1fffdafc3150650e1d/EN\\_-\\_Unravelling\\_the\\_Green\\_Bond\\_Premium.pdf](https://assets.ctfassets.net/y4nxuejkhx03/5xLIB21LkkU0mYsi8gUeKm/40c0e58885f81a1fffdafc3150650e1d/EN_-_Unravelling_the_Green_Bond_Premium.pdf)

<sup>501</sup> Julia K., Christopher S. (2019). *(In)-Credibly Green: Which Bonds Trade at a*

*Green Bond Premium?* Available at: [https://ec.europa.eu/jrc/sites/jrcsh/files/4\\_2\\_kapraun\\_paper.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/4_2_kapraun_paper.pdf).

<sup>502</sup> Morningstar (2020). *Evaluating ESG Effects on Risk and Return*. Available at: <https://www.morningstar.com/lp/esg-as-a-factor>.

<sup>503</sup> JRC (2020). *The Greenium matters: greenhouse gas emissions, environmental disclosures, and stock prices*. Available at: <https://ec.europa.eu/jrc/en/publication/greenium-matters-greenhouse-gas-emissions-environmental-disclosures-and-stock-prices>.

greener and more transparent firms and would hold those positions as a hedging strategy to reduce exposure to climate risk.<sup>504</sup> Another paper showed that, in the U.S. and Canada, investors are pricing in a premium for U.S. and Canadian securities with good ESG scores, while the comparatively better and worse ESG portfolios exhibited similar levels of risk.<sup>505</sup>

In relation to the composition and evolution of the premium, quantitative analysis from MSCI suggested that, from 2013 to 2018, the green-to-brown premium<sup>506</sup> was mainly driven by the underperformance of brown companies; however, starting in September 2018, the premium seemed to accelerate as green companies outperformed. This was driven almost as much by stock-specific effects as by industry effects, which could indicate that the selection of green vs. brown stocks started becoming more relevant. The evidence showed that investors may favour the selection of green stocks due to market pricing of renewables, government regulations, investor pressure, and consumer and industrial demand.<sup>507</sup>

#### **Profitability:**

A report published by UN PRI indicated that enhanced ESG factors could result in higher profitability of companies. It is highlighted in the report that companies with stronger gender and ethnic diversity outperform peers when measured by return on equity and other traditional financial metrics. Overall, a positive correlation between ESG ratings and risk adjusted returns, since the 2008 financial crisis, was also found in the report.<sup>508</sup>

### **Corporate and SME Lending**

#### **Project finance and loans**

#### **Riskiness:**

For loan exposures, research undertaken by Moody's showed that project finance provided by banks for green use of proceeds projects demonstrated a lower risk of default compared to that of non-green use of proceeds projects, particularly in advanced economies. In this study, green projects showed lower default rates than non-green projects in both the power and infrastructure industry sectors, although findings vary significantly across regions.<sup>509</sup> Furthermore, a recent study by MSCI showed that prudent ESG lending practices, including a review of borrowers' environmental risk management, theoretically would have resulted in better-quality loan assets, something which was demonstrated during the Covid-19 pandemic. The study found that ESG 'leaders' (i.e. top ESG-rated banks) with better ESG risk management saw their average non-performing loan (NPL) ratio decrease slightly in H1 2020, compared to the same period in the previous year, while 'laggards' saw it increase.<sup>510</sup>

### **Lending to individuals and micro-businesses**

#### **Mortgages**

#### **Riskiness:**

With respect to energy efficiency ('EE') mortgages, a report developed as part of the Horizon 2020 Energy Efficiency Data Protocol & Portal Project (EeDaPP) found a negative correlation between energy

<sup>504</sup> In the study, an index of greenness and environmental transparency was constructed at an individual company level, which takes into account both the GHG emission intensity of a company as well as the quality of its environmental disclosure.

<sup>505</sup> Morningstar (2020). *How Does Investing in ESG Companies Affect Returns?* Morningstar research uses a new model to compare the returns of companies with strong and weak ESG practices. Available at: <https://www.morningstar.com/insights/2020/02/19/esg-companies>.

<sup>506</sup> For purposes of their analysis, a green-to-brown premium entails the green index outperforming the MSCI ACWI IMI while the brown index underperforms it.

<sup>507</sup> MSCI (2020.) *Is There a Green-to-Brown Premium?* Available at: <https://www.msci.com/www/blog-posts/is-there-a-green-to-brown/02053435998>.

<sup>508</sup> UN PRI (2016). *A practical guide to ESG integration for equity investing*. Available at: <https://www.unpri.org/download?ac=10>.

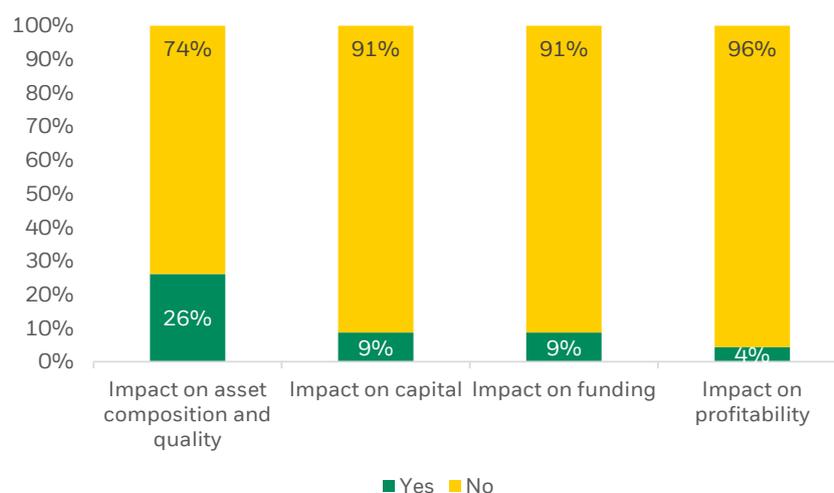
<sup>509</sup> "10-year cumulative default rate of 5.7% versus 8.5% for non-green use-of-proceeds projects." Moody's (2018). *Research Announcement: Moody's: Project finance bank loans for green use-of-proceeds projects demonstrate lower default risk*. Available at: [https://www.moody.com/research/Moodys-Project-finance-bank-loans-for-green-use-of-proceeds--PBC\\_1141935?showPdf=true](https://www.moody.com/research/Moodys-Project-finance-bank-loans-for-green-use-of-proceeds--PBC_1141935?showPdf=true).

<sup>510</sup> MSCI (2020). *Banks, ESG and Nonperforming Loans During Covid-19*. Available at: <https://www.msci.com/www/blog-posts/banks-esg-and-nonperforming/02113369423>.

efficiency and the owners' probability of default.<sup>511</sup> The report confirms that EE investments tend to improve owners'/borrowers' solvency. Additionally, the results indicate that the degree of EE achieved is also important, i.e. more energy efficient buildings are associated with relatively lower risk of default.

As further highlighted in interviews and as shown in *Figure 90*, only 4% of banks stated that they have transparency on the impact of ESG lending and investment activity on their profitability. Regarding banks' visibility of the impact of their ESG offerings on the balance sheet, 26% of banks stated that they have visibility on asset composition and quality (in particular for green bonds), 9% stated that they have evidence of the impact on their funding, and another 9% mentioned that they, to some extent, understand the impact on their capital.

**Figure 90: Transparency of the impact of ESG lending and investment activity on the balance sheet<sup>512</sup>**



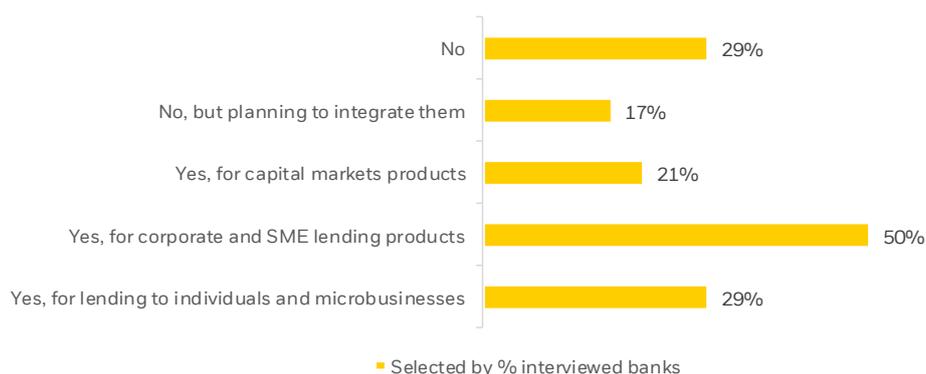
Source: BlackRock FMA analysis

In the context of pricing, 46% of interviewed banks stated that they do not take ESG considerations into account for product pricing, as shown in *Figure 91*. Common areas considered in banks' ESG-related pricing adjustments are i) Interest rate reductions for lending products to individuals (e.g. to promote the product) or to incentivise customers to become more sustainable (e.g. through green mortgages or green car loans), and ii) pricing of sustainability-linked loan products, mostly for corporate clients, where the interest rate is linked to ESG KPIs. Overall, most banks stated that they adjust the pricing for ESG products primarily to incentivise clients, meet client demand, or follow the inherent product structure, as opposed to a differentiation in the underlying risk. Only one interviewed bank mentioned that they have a methodology to differentiate and quantify the credit risk associated with the environmental and social issues which impact the client's risk rating and, consequently, the pricing.

<sup>511</sup> Energy Efficiency Data Protocol & Portal Project (2020). *Final report on correlation analysis between energy efficiency and risk (D5.7)*. Available at: [https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP\\_D57\\_27Aug20-1.pdf](https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP_D57_27Aug20-1.pdf).

<sup>512</sup> Question: Do you have transparency on the impact of your ESG lending and investment activity on your balance sheet? (Impact on balance sheet specified in the questionnaire includes impact on asset composition and quality, impact on capital, impact on funding, and impact on profitability). Sample size: 23.

**Figure 91: ESG impact on product pricing<sup>513</sup>**

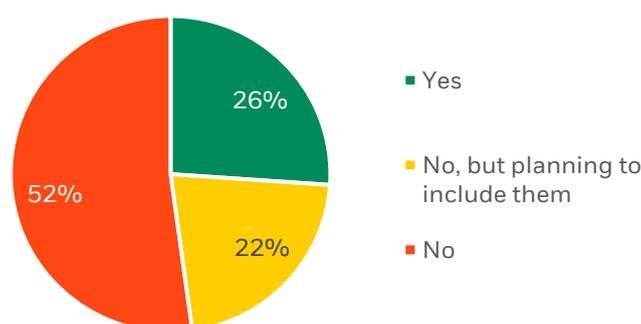


Source: BlackRock FMA analysis

Internal funding (e.g. funds transfer pricing or costs of capital) is a key component of product pricing and bank steering. However, as highlighted in interviews, only 26% of banks stated that they reflect ESG considerations in internal funding or capital, for example, in the form of lower costs of funds on the internal pricing for green products (see Figure 92). Two more advanced banks explicitly mentioned that they apply a discount on internal pricing where a green exposure is funded through the issuance of ESG debt via green bonds.

However, as also shown in Figure 92, 74% stated that they do not have internal ESG incentives related to funding or capital in place. 22% mentioned that they plan to include such incentives in the future. These banks emphasised the lack of risk assessment and measurement capabilities needed to define internal incentives and link them to external factors. This is consistent with feedback from respondent banks who stated they do not integrate ESG factors in risk parameters (see section 3.3.3.2.3).

**Figure 92: Availability of internal ESG incentives related to funding or capital<sup>514</sup>**



Source: BlackRock FMA analysis

### 5.3.3.3 ESG activity disclosure and impact of legislation

Most respondent banks stated that they disclose their ESG strategy, CSR commitments, and publicly announced ESG targets at a high-level. As discussed in section 3.3.4.1, banks also disclose ESG risks associated with business strategies and financing activities. Beyond this,

<sup>513</sup> Question: Do you have transparency on the impact of your ESG lending and investment activity on your balance sheet? Sample size: 24.

<sup>514</sup> Question: Do you have internal ESG incentives related to funding (e.g. funds transfer pricing) or capital (e.g. sustainability capital requirements benefit)? Sample 23.

according to a survey undertaken by ShareAction, the majority of the surveyed banks (70%) publicly disclose absolute targets to accelerate green finance, although no European bank publicly discloses the share of their underwriting activity that is low-carbon.<sup>515</sup>

Respondents' answers show that banks' ESG disclosure practices (e.g. non-financial reporting and sustainability reporting) have largely been driven by regulatory and legislative requirements, voluntary international disclosure standards, as well as increasing pressure from investors and civil society organisations. Among existing reporting frameworks, the EU NFRD (see section 3.3.4.2 for further details), the voluntary GRI, TCFD, as well as SASB are examples of guidelines that have influenced and shaped banks' ESG disclosure practices in recent years.<sup>516</sup>

Participants, particularly civil society organisations, raised the expectation that in the near term, the landscape of ESG disclosures for financial institutions will continue to evolve driven by standard and framework setters and regulatory requirements. It is envisaged that the CSRD (i.e. the proposed revision of the NFRD) will have a key role to play in this evolution (see section 3.3.4.2 for further details regarding the CSRD). At EU level, the adoption of the Sustainable Finance Disclosure Regulation (SFDR) introduced various ESG-related disclosure obligations for financial market institutions at entity, service, and product level.<sup>517</sup> The European Supervisory Authorities (ESAs) have recently published the final report on draft regulatory technical standards for SFDR and rules introduced primarily focus on firm-level website disclosures in relation to 'principal adverse impacts' of investment decisions on sustainability factors, and product-level pre-contractual disclosure for financial products with ESG characteristics.<sup>518</sup>

Overall, interviewed banks with a presence in the EU stated that existing EU legislation – for example, the EU Taxonomy and the NFRD – have a strong impact on their current ESG disclosure practices.<sup>519</sup> In particular, the EU Taxonomy published in March 2020 was considered by interviewed banks as a key driver for enhancing banks' ESG reporting. Interviewed banks also acknowledged the positive role the taxonomy plays in providing a definition of what is considered as green economic activities and currently acts as the only international reference in this field that defines Paris Agreement-aligned performance criteria over a set of economic activities. It will provide a common definition to also assess and measure the alignment of their financing. Some respondents, including banks and civil society organisations, expect that once the EU Taxonomy becomes more commonly applied, it will support the market in further aligning standards and definitions for ESG business opportunities. Furthermore, banks will be required to disclose their taxonomy alignment as of 2022, as part of a phased implementation. One of the intentions of the EU Taxonomy is that “disclosure of the proportion of Taxonomy-aligned green activities will allow the comparison of companies and investment portfolios based on this proportion”.<sup>520</sup>

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<sup>515</sup> ShareAction (2020). *Banking on a Low-Carbon Future II*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>.

<sup>516</sup> See for example IOSCO (2019). *Statement on disclosure of ESG matters by issuers*. Available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD619.pdf>.

<sup>517</sup> Detailed disclosures requirements under the RTS should be applied by financial institutions in scope from 1 January 2022.

<sup>518</sup> This response was also mentioned in: ESMA, EBA, EIOPA, and Joint Committee of the European Supervisory Authorities (2021). *Final Report on draft Regulatory Technical Standards*. Available at: [https://www.esma.europa.eu/sites/default/files/library/jc\\_2021\\_03\\_joint\\_esas\\_final\\_report\\_on\\_rts\\_under\\_sfdr.pdf](https://www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf)

<sup>519</sup> Question: How would you assess the impact of relevant (EU) legislation (e.g. the Non-financial Reporting Directive, EU taxonomy) and regulation on your current ESG disclosure practices (e.g. time effort)? Please provide a score (i.e. 0,1,2,3,4, or 5) with 0 being not influenced and 5 being strongly influenced; average score provided by interviewed banks was 3.4 of 5, sample size: 22.

<sup>520</sup> European Commission (2021). *EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0188&from=EN>.

However, a number of challenges were highlighted by respondents in relation to referencing the EU Taxonomy for ESG product classification and reporting. One challenge identified is that the taxonomy is perceived to be very granular and therefore not easily applied to banks' lending book. A reason given for this is that it is activity-based, whereas client information gathered by a bank is often borrower-based. According to banks, it is not always possible to link client data to activities or projects being financed, especially for loans with general corporate purposes. Additionally, some respondents mentioned that, while the taxonomy focuses on green activities, a brown taxonomy and classification of assets that are neither green nor brown (e.g. grey) might also be required. Finally, respondents mentioned that the EU Taxonomy is limited to the E pillar and does not include social or governance components.<sup>521</sup>

One interviewed academic mentioned that taking into account the ESG impact of business activities beyond their labelled classification and sector is important, and described it as developing the "first derivative of the EU Taxonomy". For example, lending to non-green sectors, which per se may not be 'ESG compatible', could be beneficial if it contributes to the transition to a low carbon economy. A recent report published by UNEP FI together with EBF stated that the availability and quality of information proved to be the most difficult challenge in assessing the 'Do Not Significantly Harm' (DNSH) criteria, "particularly when segmenting alignment by turnover/revenue and in the alignment of SMEs and non-EU based assets."<sup>522</sup> For instance, the report describes a case study where – without making certain assumptions – the fulfilment of the DNSH criteria could not be positively evidenced for retail mortgages due to insufficient information.

### **5.3.4 ESG portfolio steering and business as usual processes**

#### **5.3.4.1 ESG lending and investment strategies and policies**

As set out by a UNEP FI report, sustainability policies enable a bank to provide their own distinct account of how they relate to sustainability issues and the appropriate actions to be taken.<sup>523</sup> A key constituent of sustainability policies are sectoral policies, which set detailed assessment criteria for certain industries, typically for those that are sensitive from a social and environmental point of view. Assessment criteria often entail risk considerations and are based on industry standards such as the Equator Principles for determining and assessing environmental and social risks in development projects.<sup>524</sup>

A majority of interviewed banks (84%) currently either have sectoral policies in place or plan to introduce such policies. The sectors most commonly covered by such policies are the oil and gas sector, coal-fired power generation, and defence (see *Figure 93*). All interviewed G-SIBs stated that they have sectoral policies in place for oil and gas, coal-fired power generation, mining, forestry and wood pulp, and palm oil. Interviewed banks without any sectoral policies currently in place (16%) stated that they aim to develop relevant policies in the future following an internal assessment, while those with such policies in place often commented that they are regularly reviewed (e.g. on an annual basis). Moreover, it was often stated that banks engage multiple

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<sup>521</sup> The Platform on Sustainable Finance, which advises the European Commission on the development of technical screening criteria for the EU Taxonomy, will provide recommendations to the Commission on requirements for updated EU Taxonomy and publish reports for the review of the Taxonomy regulation by the end of 2021. See section 4.3.3.1.2 for further details.

<sup>522</sup> UNEP FI, EBF (2021). *Testing the application of the EU Taxonomy to core banking products: High level recommendations*. Available at: <https://www.ebf.eu/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-EBF-UNEPFI-report-January-2021.pdf>.

<sup>523</sup> UNEP FI (2016). *Guide to Banking and Sustainability*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2017/06/CONSOLIDATED-BANKING-GUIDE-MAY-17-WEB.pdf>.

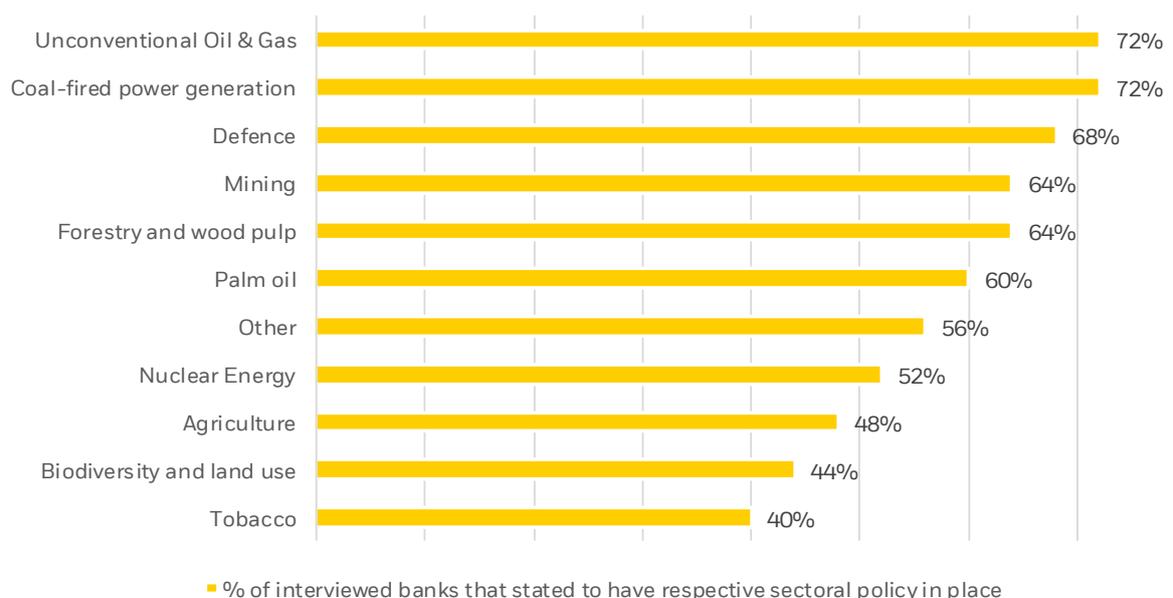
<sup>524</sup> Equator Principles (n.d.). *The Equator Principles*. Available at: <https://equator-principles.com/>.

stakeholders in this process to reflect multiple perspectives, including customers, civil society organisations, and external industry experts.

In general, interviewed banks stated that they have a lower risk appetite for sectors considered to be sensitive from an ESG perspective. One way that respondents address this is via exclusion lists as part of the respective sectoral policies, which entail, for example, financing to oil and gas projects in the arctic circle, direct financing related to development of thermal coal-fired power stations. In addition, interviewed banks often stated to identify sensitive sectors where lending activities are not completely prohibited but are under higher scrutiny, e.g. the energy sector. Consequently, a stricter screening during the credit approval process against certain environmental and social eligibility criteria is applied (see section 3.3.3.2.2).

Civil society organisations noted the importance of developing sector specific policies, as the ESG impact, for example, carbon emissions are concentrated in several specific sectors. Banks could use Nomenclature of Economic Activities (NACE) codes as referenced in the Taxonomy to identify and clarify the scope for carbon-intensive sectors, since these sectors are not commonly defined and agreed in the market. As further suggested by respondents, sector specific policies for banks should be more granular and include specific targets.

Figure 93: Availability of current sectoral policies<sup>525</sup>



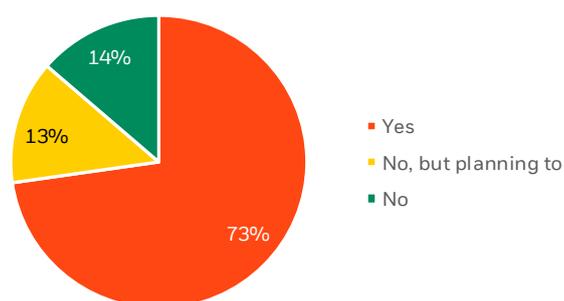
Source: BlackRock FMA analysis

#### 5.3.4.2 Business planning and steering

Sustainability policies were mentioned by many respondents as an important element of integrating ESG considerations into lending and investment, as well as for effective business planning and portfolio steering. Among interviewed banks, 73% of respondents have cascaded ESG-related policies into commercial planning, as shown in Figure 94. This includes 90% of interviewed G-SIBs, compared with only 58% of interviewed non-GSIBs.

<sup>525</sup> Question: What kind of ESG sectorial policies do you have in place / plan to introduce, and how do are they applied to the bank lending and investment activity? Sample size: 25.

Figure 94: Sectoral policies cascaded into commercial planning<sup>526</sup>



Source: BlackRock FMA analysis

However, most interviewed banks, integrate ESG considerations during the client screening and credit approval process only, and do not reflect specific ESG objectives into their credit strategies. Few banks stated that sectoral policies are further considered in business origination guidelines and procedures. For example, some banks stated that they deprioritise clients with higher ESG risks at the commercial planning stage. Similarly, some banks mentioned that they have sectoral exit strategies in place that are informed by exclusion policies, and that are translated into the planning cycle. Civil society organisations also highlighted the role sectoral policies could play in supporting the implementation of high-level ESG targets as they are more relevant for banks' daily operations.

In addition to the integration of sectoral policies into banks' business origination processes, respondent banks acknowledge that effective portfolio steering also requires specific metrics, targets, and underlying underwriting plans to capture not only the emerging ESG business opportunities but support risk mitigation in relation to a bank's risk appetite. One civil society mentioned the importance of sectoral policies being linked to more specific sectoral targets, for example, biodiversity for agriculture and social issues for healthcare. Further examples of measures that banks can use to steer their portfolios are provided by the Climate Financial Risk Forum, and include: i) Climate risk limits (e.g. limits related to carbon intensity of counterparties); ii) enhancements to increase product offerings with an attractive risk return profile under climate change assumptions; and iii) target ratios for green and brown activities that banks can steer toward, facilitated by taxonomies (either developed internally or referencing the EU Taxonomy).<sup>527</sup>

#### 5.3.4.3 Client engagement

According to the PRB<sup>528</sup>, client engagement is one of the key tools that banks can use for “encouraging sustainable practices and accompanying their customers and clients in their transition towards more sustainable business models, technologies and lifestyles”.<sup>529</sup> In line with this, many respondent banks consider client engagement to play an important role in promoting sustainable practices and steering their portfolio towards a stronger ESG profile. Of the various client engagement activities that exist, thought-leadership events are the most common activity,

<sup>526</sup> Question: Are ESG-relevant policies (e.g. sectoral policies) cascaded into commercial planning (e.g. deal origination guidelines). If so how? Sample size: 22.

<sup>527</sup> Climate Financial Risk Forum (2020). *Climate Financial Risk Forum Guide 2020*. Available at:

<https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-summary.pdf>.

<sup>528</sup> UNEP FI (2019). *Principles for Responsible Banking*. Available at <https://www.unepfi.org/wordpress/wp-content/uploads/2019/09/PRB-Guidance-Documents-Final-19092019.pdf>.

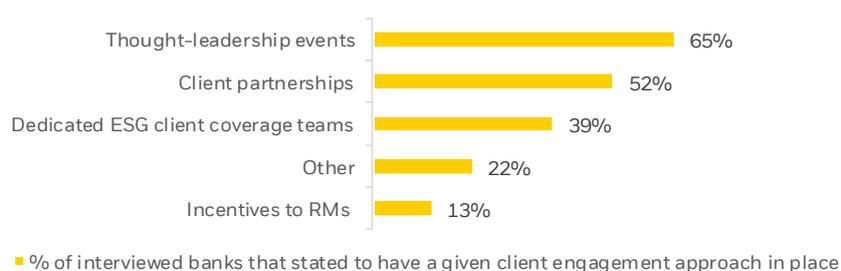
<sup>529</sup> UNEP FI (2019). *Principles for Responsible Banking – Guidance Document*. Available at:

<https://www.unepfi.org/wordpress/wp-content/uploads/2019/09/PRB-Guidance-Documents-Final-19092019.pdf>.

conducted by 65% of interviewed banks. For instance, banks hold meetings and workshops to engage with clients on ESG topics, increasing awareness, and promoting the green agenda.

Client partnerships are also a form of engagement to promote sustainable practices, which 52% of interviewed banks claim to have established, as shown in *Figure 95*. Through such partnerships, banks collaborate with clients in order to better understand their current practices and potential opportunities to improve their alignment towards sustainable practices. Some interviewed banks specifically stated that they carry out strategic dialogues with clients that operate in, or are associated with, high-risk sectors – such as oil and gas, thermal coal mining, and utilities – in order to understand their ability to adapt their business activities to a low-carbon and climate resilient economy or their progress along this path. In the engagement process, interviewed banks also mentioned that they identify opportunities to support their clients with the transition, for example, by helping them invest in renewable energy or realise energy saving initiatives. In this context, one respondent bank believes that over the next few years there will be an increased focus on how banks support their clients in the transition, measure their progress, as well as determining whether to terminate business with a client as a consequence of not meeting their transition targets.

**Figure 95: Forms of client engagement to promote more sustainable practices<sup>530</sup>**



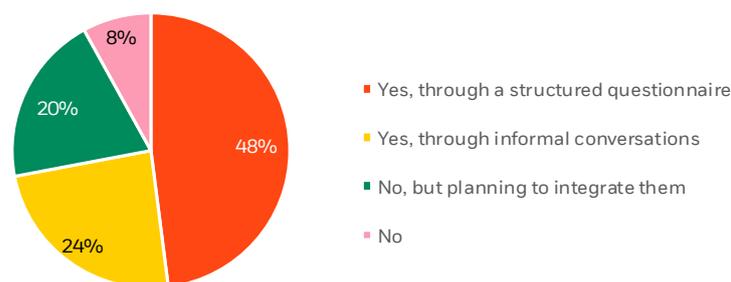
Source: BlackRock FMA analysis

A less common approach among respondents is the set-up of dedicated ESG client coverage teams, with 54% of G-SIBs having such a structure in place compared to only 17% of non-G-SIBs. Some banks mentioned that they have interdepartmental sustainability teams in place, for example, as part of their corporate and investment banking division. These teams can then support relationship managers in their periodic engagement with clients on environmental and social topics. Several banks highlighted the importance of relationship managers, given they directly face clients and engage on ESG-related matters. However, only 13% of interviewed banks stated that they have specific ESG-related incentives in place for relationship managers.

Gathering ESG-relevant information is important for portfolio steering and monitoring purposes. As shown in *Figure 96*, 48% of interviewed banks have established an internal framework for relationship managers to gather such information, for example, through an onboarding form or client questionnaire. Another 24% stated that they capture information informally, while 20% are planning to capture ESG-related information from clients in the future. A small number of banks do not have such a framework in place, nor do they currently plan to do so, as they use vendors to collect environmental and social information on clients. In this instance, relationship managers are responsible for collecting governance information only; some larger banks fall within this category, mentioning that capacities to source all information internally from clients are limited.

<sup>530</sup> Question: How do you engage with your clients to promote more sustainable practices and steer your portfolio towards a stronger ESG profile? "Other" includes ESG advisory team offering investor insights to clients; bank's partnership with organisations active in the sustainability field for client events; periodical engagement with clients, etc. Sample size: 23.

Figure 96: Availability of internal framework for relationship manager to capture ESG-related client information<sup>531</sup>



Source: BlackRock FMA analysis

Banks that have a structured questionnaire in place often stated that, while the process is consistent across lending and underwriting activities, the actual questionnaire and content is adapted to the specific client situation and/or differentiated by sector. This is particularly the case for clients in more sensitive industries – for example, mining, oil, and gas – where assessments are conducted beyond traditional environmental and social drivers. Additional elements assessed by some interviewed banks typically include risks that can unfold due to regulatory changes – which, going forward, may increasingly impact other industrial sectors such as steel, aluminium, cement, beyond sensitive sectors that are currently in scope for assessment –, litigation trends, operational and market barriers, and technological changes that can impact clients’ financial results.

For banks that do not capture climate-related information systematically, one supervisor provided an explanation that banks may be awaiting a common standard on ESG data requirement, as based on their discussions with banks, “banks desire to define information required from clients right from the outset, and requesting revised data fields from clients later on due to changes in requirements are seen as sub-optimal”. Similarly, a view was expressed that if financial institutions were to have a higher degree of standardisation of data requirement for corporates, the data requesting process would be less burdensome for the real economy.

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<sup>531</sup> Question: Have you developed an internal framework for relationship managers to capture ESG-relevant information from clients (e.g. onboarding form)? Sample size: 25.

## **5.4 Impediments to the development of a well-functioning EU market for green finance as well as possible instruments and strategies to promote the scaling-up of green finance**

This section focuses on the formulation and analysis of impediments and challenges faced by banks in the development of a well-functioning EU market for green finance, as well as potential enabling factors including appropriate instruments and strategies to address these challenges.<sup>532</sup> Based on the conducted research, challenges have been identified primarily in the context of Objective 3 and specifically focus on challenges faced by banks in the development and scaling-up of sustainable products and ESG offerings. However, they are also relevant in the context of EU banks' risk management processes and EU prudential supervision.

To promote the scaling-up of green finance and of the market for sustainable financial products, enabling factors were identified for addressing and overcoming the aforementioned challenges. The ultimate aim of these enabling factors is to increase supply and demand for green finance products offered by banks through the creation of transparency, the building of capabilities, as well as the provision of incentives. Green finance in the scope of this study focuses on products and services offered by banks, as described in section 5.3.1, meaning that investments on behalf of clients – for instance, asset management or private banking activities and the associated products – are beyond the scope of the analysis.

The structure of the section is as follows: The first sub-section (section 5.4.1) provides a brief overview of challenges and enabling factors, including a summary of interview results with stakeholders. Subsequently, the main challenges identified by study participants, and associated enabling factors, are analysed in detail in sections 5.4.2- 5.4.5.

### **5.4.1 Overview of challenges and enabling factors**

While progress has been made in the integration of ESG objectives into banks' business strategies and product offering, risk management, and prudential supervision in recent years, participants highlighted a number of challenges, that are faced primarily by banks, to promote the scaling-up and further advancement of green finance.

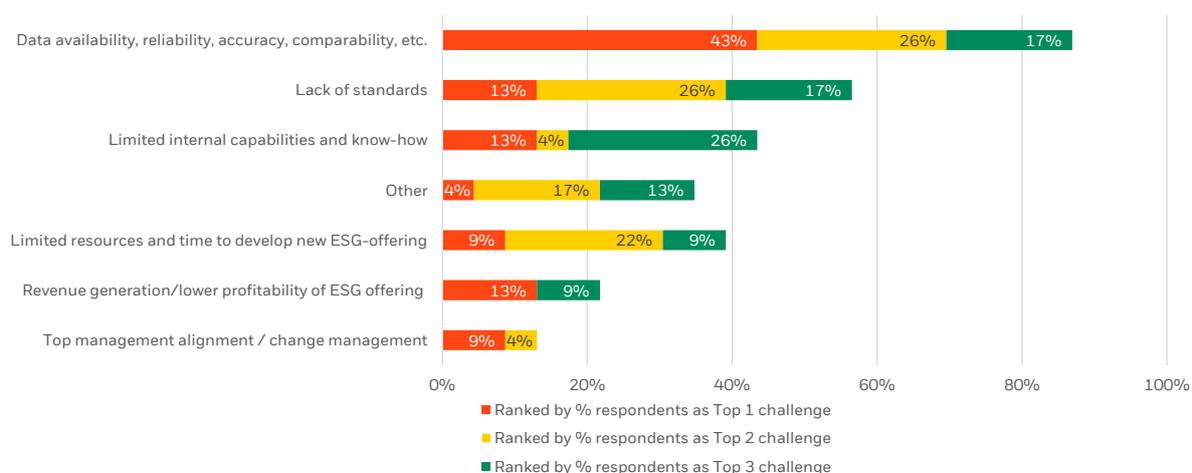
According to respondents, particularly banks, the key challenges in relation to the development of ESG products and services are as follows: i) Data-related issues, ii) lack of standards (including guidelines and common definitions), and iii) limited internal resources, capabilities, and know-how of banks (see *Figure 97*).<sup>533</sup> Other challenges were also mentioned by participants across stakeholder groups, such as a lack of innovation of products within the ESG space, perceived lower profitability of ESG offerings, and insufficient alignment at executive level. Although there seems to be a broad agreement on the major challenges faced that impede market development, different perceptions as to the scale of these challenges were also observed. For instance, one interviewed civil society organisation noted that the market for green finance has been growing, and thus considered this as evidence of the lack of substantive impediments, suggesting that banks should continue expanding their current ESG practices for product offering.

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<sup>532</sup> This includes possible regulatory incentives that have a potential to scale up sustainable investment and green finance while remaining consistent with prudential objectives. While a full analysis of the impact on prudential objectives is beyond the scope of this study, references to statements from stakeholder engagements, and/or available research, were added when these were referring to broader prudential objectives. In general, the impact of enabling factors linked to regulatory instruments and legislative instruments on prudential objectives would need to be further investigated.

<sup>533</sup> In the context of risk management and prudential supervision, the same top three challenges were identified by respondents, which are discussed in section 3.3.3.1.1, section 4.3.1.3, and section 4.3.4.1.1.

Figure 97: Challenges faced by banks when developing ESG products and services<sup>534</sup>



Source: BlackRock FMA analysis

Illustrative comments made across stakeholder groups related to the challenges that banks face in the scaling up of green finance are given in Figure 98.

Figure 98: Illustrative comments from banks, supervisors, and civil society organisations on impediments to the development of a well-functioning market

**From your perspective, what are major impediments to the development of a well-functioning (EU) market for green finance and sustainable investment?**

Data-related issues

“Data, data, and data again. Everybody – practitioners, academics, regulators, etc. – is working with highly imperfect, contradicting, and oftentimes severely biased data”

“Data is typically a major issue, with two challenges standing out: i) Availability (since it is a relatively new topic, time series typically begin in 2010 or later), and ii) quality of reported data, especially self-reported information that is not validated by a third party”

“Data is the key challenge. It is often biased, imperfect and contradicting”

Lack of standards

“The NFRD does not result in standardised corporate sustainability disclosures, making it difficult to compare the sustainability performance of companies”

“An issue here is the lack of easily comparable data due to different definitions. To be able to use data at a macro level, this requires a lot of work to achieve a better harmonisation of definitions”

“The fact that the taxonomy covers only sustainable and some transition activities is causing confusion as to which activities are not sustainable”

“There is a lack of clarity in terms of implementing the current green taxonomy”

“Sustainability is a global challenge, ideally addressed in a global framework. Yet policy responses are shaped by regional agendas, often with selective focus on the most polluting sectors”

“Lack of early visibility of future regulation, allowing [one] to factor future regulatory cost into strategic planning”

<sup>534</sup> Question: From your perspective, what are the greatest challenges your bank faces when developing ESG products and services? Sample size: 23.

Limited internal resource, capabilities, and know-how

*“Public awareness is very low on ESG principles. Collaboration between public authorities and the financial sector is not well developed”*

*“The supervisor has limited resources – what they have done so far is communicating within their organisation the importance of taking ESG aspects into consideration within every area of supervision”*

*“Today’s discussions on sustainability are often superficial – a reason for that is the lack of a clear understanding and limited know-how”*

Limited resources and time to develop new ESG-offering

*“Methodologies for climate-related assessments are still under development and all have different approaches, scopes, coverage, metrics, etc. We are confronted with even more new methodologies and divergent evolutions, rather than convergent forces.”*

Revenue generation/lower profitability of ESG offering

*“Currently, banks lack clear financial incentive to develop ESG products and services”*

*“Currently, there is not much pricing merit on ESG-related bonds and loans. When it comes to renewables projects, the pricing is very tight, and it is oftentimes difficult to meet the internal return requirements”*

Other challenges

*“There is also lack of demand at the SME and retail banking level. ESG is still a niche product so far for many segments”*

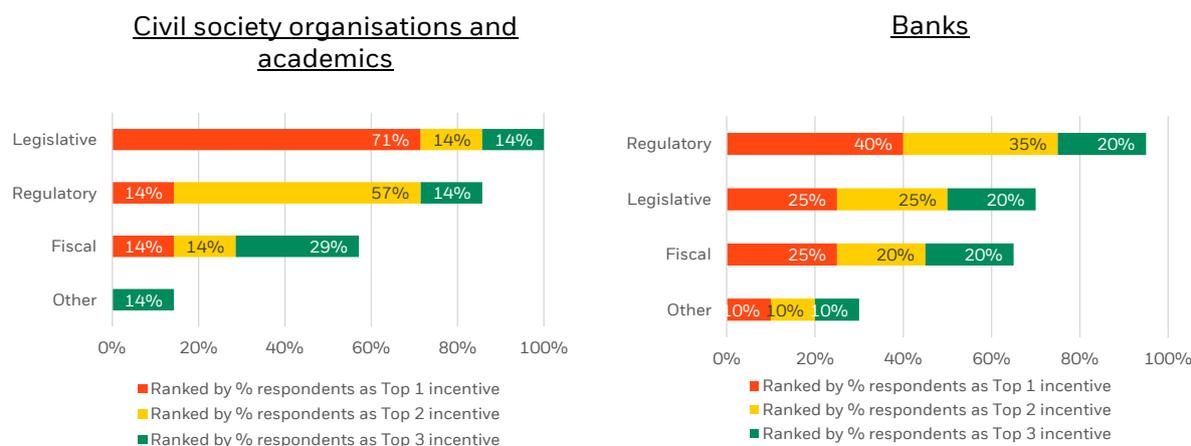
*“Integration of ESG risk management into business strategy is a huge step and therefore needs an adaptation in business strategies”*

*“There is insufficient business rationale for corporates to transition the economy and for banks to scale up sustainable finance. The EU Green Deal goals need to be underpinned by quantitative reduction trajectories for GHG emissions, allowing businesses to plan the transition”*

In order to address the aforementioned challenges, participants mentioned various enabling factors that could be taken into consideration. Enabling factors identified entail proposals, measures, actions or enhancements that could be considered and implemented by banks, supervisors or regulators, and legislative bodies. It is also worth noting that the enabling factors are forward-looking and have not yet been implemented or fully developed.

In the context of this study, enabling factors mentioned by participants are grouped into three categories: i) Supervisory or regulatory instruments, ii) legislative instruments, and iii) other instruments. While respondent banks consider regulatory incentives to be the most preferred measure in promoting the scaling-up of green finance – with 40% of respondent banks ranking it as the most preferred –, participants from civil society organisations and academics deem legislative incentives as more relevant (see Figure 99).

Figure 99: Incentives that could promote the scaling-up of green finance and the market for sustainable financial products<sup>535</sup>



Source: BlackRock FMA analysis

Most notably, the importance of considering measures that go beyond regulation and legislation was noted by both groups of stakeholders. For completeness, additional instruments mentioned by respondents are included in this section; however, it should be noted that these instruments – including, for example, fiscal incentives and monetary policy – are beyond the scope of this study. In general, the impact of enabling factors on prudential objectives should be further investigated, especially for those linked to regulatory and legislative instruments.<sup>536</sup>

#### 5.4.2 Data-related issues

Data remains perceived the most prevalent challenge in the development of ESG products and services. According to interviewed banks, a lack of available, reliable, and comparable ESG data poses challenges to the development of ESG products and services, particularly in the context of labelling ESG products, classifying assets as green, brown, or sustainable, and portfolio steering. Moreover, data is considered to be the main challenge in defining, identifying, assessing and managing ESG risks, as mentioned in section 3.3.3.1.1. The view that data is a key issue was also confirmed by interviewed supervisors in the context of the assessment of ESG risk in supervised institutions, as further detailed in section 4.3.1.3.

However, although data issues are recognised as a challenge, civil society organisations, supervisors, academics, and several banks highlighted that banks could enhance efforts in this area, for example, by requesting and collecting additional data required directly from their clients – an activity is indeed being considered by some banks in the stakeholder perimeter.

Data availability issues are highly relevant to banks' ESG product development. Firstly, the limited availability of ESG data, including historical data, makes it challenging for banks to build up evidence of the risk-return profile of ESG products. Secondly, banks claimed that a lack of detailed and quality data and information on companies' ESG practices, particularly related to the E pillar, makes ESG product labelling difficult. For example, aligning product classification approaches with available market standards or internally developed taxonomies may require banks to obtain specific certifications and proof of eligibility criteria from their clients to qualify lending as green.

<sup>535</sup> Question: From your experience, what kind of incentives could be put in place to promote the scaling-up of green finance and the market for sustainable financial products? Sample size: 7 for civil society organisations, 20 for banks.

<sup>536</sup> The full impact assessment on prudential objectives was beyond the scope of the study; however, references to statements from stakeholder engagements, and/or available desk research were added when these were referring to broader prudential objectives.

In this case, banks might require verification of eligible feedstock for the energy sector<sup>537</sup> and energy efficiency certification for real estate<sup>538</sup> from clients for the purpose of qualification, yet counterparties may not have this information readily available. Furthermore, this represents a potential trade-off for banks, as attaining such information requires further time, capacity, and cost. Data availability also presents an issue in circumstances where banks endeavour to apply the EU Taxonomy for ESG classification. In this case, ESG data required from clients to facilitate such product labelling is specific and technical in nature, and therefore often unavailable from counterparties. An example of such data includes turnover by activity type (i.e. ‘brown revenue’ or ‘green revenue’) and capital and operating expenditure by activity type.

The degree of data availability issues varies by counterparty type and region. Such issues are considered to be more prevalent for banks with exposures related to smaller and non-listed companies as their disclosures are not as comprehensive as those of listed counterparties. Similarly, there is limited data coverage for emerging markets and countries outside the EU as the availability of ESG data for non-EU clients is not supported by the NFRD.<sup>539,540</sup> Data availability in countries outside of the EU varies given different ESG priorities across geographies. For example, data and information related to the E pillar may not be fully available from clients in non-EU countries given more prominence placed on issues related to the S pillar in some regions.

Data reliability issues are another major concern that applies not only to SMEs but also to listed counterparties. For example, participants noted a low correlation between scores and ratings produced by data providers. According to one academic study, which seeks to assess why such ratings diverge, “the information that decision-makers receive from ESG rating agencies is relatively noisy”, which can represent a challenge for those “trying to contribute to an environmentally sustainable and socially just economy”. Divergences are deemed to exist primarily due to measurement (measurement of the same attribute using different indicators), scope (ratings based on different sets of attributes), and weights (relative importance ascribed to an attribute), in order of importance.<sup>541</sup> Participants perceived a lack of transparency among data providers on detailed underlying methodologies, for example with respect to the definition of companies’ peer groups when performing benchmarking analysis for the development of ESG ratings. Civil society organisations and banks also raised concerns as to the quality of self-reported data and questioned the reliability of this data, as there is no validation requirement.

Participants, including banks and international organisations, mentioned that low comparability and inconsistency of ESG data poses challenges when comparing ESG performance across companies. In particular, inconsistencies within corporates’ reporting on ESG data and measurements contributed to the incomparability of ESG data. Various metrics were used by corporates to describe the same ESG issue – for example, on employee health and safety – across companies, though with different terminologies and measurement units. Furthermore, the observed range of ESG metrics is perceived to create market-wide inconsistencies and to

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<sup>537</sup> For example, second-generation sources, certified first-generation sources.

<sup>538</sup> For example, LEED Gold, BREEAM Excellent, DGNB Gold, HQE Excellent, EPC level A.

<sup>539</sup> This response was also mentioned in: ESMA, EBA, EIOPA, and Joint Committee of the European Supervisory Authorities (2021). ESMA, EBA, EIOPA, and Joint Committee of the European Supervisory Authorities (2021). *Final Report on draft Regulatory Technical Standards – with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a(3), Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088*. Available at:

[https://www.esma.europa.eu/sites/default/files/library/jc\\_2021\\_03\\_joint\\_esas\\_final\\_report\\_on\\_rts\\_under\\_sfdr.pdf](https://www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf).

<sup>540</sup> According to the proposed CSRD, non-EU companies listed on regulated markets will be subject to EU sustainably reporting requirements (revised NFRD).

<sup>541</sup> See also: Berg F., Koelbel J., Rigobon R. (2019). *Aggregate Confusion: the Divergence of ESG Ratings*. MIT Sloan School Working Paper 5822-19. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3438533](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3438533).

undermine their reliability.<sup>542</sup> In addition, respondents noted that the different classification, rating, and measurement frameworks developed by data providers and banks leads to inconsistent ESG data requirements for counterparties. Civil society organisations raised the point that, while data providers aim to increase data coverage, data comparability still would require further enhancements.

Integration of ESG data within the existing technological infrastructure is seen as another challenging area by respondent banks. Robust internal and external ESG databases, and related automation of data processing, is seen as requiring further enhancement. Respondent banks mentioned the desire to integrate ESG data within their infrastructure across various systems, including customer databases, risk management systems, stress testing infrastructure, credit origination processes and, ultimately, loan pricing frameworks. Such integration could form a front-to-end process that would allow systematic identification of ESG characteristics of banks' assets and automate the process across origination, finance, risk, and ESG teams. However, such an infrastructural integration would require additional investment, time, and other resources.

## Enabling factors

### Supervisory and regulatory instruments

**Respondents across stakeholder groups mentioned that regulators could define technical standards on banks' ESG data collection to improve ESG data standardisation.** A common sustainability standard could help advance banks' ESG data collection processes with more certainty, and the data collection process would potentially be less burdensome for the real economy. The definition and implementation of a standard with respect to ESG data could also support the assessment and the understanding of ESG risks in the banking sector, and hence support the resilience of supervised institutions against ESG-related risks in line with prudential objectives.<sup>543,544</sup> In this context, participants mentioned that supervisory stress testing could be leveraged as a catalyst for supervisors to define common ESG data requirements – building on the EU Taxonomy and the proposed CSRD –, facilitate more comparable stress test results, and help improve the quality of ESG data, especially for climate. Further regulatory guidance could be provided to inform key ESG data required from clients for product classification and disclosure. For example, further guidance on the application of the

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<sup>542</sup> Sakis K., George S. (2019). *Four Things No One Will Tell You About ESG Data*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3420297](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3420297).

<sup>543</sup> Prudential objectives can include different objectives across institutions; for example, the ECB defines three aims to “i) ensure the safety and soundness of the European banking system; ii) increase financial integration and stability; and iii) ensure consistent supervision”. The ECB also states that the the purpose of the European banking supervision is to “help rebuild trust in the European banking sector and increase the resilience of banks.” EBA has defined two objectives, i.e. “contribute to financial stability across the EU” and “safeguard the integrity, efficiency and orderly functioning of the EU banking sector”. In the context of EU rules on prudential requirements, the Commission defines that the “goal of these rules is to strengthen the resilience of the EU banking sector so that it can better absorb economic shocks, while ensuring that banks continue to finance economic activity and growth. See: ECB (n.d.) *About Single Supervisory Mechanism*. Available at: <https://www.bankingsupervision.europa.eu/about/thessm/html/index.en.html>; EBA (n.d.) *EBA at a glance*. Available at: <https://www.eba.europa.eu/about-us/eba-at-a-glance>; European Commission (n.d.) *Prudential requirements*. Available at: [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/prudential-requirements\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/prudential-requirements_en).

<sup>544</sup> According to the “Climate-related risks to financial stability” report published by the ECB in 2021, “the lack of adequate and consistent data hampers the development of active strategies for monitoring and managing climate-related risks and undermines the effective pricing of risk.” ECB (2021). *Climate-related risks to financial stability*. Available at: [https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105\\_02~d05518fc6b.en.html](https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105_02~d05518fc6b.en.html).

EU Taxonomy to the classification and disclosure of core banking products could be beneficial.<sup>545</sup>

**Regulators could provide requirements for banks to engage with clients on ESG topics, including data gathering.** For example, regulators could recommend that banks have regular dialogues with clients in carbon-intensive industries to detail clients' ESG profiles and to assess transition plans. Through client engagement, banks could request and collect ESG data directly from clients, which might help address data availability issues, particularly for smaller counterparties, and would contribute to compliance with disclosure requirements, for example against the EU Taxonomy. While the impact of this enabling factor on prudential objectives would need further analysis, some stakeholders believe that requirements for client engagement on ESG topics would allow banks to enhance their identification and management of ESG risks, thus further improving banks' risk management through a better understanding of the respective ESG exposure and associated risks.<sup>546</sup>

**A set of key ESG data and metrics could be defined for banks for inclusion in supervisory reporting and regulatory disclosure requirements to standardise required ESG data.** For example, supervisors could develop technical standards for including ESG risks in Pillar 3 disclosure requirements.<sup>547</sup> Key ESG indicators and metrics for reporting could also be defined including, for example, banks' exposure to sensitive sectors and results from climate sensitivity analysis, which determines an exposure's vulnerability to climate-related events and policies. Inclusion of key ESG data and metrics in regulatory disclosure requirements could be considered as another lever to enhance transparency faced by banks and reduce asymmetry of information with market participants and supervisors in assessing resilience of individual European banks.<sup>548</sup>

**Supervisory measures could be applied as enforcement measures in case of non-compliance as a key tool to support the achievement of prudential objectives and to address relevant problems.** If banks fail to meet ESG prudential requirements, supervisors could consider applying existing supervisory measures (as discussed in section 4.3.3.2.1) to reinforce banks' arrangements, processes and strategies around ESG in accordance with the

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<sup>545</sup> UNEP FI, EBF (2021). *Testing the application of the EU Taxonomy to core banking products: High level recommendations*. Available at: <https://www.ebf.eu/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-EBF-UNEPFI-report-January-2021.pdf>. Recommendation 1 – 5 in the report are targeted at legislators and regulators based on an experimental application of the EU Taxonomy to banking products.

<sup>546</sup> A similar point is made by Cambridge Institute Sustainable Leadership (2021) which states that "if banks are to minimise their exposure to these risks then they will have to work with their clients at scale to deliver systemic, economy-wide change". Cambridge Institute Sustainable Leadership (2021). *Let's Discuss Climate*. Available at: <https://www.cisl.cam.ac.uk/system/files/documents/lets-discuss-climate-guide-to-bank-climate-engagement-cisl-may-2021.pdf>. In addition, one interviewed supervisor stressed the importance of dialogues between banks and clients on ESG, particularly during a client's transition phase.

<sup>547</sup> In line with this, the EBA has recently published the draft ITS for Pillar 3 disclosure of ESG risk. Responses to the consultation are required on or before 1 June 2021. Available at: EBA (2021). *Draft Implementing Technical Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

<sup>548</sup> According to the public consultation on draft ITS on Pillar 3 disclosures by EBA, "The Pillar 3 disclosure framework promotes transparency as a main driver of market discipline in the financial sector, to reduce the asymmetry of information between credit institutions and users of information, and to address uncertainties on potential risks and vulnerabilities faced by banks". See EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf).

gravity of a situation.<sup>549</sup> For example, banks could be required to submit a plan regarding ESG data collection or disclosure practices.

#### Legislative instruments

**Mandatory disclosure of company data could be expanded to smaller companies requiring the disclosure of selected ESG data or metrics, taking into account proportionality and materiality.** For example, many respondents including banks and civil society organisations mentioned the NFRD review as an enabler for solving data needs through the expansion of data requirements to more corporates and to SMEs. Such an expansion in the reporting scope could improve availability and comparability of ESG data among banks and allow them to increase the portfolio coverage of their ESG risk management and reporting. This can allow financial institutions to better identify sustainability risks, hence supporting financial stability across the EU.<sup>550</sup> To limit potential costs incurred by SMEs in the data collection process, a reduced scope of reporting requirements could be requested, in line with the proportionality principle.

**Respondents, particularly civil society organisations, highlighted the potential for establishing requirements for external validation of self-reported ESG data – via assurance or verification checks – to improve accuracy and credibility.** External verification could improve the quality of the information and data reported by corporates on their ESG practices and performance, making reliable data more accessible for all market players. ESG data that would benefit from such validation could include corporates' reported data (e.g. in GRI-based reports) and data submitted in the form of questionnaires to public disclosure platforms (e.g. CDP). Corporates' ESG data submitted to banks to perform due diligence and portfolio monitoring could also be required to be validated once more standardised data requirements have been established. The data validation process could be completed, for example, via third-party validation, through conducting assurance checks or verification checks by third-party professionals.

**The setting of standards for ESG reporting similar to accounting standards was raised, particularly by academics.** The requirement to treat ESG-related information in a similar

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<sup>549</sup> For example, according to the Single Supervisory Mechanism (SSM) Regulation (EU) No 1024/2013, as outlined in Article 16, “[for] the purpose of carrying out its tasks referred to in Article 4(1) and without prejudice to other powers conferred on the ECB, the ECB shall have the powers set out in paragraph 2 of this Article to require any credit institution, financial holding company or mixed financial holding company in participating Member States to take the necessary measures at an early stage to address relevant problems in any of the following circumstances: [...] (c) based on a determination, in the framework of a supervisory review in accordance with point (f) of Article 4(1), that the arrangements, strategies, processes and mechanisms implemented by the credit institution and the own funds and liquidity held by it do not ensure a sound management and coverage of its risks.” See Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1024&from=EN>. As outlined in “Core Principles for effective banking supervision” by BIS, “the supervisor has available a broad range of possible measures to address, at an early stage, such scenarios as described in BCP01.87(2). These measures include the ability to require a bank to take timely corrective action or to impose sanctions expeditiously. In practice, the range of measures is applied in accordance with the gravity of a situation. The supervisor provides clear prudential objectives or sets out the actions to be taken [...]” See BIS (2019). *Core Principles for effective banking supervision*. Available at: [BCP01 - The core principles](#).

<sup>550</sup> According to the Directive on Corporate Sustainability Reporting (CSRD) proposed by the European Commission, “to help ensure investor protection, all companies listed on regulated markets should in principle be subject to the same disclosure rules. SMEs listed on EU regulated markets would therefore have to fulfil the proposed new sustainability reporting requirements. [...] This proposal does not require other SMEs to report sustainability information. However, non-listed SMEs may decide to use on a voluntary basis the sustainability reporting standards that the Commission will adopt as delegated acts for reporting by listed SMEs. These aim to enable any SME to report information cost-efficiently in response to the numerous requests for information they receive from other companies with whom they do business, such as banks, insurance companies and large corporate clients, and to help define the limits for the information that companies can reasonably expect SMEs in their value chain to provide.” See European Commission (2021). *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN>.

manner as financial information could improve validity of ESG data, for instance, by introducing accounting-like standards and setting a sustainability equivalent of the International Financial Reporting Standards to further promote the integration of ESG factors.<sup>551</sup>

#### Other instruments

**Respondents, including civil society organisations and banks, mentioned that it is important for banks to enhance activities in relation to ESG data gathering, data classification, and data integration to improve data availability and usability.** For example, banks should engage with clients by requesting additional ESG data, especially for smaller corporates. Banks should also engage with SME and retail clients to raise awareness on ESG-related issues, in order to enhance their data capabilities. In addition, banks should enhance internal data categorisation frameworks to allow comparison of clients' ESG data across sectors. Further integration of ESG data into systems, models, and processes will equip banks with better technical infrastructure and allow data usage for various purposes, including risk modelling, product/service price modelling, strategic decision making, and reporting.

**Respondents across all stakeholder groups highlighted the benefits of developing a centralised data collection platform in a collaborative manner across market players.** A 'public utility' ESG database providing granular and comparable ESG-related data could address issues related to data comparability, consistency, and quality. Respondents mentioned different proposals for the set-up of such a shared data platform. A data portal could also collect information disclosed by corporates once the updated NFRD is rolled out.<sup>552</sup> Respondents also mentioned the commitment from the EU in establishing an online data portal, which banks would have access to, for gathering data from companies required to disclose both financial and sustainability-related information.

### **5.4.3 Lack of standards**

Complexity and a lack of common standards with respect to ESG factors was identified as a major challenge by many respondents across a wide range of topics, including ESG definitions, approaches, classifications, and disclosure practices. A lack of standardised approaches and established methodologies was also mentioned in the context of risk management and disclosure – for example, relating to the calculation of financed emissions, or modelling of transition risk, as discussed in section 3.3.3.1.1. Supervisors mentioned the same challenges in the context of prudential supervision. The development and definition of standardised methodologies is seen as a major issue and it is considered to be at an early stage, as referenced in section 4.3.4.1.1.

However, several civil society organisations and banks emphasised that it is not the scarcity of available standards or frameworks which presents a challenge. Rather, the challenge relates to the lack of a universal standard, given the multitude of live initiatives attempting to define standards. For example, in the context of ESG reporting and disclosure, multiple voluntary reporting standards (e.g. TCFD, GRI, SASB, UN PRI) are in place, with overlapping elements.

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<sup>551</sup> The IFRS Foundation has launched a consultation in September 2020 to assess appetite for global sustainability reporting standards and what role, if any, it might play in the development of any such standards. Available at: <https://www.ifrs.org/news-and-events/2020/09/ifrs-foundation-trustees-consult-on-global-approach-to-sustainability-reporting/>.

<sup>552</sup> Recommendation on a data portal was also mentioned in: UNEP FI, EBF (2021). *Testing the application of the EU Taxonomy to core banking products: High level recommendations*. Available at: <https://www.ebf.eu/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-EBF-UNEPFI-report-January-2021.pdf>.

In the context of the development of ESG lending offerings, a lack of international harmonised classification standards makes it difficult for banks and other participants to properly understand and assess market and product characteristics. This, according to participants, ultimately negatively affects demand for these products. At market level, respondents mentioned that there is no market-wide standard or definition for what constitutes ‘green finance’ or ‘sustainable finance’,<sup>553</sup> and economic activities beyond green are also not commonly defined (e.g. in the EU Taxonomy). For example, the lack of standards, particularly beyond green, leads to uncertainty as to whether sustainable bonds may be seen as instruments to finance the transition to a sustainable and low carbon economy. As mentioned in a recent discussion paper, “without more holistic standards, green finance is simply cutting the same pie into different slices”.<sup>554</sup>

At product level, classification standards for ESG offerings beyond green, social, and sustainability bonds are not sufficiently harmonised, according to respondents. The lack of such harmonised market-wide product definitions and frameworks acts as a barrier to the further evolution of sustainable finance; this has also been identified in earlier studies, for example, in the context of the green bond market.<sup>555</sup> However, respondents also stated that standards for green bonds are further developed, and they also acknowledged the ongoing development of market standards for other products, such as sustainability-linked loans (see section 5.3.1.1). Participants noted that an expanded EU Taxonomy, which includes and defines grey and brown activities, could further standardise the classification of ESG activities and facilitate a common product labelling. For example, Third Generation Environmentalism (E3G), in their 2020 report stated that “[it] is now time to take steps to address this gap by creating a taxonomy of unsustainable activities”.<sup>556</sup>

According to respondent banks, the absence of common regulation and standards among companies and across countries has resulted in multiple disclosure frameworks being followed by banks and corporates, which increases complexity and reduces comparability. The wide range of voluntary reporting standards, as shown in *Table 22*, has overlapping elements and focuses on different perspectives, including financial materiality and climate risks. However, the application of various standards impedes full comparability of companies and their ESG performance. In addition, respondents argued that the current NFRD leads to insufficiently comparable sustainability reporting data, as corporates have the freedom to choose different reporting frameworks ranging from international, European, or national guidelines to produce their statements. As a result, banks stated the difficulty of comparing clients’ reported data and performance on ESG, especially across sectors. Respondent banks also mentioned that there is a lack of clear guidance from supervisors or regulators on their expectations with respect to ESG

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<sup>553</sup> European Federation for Transport & Environment (2019). *EU Commission bids to stem the flow of greenwashing in banking with own ‘green list’*. Available at: <https://www.transportenvironment.org/press/eu-commission-bids-stem-flow-greenwashing-banking-own-green-list>.

<sup>554</sup> Imperial College Business School (2020). *Transition Finance: Managing Funding to Carbon-Intensive Firms*. Available at: <https://www.imperial.ac.uk/business-school/faculty-research/research-centres/centre-climate-finance-investment/research/transition-finance-managing-funding-to-carbon-intensive-firms/>.

<sup>555</sup> See for example European Commission (2016) “Study on the potential of green bond finance for resource-efficient investments”. Available at: <https://ec.europa.eu/environment/enveco/pdf/potential-green-bond.pdf>.

<sup>556</sup> E3G (2020). *A Vision for Sustainable Finance in Europe*. Available at: [https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe\\_Full-Report.pdf](https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe_Full-Report.pdf).

disclosures by banks.<sup>557,558</sup> The lack of an external and independent assessment of provided ESG information also acts as an impediment to making comparisons across banks, and potentially as a source of ‘greenwashing’. The risk of greenwashing was commonly mentioned by other stakeholders and is not limited to disclosure standards, but also to the labelling of products as sustainable.

Table 22: Comparison of key features of selected ESG disclosure standards for companies<sup>559</sup>

Standard/ Framework	GRI	IIRC	TCFD	SASB	EU NFRD <sup>560</sup>
<b>Objectives</b>	Measure companies’ impacts on environment and society	Enhance information quality available to financial capital providers for efficient capital allocation	Provide a framework for climate-related disclosures and present financial implications of related business	Facilitate material sustainability information disclosures by issuers to investors	Enhance the disclosure of non-financial information for companies and financial institutions
<b>Voluntary/ Mandatory</b>	Voluntary	Voluntary	Voluntary	Voluntary	Mandatory for in-scope EU firms
<b>Information on ‘E’ required</b>	Information on E required includes: Materials, Energy, Water, Biodiversity, Emissions, Waste, Environmental Compliance	No specific disclosure requirement: Require companies to consider the use of ‘natural capital’ in reports and its role in organizations’ value chains	Focus on strategy, risk management, and metrics and targets around climate-related risks and opportunities: For example, it includes metrics for climate risk assessment, GHG emissions	Require information for corporate impacts on the environment: For example, it includes use of non-renewable, natural resources as inputs or through harmful releases into the environment	Climate-related disclosures for NFRD reporting areas incl. business model, policies and due diligence, principal risks and risk management, and KPIs: Disclosures include GHG emissions, energy consumption, and energy efficiency targets
<b>Information on ‘S’ required</b>	Metrics on S required are around labour practices, human rights, society and product responsibility	No specific social disclosure requirements	N/A	Disclosure on S includes social capital (e.g. human rights, local economic development) and human capital (e.g. training, diversity, and compensation)	Disclose information related to social responsibility and treatment of employees, human rights, and anti-corruption and bribery

<sup>557</sup> While there is no clear guidance from supervisors or regulators on banks’ public disclosures, especially focusing on disclosure of non-financial information, under Article 499a CRR II, large institutions with publicly listed issuances are required to disclose information on ESG risks, physical risks and transition risks as defined in the report referred to in Article 98 of the CRD that EBA would submit by June 2021. See: p. 7 of EBA (2019). *EBA Action Plan on Sustainable Finance*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library//EBA%20Action%20plan%20on%20su%20sustainable%20finance.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20su%20sustainable%20finance.pdf). EBA (2020).

<sup>558</sup> The recent developments related to Pillar 3 disclosures, referenced in section 4.3.4.1.1, will contribute towards providing further guidance within the EU.

<sup>559</sup> IIF (2020). *Building a Global ESG Disclosure Framework: A Path Forward*. Available at:

<https://www.iif.com/Publications/ID/3945/Building-a-Global-ESG-Disclosure-Framework-A-Path-Forward>.

<sup>560</sup> The Commission has proposed a Directive on Corporate Sustainability Reporting to revise the requirements of the NFRD (the CSRD).

Standard/ Framework	GRI	IIRC	TCFD	SASB	EU NFRD <sup>560</sup>
Information on 'G' required	Disclosure on G includes governance structure, executive level responsibility for ESG topics, stakeholder consulting on ESG topics, composition of highest governance body, identifying and managing ESG impacts, risk management process, etc.	Disclosure on G includes leadership structure including skills and diversity, strategic decision-making process, reflection of organisation's culture, ethics, and values in its use of capital	Governance metrics relate to board oversight and management's role in assessing and managing of climate-related risks and opportunities	Governance disclosure requirements focus on business model and innovation (i.e. addressing sustainability issues) and leadership and governance (i.e. management of conflicted interest with broad stakeholder groups)	Disclosure on G includes information relates to board diversity, company diversity policies; also follow TCFD recommendations on disclosing board oversight and management's role in assessing and managing climate-related risks and opportunities

Source: IIF (2020), BlackRock FMA analysis

## Enabling factors

### Supervisory and regulatory instruments

**In the context of ESG product offering and labelling, potential regulatory requirements or expectations could be set for banks to align their ESG products with available standards.**

Examples for such standards include the EU Taxonomy, the EU Green Bond Standard, and other relevant standards among various product labelling baselines. Requiring the disclosure of information on green instruments could improve the consistency of product offering observed in the market as well as help tackle greenwashing and hence support trust in sustainable product offering by the banking sector.<sup>561</sup>

**Incorporating ESG risks into capital requirements was mentioned by various participants, including banks and civil society organisations, as a potential lever to stimulate standard setting (beyond redirecting capital) for defining green or brown.** While the setting of dedicated regulatory capital requirements for ESG exposures needs to be further investigated, according to various market participants (also see section 4.3.4.1.1),<sup>562</sup> such assessments could contribute to standard setting through forming a common definition of green or brown assets. The setting of standards could also support the assessment of banks by supervisors. The impact of the application of capital requirements should be further assessed in light of the EU rules on prudential requirements, which are aiming to strengthen the resilience of the EU banking sector, and consider potential additional analysis on the risk differential between green and brown assets.

<sup>561</sup> As noted in the "Stakeholder Consultation on the Renewed Sustainable Finance Strategy" conducted by the European Commission, stakeholders indicated that "[in the context of supporting for further definitions, standards and labels for sustainable financial assets and financial products support] requiring the disclosure of information on green bonds would improve the consistency and help tackle greenwashing" European Commission (2021). *Consultation on a renewed sustainable finance strategy - summary of responses*. Available at: [https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/2020-sustainable-finance-strategy-summary-of-responses\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/2020-sustainable-finance-strategy-summary-of-responses_en.pdf). In addition, according to the Director of Strategy at FCA in a public speech, "innovation [in sustainable investing] can't come at the expense of undermining trust in the sustainable finance market. Trust is hard won but easily lost"

<sup>562</sup> E.g. Finance Watch, together with GABV and Mission 2020 (2020), *New pathways: Building blocks for a sustainable finance future for Europe*; Available at: <https://www.finance-watch.org/publication/new-pathways-building-blocks-for-a-sustainable-finance-future-for-europe/>.

**The provision of coordinated guidance with respect to supervisory disclosures could eventually harmonise disclosure standards.** The addition of ESG disclosures to Pillar 3 reporting and the provision of regulatory guidance were mentioned by civil society organisations and interviewed supervisors as key instruments to ensure consistent disclosures.<sup>563</sup> Civil society organisations also mentioned that regulators could create common disclosure standards through harmonising disclosure frameworks and mandating disclosure. Respondent banks emphasised the importance of international standardisation of disclosure rules, especially on non-financial information, to ensure consistency of objectives and requirements for firms that are subject to multiple regulatory regimes. Close international coordination could promote robust and consistent international regulatory frameworks, ensuring consistent approaches and a level playing field among financial institutions.<sup>564</sup>

#### Legislative instruments

**Various participants across stakeholder groups suggested an expansion of the EU Taxonomy to define brown or grey activities and cover considerations on the social dimension.** In addition to the green component, the EU could consider developing a brown taxonomy to include performance criteria for activities which are significantly harmful and a grey taxonomy for activities that are neither green nor brown.<sup>565,566</sup> The introduction of brown criteria into the taxonomy could enable a more standardised approach to exclusion policies, support the assessment of underlying risks of exposures by banks as well as by supervisors – which could allow consistency in supervision through common definitions<sup>567</sup> –, and improve disclosure of business activities in line with the taxonomy. In this context, one civil society respondent mentioned that four categories could be created in the “complete taxonomy” – sustainable (green), non-sustainable (brown), medium-sustainable (grey), and a category that is taxonomy-irrelevant.<sup>568</sup>

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<sup>563</sup> EBA has committed in developing draft ITS on Pillar 3 disclosure of prudential information on ESG risks by institutions, which will be delivered by June 2021. A consultation paper was recently published in this respect. See at: EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%203%20disclosures%20on%20ESG%20risks.pdf)

<sup>564</sup> As noted by the ECB, “from a banking supervisory perspective, coherent regulatory frameworks are required to ensure that environmental and climate risks – which are of a global nature – are addressed in a robust and consistent manner, and that financial institutions operate in a level playing field.” See ECB (2021). *Eurosystem reply to the European Commission’s public consultations on the Renewed Sustainable Finance Strategy and the revision of the NonFinancial Reporting Directive*. Available at:

[https://www.ecb.europa.eu/pub/pdf/other/ecb.eurosystemreplyeuropeancommissionpublicconsultations\\_20200608~c01a984aa.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/ecb.eurosystemreplyeuropeancommissionpublicconsultations_20200608~c01a984aa.en.pdf).

<sup>565</sup> The Platform on Sustainable Finance, which advises the European Commission on the development of technical screening criteria for the EU Taxonomy, will provide recommendations to the Commission on requirements for updated EU Taxonomy and publish reports for the review of the Taxonomy regulation by the end of 2021. See section 4.3.3.1.2 for further details.

<sup>566</sup> See also: EU Technical Expert Group on Sustainable Finance (2020), *Taxonomy: Final report of the Technical Expert Group on Sustainable Finance*, Available at: [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf).

<sup>567</sup> One interviewed supervisory institution expressed the view that “There was an expectation to have a taxonomy so that everyone can refer to the same definitions. In the near term, the taxonomy needs to be introduced in the way that exposures are assessed. [...] To identify exposures of banks, having a clear way of knowing what is within the brown sector is needed. [...] The current axonomy needs to be complemented with a brown taxonomy which would be more risk-based.”

<sup>568</sup> The respondent additionally highlighted that two areas should be clarified between how ESG terms are defined in the Taxonomy and their application. The first relates to the difference between ‘medium-sustainable activities’, i.e. activities that are taxonomy relevant but are neither sustainable nor non-sustainable and activities that are taxonomy irrelevant i.e. low-impact activities for climate risks. The second clarification is around the definition of transition activities. Market

**Many respondents, in particular banks, mentioned the importance of clear guidance on the application of the EU Taxonomy for disclosure of banking products and other activities.**

Some banks mentioned that they are currently disclosing ESG products using internally developed taxonomies that align to the EU Taxonomy on a best-effort basis. Hence, setting clear expectations on disclosure requirements for banking products based on the EU Taxonomy, including an associated timeline, could be beneficial to ensure consistent disclosures and limit greenwashing.<sup>569</sup> Civil society organisations also highlighted that the EU taxonomy could be used in sustainability target setting and could be encouraged through legislative enforcement.

**Respondents mentioned the need for continued review of disclosure requirements.** As mentioned in an EBA Working Paper<sup>570</sup>, surveyed banking institutions anticipate that the implementation of the revised NFRD (i.e. the proposed CSRD) would result in a standardised framework with consistent definitions and requirements. Other stakeholders, particularly civil society organisations, suggested establishing binding and detailed disclosure requirements to underpin the general rules in the NFRD to ensure more reliable and comparable non-financial disclosure. Through setting out mandatory requirements, expanding the scope of companies covered, and ensuring consistency of the NFRD with other sustainable finance related legislation, the continued review of NFRD and its implementation could help attain more standardised and comparable disclosures among companies, including financial institutions, improving transparency and, by allowing to identify sustainability risks, supporting financial stability across the EU.<sup>571</sup>

Other instruments

**Banks could consider a number of ESG-related initiatives, independently of regulation, until ESG disclosures are standardised.** In addition to actively participating in industry working groups for standard development, banks could participate in working groups with representative companies within an industry to agree on a baseline level of ESG issues,

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players tend to consider ‘medium-sustainable’ activities as transition activities in the finance space, which is inconsistent with the definition provided in Article 10 of the Taxonomy. Transition activities are defined as “activities for which there are no technologically and economically feasible low-carbon alternatives, but that support the transition to a climate neutral economy in a manner that is consistent with a pathway to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels, for example by phasing out greenhouse gas emissions”, which is not the same concept as ‘medium-sustainable activities’.

<sup>569</sup> According to the “Climate-related risks to financial stability” report published by ECB in 2021, “the risk of greenwashing remains high due to the lack of consistent disclosures.” ECB (2021). *Climate-related risks to financial stability*. Available at: [https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105\\_02~d05518fc6b.en.html](https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105_02~d05518fc6b.en.html). See also footnote 561.

<sup>570</sup> EBA (2020). *Sustainable Finance - Market Practices*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Sustainable%20finance%20Market%20practices.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf).

<sup>571</sup> According to the Directive on Corporate Sustainability Reporting (CSRD) proposed by the European Commission, “the Accounting Directive, as amended by the NFRD, already regulates the disclosure of sustainability information in the EU. Transparency rules are necessary to ensure investor protection and financial stability across the EU. Common rules on sustainability reporting and its assurance ensure a level playing field for companies established in the different Member States.” See European Commission (2021). *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN>. In addition, as noted in NFRD (Directive 2014/95/EU), “Disclosure of non-financial information helps the measuring, monitoring and managing of undertakings’ performance and their impact on society. Thus, the European Parliament called on the Commission to bring forward a legislative proposal on the disclosure of non-financial information by undertakings allowing for high flexibility of action, in order to take account of the multidimensional nature of corporate social responsibility (CSR) and the diversity of the CSR policies implemented by businesses matched by a sufficient level of comparability to meet the needs of investors and other stakeholders as well as the need to provide consumers with easy access to information on the impact of businesses on society.” See European Commission (2014). *Directive 2014/95/EU - Non-Financial Reporting Directive*. Available at: [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en).

indicators, and metrics, which are of prime importance in the context of due diligence, exposure measurement, product labelling, and portfolio steering. An example would be to collectively develop a reporting template for qualitative and quantitative information by sectors. In addition, banks could also continue expanding disclosures to comply with available frameworks until common standards emerge.

**Industry bodies can play an important role in achieving standardisation of ESG product offerings.** Respondent banks mentioned the need for market associations – for example, ICMA and the LMA – to continue developing standard classification frameworks for other product types. In this context, however, civil society organisations highlighted the importance of aligning frameworks and standards for product labelling with an (expanded) EU Taxonomy.

#### 5.4.4 Limited internal resources, capabilities and know-how

Limited internal resources, capabilities, and know-how were identified as a further key challenge across stakeholder groups, particularly in the context of developing ESG products and services. Many respondent banks stated that, given sustainable products are a relatively recent trend, they have not yet built up comprehensive knowledge and understanding as to the nature of these products, and associated market developments and opportunities.

The understanding of the impact of ESG products on profitability within banks is somewhat limited, according to respondent banks, and is considered an impediment to the scaling up of ESG offerings. Although there is evidence available on the risk-return profiles or the riskiness of sustainable products from academics and market associations, interviewed banks consider themselves at an early stage in examining the possible risk differential of green exposures, which would be a prerequisite for any application of risk-adjusted pricing. Of the interviewed banks, very few have collected evidence or conducted own assessments on the relationship between risk and return of ESG products (see section 5.3.3.2). This is consistent with the findings from a 2020 NGFS Status Report which states that “respondents have so far not been able to verify a clear corresponding link between greenness and better profitability.”<sup>572</sup>

In the absence of other incentives, the presence of high product development costs, and limited transparency on risk-returns, there may be limitations as to the resources that would be allocated to further develop ESG capabilities – including promoting ESG offerings and developing ESG risk management. However, a number of banks stated that they see ESG products as a differentiating factor within their offerings, often due to increasing client demand, which they believe could impact price differentials going forward and create additional scale.

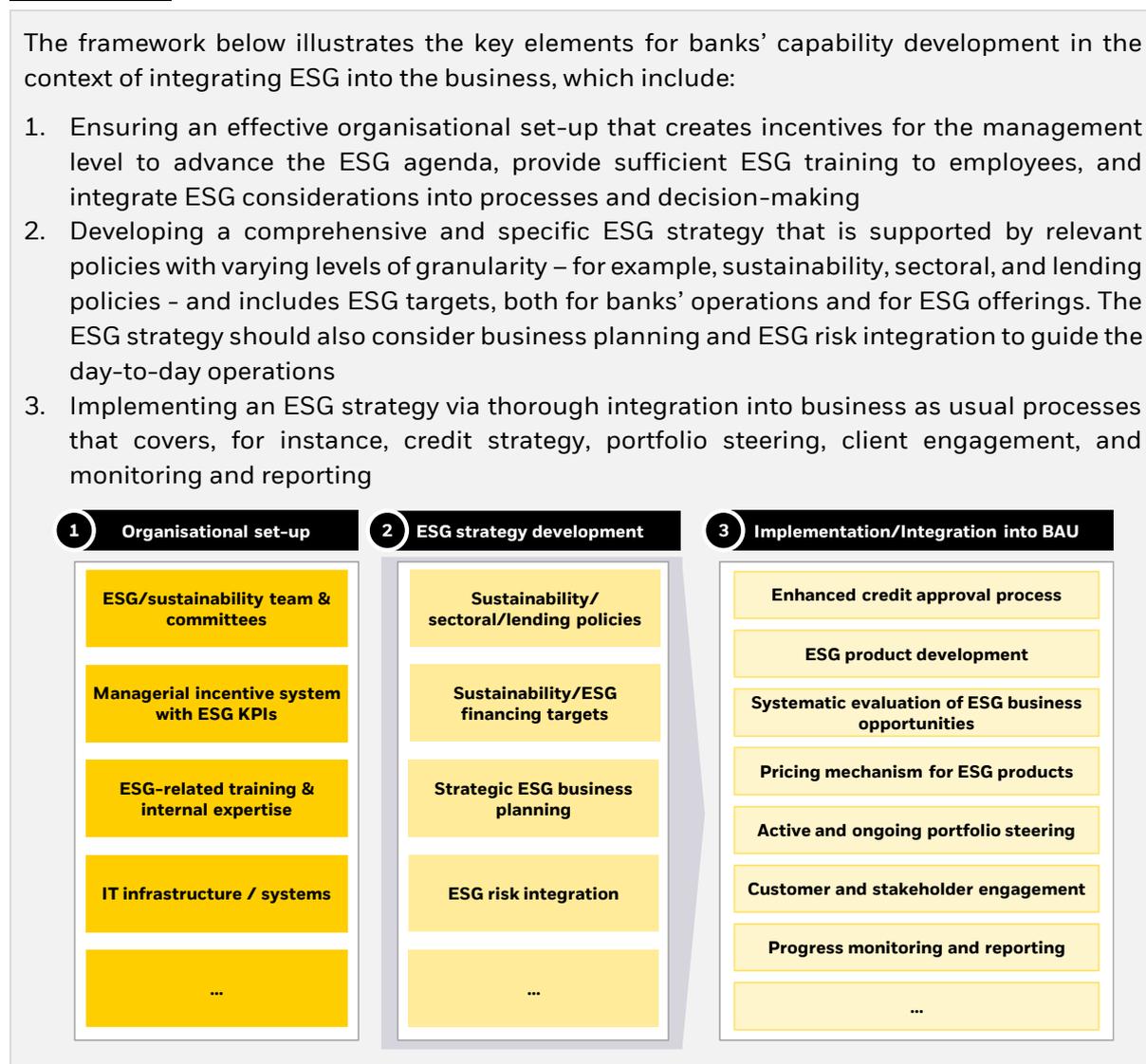
In addition, considerable resources, capabilities, and know-how are required by banks in different areas – including organisational set-up, ESG strategy development, as well as integration into business as usual processes across the bank – in order to further develop and promote sustainable financial products. Key areas mentioned by banks that should be considered when further integrating ESG into their business are illustrated in *Figure 100*. Overall, according to interviewed banks, capabilities and resources in these areas are still limited or insufficient. Some civil society organisations consider banks’ limited capabilities and spend on resources as an issue. A Finance Watch white paper states that, when it comes to finance professionals, there is “no training and competence regime for sustainability within financial institutions”, and that there is a “risk of sustainability being bolted on to existing business models which are too

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<sup>572</sup> NGFS (2020). *A Status Report on Financial Institutions’ Experiences from working with green, non-green and brown financial assets and a potential risk differential*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_status\\_report.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf).

narrowly focused on maximising financial outcomes, rather than being built in to new business models that take a holistic view.”<sup>573</sup>

Figure 100: Illustrative framework for banks’ capability development for ESG business opportunities



Source: BlackRock FMA analysis

## Enabling factors

### Supervisory and regulatory instruments

**Additional supervisory guidance could further incentivise banks to enhance their internal resources and capabilities on ESG.** For example, supervisors could provide additional guidance in relation to ESG integration into business strategy and governance – beyond climate-related and environmental risks –, as well as requirements for banks to increase resources to advance the ESG agenda. Mandatory ESG trainings for board and executive management members were also suggested by civil society organisations and academics. One

<sup>573</sup> See for example Finance Watch, together with GABV and Mission 2020 (2020). *New pathways: Building blocks for a sustainable finance future for Europe*. Available at: <https://www.finance-watch.org/publication/new-pathways-building-blocks-for-a-sustainable-finance-future-for-europe/>.

civil society organisation proposed that at least one person at board level should oversee ESG matters within the bank. Initiatives such as the increase of resources to advance the ESG agenda as well as mandatory trainings for board members and executive management are likely to build internal ESG know-how and banks' capabilities to enhance the management of ESG risks. Being able to understand and evaluate risks that arise from ESG factors at board and executive level will allow for more informed strategic decisions that ensure the sustainability of the business, and hence resilience, of banks.<sup>574</sup>

**Supervisors could request relevant ESG data from banks to assess additional evidence on, and support the analysis of, risk differentials for sustainable products.** More transparency and a better understanding of the riskiness and risk-return profiles of ESG products is considered as a major enabler to trigger additional ESG business activities. Such requirements would not only support supervisory analysis of risk differentials – for example, in the context of impact assessments –, but could also incentivise banks to develop and scale up capabilities and help to achieve more efficient capital and resource allocation within banks. The burden associated with collecting data for such assessment should remain commensurate with the broader prudential objectives.

**Participants, in particular banks, mentioned that it could be beneficial for supervisors to continue enhancing their in-house capacity and strengthen collaboration with banks to share understanding and knowledge of ESG matters.** Supervisors and regulators can further support the development of ESG-related markets by fostering awareness and offering intellectual leadership in assessing ESG risks.<sup>575</sup> For example, by developing in-house ESG knowledge and capabilities, including through associated trainings and international cooperation, supervisors could enhance and consolidate knowledge on ESG topics and share their understanding with supervised entities through, for instance, best practices to help them overcome challenges (see section 4.3.2.2).

#### Legislative instruments

**The integration of further ESG considerations in banks' governance, including at executive and board level, could increase accountability at senior level and create stronger internal incentives, and could be cascaded down from management.** Civil society organisations mentioned that EU legislation could consider a requirement for banks to align remuneration policies with the achievement of measurable sustainability targets for managers. In addition, the integration of ESG considerations into duties at board, executive and management level was proposed, for example through formulating directors' duties requiring them to identify and mitigate sustainability risks and impacts. Promoting governance practices to integrate sustainability into banks' decision making and strengthen accountability for ESG issues could contribute to banks' sustainable value creation and hence the resilience of financial institutions.<sup>576</sup>

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<sup>574</sup> One respondent supervisor expressed the view that “the governance of banks and their internal risk framework are really relevant for assessing the evolution of the risk profile of the institutions. Banks should further develop strategies and processes that they need to take conscious decisions for the sustainability of their businesses, which hopefully will translate to sustainability of society as a whole.”

<sup>575</sup> IMF (2019). *Global Financial Stability Report: Lower for Longer*. Available at:

<https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019>.

<sup>576</sup> The proposal of fostering more sustainable corporate governance was also discussed in: European Commission, EY (2020). *Study on directors' duties and sustainable corporate governance*. Available at:

<https://op.europa.eu/en/publication-detail/-/publication/e47928a2-d20b-11ea-adf7-01aa75ed71a1/language-en>. In the same report, it was noted that “a possible future EU action in the area of company law and corporate governance

### Other instruments

**Banks should continue enhancing their capabilities and accumulation of ESG-related know-how.** They should establish an effective organisational set-up for ESG integration, including building of ESG-related in-house expertise, and ensure sufficient understanding of the topic. Moreover, banks should develop and communicate comprehensive and specific ESG strategies, including ESG product development plans, and monitor progress. Further engagement with clients was also mentioned as a means to increase clients' awareness on ESG and help banks identify sustainable development needs.

**Expanding international efforts and collaboration between various stakeholders, including public authorities, civil society, and the financial sector, could further support capacity building and the development of know-how, standards, and capabilities globally.** Agreeing on standards and best practices at an international level is considered as a key enabling factor by a wide range of participants. Fostering collaboration between market players through the exchange of knowledge and experience on the topic could allow further development and expansion of know-how across market players.

### 5.4.5 Other challenges

Some respondent banks claimed that profitability of certain ESG products may be lower due to relatively higher transaction costs, as well as a lack of scale and sizeable opportunities, particularly for products offered to retail clients. However, this view was disputed by civil society organisations, who consider the lower demand and profitability, if at all, to be related to the novelty of products, i.e. as a result of the higher initial cost structures.

Respondents across all stakeholder groups suggested that embedding and mainstreaming ESG factors into all banking products is required to avoid certain ESG products, currently less developed, remaining a niche area in the future. Respondents, particularly civil society organisations, highlighted a lack of innovation of products within the ESG space as an issue, and believe that there should be an ESG version of all vanilla banking products, including for capital markets – i.e. swaps, options, futures, etc. –, to facilitate market participants playing their role of re-directing capital. In an EBF/IFF survey, two-thirds of surveyed financial firms expressed the opinion that the relative shortage of sustainable products is an impediment.<sup>577</sup>

### Enabling factors

#### Supervisory and regulatory instruments

**Regulators could define principles for banks to integrate ESG factors in general business strategies, for example to foster product innovation and assess the related cost impact.** For example, regulators could encourage banks to assess the feasibility of integrating ESG factors into more product categories, either by developing new sustainable products or expanding existing offering. This would allow banks to systematically evaluate any potential innovation for sustainable investment and green finance considering the jurisdiction they operate in and

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should pursue the general objective of fostering more sustainable corporate governance and contributing to more accountability for companies' sustainable value creation. [...] Remuneration policy [for] directors is a key area of intervention because linking executive pay to sustainability targets can create incentives to take more sustainable business decisions.”

<sup>577</sup> EBF, IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf).

specific client needs, which could support the sustainability of banks' business, and hence resilience, of banks.<sup>578</sup>

#### Legislative instruments

**A number of participants, in particular civil society organisations, mentioned that EU legislation could consider requiring banks, including at executive and board level, to take responsibility for ensuring the alignment of their strategies with international agreements and initiatives, especially for the E pillar while taking into account the assessment of their ESG risks.** According to these respondents, banks should set an ESG strategy that ensures their business activities are consistent with international initiatives and agreements, such as the Paris Agreement. ESG strategies should also include the mandatory setting of measurable sector specific objectives and targets, according to which banks proactively decrease investment and finance in unsustainable sectors and increase finance in green or socially responsible sectors. While measuring the alignment of portfolios with international agreements and initiatives would seem to have a consequent effect on banks' ESG risk profiles<sup>579</sup>, further evidence of this transmission channel from ESG strategy alignment to risk measurement should still be gathered and the overall impact on prudential objectives would need to be further assessed.

**According to respondents across stakeholder groups, the implementation of sustainability policies via legislation could support the creation of additional demand for green finance.**

For example, potential legislative changes aimed at phasing out certain brown sectors to achieve broader environmental transformation targets in the real economy would potentially promote investment and finance in sustainable technologies.

#### Other instruments

**Banks could consider measures to stimulate demand for ESG products.** For instance, banks should increase engagement with their clients to improve their understanding and awareness on ESG-related business activities and stimulate the demand for ESG products.

**As noted by multiple participants, enabling factors should go beyond banking supervision and regulation, and political decisions are required to set effective incentives.** Such measures, however, are beyond the scope of this study.<sup>580</sup> Respondent banks and civil society organisations mentioned that macroeconomic policies and political direction could serve as catalysts for creating demand in the real economy, especially for low carbon technologies, and add more clarity on net zero pathway policies. Once incentives and a clear pathway are created for the real economy, the banking industry could follow the signals and further redirect capital.

**Respondents, particularly civil society organisations, mentioned the use of fiscal policies as a potential means of supporting environmental objectives and creating demand for ESG banking products in the real economy.** Some respondents mentioned the use of subsidies within sectors with a positive impact, or the reduction/cessation of subsidies within

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<sup>578</sup> One respondent supervisor expressed the view that "Banks should further develop strategies and processes that they need to take conscious decisions for the sustainability of their businesses, which hopefully will translate to sustainability of society as a whole." See also *footnote 574*.

<sup>579</sup> As noted by EBA, "assessing the alignment of the portfolio with global targets in turn presents a way to measure ESG risks for the institution itself." See EBA (2021). *Report on management and supervision of ESG risk for credit institutions and investment firms*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf).

<sup>580</sup> As mentioned previously, additional instruments mentioned by respondents are included for completeness. However, it should be noted that these instruments, e.g. instruments including fiscal incentives, and monetary policy, are beyond the scope of this study.

environmentally harmful sectors, as a potential enabling factor. Moreover, respondents mentioned that tax advantages (or disadvantages) and other fiscal incentives could foster demand for ESG products offered by banks. Participants also stated that existing loan guarantee and export finance schemes could be adapted to provide guarantees for bank loans supporting sustainable projects and help companies in transitioning their business models. In addition, general education policies to support the implementation of fiscal policies were suggested.

## **Acknowledgements**

Collaboration between all relevant stakeholders will be necessary to achieve a more sustainable future. In this spirit, the authors wish to sincerely thank all those who contributed to the study by means of participation in focus groups, interviews/questionnaires, or workshops.

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## Annex I. List of acronyms and abbreviations

Acronym/Abbreviation	Full phrase
<b>ABS</b>	Asset-backed Securities
<b>ACPR</b>	Autorité de contrôle prudentiel et de résolution (ACPR)
<b>AML</b>	Anti-money Laundering
<b>Austrian FMA</b>	Österreichische Finanzmarktaufsichtsbehörde
<b>BaFin</b>	Bundesanstalt für Finanzdienstleistungsaufsicht
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>BES</b>	Biennial Exploratory Scenario
<b>BIS</b>	The Bank of International Settlements
<b>BoE</b>	Bank of England
<b>BPF</b>	Brown Penalising Factor
<b>CCISC</b>	Climate Change Impacts Study Committee
<b>CDP</b>	Carbon Disclosure Project
<b>CDSB</b>	Climate Disclosure Standards Board
<b>CFO</b>	Chief Finance Officer
<b>CFRF</b>	Climate Financial Risk Forum
<b>CISL</b>	University of Cambridge Institute for Sustainability Leadership
<b>CLO</b>	Collateralised Loan Obligation
<b>CMN</b>	National Monetary Council
<b>CMU</b>	Capital Markets Union
<b>CRD</b>	Capital Requirements Directive
<b>CRR</b>	Capital Requirements Regulation
<b>CRR2</b>	Capital Requirements Regulation 2
<b>CSR</b>	Corporate Social Responsibility
<b>DNB</b>	De Nederlandsche Bank
<b>E</b>	Environment
<b>E3G</b>	Third Generation Environmentalism
<b>EBA</b>	European Banking Authority
<b>EBF</b>	European Banking Federation
<b>EBRD</b>	The European Bank for Reconstruction and Development
<b>EDHEC Business School</b>	Ecole des Hautes Etudes Commerciales du Nord
<b>EeMAP</b>	Energy Efficient Mortgage Action Plan
<b>EeDaPP</b>	Energy Efficiency Data Protocol and Portal
<b>EFRAG</b>	European Financial Reporting Advisory Group
<b>EGDIP</b>	European Green Deal Investment Plan
<b>EIOPA</b>	European Insurance and Occupational Pensions Authority
<b>ESA</b>	European Supervisory Agency
<b>ESG</b>	Environment, Social and Governance
<b>ESR</b>	Environmental Social Risk
<b>ETS</b>	Exchange Trade Systems
<b>EU</b>	European Union
<b>EU GBS</b>	EU Green Bond Standard
<b>EV</b>	Electric Vehicle
<b>FCA</b>	Financial Conduct Authority
<b>FISMA</b>	Financial Services and Capital Markets Union
<b>FMA</b>	Financial Markets Advisory
<b>FSB</b>	Financial Stability Board
<b>G</b>	Governance
<b>GDP</b>	Gross Domestic Product

Acronym/Abbreviation	Full phrase
<b>GEVA</b>	GHG Emissions per unit of Value Added
<b>GHG</b>	Greenhouse Gas
<b>GRI</b>	The Global Reporting Initiative
<b>GSF</b>	Green Supporting Factor
<b>G-SIB</b>	Global Systematically Important Banks
<b>HLEG</b>	High-Level Expert Group
<b>I4CE</b>	Institution for Climate Economics
<b>IAIS</b>	International Association of Insurance Supervisors
<b>IAM</b>	Integrated Assessment Model
<b>ICAAP</b>	The Internal Capital Adequacy Assessment Process
<b>ICMA</b>	International Capital Market Association
<b>IEA</b>	International Energy Agency
<b>IFC</b>	International Finance Corporation
<b>IFRS</b>	International Financial Reporting Standards
<b>IIF</b>	Institute of International Finance
<b>IIRC</b>	International Integrated Reporting Council
<b>ILAAP</b>	The Internal Liquidity Adequacy Assessment Process
<b>IMO</b>	International Maritime Organisation
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IT</b>	Information Technology
<b>ITS</b>	Implementing Technical Standards
<b>ITR</b>	Implied Temperature Rise
<b>KPI</b>	Key Performance Indicators
<b>KRI</b>	Key Risk Indicator
<b>KyC</b>	Know-your-Customer
<b>LGD</b>	Loss Given Default
<b>LTV</b>	Loan to Value
<b>MAgPIE</b>	Model of Agricultural Production and its Impacts on the Environment
<b>MAS</b>	Monetary Authority of Singapore
<b>MIT</b>	Massachusetts Institute of Technology
<b>NACE</b>	Nomenclature of Economic Activities
<b>NCA</b>	National Competent Authority
<b>ND-GAIN</b>	Notre Dame Global Adaptation Initiative
<b>NFRD</b>	Non-Financial Reporting Directive
<b>NGFS</b>	Network for Greening the Financial System
<b>NPL</b>	Nonperforming Loan
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>ORSA</b>	Own Risk and Solvency Assessment
<b>P&amp;L</b>	Profit and Loss
<b>PACE</b>	Property Assessed Clean Energy
<b>PACTA</b>	Paris Agreement Capital Transition Assessment
<b>PCAF</b>	Partnership for Carbon Accounting Financials
<b>PG</b>	Probability of Default
<b>PIK</b>	Potsdam Institute for Climate Impact Research
<b>PRA</b>	The Prudential Regulation Authority
<b>RAF</b>	Risk Appetite Framework
<b>RAG</b>	Red Amber Green
<b>RCP</b>	Representative Concentration Pathways
<b>REMIND</b>	Regional Model of Investment and Development
<b>S</b>	Social
<b>S&amp;P</b>	Standard and Poor's

<b>Acronym/Abbreviation</b>	<b>Full phrase</b>
<b>SASB</b>	Sustainability Accounting Standards Board
<b>SBTi</b>	Science Based Targets initiative
<b>SDA</b>	Sector Decarbonisation Approach
<b>SDG</b>	Sustainable Development Goals
<b>SDS</b>	Sustainable Development Scenario
<b>SEIP</b>	Sustainable Europe Investment Plan
<b>SIF</b>	Sustainable Insurance Forum
<b>SME</b>	Small and Medium Enterprises
<b>SOMO</b>	Centre for Research on Multinational Corporations
<b>SREP</b>	Supervisory Review and Evaluation Process
<b>SS</b>	Supervisory Statement
<b>SSM</b>	Single Supervisory Mechanism
<b>SyRB</b>	Sectoral Macroprudential Systemic Risk Buffer
<b>TCFD</b>	Task Force on Climate-related Financial Disclosure
<b>The Commission</b>	European Commission
<b>UNEP FI</b>	United Nations Environment Programme - Finance Initiative
<b>VAR</b>	Value at Risk
<b>WEF</b>	World Economic Forum
<b>WWF</b>	World Wide Fund for Nature

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### Annex III. List of stakeholders

Table 23, Table 24, and Table 25 list all stakeholders per group as defined in section 2.2. As described in section 2.1, desk research was carried out for all stakeholders while other research methods were carried out on a subset of the full perimeter. An inclusion of an entity in this list does not imply that the entity actively participated in the study nor that the study reflects the views of this entity.

**Table 23: Banks in the stakeholder perimeter**

Geography	Country	Stakeholder name	
EU member states	Austria	Erste Group	
	Belgium	KBC	
	Bulgaria	DSK Bank	
	Cyprus	Bank of Cyprus	
	Denmark	Danske Bank	
	Estonia	Luminor Bank	
	Finland	Nordea Bank	
	France	BNP Paribas	
			Crédit Agricole Group
			Société Générale
	Germany	Deutsche Bank	
			DZ Bank
	Greece	Eurobank	
	Hungary	OTP Bank	
	Ireland	Bank of Ireland	
	Italy	UniCredit	
			Intesa Sanpaolo
	Latvia	Citadele banka	
	Lithuania	Šiaulių Bankas	
	Luxembourg	Banque et Caisse d'Epargne de l'Etat	
	Malta	Bank of Valletta	
	Netherlands	ING Group	
	Poland	PKO Bank Polski	
	Portugal	Caixa Geral de Depósitos	
	Romania	Banca Transilvania	
	Slovenia	Nova Ljubljanska banka	
Spain	Banco Santander		
		Banco Bilbao Vizcaya Argentaria	
Sweden	Svenska Handelsbanken		
Non-EU member states	Brazil	Itaú Unibanco Holding	
	China	China Construction Bank Corporation	
		Industrial & Commercial Bank of China Ltd.	
	India	State Bank of India	
	Japan	Mitsubishi UFJ Financial Group	
		Sumitomo Mitsui Financial Group	
	USA	Bank of America	
		JPMorgan Chase & Co.	
UK	Barclays		

Geography	Country	Stakeholder name
		HSBC
		Standard Chartered
	Switzerland	Credit Suisse
		UBS Switzerland

**Table 24: Supervisors and Regulators in the stakeholder perimeter**

Geography	Country	Stakeholder name	
EU member states	Supranational	European Banking Authority (EBA)	
		European Central Bank (ECB)	
		European Systemic Risk Board (ESRB)	
	Austria	The Austrian Financial Market Authority (FMA)	
	Belgium	National Bank of Belgium	
	Bulgaria	Bulgarian National Bank	
	Croatia	Croatian National Bank	
	Cyprus	Central Bank of Cyprus	
	Czechia	Czech National Bank	
	Denmark	Danish Financial Supervisory Authority	
	Estonia	The Estonian Financial Supervisory Authority	
	Finland	Financial Supervisory Authority (FIN-FSA)	
	France		Autorité de contrôle prudentiel et de résolution
			Banque de France
	Germany		Deutsche Bundesbank
			Federal Financial Supervisory Authority (BaFin)
	Greece	Bank of Greece	
	Hungary	Magyar Nemzeti Bank (Central Bank of Hungary)	
	Ireland	Central Bank of Ireland	
	Italy	Bank of Italy (Banca d'Italia)	
	Latvia	Latvia Financial and Capital Market Commission's (FCMC)	
	Lithuania	Bank of Lithuania (Lietuvos bankas)	
	Luxembourg	Commission de Surveillance du Secteur Financier (CSSF)	
	Malta	Malta Financial Services Authority (MFSA)	
	Netherlands	Netherlands Bank (De Nederlandsche Bank)	
	Poland	Polish Financial Supervision Authority	
	Portugal	Central Bank of Portugal (Banco de Portugal)	
	Romania	National Bank of Romania (Banca Națională a României)	
	Slovakia	National Bank of Slovakia (Národná banka Slovenska)	
	Slovenia	Bank of Slovenia (Banka Slovenije)	
Spain	Bank of Spain (Banco de España)		
Sweden	Finansinspektionen		
Non-EU member states	Brazil	Central Bank of Brazil	
	China	China Banking Regulatory Commission (CBRC)	
		The People's Bank of China	
	India	Reserve Bank of India	
	Japan	Japanese Financial Services Agency	
	Mexico	Bank of Mexico	
Singapore	Monetary Authority of Singapore (MAS)		

Geography	Country	Stakeholder name
	Switzerland	Swiss Financial Market Supervisory Authority (FINMA)
	United Kingdom	Bank of England Prudential Regulation Authority (PRA)
	United States	Federal Reserve

**Table 25: International Organisations, Civil Society and Other Stakeholders in the stakeholder perimeter**

Type	Country	Stakeholder name
Academics	EU Member State	Bocconi University
		EDHEC Business School
		ESMT Berlin: Center for Financial Reporting and Auditing (CFRA)
		Florence School of Regulation
		Goethe University of Frankfurt (Centre for Financial Studies)
		Institute Louis Bachelier
		Stockholm School of Economics (Centre for Sustainable Markets)
	Non-EU Member State	Wirtschaftsuniversität Wien (Vienna University of Economics and Business)
		Imperial College Business School
		Northwestern University
		MIT Sloan School of Management
		Tsinghua University Centre for Finance and Development
		University of Cambridge (Cambridge Institute for Sustainability Leadership (CISL))
		Zurich University
Associations	EU Member State	European Banking Federation
		European Federation of Financial Analysts Societies
		European Financial Reporting Advisory Group
		European Systemic Risk Board (ESRB)
	Non-EU Member State	Asia Pacific Loan Market Association (APLMA)
		Association for Financial Markets in Europe (AFME)
		International Capital Market Association (ICMA)
		Loan Market Association (LMA)
		Loan Syndications and Trading Association (LSTA)
	Global	Bank Policy Institute
		Equator Principles
		Global Association of Risk Professionals (GARP)
		Institute of International Finance (IIF) - Sustainable Finance Working Group (SFWG)
		Partnership for Carbon Accounting Financials (PCAF)
Civil Society Organisations	EU Member State	Bruegel
		CEE Bankwatch Network
		Centre for Research on Multinational Corporations (SOMO)

Type	Country	Stakeholder name
		European Federation for Transport & Environment
		Finance Watch
		Institute for Climate Economics (I4CE)
	Non-EU Member State	E3G
		Oil Change International
	Global	2° Investing Initiative
		Amnesty International
		CDP
		Change Finance
		Climate Bond Initiative
		Global Reporting Initiative
		International Financial Reporting Standards Foundation (IFRS) Foundation
		Oxfam
		Sustainability Accounting Standards Board (SASB)
		ShareAction
Transparency International		
WWF		
Data Providers/Rating Agencies	Global	Fitch
		Moody's (incl. Vigeo Eiris)
		MSCI
		Refinitiv
		RepRisk
		Rhodium
		S&P (incl. RobecoSAM, TRUCOST)
Sustainalytics		
International Organisations/ Fora	EU	European Commission
		European Investment Bank
	Non-EU Member State	Climate Financial Risk Forum (CFRF)
	Global	Bank for International Settlements (BIS)
		European Bank for Reconstruction and Development (EBRD)
		FSB Task Force on Climate-related Financial Disclosure (TCFD)
		G20 (e.g. Green/Sustainable Finance Study Group)
		International Monetary Fund (IMF)
		IOSCO and the Sustainable Finance Network
		Network of Central Banks and Supervisors for Greening the Financial System (NGFS)
		Organisation for Economic Co-operation and Development (OECD)
		United Nations - Environment Programme Finance Initiative (UNEP FI) - Sustainable Development Goals (SDGs) - Global Compact
World Bank - IFC's Sustainable Banking Network		

Type	Country	Stakeholder name
		World Economic Forum - Global Future Council on Sustainable Development, Public Private Cooperation and Int. governance

**Table 26: Coverage of external stakeholder perimeter groups per tool and technique**

Objective	Desk Research	Focus Groups	Questionnaires / Interviews	Minimum as per Tender Specific.	Workshop
Objective 1	Desk research covering: • 42 Banks • 43	<ul style="list-style-type: none"> <li>Focus group on Objective 1 &amp; 3 involving 24 Banks</li> <li>Focus group with 10 other Stakeholders (incl. 7 Civil Society Organisations &amp; 3 Academics) covering all three objectives</li> </ul>	<ul style="list-style-type: none"> <li>27 with banks</li> <li>15 with International Organisations, Civil Society Organisations and Other Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>15 interviews</li> </ul>	
Objective 2	Supervisors and Regulators • 68 International Organisations, Civil Society Organisations and Other Stakeholders  750+ documents, papers and websites reviewed across stakeholder groups	<ul style="list-style-type: none"> <li>Focus group on Objective 2 involving 13 Supervisors and Regulators</li> <li>Focus group with 10 other Stakeholders (incl. 7 Civil Society Organisations &amp; 3 Academics) covering all three objectives</li> </ul>	<ul style="list-style-type: none"> <li>15 with supervisors</li> <li>15 with International Organisations, Civil Society Organisations and Other Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>15 interviews</li> </ul>	<ul style="list-style-type: none"> <li>Workshop 1 with 7 Supervisors and Regulators, 6 Banks and 6 Civil Society Organisations &amp; Academics</li> <li>Workshop 2 with: with 10 Supervisors and Regulators, 10 Banks and 8 Civil Society Organisations &amp; Academics</li> </ul>
Objective 3		<ul style="list-style-type: none"> <li>Focus group on Objective 1 &amp; 3 involving 24 Banks</li> <li>Focus group with 10 other Stakeholders (incl. 7 Civil Society Organisations &amp; 3 Academics) covering all three objectives</li> </ul>	<ul style="list-style-type: none"> <li>28 with banks</li> <li>15 with International Organisations, Civil Society Organisations and Other Stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>15 interviews</li> </ul>	

#### Annex IV. Desk research coverage

Table 27 and Table 28 provide details on the documents consulted as part of the desk research.

Table 27: Documents consulted by stakeholder group

Stakeholder Group	Resources consulted
Banks	167
Supervisors and Regulators	208
Academics	50
Associations	40
Civil Society Organisations	111
Data Providers/Rating Agencies	35
International Organisations/Forums	130
Other	12
<b>Total</b>	<b>753</b>

Table 28: Documents consulted by year of publication

Year of Publication	Documents consulted
Before 2018	44
2018	54
2019	230
2020	277
2021	23
n.d.	125
<b>Total</b>	<b>753</b>

## Annex V. Bibliography

The below list comprises documents referenced in the final study only. The desk research, however, comprised a significantly broader sample.

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2° Investing Initiative (2020). *Credit Portfolio Alignment—An application of the PACTA methodology by Katowice Banks in partnership with the 2 Degrees Investing Initiative*. Available at: <https://2degrees-investing.org/wp-content/uploads/2020/09/Katowice-Banks-2020-Credit-Portfolio-Alignment.pdf>

2° Investing Initiative (n.d.). *PACTA*. Available at: <https://2degrees-investing.org/resource/pacta/>

2° Investing Initiative (2019). *The Katowice commitment: one year on*. Available at: <https://2degrees-investing.org/the-katowice-commitment-one-year-on/>

2° Investing Initiative (2018). *The Green Supporting Factor*. Available at: <https://2degrees-investing.org/wp-content/uploads/2018/04/The-Green-Supporting-Factor.pdf>

2° Investing Initiative, UNEP FI, World Research Institute (n.d.). *Portfolio Carbon Initiative – Exploring metrics to measure the climate progress of banks*. Available at: <https://ghgprotocol.org/sites/default/files/standards/Exploring%20Metrics%20to%20Measure%20the%20Climate%20Progress%20of%20Banks.pdf>

ACPR (2021). *A first assessment of financial risks stemming from climate change: The main results of the 2020 climate pilot exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20210504\\_as\\_pilot\\_exercise\\_climat\\_change.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20210504_as_pilot_exercise_climat_change.pdf)

ACPR (2020). *Governance and management of climate-related risks by French banking institutions: some good practices*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525\\_synthese\\_gouvernance\\_anglais.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200525_synthese_gouvernance_anglais.pdf)

ACPR (2020). *Scenarios and main assumptions of the ACPR pilot climate exercise*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717\\_main\\_assumptions\\_and\\_scenarios\\_of\\_the\\_acpr\\_climate\\_pilot\\_exercise.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/20200717_main_assumptions_and_scenarios_of_the_acpr_climate_pilot_exercise.pdf)

ACPR (2019). *French banking groups facing climate change-related risks: Analyses et synthèses*. Available at: [https://acpr.banque-france.fr/sites/default/files/medias/documents/as\\_101\\_climate\\_risk\\_banks\\_en.pdf](https://acpr.banque-france.fr/sites/default/files/medias/documents/as_101_climate_risk_banks_en.pdf)

Albert D., Lev D., Jay H. (2017). *Sustainable Investing and Bond Returns*. Available at: <https://cbey.yale.edu/sites/default/files/Sustainable%20Investing%20and%20Bond%20Returns.pdf>

Amnesty International (2020). *Davos: Climate emergency must come top of the agenda*. Available at: <https://www.amnesty.org.nz/davos-climate-emergency-must-come-top-agenda>

APLMA, LMA, LSTA (2020). *Sustainability Linked Loan Principles*. Available at: <https://www.lsta.org/content/sustainability-linked-loan-principles-sllp/>

BaFin (2019). *Guidance Notice on Dealing with Sustainability Risks*. Available at: [https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung\\_191220\\_MB\\_Nachhaltigkeitsrisiken\\_en.html](https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung_191220_MB_Nachhaltigkeitsrisiken_en.html)

Banco Central Do Brasil (n.d.). Webpage: *Social and environmental responsibility*. Available at: <https://www.bcb.gov.br/en/about/socialresponsibility>

Bank of England (2020). *The road to Glasgow*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/the-road-to-glasgow-speech-by-mark-carney.pdf?la=en&hash=DCA8689207770DCBBB179CBADBE3296F7982FDF5>

Bank of England (2020). *Update on the Bank's approach to the Climate Biennial Exploratory Scenario in selected areas*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2020/update-on-the-banks-approach-to-the-climate-biennial-exploratory-scenario.pdf?la=en&hash=B864270BA6D35453A7700990B1DEE809FB8B29A1>

Bank of England (2019). *Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>

Bank of England (2019). *The 2021 biennial exploratory scenario on the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/paper/2019/the-2021-biennial-exploratory-scenario-on-the-financial-risks-from-climate-change.pdf?la=en&hash=73D06B913C73472D0DF21F18DB71C2F454148C80>

Bank Policy Institute (2020). *Challenges in Stress Testing and Climate Change*. Available at: <https://bpi.com/wp-content/uploads/2020/10/Challenges-in-Stress-Testing-and-Climate-Change-.pdf>

Bank of England (n.d.). Webpage: *Climate Financial Risk Forum*. Available at: <https://www.bankofengland.co.uk/climate-change/climate-financial-risk-forum>

Banque de France (2021). *Showing off cleaner hands: mandatory climate-related disclosure by financial institutions and the financing of fossil energy*. Available at: <https://publications.banque-france.fr/sites/default/files/medias/documents/wp800.pdf>

Banque de France (2020). *Climate-Related Scenarios for Financial Stability Assessment: an Application to France*. Available at: <https://publications.banque-france.fr/en/climate-related-scenarios-financial-stability-assessment-application-france>

Banque de France (2020). *Responsible Investment Report 2019*. Available at: [https://www.banque-france.fr/sites/default/files/media/2020/06/26/rapport-annuel-investissement-responsable\\_2019\\_en.pdf](https://www.banque-france.fr/sites/default/files/media/2020/06/26/rapport-annuel-investissement-responsable_2019_en.pdf)

Bank of Greece (n.d.). Webpage: *CCISC*. Available at: <https://www.bankofgreece.gr/en/the-bank/social-responsibility/sustainability-and-climate-change/ccisc>

Bank for International Settlements (2020). *The green swan moment: Central banking and financial stability in the age of climate change*. Available at: <https://www.bis.org/publ/othp31.pdf>

Bank for International Settlements (2019). *Overview of Pillar 2 supervisory review practices and approaches*. Available at: <https://www.bis.org/bcbs/publ/d465.pdf>

Bank for International Settlements (2017). *Supervisory and bank stress testing: range of practices*. Available at: <https://www.bis.org/bcbs/publ/d427.pdf>

Basel Committee on Banking Supervision (2019). *Overview of Pillar 2 supervisory review practices and approaches*. Available at: <https://www.bis.org/bcbs/publ/d465.pdf>

Berg F., Koelbel J., Rigobon R. (2019). *Aggregate Confusion: the Divergence of ESG Ratings*. MIT Sloan School Working Paper 5822-19. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3438533](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3438533)

BIS (2019). *Core Principles for effective banking supervision*. Available at: [BCP01 - The core principles](#).

BlackRock Investment Institute (2020). *Troubled water: Water stress risks to portfolios*. Available at: <https://www.blackrock.com/corporate/literature/whitepaper/bii-water-risks-july-2020.pdf>

BlackRock Investment Institute (2019). *Getting physical: assessing climate risks*. Available at: <https://www.blackrock.com/us/individual/insights/blackrock-investment-institute/physical-climate-risks>

BlackRock (2019). *Sustainability: the bond that endures*. Available at: <https://www.blackrock.com/corporate/literature/whitepaper/bii-sustainable-investing-bonds-november-2019.pdf>

Basel Committee on Banking Supervision (2020). *Climate-related financial risks: a survey on current initiatives*. Available at: <https://www.bis.org/bcbs/publ/d502.pdf>

Bruegel, Schoenmaker, D. (2020). *The impact economy: balancing profit and impact*. Working Paper 2020/04. Available at: [bruegel.org/wp-content/uploads/2020/07/WP-2020-04-Impact-Economy-D.-Schoenmaker.pdf](https://bruegel.org/wp-content/uploads/2020/07/WP-2020-04-Impact-Economy-D.-Schoenmaker.pdf)

Cambridge Institute Sustainable Leadership (2021). *Let's Discuss Climate*. Available at: <https://www.cisl.cam.ac.uk/system/files/documents/lets-discuss-climate-guide-to-bank-climate-engagement-cisl-may-2021.pdf>.

Capelle-Blancard, Gunther and Crifo, Patricia and Diaye, Marc-Arthur and Scholtens, Bert and OUEGHLISSI. (2016). *Environmental, Social and Governance (ESG) Performance and Sovereign Bond Spreads: An Empirical Analysis of OECD Countries*. Available at: <https://ssrn.com/abstract=2874262>

Carbon Credit Capital (2020). *Carbon Neutral Mortgage*. Available at: <https://carboncreditcapital.com/our-services/for-businesses/carbon-neutral-checkout/carbon-neutral-mortgage/>.

Caroline F. (2020). *Corporate Green Bonds*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3125518](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3125518)

CDP (2020). *Statement of Intent to Work Together Towards Comprehensive Corporate Reporting - Summary of alignment discussions among leading sustainability and integrated reporting organisations CDP, CDSB, GRI, IIRC and SASB*. Available at: <https://www.cdp.net/en/articles/media/comprehensive-corporate-reporting>

CDP (n.d.). *What we do*. Available at: <https://www.cdp.net/en/info/about-us/what-we-do>

CEE Bankwatch Network (2020). *EU Funds for A Green Recovery - Recommendations to Steer EU Regional and Recovery Funding Towards Climate Neutrality*. Available at: <http://www.caneurope.org/docman/climate-finance-development/3625-eu-funds-for-a-green-recovery-report-july-2020/file>

Centre for Research on Multinational Corporations (SOMO) (2019). *Green bond standards?* Available at: <https://www.somo.nl/a-voluntary-eu-green-bond-standard/>

Centre for Research on Multinational Corporations (SOMO) (2018). *Supervising the environmental, social and governance impact of Finance - How to reinforce the role of European and national supervisory authorities?* Available at: <https://www.somo.nl/wp-content/uploads/2018/08/ESAs-and-national-supervisors-role-for-sustainability-final-version.pdf>

Change Finance (n.d.). *Investing not betting*. Available at: <https://www.changefinance.org/solution/investing-not-betting/>

Change Finance (n.d.). *Saving our planet*. Available at: <https://www.changefinance.org/it/solution/saving-our-planet-2/>

Chenet, H., Ryan-Collins, J., van Lerven, F.(2020). *Finance, climate-change and radical uncertainty: Towards a precautionary approach to financial policy*. Ecological economics. Available at: <https://www.sciencedirect.com/science/article/pii/S092180092100015X>

Claudio F., Joe H. (2018). *The impact of ESG investing in corporate bonds*. Available at: <https://page.ws.fidelityinternational.com/rs/829-LMV-001/images/ESG%20White%20Paper%20FINAL.pdf>

CISL, UNEP FI (2014). *Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?* Available at: <https://www.cisl.cam.ac.uk/resources/publication-pdfs/stability-and-sustainability-basel-iii-final-repor.pdf/view>

Climate Bonds Initiative (2021). *Sustainable Debt Global State of the Market 2020*. Available at: [https://www.climatebonds.net/files/reports/cbi\\_sd\\_sotm\\_2020\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sd_sotm_2020_04d.pdf)

Climate Bonds Initiative (2020). *Green Bonds Global State of the Market 2019*. Available at: [https://www.climatebonds.net/files/reports/cbi\\_sotm\\_2019\\_vol1\\_04d.pdf](https://www.climatebonds.net/files/reports/cbi_sotm_2019_vol1_04d.pdf)

Climate Bonds Initiative (2020). *How the Hungarian Central Bank could help solve the energy efficiency puzzle: MNB goes for green on housing loans*. Available at:

<https://www.climatebonds.net/2020/01/how-hungarian-central-bank-could-help-solve-energy-efficiency-puzzle-mnb-goes-green-housing>.

Climate Bonds Initiative (2019). *Greening the Financial System*. Available at:

<https://www.climatebonds.net/system/tdf/reports/cbi-greening-the-financial-sytem-20191016.pdf?file=1&type=node&id=39836&force=0>.

Climate Bonds Initiative (2019). *Green Bond Market Summary*. Available at:

[https://www.climatebonds.net/system/tdf/reports/2019\\_annual\\_highlights-final.pdf?file=1&type=node&id=46731&force=0](https://www.climatebonds.net/system/tdf/reports/2019_annual_highlights-final.pdf?file=1&type=node&id=46731&force=0)

Climate Bonds Initiative (2017). *Green Securitisation: unlocking finance for small-scale low carbon projects*. Available at:

[https://www.climatebonds.net/files/files/March17\\_CBI\\_Briefing\\_Green\\_Securisation.pdf](https://www.climatebonds.net/files/files/March17_CBI_Briefing_Green_Securisation.pdf)

Climate Bonds Initiative (n.d.). *Improving risk-return profile: Increasing returns or reducing risks*.

Available at: <https://www.climatebonds.net/policy/policy-areas/improving-risk-return-profile>

Climate Financial Risk Forum (2020). *Climate Finance Risk Forum Guide 2020 – Risk Management Chapter*. Available at: <https://www.fca.org.uk/publication/corporate/climate-financial-risk-forum-guide-2020-risk-management-chapter.pdf>

Communication from the Commission – *Guidelines on non-financial reporting: Supplement on reporting climate-related information*. OJ C 209/1, 20.6.2019, p. 1–29 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29>

Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1024&from=EN>

Credit Agricole (2020). *ESG 2021 Outlook: The new sustainable borders*. Available at:

<https://research.ca-cib.com/article/details/e8ba5655-e564-4876-96a9-08247ff96943?email=hugues.delafon@ca-cib.com>

Cremona, B.; Passador, M. (2019). *What about the future of European banks? Board characteristics and ESG Impact*. Available at:

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3441784](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3441784)

Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. Available at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/962785/The\\_Economics\\_of\\_Biodiversity\\_The\\_Dasgupta\\_Review\\_Full\\_Report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf)

De Nederlandsche Bank (2020). *Good practice: Integration of climate-related risk considerations into banks' risk management*. Available at: <https://www.dnb.nl/media/a4gdcovq/consultation-document-good-practice-integration-of-climate-related-risk-considerations-into-banks-risk-management-nov-2019.pdf>

De Nederlandsche Bank (2020). *Indebted to nature: Exploring biodiversity risks for the Dutch financial sector*. Available at:

[https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20\\_tcm47-389172.pdf](https://www.dnb.nl/en/binaries/Indebted%20to%20nature%20_tcm47-389172.pdf)

Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures. OJ L 150/253, 7.6.2019, p. 253–295 Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2019.150.01.0253.01.ENG&toc=OJ:L:2019:150:TOC)

Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC. OJ L 176, 27.6.2013. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013L0036>

E3G (2020). *A Vision for Sustainable Finance in Europe*. Available at: [https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe\\_Full-Report.pdf](https://www.e3g.org/wp-content/uploads/E3G-A-Vision-for-Sustainable-Finance-in-Europe_Full-Report.pdf)

EASAC (2018). *Negative emission technologies: What role in meeting Paris Agreement targets?* Available at:

[https://unfccc.int/sites/default/files/resource/28\\_EASAC%20Report%20on%20Negative%20Emission%20Technologies.pdf](https://unfccc.int/sites/default/files/resource/28_EASAC%20Report%20on%20Negative%20Emission%20Technologies.pdf)

EBA (2014). *Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP)*. Available at:

[https://eba.europa.eu/sites/default/documents/files/documents/10180/935249/4b842c7e-3294-4947-94cd-ad7f94405d66/EBA-GL-2014-13%20\(Guidelines%20on%20SREP%20methodologies%20and%20processes\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/935249/4b842c7e-3294-4947-94cd-ad7f94405d66/EBA-GL-2014-13%20(Guidelines%20on%20SREP%20methodologies%20and%20processes).pdf)

EBA (2016). *EBA Report on SMEs and SME Supporting Factor*. Available at:

<https://www.eba.europa.eu/sites/default/documents/files/documents/10180/1359456/602d5c61-b501-4df9-8c89-71e32ab1bf84/EBA-Op-2016-04%20%20Report%20on%20SMEs%20and%20SME%20supporting%20factor.pdf>

EBA (2017). *Guidelines on internal governance (EBA/GL/2017/11)*. Available at:

[https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20\(EBA-GL-2017-11\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/1972987/eb859955-614a-4afb-bdcd-aaa664994889/Final%20Guidelines%20on%20Internal%20Governance%20(EBA-GL-2017-11).pdf)

EBA (2018) *EBA Final Report - Guidelines on the revised common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing (EBA/GL/2018/03)*. Available at:

[https://eba.europa.eu/sites/default/documents/files/documents/10180/2282666/6c2e3962-6b95-4753-a7dc-68070a5ba662/Revised%20Guidelines%20on%20SREP%20\(EBA-GL-2018-03\).pdf](https://eba.europa.eu/sites/default/documents/files/documents/10180/2282666/6c2e3962-6b95-4753-a7dc-68070a5ba662/Revised%20Guidelines%20on%20SREP%20(EBA-GL-2018-03).pdf)

EBA (2019). *Action Plan on Sustainable Finance*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/EBA%20Action%20plan%20on%20sustainable%20finance.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/EBA%20Action%20plan%20on%20sustainable%20finance.pdf)

EBA (2020). *EBA discussion paper: On management and supervision of ESG risks for credit institutions and investment firms*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Discussions/2021/Discussion%20Paper%20on%20management%20and%20supervision%20of%20ESG%20risks%20for%20credit%20institutions%20and%20investment%20firms/935496/2020-11-02%20%20ESG%20Discussion%20Paper.pdf)

EBA (2020). *Guidelines on loan origination and monitoring*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20OGL%202020%2006%20Final%20Report%20on%20OGL%20on%20loan%20origination%20and%20monitoring.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20OGL%202020%2006%20Final%20Report%20on%20OGL%20on%20loan%20origination%20and%20monitoring.pdf)

EBA (2020). *Sustainable Finance: Market Practices (Staff Paper Series)*. Available at: [https://eba.europa.eu/sites/default/documents/files/document\\_library/Sustainable%20finance%20Market%20practices.pdf](https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf)

EBA (2021). *Advice to the Commission on KPIs and methodology for disclosure by credit institutions and investment firms under the NFRD on how and to what extent their activities qualify as environmentally sustainable according to the EU Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM\\_Disclosure%20Article%208%20Taxonomy.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963616/Report%20-%20Advice%20to%20COM_Disclosure%20Article%208%20Taxonomy.pdf)

EBA (2021). *Draft Implementing Standards on prudential disclosures on ESG risks in accordance with Article 449a CRR*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risks.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risk/963621/Consultation%20paper%20on%20draft%20ITS%20on%20Pillar%20disclosures%20on%20ESG%20risks.pdf)

EBA (2021). *Opinion of the European Banking Authority on the disclosure requirement on environmentally sustainable activities in accordance with Article 8 of the Taxonomy Regulation*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/About%20Us/Missions%20and%20tasks/Call%20for%20Advice/2021/CfA%20on%20KPIs%20and%20methodology%20for%20disclosures%20under%20Article%208%20of%20the%20Taxonomy%20Regulation/963619/EBA%20Opinion%20-%20Advice%20to%20EC%20on%20Disclosures%20under%20Article%208%20Taxonomy%20Regulation.pdf)

EBA (2021). *Report on management and supervision of ESG risk for credit institutions and investment firms*. Available at: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Re](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Re)

[ports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20Osupervision.pdf](https://eba.europa.eu/ports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20Osupervision.pdf)

EBA (2020). *Article 501c, Capital Requirements Regulation 2 (CRR2)*. Available at: <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/101647>

EBA (n.d.). *Interactive Rulebook - Capital Requirements Regulation 2 (CRR 2)*. Available at: <https://eba.europa.eu/regulation-and-policy/single-rulebook/interactive-single-rulebook/100427>

EBA, EBF (2019). *Joint EBA & EBF Workshop on Sustainable Finance*. Available at: <https://www.ebf.eu/wp-content/uploads/2019/04/EBA-EBF-Workshop-on-Sustainable-Finance-Highlights-and-summary.pdf>

EBF and IIF (2020). *Global Climate Finance Survey: A look at how financial firms are approaching climate risk analysis, measurement and disclosure*. Available at: [https://www.iif.com/Portals/0/Files/content/2020\\_global\\_climate\\_survey.pdf](https://www.iif.com/Portals/0/Files/content/2020_global_climate_survey.pdf)

EBRD (n.d.). *EBRD Environmental and Social Risk Management Manual (E-Manual)*. Available at: <https://www.ebrd.com/who-we-are/our-values/environmental-emanual-toolkit.html>

ECB (2021). *Climate-related risks to financial stability*. Available at: [https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105\\_02~d05518fc6b.en.html](https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart202105_02~d05518fc6b.en.html)

ECB (2021). *Eurosystem reply to the European Commission's public consultations on the Renewed Sustainable Finance Strategy and the revision of the NonFinancial Reporting Directive*. Available at: [https://www.ecb.europa.eu/pub/pdf/other/ecb.eurosystemreplyeuropeancommissionpublicconsultations\\_20200608~cf01a984aa.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/ecb.eurosystemreplyeuropeancommissionpublicconsultations_20200608~cf01a984aa.en.pdf)

ECB (n.d.) *About Single Supervisory Mechanism*. Available at: <https://www.bankingsupervision.europa.eu/about/thessm/html/index.en.html>

EDHEC (2020). *Climate Change and Credit Risk*. Available at: <https://risk.edhec.edu/publications/climate-change-and-credit-risk>

EFRAG (2021). *Final Report: Proposals for a relevant and dynamic EU sustainability reporting standard-setting*. Available at: [https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRAG%2520PTF-NFRS\\_MAIN\\_REPORT.pdf](https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRAG%2520PTF-NFRS_MAIN_REPORT.pdf)

EFRAG (2020). *EFRAG mandated to provide recommendations on possible European non-financial reporting standards*. Available at: <https://www.efrag.org/News/Public-243/EFRAG-mandated-to-provide-recommendations-on-possible-European-Non-Financial-Reporting-Standards>

EeMAP (n.d.). *WELCOME TO THE EeMAP Initiative*. Available at: <https://eemap.energyefficientmortgages.eu/>

EIOPA (2019). *Methodological principles of insurance stress testing*. Available at: [https://www.eiopa.europa.eu/content/methodological-principles-insurance-stress-testing\\_en](https://www.eiopa.europa.eu/content/methodological-principles-insurance-stress-testing_en)

EIOPA (2020). *Consultation Paper on draft Opinion on the supervision of the use of climate change risk scenarios in ORSA*. Available at: [https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-20-561-cp\\_draft\\_opinion\\_climate\\_scenarios\\_in\\_orisa.pdf](https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-20-561-cp_draft_opinion_climate_scenarios_in_orisa.pdf)

EIOPA (2020). *Second Discussion Paper on Methodological Principles of Insurance Stress Testing*. Available at: [https://www.eiopa.europa.eu/content/second-discussion-paper-methodological-principles-insurance-stress-testing\\_en](https://www.eiopa.europa.eu/content/second-discussion-paper-methodological-principles-insurance-stress-testing_en)

ESRB (2020). *Positively green: Measuring climate change risks to financial stability*. Available at: [https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608\\_on\\_Positively\\_green\\_-\\_Measuring\\_climate\\_change\\_risks\\_to\\_financial\\_stability~d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report200608_on_Positively_green_-_Measuring_climate_change_risks_to_financial_stability~d903a83690.en.pdf?c5d033aa3c648ca0623f5a2306931e26)

ESMA, EBA, EIOPA, and Joint Committee of the European Supervisory Authorities (2021). *Final Report on draft Regulatory Technical Standards - with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a(3), Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088*. Available at: [https://www.esma.europa.eu/sites/default/files/library/jc\\_2021\\_03\\_joint\\_esas\\_final\\_report\\_on\\_rts\\_under\\_sfdr.pdf](https://www.esma.europa.eu/sites/default/files/library/jc_2021_03_joint_esas_final_report_on_rts_under_sfdr.pdf)

Energy Efficiency Data Protocol & Portal Project (2020). *Final report on correlation analysis between energy efficiency and risk (D5.7)*. Available at: [https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP\\_D57\\_27Aug20-1.pdf](https://eedapp.energyefficientmortgages.eu/wp-content/uploads/2020/08/EeDaPP_D57_27Aug20-1.pdf)

EFFAS (2009). *KPIs for ESG: A Guideline for the Integration of ESG into Key Performance Indicators for Environmental, Social & Governance Issues Financial Analysis and Corporate Valuation*. Available at: <https://ec.europa.eu/docsroom/documents/1547/attachments/1/translations/en/renditions/native>

Equator Principles (2020). *The Equator Principles – July 2020*. Available at: <https://equator-principles.com/wp-content/uploads/2020/05/The-Equator-Principles-July-2020-v2.pdf>

European Central Bank (2020). *Guide on climate-related and environmental risks*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks~58213f6564.en.pdf>

European Central Bank (2020). *ECB report on banks' ICAAP practices*. Available at: <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.reportbanksicaappractices202007~fc93bf05d9.en.pdf>

European Central Bank (2020). *ECB to accept sustainability-linked bonds as collateral*. Available at: <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200922~482e4a5a90.en.html>

European Central Bank (2018). *ECB Guide to the internal capital adequacy assessment process (ICAAP)*. Available at:

[https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap\\_guide\\_201811.en.pdf](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.icaap_guide_201811.en.pdf)

European Commission (2019). *The European Green Deal*. Available at:

[https://ec.europa.eu/info/sites/info/files/european-green-deal-communication\\_en.pdf](https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf)

European Commission (2021). *Consultation on a renewed sustainable finance strategy - summary of responses*. Available at:

[https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/2020-sustainable-finance-strategy-summary-of-responses\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/2020-sustainable-finance-strategy-summary-of-responses_en.pdf)

European Commission (2021). *EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal*. Available at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0188&from=EN>

European Commission (2021). *Proposal for a Directive of the European Parliament and of the council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting*. Available at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN>

European Commission (2020). *Sustainable finance taxonomy - Regulation (EU) 2020/852*.

Available at: [https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852\\_en](https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852_en)

European Commission (2020). *A capital markets union for people and businesses: new action plan*. Available at:

[https://ec.europa.eu/info/publications/200924-capital-markets-union-action-plan\\_en](https://ec.europa.eu/info/publications/200924-capital-markets-union-action-plan_en)

European Commission (2020). *Stepping up Europe's 2030 climate ambition*. Available at:

[https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com\\_2030\\_ctp\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com_2030_ctp_en.pdf)

European Commission (2020). *TEG final report on the EU taxonomy*. Available at:

[https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy\\_en](https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy_en)

European Commission (2020). *The European Green Deal Investment Plan and Just Transition Mechanism explained*. Available at:

[https://ec.europa.eu/commission/presscorner/detail/en/qanda\\_20\\_24](https://ec.europa.eu/commission/presscorner/detail/en/qanda_20_24)

European Commission, EY (2020). *Study on directors' duties and sustainable corporate governance*.

Available at: <https://op.europa.eu/en/publication-detail/-/publication/e47928a2-d20b-11ea-adf7-01aa75ed71a1/language-en>

European Commission (2019). *Guidelines on Reporting Climate-related Information*. Available at:

[https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines\\_en.pdf](https://ec.europa.eu/finance/docs/policy/190618-climate-related-information-reporting-guidelines_en.pdf)

European Commission (2018). *Action Plan: Financing Sustainable Growth*. Available at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0097&from=EN>

European Commission (2014). *Directive 2014/95/EU - Non-Financial Reporting Directive*. Available at: [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en)

European Commission (n.d.). *A European Green Deal*. Available at: [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en)

European Commission (n.d.). *Platform on sustainable finance*. Available at: [https://ec.europa.eu/info/publications/sustainable-finance-platform\\_en](https://ec.europa.eu/info/publications/sustainable-finance-platform_en)

European Commission (n.d.). *Renewed sustainable finance strategy and implementation of the action plan on financing sustainable growth*. Available at: [https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy\\_en](https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en)

European Commission (n.d.). *Non-financial reporting*. Available at: [https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting\\_en](https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en)

European Commission (n.d.). *Overview of sustainable finance*. Available at: [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/what-sustainable-finance\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/what-sustainable-finance_en)

European Commission (n.d.) *Prudential requirements*. Available at: [https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/prudential-requirements\\_en](https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/managing-risks-banks-and-financial-institutions/prudential-requirements_en)

European Federation for Transport & Environment (2019). *EU Commission bids to stem the flow of greenwashing in banking with own 'green list'*. Available at: <https://www.transportenvironment.org/press/eu-commission-bids-stem-flow-greenwashing-banking-own-green-list>

EU High-level Expert Group on Sustainable Finance (2018). *Financing a Sustainable European Economy*. Available at: [https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report\\_en.pdf](https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report_en.pdf)

EU Technical Expert Group on Sustainable Finance (2020). *Taxonomy: Final report of the Technical Expert Group on Sustainable Finance*. Available at: [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf)

EU Technical Expert Group (2019). *Report on EU Green Bond Standard*. Available at: [https://ec.europa.eu/info/sites/info/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard\\_en.pdf](https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard_en.pdf)

Expert group on social economy and social enterprises (2020). *Minutes of the Meeting of the European Commission's Expert Group on Social Economy and Social Enterprises*. Available at: <https://ec.europa.eu/docsroom/documents/42441>

Finance Watch (2020). *EU has the tools to break the climate-finance doom loop*. Available at: [https://www.finance-watch.org/wp-content/uploads/2020/06/Breaking-the-climate-finance-doom-loop\\_Finance-Watch-report.pdf](https://www.finance-watch.org/wp-content/uploads/2020/06/Breaking-the-climate-finance-doom-loop_Finance-Watch-report.pdf)

Finance Watch (2019). *Response to Invitation for feedback on the TEG preliminary recommendations for an EU Green Bond Standard*. Available at: <https://www.finance-watch.org/wp-content/uploads/2019/04/Finance-Watch-feedback-TEG-report-Green-Bonds.pdf>

Finance Watch (2017). *New pathways: Building blocks for a sustainable finance future for Europe*. Available at: <https://www.finance-watch.org/wp-content/uploads/2018/08/New-Pathways-Building-Blocks-for-a-sustainable-finance-future-for-Europe-GABV-Finance-Watch-M2020.pdf>

Fitch Ratings (2020). *ESG in Credit*. Available at: <https://your.fitch.group/esgwhitepaper.html>

Finance Watch, together with GABV and Mission (2020). *New pathways: Building blocks for a sustainable finance future for Europe*. Available at: <https://www.finance-watch.org/publication/new-pathways-building-blocks-for-a-sustainable-finance-future-for-europe/>

Fitch Ratings (2020). *Banks' Risk Management Embraces ESG*. Available at: <https://www.fitchratings.com/research/banks/banks-risk-management-embraces-esg-04-12-2019>

Four Twenty-Seven, Vigeo Eiris (2020). *Measuring TCFD Disclosures*. Available at: <http://427mt.com/wp-content/uploads/2020/09/Measuring-TCFD-Disclosures.pdf>

GARP (2020). *Second Annual Global Survey of Climate Risk Management at Financial Firms*. Available at: [https://climate.garp.org/wp-content/uploads/2020/05/GRI\\_ClimateSurvey\\_051320.pdf](https://climate.garp.org/wp-content/uploads/2020/05/GRI_ClimateSurvey_051320.pdf)

G20 Green Finance Study Group (2016). *Terms of Reference*. Available at: <http://unepinquiry.org/wp-content/uploads/2016/08/Final-GFSG-TOR-2016-01-29.pdf>

G20 (2019). *Strengthened Actions towards Decarbonised and Climate Resilient Society*. Available at: <https://www.g20-insights.org/wp-content/uploads/2019/05/t20-japan-tf3-1-actions-decarbonised-climate-resilient-society-1.pdf>

Global Reporting Initiative (2020). *GRI contribution to the EU public consultation regarding the proposal by the European Commission for regulation*. Available at: : [https://www.globalreporting.org/media/5egmieer/nfrd\\_update-2020.pdf](https://www.globalreporting.org/media/5egmieer/nfrd_update-2020.pdf)

Global Reporting Initiative (n.d.). *The global standards for sustainability reporting*. Available at: <https://www.globalreporting.org/standards/>

Hong, B.; Li, Z.; Minor, D. (2016). *Corporate Governance and Executive Compensation for Corporate Social Responsibility*. Available at: <https://link.springer.com/article/10.1007/s10551-015-2962-0>

I4CE (2020). *Integrating Climate-related Risks into Banks' Capital Requirements*. Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate\\_EtudeVA.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2020/03/IntegratingClimate_EtudeVA.pdf)

I4CE (2019). *A Framework for Alignment with the Paris Agreement: Why, What and How for Financial Institutions?* Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2019/09/I4CE%E2%80%A2Framework\\_Alignment\\_Financial\\_Paris\\_Agreement\\_52p.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2019/09/I4CE%E2%80%A2Framework_Alignment_Financial_Paris_Agreement_52p.pdf)

I4CE (2019). *Towards an alternative approach in finance to climate risks: Taking uncertainties fully into account*. Available at: [https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers\\_20p-va-web.pdf](https://www.i4ce.org/wp-core/wp-content/uploads/2019/11/1120-I4CE3117-Etude-IncertitudeEtAnalyseRisquesFinanciers_20p-va-web.pdf)

International Association of Insurance Supervisors, Sustainable Insurance Forum. (2020). *Issues Paper on the Implementation of the Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at: [https://b9ea8c1e-dc19-4d5f-b149-9b1ea4b8d050.filesusr.com/ugd/eb1f0b\\_365cc83062254d509c20d79313143868.pdf](https://b9ea8c1e-dc19-4d5f-b149-9b1ea4b8d050.filesusr.com/ugd/eb1f0b_365cc83062254d509c20d79313143868.pdf)

ICMA (2020). *Sustainable Finance High-level definitions*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Sustainable-Finance-High-Level-Definitions-May-2020-110520v4.pdf>

ICMA (2020). *Social Bond Principles – Voluntary Process Guidelines for Issuing Social Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-PrinciplesJune-2020-090620.pdf>

ICMA (2020). *Sustainability-Linked Bond Principles*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Sustainability-Linked-Bond-PrinciplesJune-2020-100620.pdf>

ICMA (2018). *Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Green-Bonds-Principles-June-2018-270520.pdf>

ICMA (2018). *Sustainability Bond Guidelines*. Available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Sustainability-Bonds-Guidelines-June-2018-270520.pdf>

IFC (2019). *Emerging Market Green Bonds Report 2019: Momentum Builds as Nascent Markets Grow*. Available at: [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/climate+business/resources/em-gb-report-2019](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/resources/em-gb-report-2019)

IFC (2019). *Emerging Market Green Bonds Report 2019*. Available at: <https://www.ifc.org/wps/wcm/connect/a64560ef-b074-4a53-8173-f678ccb4f9cd/202005-EM-Green-Bonds-Report-2019.pdf?MOD=AJPERES&CVID=n7Gtahg>

IFC (2020). *Emerging Market Green Bonds Report 2020: On the Road to Green Recovery*. Available at: <https://www.ifc.org/wps/wcm/connect/Ofab2dcd-25c9-48cd-b9a8->

[d6cc4901066e/2021.04+-+Emerging+Market+Green+Bonds+Report+2020+-+EN.pdf?MOD=AJPERES&CVID=nBW.6AT](https://www.imf.org/external/pubs/ft/d6cc4901066e/2021.04+-+Emerging+Market+Green+Bonds+Report+2020+-+EN.pdf?MOD=AJPERES&CVID=nBW.6AT)

IFC (2012). *Performance Standards*. Available at: [https://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards](https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards)

IFRS Foundation (2020). *Consultation Paper on Sustainability Reporting*. Available at: <https://cdn.ifrs.org/-/media/project/sustainability-reporting/consultation-paper-on-sustainability-reporting.pdf?la=en>

IIF (2020). *Building a Global ESG Disclosure Framework: a Path Forward*. Available at: [https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20\(June%202020\)%20final.pdf](https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20(June%202020)%20final.pdf)

IMF (2019). *Global Financial Stability Report: Lower for Longer*. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019>

IMF (2020). *Global Financial Stability Report: Bridge to Recovery*. Available at: <https://www.imf.org/en/Publications/GFSR/Issues/2020/10/13/global-financial-stability-report-october-2020#ExecSum>

IMF (2020). *This Changes Everything: Climate Shocks and Sovereign Bonds*. Available at: <https://www.imf.org/en/Topics/climate-change/green-finance>

Imperial College Business School (2020). *Transition Finance: Managing Funding to Carbon-Intensive Firms*. Available at: <https://www.imperial.ac.uk/business-school/faculty-research/research-centres/centre-climate-finance-investment/research/transition-finance-managing-funding-to-carbon-intensive-firms/>

Institut Louis Bachelier et al. (2020). *The Alignment Cookbook - A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-carbon Trajectories or Temperature Goal*. Available at: <https://www.louisbachelier.org/wp-content/uploads/2020/07/rapport-0607.pdf>

International Labour Organization (n.d.). *Conventions and Recommendations*. Available at: <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm>

IOSCO (2019). *Statement on disclosure of ESG matters by issuers*. Available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD619.pdf>

IPCC (n.d.). *Representative Concentration Pathways (RCPs)*. Available at: [https://www.ipcc-data.org/guidelines/pages/glossary/glossary\\_r.html](https://www.ipcc-data.org/guidelines/pages/glossary/glossary_r.html)

JRC (2020). *The Greenium matters: greenhouse gas emissions, environmental disclosures, and stock prices*. Available at: <https://ec.europa.eu/jrc/en/publication/greenium-matters-greenhouse-gas-emissions-environmental-disclosures-and-stock-prices>

JRC (2019). The pricing of green bonds: are financial institutions special? Available at: <https://ec.europa.eu/jrc/en/publication/pricing-green-bonds-are-financial-institutions-special>

Julia K., Christopher S. (2019). *(In)-Credibly Green: Which Bonds Trade at a Green Bond Premium?* Available at: [https://ec.europa.eu/jrc/sites/jrcsh/files/4\\_2\\_kapraun\\_paper.pdf](https://ec.europa.eu/jrc/sites/jrcsh/files/4_2_kapraun_paper.pdf)

Li, P.; Zhou, R.; Xiong, Y. (2020). *Can ESG Performance Affect Bond Default Rate? Evidence from China.* Available at: <https://www.mdpi.com/2071-1050/12/7/2954>

LMA (2018). *Green Loan Principles.* Available at: [https://www.lma.eu.com/application/files/9115/4452/5458/741\\_LM\\_Green\\_Loan\\_Principles\\_Booklet\\_V8.pdf](https://www.lma.eu.com/application/files/9115/4452/5458/741_LM_Green_Loan_Principles_Booklet_V8.pdf)

Magyar Nemzeti Bank (2019). *Green retail lending in Hungary.* Available at: <https://www.mnb.hu/letoltes/green-retail-lending-in-hungary.pdf>

Magyar Nemzeti Bank (2019). *MNB Green Program.* Available at: <https://www.mnb.hu/letoltes/mnb-green-program-en.pdf>

Malcolm P.B., Daniel B., George S., Jeffrey W. (2018). *Financing the Response to Climate Change: The Pricing and Ownership of U.S. Green Bonds.* Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3275327](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3275327)

Maria J. B.; Leonardo B.; Stefano M. (2019). *The Green Bonds Premium Puzzle: The Role of Issuer Characteristics and Third-Party Verification.* Available at: [https://www.researchgate.net/publication/331225715\\_The\\_Green\\_Bonds\\_Premium\\_Puzzle\\_The\\_Role\\_of\\_Issuer\\_Characteristics\\_and\\_Third-Party\\_Verification](https://www.researchgate.net/publication/331225715_The_Green_Bonds_Premium_Puzzle_The_Role_of_Issuer_Characteristics_and_Third-Party_Verification)

Mohamed Ben S., Theo Le G., Thierry R., Takaya S. (2019). *ESG Investing in Corporate Bonds: Mind the Gap.* Available at: <https://ssrn.com/abstract=3683472>

Monetary Authority of Singapore (2020). *Proposed Guidelines on Environmental Risk Management (Banks).* Available at: <https://www.mas.gov.sg/-/media/MAS/News-and-Publications/Consultation-Papers/2020/Consultation-Paper-on-Proposed-Guidelines-on-Environmental-Risk-Management-for-Banks.pdf>

Monetary Authority of Singapore (2020). *Reply to Parliamentary Question on including climate change-related risk in MAS' annual industry-wide stress test.* Available at: <https://www.mas.gov.sg/news/parliamentary-replies/2020/reply-to-parliamentary-question-on-including-climate-change-related-risk-in-mas-annual-iwst>

Monetary Authority of Singapore (n.d.). *Sustainable Finance.* Available at: <https://www.mas.gov.sg/development/sustainable-finance>

Morningstar (2020). *How Does Investing in ESG Companies Affect Returns? Morningstar research uses a new model to compare the returns of companies with strong and weak ESG practices.* Available at: <https://www.morningstar.com/insights/2020/02/19/esg-companies>

Morningstar (2020). *Evaluating ESG Effects on Risk and Return*. Available at:  
<https://www.morningstar.com/lp/esg-as-a-factor>

Moody's Investors Service (2021). *Sustainable bond issuance to hit a record \$650 billion in 2021*. Available at: [https://www.moodys.com/research/Moodys-Sustainable-bond-issuance-to-hit-a-record-650-billion--PBC\\_1263479](https://www.moodys.com/research/Moodys-Sustainable-bond-issuance-to-hit-a-record-650-billion--PBC_1263479)

Moody's Investors Service (2020). *Sustainable Finance – Global (Sector In-Depth, 17 August 2020)*. Available at: <https://ma.moodys.com/rs/961-KCJ308/images/Record%20sustainable%20bond%20issuance.pdf>

Moody's Investors Service (2020). *Sustainable Finance – Global (Sector In-Depth, 3 February 2020)*. Available at: <https://www.eticanews.it/wp-content/uploads/2020/02/Sector-In-Depth-Sustainable-Finance-Global-03Feb20.pdf>

Moody's Analytics (2013). *Moody's Analytics Risk Perspectives, Volume I*. Available at: <https://www.moodysanalytics.com/-/media/article/2013/2013-01-09-risk-perspectives-v01-stress-testing-european-edition.pdf>

MSCI (2020). *Banks, ESG and Nonperforming Loans During Covid-19*. Available at: <https://www.msci.com/www/blog-posts/banks-esg-and-nonperforming/02113369423>

MSCI (2020.) *Is There a Green-to-Brown Premium?* Available at: <https://www.msci.com/www/blog-posts/is-there-a-green-to-brown/02053435998>

Network for Greening the Financial System (2019). *A call for action – Climate Change as a source of financial risk*. Available at: <https://www.banque-france.fr/en/financial-stability/international-role/network-greening-financial-system/first-ngfs-progress-report>

Network for Greening the Financial System (2020). *A Status Report on Financial Institutions' Experiences from working with green, non-green and brown financial assets and a potential risk differential*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_status\\_report.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf)

Network for Greening the Financial System (2020). *Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_for\\_supervisors.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf)

Network for Greening the Financial System (2020). *Guide to climate scenario analysis for central banks and supervisors*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_guide\\_scenario\\_analysis\\_final.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf)

Network for Greening the Financial System (2020). *Overview of Environmental Risk Analysis by Financial Institutions*. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/overview\\_of\\_environmental\\_risk\\_analysis\\_by\\_financial\\_institutions.pdf](https://www.ngfs.net/sites/default/files/medias/documents/overview_of_environmental_risk_analysis_by_financial_institutions.pdf)

Network for Greening the Financial System (2020). *NGFS Climate Scenarios for central banks and supervisors*. Available at:

[https://www.ngfs.net/sites/default/files/medias/documents/820184\\_ngfs\\_scenarios\\_final\\_version\\_v6.pdf](https://www.ngfs.net/sites/default/files/medias/documents/820184_ngfs_scenarios_final_version_v6.pdf)

NN Investment Partners (2018). *Unravelling the Green Bond Premium*. Available at: [https://assets.ctfassets.net/y4nxuejkhx03/5xLIB21LkkUOmYsi8gUeKm/40c0e58885f81a1fffdafc3150650e1d/EN\\_-\\_Unravelling\\_the\\_Green\\_Bond\\_Premium.pdf](https://assets.ctfassets.net/y4nxuejkhx03/5xLIB21LkkUOmYsi8gUeKm/40c0e58885f81a1fffdafc3150650e1d/EN_-_Unravelling_the_Green_Bond_Premium.pdf)

Partnership for Carbon Accounting Financials (n.d.). *The Global GHG Accounting and Reporting Standard for the Financial Industry*. Available at: <https://carbonaccountingfinancials.com/standard#the-global-ghg-accounting-and-reporting-standard-for-the-financial-industry>.

Patricia C., Marc-Arthur D., Rim O. (2015). *Measuring the effect of government ESG performance on sovereign borrowing cost*. Available at: <https://hal.archives-ouvertes.fr/hal-00951304v3/document>

Platform for Carbon Accounting Financials (n.d.). *Enabling financial institutions to assess and disclose greenhouse gas emissions of loans and investments*. <https://carbonaccountingfinancials.com/>

Österreichische Finanzmarktaufsichtsbehörde (2020). *FMA guide for managing sustainability risks*. Available at: <https://www.fma.gv.at/en/fma/fma-guides/>

OECD (2020). *OECD Business and Finance Outlook*. Available at: <http://www.oecd.org/finance/Sustainable-and-resilient-finance.htm>

OECD (2019). *Due Diligence for Responsible Corporate Lending and Securities Underwriting: Key considerations for banks implementing the OECD Guidelines for Multinational Enterprises*. Available at: <http://mneguidelines.oecd.org/Due-Diligence-for-Responsible-Corporate-Lending-and-Securities-Underwriting.pdf>

OECD (2019). *Social Impact Investment 2019*. Available at: <https://www.oecd-ilibrary.org/docserver/9789264311299-en.pdf>

OECD (2017). *Technical note on estimates of infrastructure investment needs*. Available at: <https://www.oecd.org/env/cc/g20-climate/Technical-note-estimates-of-infrastructure-investment-needs.pdf>

OECD (2016). *Financial Management of Flood Risk*. Available at: <https://www.oecd.org/daf/fin/insurance/OECD-Financial-Management-of-Flood-Risk.pdf>

Oil Change International & Reclaim Finance (2021). *NGFS Scenarios: Guiding Finance Towards Climate Ambition Or Climate Failure?* Available at: <http://priceofoil.org/content/uploads/2021/02/NGFS-scenarios-final.pdf>

Olivier, Z. (2019). *Is There a Green Bond Premium? The Yield Differential Between Green and Conventional Bonds*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2889690](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2889690)

Oxfam (2020). *Bankrolling climate action and accountability*. Available at: <https://politicsofpoverty.oxfamamerica.org/bankrolling-climate-action-accountability-financial-sector/>

Principles for Responsible Investment (n.d.) *About the PRI*. Available at: <https://www.unpri.org/>

Prudential Regulation Authority (2019). *Enhancing banks' and insurers' approaches to managing the financial risks from climate change*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/supervisory-statement/2019/ss319.pdf?la=en&hash=7BA9824BAC5FB313F42C00889D4E3A6104881C44>

Prudential Regulation Authority (2018). *Transition in thinking: The impact of climate change on the UK banking sector*. Available at: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D>

Prudential Regulation Authority (n.d.). *Climate Financial Risk Forum*. Available at: <https://www.bankofengland.co.uk/climate-change/climate-financial-risk-forum>

Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector. OJ L 317, 9.12.2019, p. 1–16 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R2088>

Regulation (Eu) 2019/876 Of The European Parliament And Of The Council REGULATION (EU) 2019/876 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012. OJ L 150/1, 7.6.2019, p. 1–225 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0876>

Regulation (EU) 2017/2402 of the European Parliament and of the Council of 12 December 2017 laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012. OJ L 347, 28.12.2017, p. 35–80 Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R2402>

Sakis K., George S. (2019). *Four Things No One Will Tell You About ESG Data*. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3420297](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3420297)

SASB (n.d.). SASB Materiality Map. Available at: <https://materiality.sasb.org/>

ShareAction (2020). *Banking on a Low-Carbon Future II - A ranking of the 20 largest European banks' responses to climate change*. Available at: <https://shareaction.org/wp-content/uploads/2020/04/ShareAction-Banking-Report-2020.pdf>

Science Based Targets Initiative (2021). *Net-Zero Criteria Draft for Public Consultation*. Available at: <https://sciencebasedtargets.org/resources/files/Net-Zero-Criteria-Draft-for-Public-Consultation-v1-0.pdf>

Science Based Targets Initiative (2020). *Financial sector science-based targets guidance*. Available at: <https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf>

Science Based Targets Initiative (2015). *Sectoral Decarbonisation Approach: A method for setting corporate emission reduction targets in line with climate science*. Available at: <https://sciencebasedtargets.org/wp-content/uploads/2015/05/Sectoral-Decarbonization-Approach-Report.pdf>

Science Based Targets Initiative (n.d.). *Resources*. Available at: <https://sciencebasedtargets.org/methods-2/>

Science Based Targets Initiative (n.d.). *How it works*. Available at: <https://sciencebasedtargets.org/how-it-works>

Simon P., Albert D., Lev D., Anando M. (2016). *ESG Ratings and Performance of Corporate Bonds*. Available at: <https://doi.org/10.3905/jfi.2016.26.1.021>

Sustainability Accounting Standards Board (n.d.). *Standards Overview*. Available at: <https://www.sasb.org/standards-overview/>

Sustainalytics (2020). *ESG Implications of COVID-19*. Available at: <https://www.sustainalytics.com/esg-investing-news/sustainalytics-blog-series-focuses-on-the-esg-implications-of-covid-19/>

TCFD (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Available at: <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>

The SustainAbility Institute by ERM (2020). *Rate the Raters 2020: Investor Survey and Interview Results*. Available at: <https://www.sustainability.com/globalassets/sustainability.com/thinking/pdfs/sustainability-ratetheraters2020-report.pdf>

Transition Pathway Initiative (n.d.). *The TPI tool*. Available at: <https://www.transitionpathwayinitiative.org/>

Transparency International (2018). *Better Blending – Making the case for transparency and accountability in blended finance*. Available at: [https://images.transparencycdn.org/images/2018\\_WorkingPaper\\_BetterBlending\\_English.pdf](https://images.transparencycdn.org/images/2018_WorkingPaper_BetterBlending_English.pdf)

European Federation for Transport & Environment (2019). *EU Commission bids to stem the flow of greenwashing in banking with own 'green list'*. Available at: <https://www.transportenvironment.org/press/eu-commission-bids-stem-flow-greenwashing-banking-own-green-list>

UN (2020). *GISD members call for COVID-19 bonds issuance*. Available at: <https://www.un.org/development/desa/financing/post-news/gisd-members-call-covid-19-bonds-issuance>

UN (2015). *Sustainable Development Goals*. Available at: <https://sdgs.un.org/goals>

UN (1984). *Universal Declaration of Human Rights*. Available at: <https://www.un.org/en/universal-declaration-human-rights/>

UN Climate Change (n.d.). *What is the United Nations Framework Convention on Climate Change?* Available at: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>

UN Global Compact (2004). *Who cares wins: connecting financial markets to a changing world*. Available at: [https://www.unglobalcompact.org/docs/issues\\_doc/Financial\\_markets/who\\_cares\\_who\\_wins.pdf](https://www.unglobalcompact.org/docs/issues_doc/Financial_markets/who_cares_who_wins.pdf)

UN Global Compact (n.d.). *The Ten Principles of the UN Global Compact*. Available at: <https://www.unglobalcompact.org/what-is-gc/mission/principles>

UN PRI (2018). *PRI Reporting Framework Main definitions 2018*. Available at: <https://www.unpri.org/download?ac=1453>

UN PRI (2016). *A practical guide to ESG integration for equity investing*. Available at: <https://www.unpri.org/download?ac=10>

UNEP FI, EBF (2021). *Testing the application of the EU Taxonomy to core banking products: High level recommendations*. Available at: <https://www.ebf.eu/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-EBF-UNEPFI-report-January-2021.pdf>.

UNEP FI (2020). *Signatories*. Available at: <https://www.unepfi.org/banking/bankingprinciples/signatories/>

UNEP FI (2019). *33 banks commit to immediate action towards aligning with global climate goals*. Available at: <https://www.unepfi.org/news/industries/banking/collective-commitment-to-climate-action/#:~:text=The%20Collective%20Commitment%20to%20Climate,Paris%20Agreement%20on%20Climate%2C%20including%3A&text=being%20publicly%20accountable%20for%20their%20climate%20impact%20and%20progress%20on%20these%20commitments>.

UNEP FI (2019). *Changing Course: A comprehensive investor guide to scenario-based methods for climate risk assessment, in response to the TCFD*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2019/05/TCFD-Changing-Course-Oct-19.pdf>

UNEP FI (2019). *Principles for Responsible Banking*. Available at <https://www.unepfi.org/wordpress/wp-content/uploads/2019/09/PRB-Guidance-Document-Final-19092019.pdf>

UNEP FI (2018). *Extending our Horizons – Part 1: Transition-related risks & opportunities*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/04/EXTENDING-OUR-HORIZONS.pdf>

UNEP FI (2018). *Navigating a new climate – Part 2: Physical risks and opportunities*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2018/07/NAVIGATING-A-NEW-CLIMATE.pdf>

UNEP FI (2016). *Guide to Banking and Sustainability*. Available at: <https://www.unepfi.org/wordpress/wp-content/uploads/2017/06/CONSOLIDATED-BANKING-GUIDE-MAY-17-WEB.pdf>

UNEP FI (n.d.). *Pilot Projects on Implementing the TCFD Recommendations for Banks*. Available at: <https://www.unepfi.org/banking/tcfd/>

UNFCCC (n.d.). *What is the Paris Agreement?* Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement>

World Economic Forum (2020). *'Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation*. Available at: [http://www3.weforum.org/docs/WEF\\_IBC\\_ESG\\_Metrics\\_Discussion\\_Paper.pdf](http://www3.weforum.org/docs/WEF_IBC_ESG_Metrics_Discussion_Paper.pdf)

World Economic Forum (2019). *Banking on sustainability - what's next?* Available at: <https://www.weforum.org/agenda/2019/09/how-banks-can-be-more-sustainable>

World Economic Forum (2019). *How to Set Up Effective Climate Governance on Corporate Boards – Guiding Principles and Questions*. Available at: [http://www3.weforum.org/docs/WEF\\_Creating\\_effective\\_climate\\_governance\\_on\\_corporate\\_boards.pdf](http://www3.weforum.org/docs/WEF_Creating_effective_climate_governance_on_corporate_boards.pdf)

World Bank (2018). *Sovereign Blue Bond Issuance: Frequently Asked Questions*. Available at: <https://www.worldbank.org/en/news/feature/2018/10/29/sovereign-blue-bond-issuance-frequently-asked-questions>

WWF (2019) *Nature Risks - Framework for Understanding Nature-Related Risk to Business* Available at: [https://wwf.panda.org/our\\_work/our\\_focus/finance/?356338/Nature-Risks-are-Financial-Risks](https://wwf.panda.org/our_work/our_focus/finance/?356338/Nature-Risks-are-Financial-Risks)

WWF (2020). *Climate & Nature Sovereign Index – Introducing a framework for a clear assessment of environmental risk*. Available at: [https://www.wwf.org.uk/sites/default/files/2020-07/Climate\\_%26\\_Nature\\_Sovereign\\_White\\_Paper.pdf](https://www.wwf.org.uk/sites/default/files/2020-07/Climate_%26_Nature_Sovereign_White_Paper.pdf)

WWF (n.d.). *Convincing major banks to save our heritage*. Available at: <https://www.wwf.org.uk/success-stories/convincing-major-banks-save-our-heritage>

WWF and KFW (2019). *Freshwater risks & opportunities – An overview and call to action for the financial sector*. Available at: [https://wwfeu.awsassets.panda.org/downloads/wwf\\_waterrisk\\_financialvalue\\_part4\\_keypiece\\_web.pdf](https://wwfeu.awsassets.panda.org/downloads/wwf_waterrisk_financialvalue_part4_keypiece_web.pdf)

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