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EBA/DP/2020/03

EBA Discussion paper

On management and supervision of ESG risks for credit institutions and investment firms

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Abbreviations

CET 1	Common Equity Tier 1
CRR	Capital Requirements Regulation
CRD	Capital Requirement Directive
CSR	Corporate Social Responsibility
IFD	Investment Firm Directive
EBA	European Banking Authority
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
ESG	Environmental, Social and Governance
ESMA	European Securities and Markets Authority
EU	European Union
GDP	Gross Domestic Product
GHG	Green House Gases
ICAAP	Internal Capital Adequacy Assessment Process
ILAAP	Internal Liquidity Adequacy Assessment Process
NGFS	Network for Greening the Financial System
SREP	Supervisory Review and Evaluation Process
SDG	Sustainable Development Goals
TCFD	Taskforce on Climate-Related Financial Disclosures
USD	USA dollar

1. Responding to this consultation

The European Banking Authority (EBA) invites comments on all the proposals put forward in this paper and, in particular, on the specific questions included in this discussion paper.

Comments are most helpful if they:

- respond to the question stated;
- indicate the specific point to which a comment relates;
- contain a clear rationale;
- provide evidence to support the views expressed/ ationale proposed; and
- describe any alternative regulatory choices the EBA should consider.

Submission of responses

To submit your comments, click on the 'send your comments' button on the consultation page by 3 February 2021. Please note that comments submitted after this deadline or submitted via other means may not be processed.

Publication of responses

Please clearly indicate in the consultation form if you wish your comments to be disclosed or to be treated as confidential. A confidential response may be requested from us in accordance with the EBA's rules on public access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by the EBA's Board of Appeal and the European Ombudsman.

Data protection

The protection of individuals with regard to the processing of personal data by the EBA is based on Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 as implemented by the EBA in its implementing rules adopted by its Management Board. Further information on data protection can be found in the legal notice section of the EBA website.

2. Executive Summary

Article 98(8) CRDV and Article 35 IFD mandate the EBA to develop a report assessing the potential inclusion of Environmental, Social and Governance risks (ESG risks) in the review and evaluation performed by competent authorities and elaborating on the arrangements, processes, mechanisms and strategies to be implemented by institutions to identify, assess and manage ESG risks. The purpose of this discussion paper is, firstly, to present the EBA's understanding on the relevance of ESG risks for a sound functioning of the financial sector and, secondly, to collect comments and feedback from stakeholders with a view to further informing the EBA's report. The report is expected to be delivered in June 2021.

ESG factors materialise at many levels, such as international, country, sectoral or entity level. This discussion paper includes proposals for common definitions of ESG risks to credit institutions and investment firms (hereafter institutions) as risks that stem from the current or prospective impacts of ESG factors on its counterparties. Therefore, the financial materiality of ESG risks will need to be carefully assessed by institutions and supervisors. Since not all financing activities are likely to be equally affected by ESG risks, it is important that institutions and supervisors are able to distinguish and form a view on the relevance of ESG risks, following a proportionate, risk-based approach that takes into account the likelihood and the severity of the materialisation of ESG risks.

Institutions are clearly directly exposed to ESG factors as companies, for example, Scope 1 and Scope 2 CO_2 emissions of institutions,[1] the physical effects of climate change on institutions' premises and/or reputational impacts from environmental and social factors (e.g. working conditions). These risks need to be covered by the related management arrangements. However, the main focus of this discussion paper is on the risks to which the institutions are exposed to via the impact of ESG factors on its counterparties.

In the discussion paper ESG factors and ESG risks are identified and explained, giving particular consideration to risks stemming from environmental factors and especially climate change, reflecting ongoing initiatives and progress achieved by institutions and supervisors on this particular topic over the recent years.[2] Social and governance factors are included in the analysis, in accordance with the EBA's legal mandates, and the paper explores why and how these factors can also be sources of risk for institutions. The EBA acknowledges that qualitative and quantitative indicators, metrics and methods currently available to the institutions for the assessment of risks may be more advanced for environmental risks compared to social and governance risks. Therefore, the management of ESG risks by institutions as well as the incorporation of ESG risks in supervision may, in an initial stage, give particular prominence to environmental risks. Nevertheless, the progress in this policy field, including the further development of the EU Taxonomy Regulation, will

[1] See definitions for these concepts in Annex 1.

[2] This is also in accordance with the sequential approach described in the EBA's action plan on sustainable finance.

gradually allow institutions and supervisor to exploit social and governance indicators, and integrate them, respectively into the management and supervision of ESG risks.

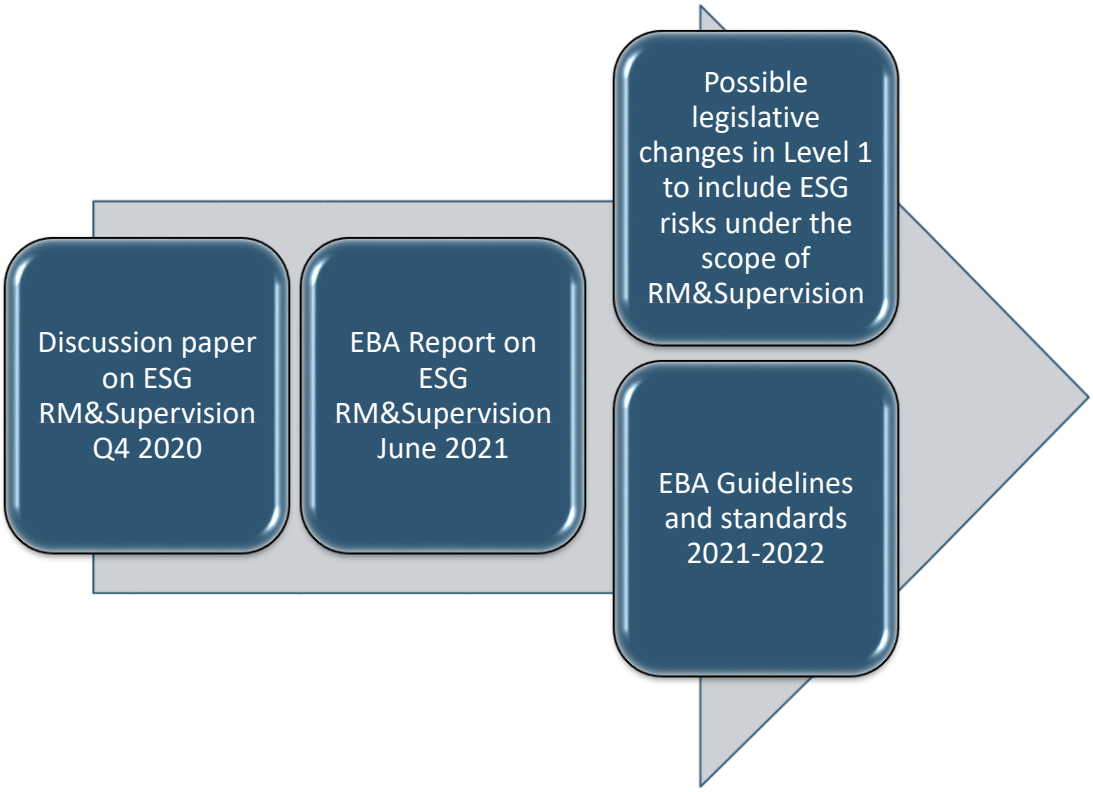
Various methods for the assessment of ESG risks exist on the market. Ultimately, all approaches have the same objective of assessing the alignment of institutions' portfolios with global sustainability goals and offering insights into the risk caused by exposures to certain sectors. This report provides an overview of the approaches identified by the EBA, divided into three different types (i) portfolio alignment method, (ii) risk framework method and (iii) exposure method. Each approach is different in terms of what it measures and how the outcome can be used by institutions. The decision on which methodological approach to choose will also depend on the size, the complexity and the business model of the respective institution.

The EBA sees the need for enhancing the incorporation of ESG risks into institutions' business strategies, business processes and proportionately incorporate ESG risks in their internal governance arrangements. Adjusting the business strategy of an institution to incorporate ESG risks as drivers of prudential risks can be considered as a progressive risk management tool to mitigate the potential impact of ESG risks. The EBA also sees a need to gradually develop methodologies and approaches to a climate risk stress test, while considering the methodological and data constraints. The objective of a climate risk stress test should be to inform on the resilience of institutions' own business model and investment strategies. In order to reflect the ESG risks in the supervisory evaluation, the EBA sees a need to proportionately incorporate the ESG factors and considerations into the business model analysis, in particular with regards to the analysis of business environment, the current business model, the analysis of the strategy, and the assessment of the viability and sustainability of the business model. However, the existing assessment under the Supervisory Review and Evaluation Process (SREP) of credit institutions might not sufficiently enable supervisors to understand the longer term impact of ESG risks, its breadth and magnitude, on future financial positions and related long-term vulnerabilities. In this context, 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, i.e. exceeding commonly used timeframes of 3-5 years or potentially even the ten year-horizon already applied in some jurisdictions.

This discussion paper is closely linked with –and leverages on– the work done by other stakeholders, either policy-makers, central banks and the supervisory community, think-tanks, researches and industry initiatives.[3] Particular attention is paid to ongoing EU initiatives led by the EU commission, notably the EU taxonomy. The discussion paper also takes into account available stock-takes on the current practices with regard to the management of ESG risks of both the industry and supervisors, which are the key stakeholders and addressees of a number of policy recommendations proposed in this discussion paper.

[3] The work in the area of ESG risks is expanding fast. While this paper includes a number of references to ESG-related know-how providers and initiatives, it is not the EBA's intention to promote them in a particular way. In other words, the references and examples provided are non-exhaustive and for illustrative purposes only.

The feedback sought in the consultation to this discussion paper will inform the EBA's final report on management and supervision of ESG risks for credit institutions and investment firms. It will be also taken into account for the EBA's ongoing work related to the fulfilment of its mandates to develop a technical standard implementing the ESG risks Pillar 3 disclosure requirements included in Part Eight of CRR2 (Article 434a and 449a of CRR 2) and 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 as a component of Pillar 1 capital requirements (Article 501c of CRR 2), as explained in the EBA's Action Plan on Sustainable Finance.[4] The EBA mandates will contribute to the definition and development of the framework in the field of sustainable finance, which will provide insights for supervisors, institutions and policymakers, as well as to wider market participants.



[4] EBA Action Plan on Sustainable Finance.

3. Background and rationale

1. In 2015, more than 190 governments around the world adopted the UN 2030 Agenda for Sustainable Development, aiming to support further progress on a wide range of many interconnected and cross-cutting economic, social and environmental objectives. These objectives aimed at strengthening the global response to poverty eradication, the threat of climate change and access to equitable and universal health, food security, nutrition, education and decent work in more peaceful and inclusive societies. The agenda included seventeen Sustainable Development Goals (SDGs) and 169 associated targets to be reached by 2030. Achieving the SDGs requires major societal transformations in the next fifteen years and will depend on the mobilisation of significant financial resources from the public and private sectors, with a SDG financing gap currently estimated at an incremental USD2-3 trillion per year for all countries.[5]

2. Also in 2015, signatories to the Paris Agreement committed to undertake ambitious efforts to limit the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5° above such levels.[6] This implies the need for early actions to reach peaking of greenhouse gas emissions as soon as possible and to undertake rapid reductions thereafter.[7] In the long term, an unabated warming pathway would lead to significant declines in global GDP by 2100.[8]

3. Indeed, economies and societies are increasingly facing the somewhat unpredictable, complex and severe consequences of biodiversity loss and climate change resource depletion, income inequality, migration and other environmental and social concerns.[9] Against this background, legislators in the EU and around the world are taking actions to change economic activities that have significant adverse impacts on ESG factors and to alleviate the worst consequences. While these policies will be gradually introduced and take full effect for financial market participants over a longer time period, it is crucial to develop strategies to be able to cope with such changes.

[5] See Sustainable Development Solutions Network: see http://www.unsdsn.org.

[6] Art. 2 and 3 of the Paris Agreement.

[7] NGFS, 'A Call for Action', par. 1.3.2.

[8] See, for instance, "Long-Term Macroeconomic Effects of Climate Change: A Cross-Country Analysis" (IMF Working Paper, 2019), Chief Risk Officers Forum, 'The heat is on' (2019).

[9] Cf. e.g.: IPBES (2019), "Global Assessment Report on Biodiversity and Ecosystem Services", the "five reasons for concern" in the IPCC (2018), „Global Warming of 1.5°C - Summary for Policymakers" and OECD (2014), "Migration Policy Debates - Is migration good for the economy?"

4. In the European Union (EU), a commitment to a binding target of at least a 40% domestic reduction in greenhouse gas emissions by 2030, compared to 1990, was adopted in 2015.[10] In light of more recent climate science findings, the EU has stepped up its efforts and is about to commit to climate-neutrality by 2050.[11] The Commission's proposal for the so-called European Climate Law *'sets the direction of travel for all EU policy'*. It follows the Report of the European Commission's High-Level Expert Group on Sustainable Finance,[12] published in January 2018, and the "Action Plan: Financing Sustainable Growth" [13], published on 8 March 2018, and the Communication on the European Green Deal[14], in December 2019, setting an EU strategy on sustainable finance[15] and a roadmap for future work across the financial system.

5. The European Commission's Action Plan has the following three main objectives:

    a. reorienting capital flows towards sustainable investment in order to achieve sustainable and inclusive growth;

    b. managing financial risks stemming from climate change, resource depletion, environmental degradation and social issues and;

    c. fostering transparency and long-termism in financial and economic activity, and is complemented with broader legislative efforts to support the transition to a more sustainable global economy.

6. The financial sector is expected to play a key role in financing the transition of the economy to a more sustainable form. According to the EU Commission's "Action Plan - Financing Sustainable Growth",[16] the financial system is being reformed to address the lessons of the financial crisis, and, in this context, it could be part of the solution towards a greener and more sustainable economy. Reorienting private capital to more sustainable investments was said to require a comprehensive shift in how the financial system works. This transformation will certainly spur new business opportunities, but the financial sector will also experience the financial risks stemming from the transformation of the economy and the worsening physical conditions. The

[10] Intended Nationally Determined Contribution of the EU and its Member States, submitted by the Latvian Presidency and the European Commission on 6 March 2015.

[11] Proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law).

[12] https://ec.europa.eu/info/publications/180131-sustainable-finance-report_en

[13] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0097&from=EN.

[14] https://ec.europa.eu/info/files/communication-european-green-deal_en.

[15] Earlier this year, the European Commission launched a Consultation on its Renewed Strategy on Sustainable Finance, see https://ec.europa.eu/info/consultations/finance-2020-sustainable-finance-strategy_en), which is expected to be published before the end of the year.

[16] COM(2018) 97 final.

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

7. Reflecting all the above, the banking regulatory framework (CRR2/CRD5) has been revised and several mandates have been extended to the EBA in the area of sustainable finance. The first mandate (Article 98(8) of CRD5) calls on the EBA to develop a report assessing the potential inclusion of ESG risks in the supervisory review and evaluation process (SREP) performed by competent authorities. The second mandate (Article 434a and Article 449a of CRR2) requires the EBA to develop a technical standard for including ESG risks in the Pillar 3 disclosure requirements in Part Eight of CRR2.[17] Lastly, the third mandate (Article 501c of CRR2) requires the EBA 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, as a component of Pillar 1 capital requirements.

8. More specifically, regarding the first mandate (Article 98(8) of the CRD5), the EBA's assessment shall comprise at least the following:

    a. the development of a uniform definition of ESG risks, including physical risks and transition risks; the latter shall comprise the risks related to the depreciation of assets due to regulatory changes;

    b. the development of appropriate qualitative and quantitative criteria for the assessment of the impact of ESG risks on the financial stability of institutions in the short, medium and long term; such criteria shall include stress testing processes and scenario analyses to assess the impact of ESG risks under scenarios with different severities;

    c. the arrangements, processes, mechanisms and strategies to be implemented by the institutions to identify, assess and manage ESG risks;

    d. the analysis methods and tools to assess the impact of ESG risks on lending and financial intermediation activities of institutions.

9. The EBA shall submit a report on its findings to the European Parliament, to the Council, and to the Commission, by 28 June 2021.[18]

10. Similarly, in accordance with Article 35 of the Directive (EU) 2019/2034 on the prudential supervision of investment firms (IFD), the EBA shall prepare a report on the introduction of

[17] Article 449a of CRR2 requires large institutions with publicly listed issuances to disclose information on ESG risks, physical risks and transition risks as defined in the EBA report produced under Article 98(8).

[18] On the basis of the outcome of its report, the EBA may, if appropriate, issue guidelines, in accordance with Article 16 of Regulation (EU) No 1093/2010, regarding the uniform inclusion of ESG risks in the SREP performed by competent authorities.

technical criteria related to exposures to activities associated substantially with ESG objectives for the supervisory review and evaluation process, with a view to assessing the possible sources and effects of risks on investment firms, taking into account applicable Union legal acts in the field of ESG taxonomy. The EBA report shall comprise at least the following:

a. a definition of ESG risks, including physical risks and transition risks related to the transition to a more sustainable economy, and, with regard to transition risks, including risks related to the depreciation of assets due to regulatory change, qualitative and quantitative criteria and metrics relevant for assessing such risks, as well as a methodology for assessing the possibility of such risks arising in the short, medium, or long term and the possibility of such risks having a material financial impact on an investment firm;

b. an assessment of the possibility of significant concentrations of specific assets increasing ESG risks, including physical risks and transition risks for an investment firm;

c. a description of the processes by means of which an investment firm can identify, assess, and manage ESG risks, including physical risks and transition risks;

d. the criteria, parameters and metrics by means of which supervisors and investment firms can assess the impact of short-, medium- and long-term ESG risks for the purposes of the supervisory review and evaluation process.

11. The EBA shall submit the report on its findings to the European Parliament, to the Council, and to the Commission, by 26 December 2021.[19]

12. This discussion paper has been prepared as a step towards the fulfilment of the EBA's mandates stipulated under Article 98(8) of CRD5 and Article 35 of the IFD, aiming to receive stakeholders' feedback on the proposed approach for incorporating ESG risks into the risk management of institutions and the supervisory review.

13. The reasoning and arguments presented in this discussion paper can be applicable to investment firms that are similar to credit institutions in terms of their business models and risk profile, and that fall under the framework of CRR and CRD. Those investment firms carry characteristics of credit institutions and may be subject to ESG risks in a similar manner.

14. Investment firms may be different from credit institutions in terms of their economic activities because they do not have large portfolios of retail and corporate loans. Therefore, the risks faced by investment firms, especially from an ESG point of view, may have some differences

[19] On the basis of that report, the EBA may, if appropriate, adopt guidelines to introduce criteria related to ESG risks for the supervisory review and evaluation process that take into account the findings of the EBA report referred to this Article.

compared to those faced by credit institutions. For these investment firms, e.g. trading companies and asset management companies, the materialisation of ESG risks would manifest in different risk metrics monitored under the IFD by relevant investment firms, for example under management, net position risk, customer orders handled.

3.1 Structure of the discussion paper

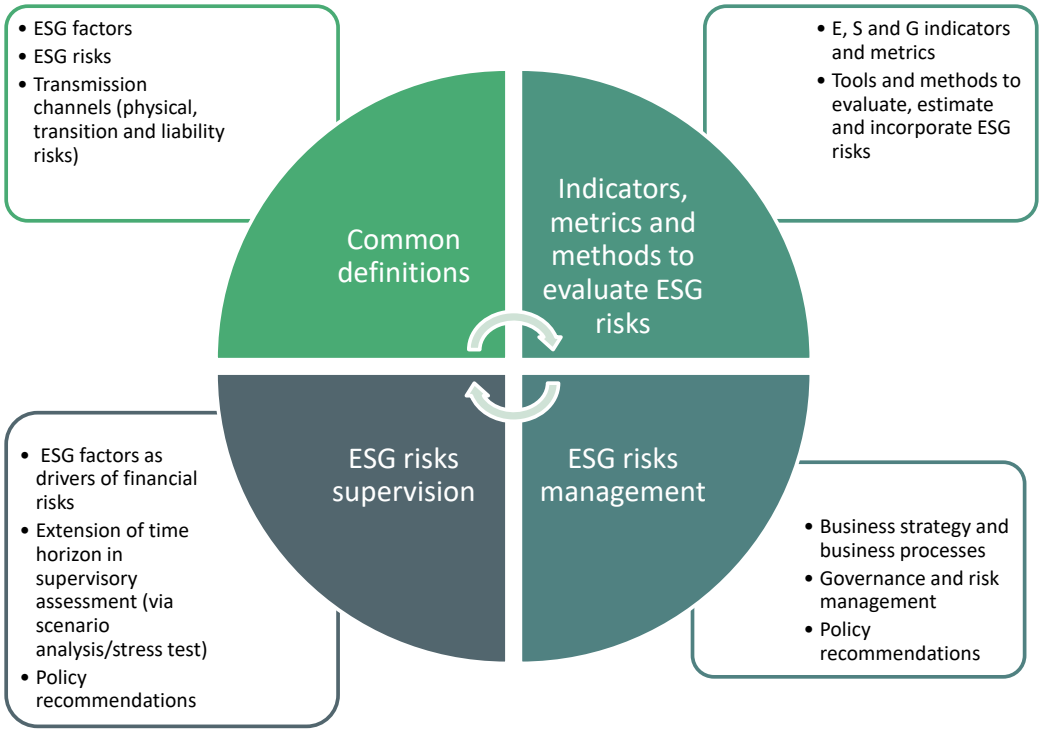
15. This discussion paper focuses on the issues that fall within the scope of the above-mentioned mandates extended to the EBA under the CRD and IFD. In particular, this discussion paper includes a comprehensive elaboration on what ESG factors and ESG risks are, how and through which transmission channels they materialise, why they matter from a financial point of view and what can be done to support their full incorporation by institutions and supervisors in order to enhance the resilience of the financial sector in the short, medium and long run (see Figure 1).

16. This discussion paper is organized as follows:

17. Chapter 4 elaborates on the relevance of ESG risks for the financial sector and provides uniform definition of ESG factors and ESG risks, including definitions of physical risks and transition risks as the main transmission channels for environmental risks. The definition of the transition risks comprise the risks related to the depreciation of assets due to policy, technological and/or behavioural changes. The report also defines, elaborates and presents examples to substantiate the relevance of environmental, social and governance risks for the financial sector. One example is also dedicated to social impacts triggered by the COVID-19 pandemic. As a third transmission channel for ESG risks, this discussion paper also identifies liability risks as the financial risks stemming from the exposure of institutions to counterparties potentially held accountable for the negative impact of their activities on environmental, social and governance factors.

18. Chapter 5 presents a non-exhaustive list of quantitative and qualitative definitions, indicators and metrics for a non-exhaustive list of ESG factors, together with a description of several tools and methodologies that can support the identification, evaluation and assessment of ESG risks, namely the (i) alignment method, (ii) risk framework method and (iii) exposure method. These methodologies are based on research of existing tools. They are presented in a neutral way (i.e. without any prioritisation or preference) and can complement each other. The methods may be used to better understand and compare the interaction of ESG risks in given exposures and portfolios. Together with the progress made in the definition of common taxonomies (like the EU Taxonomy Regulation), these analytical tools can help overcome some of the challenges for the assessment of ESG risks.

Figure 1 Main content of this discussion paper



19. The discussion paper argues that the impact of ESG risks materialises in the form of existing prudential risks (e.g. credit risk, market risk, operational risk). After presenting the rationale for the incorporation of ESG risks in the institution's business strategy and business processes, chapter 6 includes several policy recommendations regarding the way in which institutions can embed ESG risks in their internal governance and risk management frameworks in a proportionate manner. Finally, chapter 7 elaborates on the effective way to proportionately reflect ESG risks in the supervisory review for credit institutions and makes several policy recommendations in this respect.[20]

[20] Note that, regarding investment firms, in line with the EBA Roadmap on Investment Firms, the EBA's aim is to deliver the SREP guidelines by the end of 2022, leveraging on the output of the report to be prepared under Article 35 (IFD).

3.2 Questions for consultation

Common definitions of ESG factors, ESG risks and their transmission channels (Chapter 4)

1. Please provide details of other relevant frameworks for ESG factors you use.
2. Please provide your views on the proposed definition of ESG factors and ESG risks.
3. Do you agree that, for the purpose of assessing their inclusion in institutions' and supervisors' practices from a prudential perspective, ESG risks should be approached primarily from the angle of the negative impacts of ESG factors on institutions' counterparties? Please explain why.
4. Please provide your views on the proposed definitions of transition risks and physical risks included in section 4.3.
5. Please provide you views on the proposed definition of social risks and governance risks. As an institution, to which extent is the on-going COVID-19 crisis having an impact on your approach to ESG factors and ESG risks?
6. Do you agree with the description of liability transmission channels/liability risks, including the consideration that liability risks may also arise from social and governance factors? If not, please explain why.
7. Do the specificities of investment firms compared to credit institutions justify the elaboration of different definitions, or are the proposed definitions included in chapter 4 also applicable to them (in particular the perspective of counterparties)? Please elaborate on the potential specificities of investment firms in relation to ESG risks and on how these specificities, if any, could be reflected in this paper.

Quantitative and qualitative indicators, metrics and methods to assess ESG risks (Chapter 5)

8. Please provide your views on the relevance and use of qualitative and quantitative indicators related to the identification of ESG risks.
9. As an institution, do you use or plan to use some of the ESG indicators (including taxonomies, standards, labels and benchmarks) described in section 5.1 or any other indicators, inter alia for the purpose of risks management? If yes, please explain which ones.
10. As an institution, do you use or plan to use a portfolio alignment method in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.
11. As an institution, do you use or plan to use a risk framework method (including climate stress testing and climate sensitivity analysis) in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.

12. .As an institution, do you use or plan to use an exposure method in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.
13. As an institution, do you use or plan to use any different approaches in relation to ESG risk management than the ones included in chapter 5? If yes, please provide details.
14. Specifically for investment firms, do you apply other methodological approaches, or are the approaches described in this chapter applicable also for investment firms?

The management of ESG risks by institutions (Chapter 6)

15. Please provide your views on the extent to which smaller institutions can be vulnerable to ESG risks and on the criteria that should be used to design and implement a proportionate ESG risks management approach.
16. Through which measures could the adoption of strategic ESG risk-related objectives and/or limits be further supported?
17. Please provide your views on the proposed ways how to integrate ESG risks into the business strategies and processes of institutions.
18. Please provide your views on the proposed ways how to integrate ESG risks into the internal governance of institutions.
19. Please provide your views on the proposed ways how to integrate ESG risks into the risk management framework of institutions.
20. The EBA acknowledges that institutions' approaches to environmental, and particularly climate-related, risks might be more advanced compared to social and governance risks, and gives particular prominence in this report to the former type of risks. To what extent do you support this approach? Please also provide your views on any specificities associated with the management of social and governance risks.
21. Specifically for investment firms, what are the most relevant characteristics or particularities of business strategies, internal governance and risk management that should be taken into account for the management of the ESG risks? Please provide specific suggestions how could these be reflected.

ESG factors and ESG risks in supervision (Chapter 7)

22. Please provide your views on the incorporation of ESG factors and ESG risks considerations in the business model analysis of credit institutions.
23. Do you agree with the need to extend the time horizon of the supervisory assessment of the business model and introduce as a new area of analysis the assessment of the long term resilience of credit institutions in accordance with relevant public policies? Please explain why.
24. Please provide your views on the incorporation of ESG risks considerations into the assessment of the credit institution's internal governance and wide controls.

25. Please provide your views on the incorporation of ESG risks considerations in the assessment of risks to capital, liquidity and funding.
26. If not covered in your previous answers, please provide your views on whether the principle of proportionality is appropriately reflected in the discussion paper, and your suggestions in this respect keeping in mind the need to ensure consistency with a risk-based approach.
27. Are there other important channels (i.e. other than the ones included in chapter 7) through which ESG risks should be incorporated in the supervisory review of credit institutions?

Annex 1

28. As an institution, do you use or plan to use some of the indicators and metrics included in Annex 1? If yes, please describe how they are used in relation to your ESG risk management approach.
29. If relevant, please elaborate on potential obstacles, including scope of applicability, granularity and data availability, associated with the indicators and metrics included in Annex 1.

4. Common definitions of ESG factors, ESG risks and their transmission channels

20. In order to evaluate and measure ESG risks in a common and comparable way, a fundamental part is having common definitions of ESG factors, and to understand how these factors translate into financial risks and may impact institutions individually and the financial system as a whole. In the EU's policy context, the EU Taxonomy Regulation (2020/852) on the establishment of a framework to facilitate sustainable investment is a key milestone in defining legally sustainable activities. The EU taxonomy is being implemented via a set of granular criteria for economic activities being considered as sustainable (see more details in chapter 7).

21. Also at the European level, a main legal reference when trying to frame ESG factors is the 'Regulation on sustainability-related disclosures in the financial services sector (2019/2088)'.[21] The 'SDFR' aims at enhancing transparency and informing end investors about sustainability-related aspects, particularly in terms of '[the principal's] adverse impacts', a concept that could be understood as those impacts of investment decisions and advice that result in negative effects on sustainability factors. Although the SDFR does not provide granular information on the characteristic of sustainability factors, it does provide a definition of sustainability factors meaning 'environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters'. Moreover, the EBA, EIOPA and ESMA (collectively, the 'ESAs') have been mandated, through the Joint Committee, to develop draft regulatory technical standards to further specify the content, methodologies and presentation of information in disclosures related to such sustainability factors.[22]

22. At the international level, there has been a number of initiatives by international bodies to frame ESG factors. However, the current policy framework lacks a common definition of ESG factors and, hence, current market practices also vary across institutions.

23. An EBA market survey conducted in May-June 2019[23] showed that institutions have been relying upon various international frameworks and standards defining ESG factors,

[21]The EU Regulation on sustainability-related disclosures in the financial services sector (2019/2088) needs to be read in conjunction with the EU Taxonomy Regulation (2020/852), which introduces several amendments on the former.

[22]See, for further details, https://eba.europa.eu/regulation-and-policy/transparency-and-pillar-3/joint-rts-esg-disclosure-standards-financial-market-participants .

[23] See Annex in EBA staff Paper, N. 6 – January 2020, "Sustainable Finance – Market Practices".

although some of them use their own definitions. Existing frameworks currently used by institutions include five main references:

a. the United Nations' Principles for Responsible Investment (UNPRI) aim at supporting its signatories –i.e., (i) asset owners/institutional investors, (ii) investment managers and (iii) service providers, including consultancy, information and data- to incorporate ESG factors into their investment and ownership decisions;

b. the United Nations' Environment Programme Finance Initiative (UNEP FI)'s Principles for Responsible Banking, aim at aligning the banks' business strategy with the objectives of the SDGs and the Paris Agreement;

c. the Global Reporting Initiative's from the Global Sustainability Standards Board (GRI-GSSB), aim at helping organisations to better understand, manage and communicate their impacts on issues relating to sustainability;

d. the Equator Principles, adopted by financial market institutions, which provide a common baseline and framework to identify, assess and manage environmental and social risks when financing projects;

e. the Natural Capital Protocol + Supplement (Finance), which provides a standardised framework for organisations to identify, measure, and value their impacts and dependencies on natural capital.

24. Generally, references to ESG factors are associated with the concept of sustainable finance, sometimes also referred to as green finance. Specifically, sustainable finance relates to financing to 'support economic growth while reducing pressures on the environment and taking into account social and governance aspects. Sustainable finance also encompasses transparency on risks related to ESG factors that may impact the financial system, and the mitigation of such risks through the appropriate governance of financial and corporate actors'.[24]

25. Examples of ESG factors that are common across those definitions and practices for financial and non-financial firms include greenhouse gas emissions, biodiversity and water use and consumption in the area of environment; human rights, and labour and workforce considerations in the area of social; and rights and responsibilities of senior staff members and remuneration in the area of governance (see Table 1).

[24] https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en.

Table 1 Examples of ESG factors included in the most commonly used frameworks

Source	Environmental	Social	Governance
International Frameworks[1)]	▪ GHG emissions ▪ Energy use and efficiency ▪ Air pollutants ▪ Water use ▪ Waste management (water, solid, hazardous) ▪ Use of ecosystems – impact and dependence ▪ Innovation in environment-friendly products and services	▪ Workforce ▪ Workplace health and safety ▪ Customer health and safety ▪ Diversity and equal opportunity ▪ Poverty and community impact ▪ Supply chain management ▪ Training and education ▪ Customer privacy	▪ Codes of conduct and business principles ▪ Accountability ▪ Transparency and disclosure ▪ Executive pay ▪ Board diversity and structure ▪ Bribery and corruption ▪ Stakeholder engagement ▪ Shareholder rights
European Framework[2)]	▪ GHG emissions ▪ Energy use and efficiency ▪ Water, air, soil pollutants ▪ Water use and management ▪ Land degradation, desertification, soil sealing ▪ Waste management ▪ Biodiversity and protection of healthy ecosystems	▪ Implementation of fundamental ILO Conventions ▪ Inclusiveness/Inequality ▪ Diversity ▪ Insufficient whistle-blower protection ▪ Human rights policy ▪ Investment in human capital and communities	▪ Exposure to controversial weapons (land mines and cluster bombs) ▪ Anti-corruption and anti-bribery policies ▪ Trafficking in human beings
Industry[3)]	▪ Consumption of materials, energy and water ▪ Production of GHG emissions, other emissions to air and water ▪ Production and management of waste and waste water ▪ Protection of biodiversity ▪ Research and development in low-carbon and other	▪ Quality and innovation in customer relations, rights of the customers to gain information about environmental issues (e.g., climate and social consequences of global warming with which they can make responsible decisions) ▪ Human rights ▪ Labour practices: human resource management and employee relations, diversity issues, gender equality, workplace	▪ Set of rules or principles defining rights, responsibilities and expectations between different stakeholders in the governance of the entity/sovereign ▪ Values that determine the definition of governance: executive pay, Board of Directors independence, composition and structure, shareholder rights, internal audit,

	environmental technologies	health and safety considerations ▪ Access to credit and financial inclusion ▪ Personal data security	▪ Compensation and bribery and corruption ▪ Integrity in corporate conduct/conduct frameworks
Common areas[4)]	▪ Water use and consumption ▪ Biodiversity ▪ GHG emissions ▪ Deprived landscape revitalisation	▪ Labour and workforce considerations ▪ Human rights ▪ Inequality ▪ Gender rights ▪ Minority rights	▪ Rights and responsibilities of directors ▪ Remuneration

Sources: EBA staff based on: [1)] United Nations' Principles for Responsible Investment (UNPRI), the United Nations' Environment Programme (UNEP) Finance Initiative (FI)'s Principles for Responsible Banking, the Global Reporting Initiative's from the Global Sustainability Standards Board (GRI-GSSB), the Equator Principles; the Natural Capital Protocol + Supplement (Finance), [2)] Regulation EU 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 and Draft RTS ESG Disclosures Consultation Paper; [3)] EBA Market Practices Survey on Sustainable Finance and [4)] EBA staff.

Questions:

1. Please provide details of other relevant frameworks for ESG factors you use.

4.1 Definition and general features of ESG factors

26. 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.

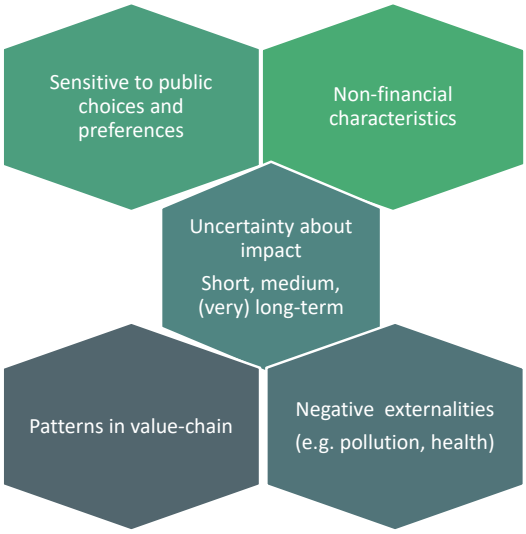
27. Based on the commonalities of the available international frameworks that refer to ESG factors, an ESG factor displays one or more of the following intrinsic features, which may potentially interconnect with each other and which are hereby presented in a non-hierarchical order (see Figure 2):

    - Factors traditionally considered as non-financial: They reflect additional characteristics, such as greenhouse gas emissions, environmental footprint, social welfare, poverty, equal right and ethics, besides those that have been traditionally financially-oriented, such as profits, capital and costs.[25]

[25] These characteristics are treated separately in corporate reporting, see Directive 2014/95/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

- Uncertainty about impact: This refers to the uncertainty related to the timing of the impacts of these factors, as these impacts may occur at any time (short, medium and/or long-term) and trigger effects over very different timespans. At the same time, it is important to avoid any misunderstanding that ESG factors are only relevant in the medium and/or longer-term, as they also create risks in the short-term like the ongoing acute environmental hazards.

Figure 2 Commonalities of ESG factors



- Negative economic externalities: ESG factors such as pollution, overall welfare of the society, poverty, are of particular concern to the wider public. While they reflect the impact of a sum of individual activities, they are not captured in financial statements, meaning that the costs of those activities is borne by third parties or by the society at large and not fully captured by market mechanisms. For example, consider the 'collective' cost of greenhouse gas emissions generated by an entity. In the absence of carbon pricing that adequately captures climate related externalities, financial markets, while seemingly willing to price climate risk, are unable to fully reflect this risk in prices.[26]

- Patterns arising from the value chain: Patterns arising throughout the value chain mean the impacts from an entity's activities and interactions with different stakeholders within its upstream and downstream value chains. In the context of

[26] This poses also a challenge for disclosures that tend to be incomplete (selection bias in firm reporting), inconsistent (lack of accepted methodology for defining sustainability-oriented assets) and insufficient (virtually absent reporting on downstream emission intensity of products of portfolios).

these activities, an entity may face indirectly through its debtors and creditors different ESG factors.

- Increased sensitivity to changes in public policies designed to mitigate climate change and other externalities: Signatories of SDGs and the Paris Agreement have committed to undertake ambitious efforts in meeting the set goals and targets, which imply major changes in public policies and regulatory framework. Efforts to limit climate change might imply significant regulatory shifts and lead into wider structural changes difficult to include into economic development predictions (see Box 1).

Box 1: Example of public policies designed to mitigate climate change

For example, at the European level, the EU's Emissions Trading System (EU ETS) is key for the EU policy to tackle climate change and for a cost-effective reduction of emissions of carbon dioxide (CO_2) and other greenhouse gases (GHG) in the power, aviation and industrial sectors. It was launched in 2005 and is the first - and still the largest - international system for trading GHG allowances covering over three-quarters of the allowances traded on the international carbon market, while it covers around 45% of the EU's GHG emissions.*

Another example is at national level, where the German legislator has adopted a law introducing a national emissions trading scheme for trading heating oil, natural gas, petrol and diesel.

These mechanisms will significantly increase the price of fossil fuels in the construction and transport sectors and strain the profitability of corporates active in those sectors that are particularly dependent on fossil fuels.

*https://www.emissions-euets.com/carbon-market-glossary/872-european-union-emissions-trading-system-eu-ets

28. ESG factors can have a qualitative or quantitative manifestation and materialise at many levels, such as international, country, sectoral or entity level. While it is understood that institutions are directly exposed to the ESG factors as companies, for example, Scope 1 and Scope 2 CO_2 emissions,[27] physical effects of climate change on institutions' premises or reputational impacts from social factors (e.g. working conditions), these impacts and related management arrangements are not covered in this discussion paper. Although relevant for institutions and potentially impactful from a financial perspective, these impacts at institution level stem from the institutions' own, fully-controlled activities and

[27] See definitions for these concepts in Annex 1.

related management arrangements. They are expected to be already taken into account in the existing risks management and internal governance framework.

29. The main purpose of this discussion paper is to define and develop assessment criteria for ESG factors that may impact the financial performance and solvency of institutions via their counterparties. For instance, an institution may experience a negative financial impact when it holds collateral assets that become stranded assets due to the introduction of regulatory changes aimed at containing climate change, or if any of its counterparties experiences reputational losses that affect their ability to repay their debts (e.g. a company with labour conditions that are regarded as abusive by the public).

30. For the purpose of this paper, the ESG factors can be defined in the following way: '**ESG factors are 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.'**

31. As referred to in the definition of the ESG factors, the ESG factors can have negative or positive impacts. From this perspective the ESG factors can be used also when evaluating opportunities for financial or non-financial entities related to the transition to more sustainable economy. This approach was, for example, used for the EU Taxonomy Regulation, which defines specific characteristics and criteria for an economic activity being considered as environmentally sustainable.

32. Counterparties of institutions may be affected to a different extent by ESG factors.[28] 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. In this regard, counterparties – and thus institutions – may be affected to varying degrees by policy changes in light of the transition (see Box 2).

[28] See, for example, the UN report on 'How investors are addressing ESG factors in fundamental equity valuation' (2013).

Box 2: Example of policy changes in light of the transition

For instance, the Renewable Energy Directive[29] requires the EU to meet at least 20% of its total energy demand with energy from renewable sources by 2020 via the attainment of individual national targets. The revised Renewable Energy Directive[30] establishes a new binding target for the EU of at least 32% of renewable energy by 2030,[31] with a clause for a possible upwards revision by 2023.[32] The envisaged importance of renewable energy implies harder financial conditions for those counterparties unable to catch-up with the use or production of energy from non-renewable sources. Similarly, the Energy Performance of Buildings Directive [33] requires all new buildings to be nearly zero-energy by the end of 2020. In the transport sector, Regulation (EC) 443/2009 significantly reduced the permissible fleet-wide CO_2 emissions of new cars and vans from 2021 onwards. Another example is provided by Regulation (EU) 2019/631, which has introduced CO_2 emission performance standards for new passenger cars and for new vans for 2025 and 2030.

33. Annex 1 presents a non-exhaustive list of ESG factors based on international frameworks and initiatives. This list should be considered as a dynamic list of ESG factors to support institutions' and competent authorities' understanding of relevant concepts in their evaluation of ESG factors. As policy makers, supervisors, financial market participants and the scientific community are constantly gaining a deeper, more granular understanding, the identified ESG factors (and associated risks) are likely to evolve over time. Any policy framework implemented should be flexible enough to address adequately emerging issues in the transition to a sustainable economy.

4.2 Definition of ESG risks

34. ESG factors may impact institutions' financial performance by manifesting themselves in financial or non-financial prudential risks, such as credit, market, operational, liquidity and funding risks. So, while ESG factors can have positive or negative impacts, the ESG risks for the purpose of this discussion paper are defined from a prudential perspective, in the context of the supervisory review, as the negative materialisation of ESG factors. In other

[29] Directive 2009/28/EC.

[30] Directive 2018/2001/EU.

[31] Intended Nationally Determined Contribution of the EU and its Member States, submitted by the Latvian Presidency and the European Commission on 6 March 2015.

[32] More ambitiously, the European Commission's proposal for "EU Climate Law" envisages climate-neutrality by 2050 (see https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020PC0080&from=EN).

[33] Directive 2010/31/EU as amended by Directive 2018/844/EU.

words, **ESG risks materialise when the ESG factors affecting institutions' counterparties have a negative impact on the financial performance or solvency of such institutions.**

35. The impact of ESG factors on the institutions' financial performance may vary depending not only on its business activities (e.g. asset type, the sector, size, geographic location and the stage in the life cycle, and liabilities) but also on the institution's governance and strategy for managing them. Depending on the business activities, the concept of counterparty may be understood as a client (e.g. an entity, individual) or as an issuer (e.g. sovereign, entity). In the case of investment firms, the concept of counterparty may be less relevant as ESG risks may manifest through the assets they held as part of their investment activities in general.

36. The materiality of ESG risks depends on the risks posed by ESG factors over the short, medium and long-term.[34] In this regard, a double materiality perspective in terms of the impact that the counterparty's activities can have on the institutions' performance can be identified and includes both:

    a. 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

    b. 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.

37. When assessing financial materiality, it is also important to distinguish between impacts that are exogenous to the counterparty's activities (e.g., floods, tsunamis, fires or other climate-related hazards) and impacts that originate from the counterparty's activities (e.g. any activity that may be considered as damaging for the climate such as CO_2 emissions or use of fossil fuels, and/or as a failure to comply with social standards, like labour conditions, and ethical values). Hence, managing ESG risks implies taking into account both types of materiality and the two potential originations of the impacts from ESG factors.

38. In line with the above, the following definition of ESG risks is used in this discussion paper: '**ESG risks mean the risks of <u>any</u> negative financial impact to the institution stemming,**

[34] The Guidelines on non-financial reporting: Supplement on reporting climate-related information (2019/C 209/01) section°3 (see https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0705(01)&from=EN) explain in more detail the concept of materiality applied to climate-related factors.

from the current or prospective impacts of ESG factors on its counterparties'.[35] ESG risks materialise themselves through their impact on prudential risk categories.

39. As referred to in the previous section, it is understood that institutions are directly exposed to the ESG factors (and related risks) as companies, for example, Scope 1 and Scope 2 CO_2 emissions, physical effects of climate change on institutions' premises or reputational impacts from social factors (e.g. working conditions), these impacts and related management arrangements are not covered in this discussion paper. These impacts stem from the institutions' own, fully-controlled activities and related management arrangements (e.g. location of premises, ICT systems used, employees' conditions etc.) and the related risks are expected to be, already taken into account in the existing risks management and internal governance framework. However, these impacts and management of these risks are not under the scope of this discussion paper.

Questions:

2. Please provide your views on the proposed definition of ESG factors and ESG risks.

3. Do you agree that, for the purpose of assessing their inclusion in institutions' and supervisors' practices from a prudential perspective, ESG risks should be approached primarily from the angle of the negative impacts of ESG factors on institutions' counterparties? Please explain why.

4.3 Environmental factors and environmental risks

4.3.1 Environmental factors

40. Environmental factors are related to the quality and functioning of the natural environment and systems, which may have an impact on the activities of the institutions' counterparties. The main transmission channels for the impact of environmental factors cover physical (such as extreme weather events and gradually deteriorating conditions in climate) and transition (such as regulatory restrictions or taxation, disruptive technologies and changing consumer preferences) transmission channels. These channels can affect the entire value chain of companies as well as any other counterparties to which institutions are exposed.

41. The impact of environmental factors can be twofold, reflecting their potential double materiality. On the one hand, the financial performance of a counterparty can be affected by environmental factors, for example, the introduction of a carbon tax may decrease the

[35] The SDFR defines sustainability risk as meaning 'an environmental, social or governance event or condition that, if it occurs, could cause a negative material impact on the value of the investment,' as specified in the relevant sectoral legislation.

profitability of carbon-dependent businesses or decrease the competitiveness of their products. On the other hand, the activities of the counterparties may have a negative impact on the environment, e.g., via the release of a large volume of CO_2 into the atmosphere, leading to an environmental materiality, which may trigger a financial impact on such counterparties.

4.3.2 Environmental risks

42. Environmental risks are driven by environmental factors. They should be understood as the financial risks posed by the institutions' exposures to counterparties that may potentially contribute to or be affected by climate change and other forms of environmental degradation (such as air pollution, water pollution, scarcity of fresh water, land contamination, biodiversity loss and deforestation).

43. Climate-related risks are the financial risks posed by the exposure of institutions to counterparties that may potentially contribute to or be affected by climate change. For example, damage for companies or citizens caused by extreme weather events or a decline of asset value of a company in carbon-intensive sectors.

44. There is a connection and to some degree an overlap between climate-related and environmental risks. Climate change also leads to environmental degradation, as an increase of just 1.5°C is already expected to have a significant impact on biodiversity and ecosystems on land and in the sea.[36] Yet, not all environmental degradation is a result of climate change as it can stem from other sources as well. For example, rising population levels and income growth leading to higher water demand will cause a large part of the world and its inhabitants to face water stress.

45. Climate-related and other environmental risk cannot be entirely separated, as they may reinforce each other given that climate change could increase the degradation of the environment and vice versa. For example, reductions in the diversity of cultivated crops due to the rise in temperatures may mean that agroecosystems are less resilient against future climate change, pests and pathogens. At the same time, healthy ecosystems contribute to resilience and adapting to conditions caused by climate change that are already taking place, such as higher temperatures, rising seas, fiercer storms, more unpredictable rainfall and more acidic oceans.

46. Therefore, the scope of the analysis presented in this discussion paper covers a definition of environmental risks that includes the impact of both climate-change and other environmental factors. For the purpose of this report '**Environmental risks are the risks posed by the exposure of institutions to counterparties that may potentially be**

[36] IPCC (2019), 'Global warming of 1.5°C'.

negatively affected by environmental factors, including factors resulting from the climate change and factors resulting from other environmental degradation.'

47. Environmental risks can materialise via the three main transmission channels:

    a. Physical transmission channels

    b. Transition transmission channels

    c. Liability transmission channels (see section 4.6)

4.3.3 Physical transmission channels/physical risks

48. Although definitions of physical risks vary marginally among international organisations, central banks, supervisors, policy-makers and researchers, they are typically defined as one of the transmission channels through which climate-related risks (including shocks) can materialise, impacting negatively the financial position of counterparties and, hence, potentially causing the depreciation of assets.[37]

49. For example, the 'Guidelines on non-financial reporting: Supplement on reporting climate-related information' issued by the European Commission[38] define **physical risks** as '*risks to the company that arise from physical effects of* ***climate change***.[39] *They include:*

    a. acute physical risks, which arise from particular events, especially weather-related events such as storms, floods, fires or heatwaves, that may damage production facilities and disrupt value chains;

    b. chronic physical risks, which arise from longer-term changes in the climate, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity'.

50. This distinction between acute and chronic physical risks is to a large extent based on the 'Final Recommendations Report of the Taskforce on Climate-Related Financial Disclosures (TCFD)', published in June 2017. The distinction is also found in many other reference

[37] See, for instance, NGFS, BIS (2020) "The Green Swan - Central banking and financial stability".

[38] Communication from the Commission – Guidelines on non-financial reporting: Supplement on reporting climate-related information (OJ C 209, 20.06.2019, p. 1-30).

[39] Further guidance on reporting physical risks can be found in Advancing TCFD Guidance on Physical Climate Risks and Opportunities, European Bank for Reconstruction and Development (EBRD) and Global Centre of Excellence on Climate Adaptation. https://www.physicalclimaterisk.com/media/EBRD-GCECA_draft_final_report_full.pdf.

papers assessing the financial impacts of climate-related risks, such as the NGFS, which refers to physical risks as risks that can be categorised as either acute – if they arise from climate and weather-related events – or chronic – if they arise from progressive shifts in climate and weather patterns.[40]

51. So far, physical risks have been mainly defined as the impact or the transmission channels of climate change. However, there are environmental events other than climate change that can drive physical risks as well, such as water stress, biodiversity loss and pollution (see Box 3).

Box 3: Example of environmental impacts

"Water stress" might be defined as the lack of sufficient available fresh water resources to meet water usage demand. As demand for fresh water is projected to increase over certain levels in the future, risks related to water stress are expected to grow.[41] The drivers of water stress may vary, ranging from other environmental factors such as prolonged drought to social factors such as growing prosperity and growing world population, if not matched by appropriate technological developments. Irrespective of the drivers, water stress is a physical risk with potential impact on the overall society and the economy. According to the World Bank, some regions could see their growth rates decline by as much as 6% of GDP by 2050 as a result of water-related losses in agriculture, health, income and prosperity.[42]

Similarly, biodiversity loss is the ever-growing extinction of animal and vegetable species in a territory. It may be driven by factors other than climate change such as excess exploitation of land and water, direct exploitation of organism, pollution, growing population and deforestation.[43] Deterioration of biodiversity may affect a number of ecosystem services (e.g. fresh water, land, habitats and food) as well as economic activities (e.g., agriculture and pharmaceutical industries). In that regard, biodiversity loss could have a financial impact similar to climate change; for example, scientific estimates suggest that the risk to agriculture from the loss of pollinators could amount to USD577 billion annually.[44]

[40] See NGFS 'Guide for supervisors –Integrating climate-related and environmental risks into prudential supervision' (May 2020).

[41] DNB, Values at risk? Sustainability risks and goals in the Dutch financial sector (2019).

[42] https://www.worldbank.org/en/topic/water/overview.

[43] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

[44] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019), 'Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental'.

52. Figure 3 illustrates a cycle on how environmental factors (e.g. biodiversity loss and lack of healthy ecosystems) can manifest in environmental risk through the physical risk transmission channel and then have an impact on institutions' balance sheet.[45]

Figure 3 Theoretical example on the ESG cycle: impact of environmental factors through physical risk on the institutions' balance sheet

53. In this example, biodiversity loss impacts the risk profile of an institution's counterparty, through the physical impact of a reduction in agricultural activities and food production. The physical impact transmits onto the balance sheet of an institution exposed to the agricultural sector, increasing its risk profile.

54. Considering the existing definitions of physical risks in the context of climate change, the EBA would extend this to environmental risks, defined as follows: **Physical transmission channels/physical risks are the risks posed by the exposure of institutions to counterparties that may potentially be negatively affected by the physical effects of climate change or other environmental factors, including**:

    a. **acute physical effects, which arise from particular events, especially weather-related events such as storms, floods, fires or heatwaves, that may damage production facilities and disrupt value chains; and**

    b. **chronic physical effects, which arise from longer-term trends, such as temperature changes, rising sea levels, reduced water availability, biodiversity loss and changes in land and soil productivity.**

4.3.4 Transition transmission channels/transition risks

55. Transition risks are the other main transmission channel through which climate change may impact the financial position of the institution's counterparties negatively. Although definitions vary across different sources, transition risks generally refer to the uncertainty

[45] See also a study from DeNederlandsche Bank "Indebted in nature" on the exposure of the financial sector as a result of biodiversity loss, https://www.dnb.nl/en/news/news-and-archive/dnbulletin-2020/dnb389169.jsp.

related to the timing and speed of the process of adjustment towards a low-carbon economy.

56. Such process will be affected, for instance, by the impact of the related policy action on the asset prices of carbon-intensive sectors and/or by physical risks themselves, and includes the risks of potentially disordered mitigation strategies.[4647] In addition, technological changes may, for instance, make existing technologies obsolete or could allow today's comparatively less sustainable activities to become more environmentally friendly in the future. Such technological progress, if materialised, might trigger a repricing of assets that is difficult to foresee. Changes in the preferences and behaviour of consumers, investors and entities may also affect the relevance of ESG factors over time. As an example, a change in the preferences of customers (such as avoidance of investing in non-sustainable assets) may impact institutions' investment product offerings. Some studies suggest that there is a correlation between the age and gender of investors and more sustainable investment and consumption patterns.[48]

57. The NGFS defines transition risks as financial risks which can result from the process of adjustment towards a lower-carbon and more circular economy, prompted, for example, by changes in climate and environmental policy, technology or market sentiment.

58. The NGFS identifies three main categories of transition risk drivers in the context of climate risk:

    a. *Climate-related mitigation policies*, *which could lead to reductions in financial valuations and/or downgrades in credit ratings for companies not compliant with such policies because they no longer earn an economic return on past investment;*

    b. *Technological advances, which could affect the relative pricing of alternative products and reduce the market shares of certain companies, resulting in lower profitability and eventually losses for institutions; and*

    c. *Shift in public sentiment, demand patterns, and preferences and expectations that can affect the economy and the financial system*.[49]

[46] See seminal speech by Carney, Mark (2015), "Breaking the Tragedy of the Horizon – Climate Change and Financial Stability" and ECB Financial Stability Review, May 2019.

[47] See BIS (2020) 'The Green Swan - Central banking and financial stability'.

[48] Morgan Stanley (2016), 'Sustainable Signals: The Individual Investor Perspective': https://www.morganstanley.com/ideas/sustainable-socially-responsible-investing-millennials-drive-growth.

[49] See NGFS "Guide for supervisors –Integrating climate-related and environmental risks into prudential supervision" (May 2020).

59. In the European Commission's 'Guidelines on non-financial reporting: Supplement on reporting climate-related information',[50] **transition risks** (in the context of climate risk) are defined as '*risks to the company that arise from the transition to a low-carbon and climate-resilient economy. They include:*

    a. *Policy risks, for example as a result of energy efficiency requirements, carbon-pricing mechanisms which increase the price of fossil fuels, or policies to encourage sustainable land use.*

    b. *Legal risks, for example the risk of litigation for failing to avoid or minimise adverse impacts on the climate, or failing to adapt to climate change.*

    c. *Technology risks, for example if a technology with a less damaging impact on the climate replaces a technology that is more damaging to the climate.*

    d. *Market risks, for example if the choices of consumers and business customers shift towards products and services that are less damaging to the climate.*

    e. *Reputational risks, for example the difficulty of attracting and retaining customers, employees, business partners and investors if a company has reputation for damaging the climate.'*

60. Another definition has been used by the TCFD[51] in the context of climate risk, which identifies similar risk drivers, however grouped in four different categories: i) policy and legal risk, ii) technology risk, iii) market risk and iv) reputation risk.

61. Legal risks in the context of climate-change − sometimes also referred as liability risks or litigation risks − are often considered as a separate risk category and refer to the "the impacts that could arise tomorrow if parties who have suffered loss or damage from the effects of climate change seek compensation from those they hold responsible".[52] Legal risks are sometimes considered as part of either physical or transition risks,[53] and are, in principle, more likely to impact on institutions that are active in the liability insurance market.[54)]

[50] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019XC0620%2801%29.

[51] See Final Report on Recommendation Task-Force on Climate-Related Disclosures (2017).

[52] See Carney, Mark (2015), "Breaking the Tragedy of the Horizon – Climate Change and Financial Stability."

[53] See NGFS "Guide for Supervisors: Integrating climate-related and environmental risks into prudential supervision" (May 2020), in which potential liabilities to the financial sector can stem from the impact of physical or transition risks.

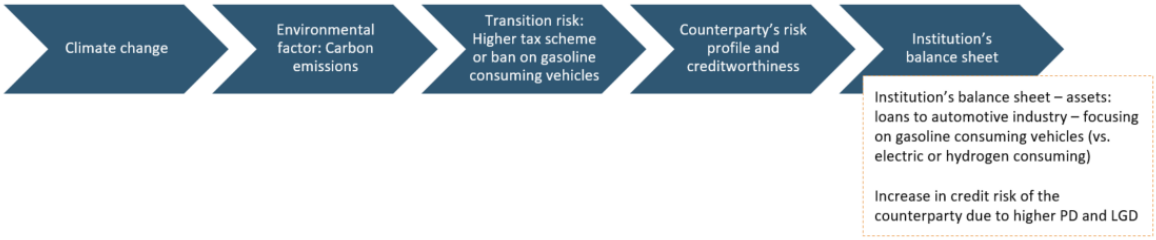
[54] See e.g. Batten, S., Sowerbutts, R. and Tanaka, M., "Let's talk about the weather: the impact of climate change on central banks", Staff Working Paper No 603, Bank of England, May 2016.

62. Considering that legal risks may arise from social and governance factors as much as from environmental ones, they might not fully fit under the definition of transition risks and may be considered as a transmission channel of 'E', 'S' and 'G' risks (see section 4.6).

63. Transition risks can also impact individuals, for example, when they are employed by a carbon-intensive company that fails due to new carbon pricing mechanisms, and sovereigns, for example, when the transition causes mass unemployment and therefore a deterioration of tax income or increased public spending. They can also lower the value of collateral which does not meet the latest environmental standards or market expectations anymore.

64. Figure 4 illustrates that regulatory intervention to tackle carbon emissions can create transition risk for the economic agents, and manifest as the counterparty risk on the institution's balance sheet.

Figure 4 Theoretical example on the ESG cycle: impact of environmental factors through transition risks on the institutions' balance sheet



65. Such transition to a low carbon and climate-resilient economy, as mentioned above, can also provide opportunities for the counterparties –and the institutions providing funding to them – if companies contribute to climate mitigation and adaptation.

66. Similarly to the definition of physical risks, the existing definitions of transition risks are used primarily in the context of climate change. However, it can be easily expanded beyond climate change, e.g. to water stress and biodiversity loss, to cover all aspects of environmental risks (see Box 4).

Box 4: Examples of transition risks driven by environmental factors

In the case of water stress, policy risk bringing in regulatory changes may incentivise re-channelling of capital (and water) from less essential sectors and business activities (such as clothing industry[55]) to more essential sectors and business activities (such as agriculture), affecting ongoing business operations of companies. Similarly, consumer behaviour and preferences as well as technological development may shift towards more water efficient practices.

Biodiversity loss can lead to policy risk when governments introduce measures to counter, for example, deforestation, use of fertilisers[56] or excessive land use, which would then impact the value of businesses relaying on those lands or practices, or strict regulation in agriculture and fisheries affecting the outcome from those activities. Similarly, change in consumer dynamics and technology may shift practices towards more sustainable path ways to safeguard biodiversity.

67. As explained above, legal risks are not fully captured by the main drivers of transition risks, as the related legal losses and costs from litigations or other liabilities may arise also from social and governance factors, not only from environmental ones. For this reason, liability risk is defined in this discussion paper outside of transition risks.

68. Considering the existing definitions and main drivers of transition risks, the following definition, extended to overall environmental risks, is proposed**. Transition transmission channels/transition risks are the risks posed by the exposure of institutions to counterparties that may potentially be negatively affected by the transition to a low-carbon, climate-resilient or environmentally sustainable economy, including:**

    - **climate and environment related policy changes, for example as a result of energy efficiency requirements, carbon-pricing mechanisms that increase the price of fossil fuels, or policies to encourage sustainable use of environmental resources;**

    - **technological changes, for example if a technology with a less damaging impact on the climate or the environment replaces a technology that is more damaging, hence making it obsolete;**

    - **behavioural changes, for example if the choices of consumers and investors shift towards products and services that are more sustainable; or if difficulties to attract and**

[55] 17-20% of industrial water pollution is said to come from textile dyeing and treatment, https://fashiontakesaction.com/facts/

[56] See, for example, Regulation (EU) 2019/1009 laying down rules on the making available on the market of EU fertilising products; this Regulation includes obligatory maximum contaminant levels, the use of defined component material categories and labelling requirements.

retain customers, employees, business partners and investors arise when a counterparty has reputation for damaging the climate and the environment.

4.3.5 The interaction of physical and transition risks

69. Transition and physical risks interact closely with each other and companies and institutions may be subject to the full impact of these risks. The persistent emissions of greenhouse gases without carbon removal technologies in place and the continuation of unsustainable practices in the economy contribute to the very source of physical risks, potentially exacerbating the likelihood of environmental hazards and its socio-economic impacts. As a response to the impact of physical risks, policy makers will likely introduce, where not already in place, mitigation policies and regulation; people's preferences may also change towards more sustainable products and services. As a result, the negative impact of both physical risks and transition risks is more likely to materialise. For example, an institution might be exposed to counterparties that go bankrupt due to the introduction of climate mitigation policies, while at the same time assets held as collateral are damaged during a flood incident.

70. Moreover, a trade-off between physical and transition risks exists, depending on how and when the transition to a sustainable economy takes place. All other things being equal, physical risks gradually decrease over the long run when transition policies are implemented. At the same time, however, abrupt and transition-related changes increase transition risks due to the related disruption that such changes may pose to existing technologies, policies and preferences. The opposite occurs when no action is taken and transition risks are low: the longer the transition to achieve sustainability objectives takes, the more likely it is that physical risks will rise.

71. In addition, depending on their scale, physical and transition risks have the potential to trigger significant impacts on the real economy and the financial system as a whole. These impacts may result from natural disasters and other environmental hazards and from the policies implemented in order to prevent or moderate the deterioration of the environment and climate change. As an illustrative example, continued environmental deterioration will impact the aggregate output levels as well as potential growth rates, as some economic activities become unviable or labour conditions deteriorate due to health issues. This could be the case, for instance, when rising temperatures and changing patterns of precipitation directly impact industries, such as agriculture and fisheries, energy, tourism, and construction among others. The relative adjustment of prices in the economy that will need to take place may create additional disruptive effects and further exacerbate the level of uncertainty, potentially increasing social unrest, as the impact of physical and transition risks is likely to be unevenly distributed across populations. Ultimately, further global warming could impact the solvency of sovereigns whose

economies are heavily dependent on sectors vulnerable to climatic changes, such as agriculture or the tourism sector. While such significant macroeconomic impacts may occur in the more distant future, some impacts are already evident.[57]

Questions:

4. Please provide your views on the proposed definitions of transition risks and physical risks included in section 4.3.

4.4 Social factors and social risks

72. Social factors are related to the rights, well-being and interests of people and communities, which may have an impact on the activities of the institutions' counterparties. Social factors, such as (in)equality, health, inclusiveness, labour relations, and investing in human capital and communities, are increasingly being considered in the business strategies and the operating frameworks of businesses, institutions and their counterparties.

73. The European Commission's Action Plan: Financing Sustainable Growth[58] refers to social considerations as those referring to issues of inequality, inclusiveness, labour relations, investment in human capital and communities.

74. References to a definition of social risks are more difficult to identify. Investors, asset managers or rating agencies refer generally to ESG risks and more specifically to social criteria considered for the 'S'. In general, these criteria involve aspects of society or community, relationships with employees or labour standards, customers, human rights and poverty.

75. Environmental and social risks are closely interrelated (see Box 5). The continuous deterioration of environmental conditions implies heightened social risks, such as when climate-related physical change or water stress affect deprived parts of a geographical area and already disadvantaged populations. Environmental degradation can exacerbate migration, social and political unrest in the most affected regions, with potentially more devastating repercussions and contagion across the globe.[59] According to the Internal

[57] See, e.g., IMF's 'Climate change and financial risk" (December 2019) https://www.imf.org/external/pubs/ft/fandd/2019/12/pdf/climate-change-central-banks-and-financial-risk-grippa.pdf and ECB's Climate Change and Financial Stability (May 2019) https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart201905_1~47cf778cc1.en.html

[58] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0097&from=EN

[59] See McKinseyGlobal Institute's Climate Risk and Response – Physical hazards and socioeconomic impacts' (January 2020)

Displacement Monitoring Centre,[60] between 2008 and 2018, natural disasters displaced as many as 265 million people. The World Bank projects that by 2050, lower water availability and crop productivity combined with the impact of other physical risks like storms or rising sea levels may lead 140 million people to migrate within their countries in Latin America, South Asia, and sub-Saharan Africa.[61] While global warming should not be held solely responsible for migration decisions, it may amplify existing motivations such as income inequality, lack of human rights or civil wars. Another example of the interconnection between environmental and social risks is the potential impact that envisaged technological and regulatory changes to combat climate change may have on labour markets, for instance, amplifying social risks, particularly for (non-green) industries where low-skilled labour is prominent, e.g., the coal mining industry. The timing for the potential manifestation of these social risks is uncertain.

Box 5: Examples of the social impacts of the COVID-19 pandemic

The outbreak of the COVID-19 pandemic provides a good example of the interaction between environmental, social and governance factors. Several commentators have highlighted the importance of biodiversity loss in the origin and spread of new diseases with several health and social impacts.[62] Several studies have been also published estimating the reduction in CO_2 emissions during the COVID-19 confinement,[63] also driven by reduced use of transport means. From a social perspective, the widespread containment measures introduced to limit the spread of the disease have severely impacted our way of life. In addition to the profound impact of the economic disruption and the associated unemployment, the term "social distancing" suddenly became well known to billions of people, who were asked to stay at home, refrain from social contacts, and observe strict rules for non-avoidable social interaction. Shortly after the outbreak, several studies have highlighted the social consequences of such containment measures. The studies focused, for instance, on the impact of the pandemic on low-income and high-income individuals, [64] the effect on social norms and

[60] Sylvain Ponserre and Justin Ginnetti, Disaster displacement: A global review, 2008–2018, Internal Displacement Monitoring Centre, May 2019.

[61] Kanta Kumari Rigaud et al., Groundswell: Preparing for internal climate migration, World Bank, March 2018.

[62] EU Commission, "Consultation on the Renewed Sustainable Finance Strategy", April 2020, Introductory Part; speech of German Ministry for the Environment, Svenja Schulze, on the connections between biodiversity loss and spread of epidemics: https://www.bmu.de/rede/rede-von-svenja-schulze-zu-biodiversitaet-und-pandemie/.

[63] Le Quéré, C., Jackson, R.B., Jones, M.W. et al. Temporary reduction in daily global CO_2 emissions during the COVID-19 forced confinement. Nat. Clim. Chang. (2020). https://doi.org/10.1038/s41558-020-0797-x

[64] COVID: Not a great equalizer, Galasso, V, Covid Economics 19, 18 May 2020: 241-255

accepted behaviours,[65] as well as on the implication of the lockdown measures on gender balances.[66] One of the noticeable observed consequences of COVID-19 is the disproportionate impact on minority groups.[67] The management of the COVID-19 crisis has also brought to the fore questions related to the future of democracy and human rights and freedoms (e.g., education, reunion) as well as on the impact of potentially privacy-intrusive measures (e.g. geo tracking, facial recognition). Moreover, the COVID-19 crisis has revealed important differences across countries reflecting inter alia different levels of economic development (e.g. ability of people to work from home), different cultural patterns (e.g. relative importance of social gatherings) or different common values (e.g. tolerance and compliance with new, relatively stringent, norms), which have affected the governments' ability to introduce or not measures to manage the crisis. The financial impact of the pandemic has already been visible on the balance sheets of institutions in the first quarter results of 2020. The risk driver of the impact has been widely associated with the increased credit risk of the counterparties, which suffered from the suppression of economic activity during the confinement and higher levels of unemployment. However, even after the lifting of the confinement measures, several companies continued to suffer from turnover below average, pointing to the role of social dynamics on economic behaviours. While a precise quantification of the financial impact of the social dynamics is still difficult, there are some areas where the impact for institutions of social distancing measures can be better assessed. For the purpose of this discussion paper, we focus on the effect that distancing measures had on workforce and process organisation, as these have more directly measurable impacts.

The sudden introduction of social distancing measures forced companies and businesses to either adjust the organisation of their workforce and processes or shut down. Sometimes overnight, a significant proportion of people started smart working, with also the most reluctant companies being forced to adjust. Months of mandatory "work-from-home" provided a natural experiment to assess not only the impacts on productivity, but also on well-being, work-life balance and diversity. A number of companies have announced long term plan to shift a significant share of their employees to long term smart working.[68] Why so?

A recent publication[69] (Angelici, M.; Profeta, P. (2020)) finds causal evidence that the flexibility of smart-working increases the productivity of workers and improves their well-being and

[65] Goldberg, Matthew & Gustafson, Abel & Maibach, Edward & van der Linden, Sander & Ballew, Matthew & Bergquist, Parrish & Kotcher, John & Marlon, Jennifer & Rosenthal, Seth & Leiserowitz, Anthony. (2020). Social norms motivate COVID-19 preventive behaviors. 10.31234/osf.io/9whp4.

[66] Titan Alon & Matthias Doepke & Jane Olmstead-Rumsey & Michèle Tertilt, 2020. "The Impact of COVID-19 on Gender Equality," CRC TR 224 Discussion Paper Series crctr224_2020_163, University of Bonn and University of Mannheim, Germany.

[67] https://www.globalcitizen.org/en/content/covid-19-impact-people-of-color-un-rights-chief/

[68] Bloomberg. ING Offers Permanent Work-From-Home Option in Spain, Charlie Devereux, June 10, 2020.

[69] Angelici, M.; Profeta, P. (2020): Smart-Working: Work Flexibility without Constraints, CESifo Working Paper, No. 8165, Center for Economic Studies and ifo Institute (CESifo), Munich

work-life balance. The research shows that effects are stronger for women. However, it can be also argued that benefits for companies do not stop here. In the short term, companies will save on benefits connected with the physical presence of employees (e.g. discount on canteens, coffee and beverages, electricity consumptions). In the long term, structural changes to the organisation of office spaces might result in savings on rents, office equipment and logistics, or in higher costs to rearrange office spaces in compliances with social distancing rules. Such social changes are relevant to understand for the financial industry, under multiple dimensions. More immediately, the move to smart working might impact the demand for office spaces and commercial real estate (CRE) in general. If such drop in demand happens, it is likely to affect prices and, for institutions, the value of their collaterals.[70] A further negative is the second round effects that could materialise on the construction, office furniture and catering sectors, which might see a reduction in demand for their products. The increase of productivity for companies that will successfully migrate to smart working, coupled with lower costs, has the potential to unlock additional profits and investments, which institutions might want to assess early on in order to start fruitful business relationships. Conversely, the reorganisation of office spaces to comply with social distancing measures might have the opposite effect, with an increase in demand for office spaces. This potential increase in demand also applies to other activities, for instance for companies in the service sector, which are likely to need more space for common areas.

Another side effect of the COVID-19 pandemic is the necessary reorganisation of work processes to comply with distancing measures. Koren, M. and Peto, R. (2020) found, in a calibrated model, that social distancing policy with a cap on interactions per worker such that the total number of interactions drops by half nationwide in US, is compensated by a 12.2% wage subsidy. This paper provides a measure of the drop in productivity in sectors where social interaction is not avoidable (e.g. retail, accommodation, entertainment). The implications of such changes for institutions are relevant. Institutions might want to assess what are the impacts on their clients, in order to decouple the short term losses due to the lockdown from the long term impacts due to the changes in processes. Such assessment might help to better understand the investment strategies of the clients, and their viability under different social distancing scenarios. Similarly, by identifying sectors that will most likely be affected by the reorganisation of processes, institutions can estimate the changes in employment levels across the economy, and include such information in the preparation of their strategies.

In conclusion, this crisis provides a learning opportunity to better understand and realise the extent to which – as well as how quickly and in which form – ESG risks may represent a vulnerability threat for the financial system.

[70] According to Green Street Advisors (April 2020), “REITs amid a pandemic”, unlevered enterprise value of real estate assets had fallen 25 percent or more in most sectors.

76. On top of the social risks emerging from climate-related and environmental hazards, a significant number of changes in policies and market sentiments can be linked to the social transformation towards a more inclusive, equitable society. For instance, labour rights – which relate to a wide range of core values that should be warranted to each individual, including, amongst others, working hours, minimum wage, health and safety in the workplace –are an important social factor that may impact the institutions' counterparties. This is, for example, the case when a counterparty operates a business in a country with poor labour rights and protection that can potentially affect the financial position of such counterparty. The impact on institutions' counterparties is more easily detected when looking at changes in market sentiment, reputation and policy. Institutions' counterparties not respecting labour rights might be affected by social changes demanding new policies to improve, for instance, safer and healthier conditions at the workplace. Counterparties that apply lower standard of labour rights (or other social standards) may face increased costs of compliance in the future, with potential impacts on their financial position.[71] However, these examples do not seem to justify the definition of physical and transition risks as transmission channels of risks stemming from social factors. Compared to environmental issues, the evolution of social norms, preferences and policies is more difficult to foresee.[72]

77. Finally, a number of policy actions have been taken in response to social movements demanding equal pay or equal representation as well as workforce diversity. Such social changes can constitute a risk for companies that are not prepared to adapt, for instance because of a poor corporate culture. These companies might become the target of complaints and be affected by lawsuits, market pressure and/or reputational damages. In addition, research finds that there is a strong positive correlation between the representation of women in leadership positions and the financial performance of companies.[73] This means, in turn, that an over-representation of one gender in management positions may put a company at a relatively higher risk.

78. Figure 5 illustrates how counterparties' violation of social rules can lead to, e.g., legal and reputational risks for themselves and, in turn, affect the balance sheets of the institutions financing these counterparties' business activities. In this example, social factors such as lack of diversity/discrimination, violation of labour rights and human rights can create

[71] This is, for instance, the case of many companies operating in the so-called "gig-economy". Since 2014, when social pressure started to build on the operating model of such companies, workers arranged to raise awareness on their working conditions (e.g. self-employed status). Such claims resulted in vibrant academic and political debates. In the European Union, such debates ultimately led to the Directive 2019/1152 on Transparent and Predictable Working Conditions. Once transposed into national law, the Directive will largely constrain companies of the "gig-economy" from using certain contractual relationships, e.g. limiting the use of self-employed workers.

[72] For a set of most essential social and in particular labour norms, see Art. 18 of Regulation (EU) 2020/852 (Taxonomy Regulation).

[73] McKinsey, 'Women Matter - Time to accelerate'. "Gender diversity on European banks' Boards of Directors" (by Ricardo Gimeno, Ruth Mateos de Cabo and María J. Nieto (2012-08), Journal of Business Ethics 109 (2), 145-162.

counterparty credit risk for institutions. At a later stage, if the institutions involved in these activities do not take necessary actions, they may risk facing reputational damage themselves, for instance, when consumers, sensitive to such violations decide to change their institutions.

Figure 5 Theoretical example on the ESG cycle: impact of social factors on the institutions' balance sheet

79. For the purpose of this discussion paper, **"Social risks are the risks posed by the exposure of institutions to counterparties that may potentially be negatively affected by social factors."**

4.5 Governance factors and governance risks

80. Governance factors cover governance practices of the institutions' counterparties, including the inclusion of ESG factors in policies and procedures under the governance of the counterparties.

81. Similar to social risks, identifying the impact of governance factors through physical and transition risk channels is not conceptually straightforward.

82. However, governance factors can lead to governance risks in many different ways. For instance, a poor code of conduct or a lack of action on anti-money laundering in a given company can typically hamper its (financial and non-financial) resources, thus affecting its potential to perform and generate returns. Moreover, if such poor code of conduct becomes public, customers and investors can lose trust and faith in the company, potentially leading to penalties and legal fees and affecting its ability to conduct business over the longer-term.

83. Governance plays also a fundamental role in ensuring the inclusion of environmental and social considerations by a given counterparty. Recognition of the potential impact of climate and environmental changes and related physical, transition and liability risks is understood as a sign of good governance. To the contrary, neglecting these potential impacts in the strategic planning of a counterparty may create additional governance risks.

84. Similar interlinkages exist with the inclusion of social considerations into the governance of a counterparty. Corporate culture respecting equality, inclusiveness, fair labour standards and support of communities are signs of a good governance. On the other hand, negative conditions for employees, unfair treatment of customers or low interest in contribution to society may bring additional governance risks (see Box 6).

Box 6: Example of governance risks

Business ethics as a governance factor of counterparties could become a risk for institutions. For instance, a counterparty involved in bribing scandals may be affected by market pressure and suffer large reputational damage.[74][75]

There can also be a correlation between poor environmental performance and poor governance as evidenced by the Diesel emissions scandal. A small number of car manufacturers had declared for years lower-than-real nitrogen oxide emissions to the licensing authorities and their customers. The low values were made possible by a setup of the engines that could distinguish between test mode and normal operations. In test mode, the engines were electronically manipulated in order to only produce emissions below accepted thresholds. The scandal was disclosed by a Notice of Violation by the US Environmental Protection Agency and costed the German car manufacturer Volkswagen USD2.8bn in fines and about USD17bn in damages in the US alone.[76] The Diesel emissions scandal reflects the interrelation between environmental and governance factors and the consequences of poor management of environmental risks. However, the practice of deceiving authorities, customers and the public for years also revealed alarming shortcomings in the internal control structures of the involved car manufacturers, a culture of non-compliance at the management level as well as bad company reporting.

85. For the purpose of this discussion paper, **"Governance risks are the risks posed by the exposure of institutions to counterparties that may potentially be negatively affected by governance factors".**

[74] For example, construction company Odebrecht, which admitted to spending nearly USD 800 million to bribe officials across Latin America, filed for bankruptcy.

[75] Italian company Finmeccanica, involved in a controversial bribing scandal in India, is being threatened of being blacklisted by the Indian government.

[76] https://www.manager-magazin.de/unternehmen/artikel/volkswagen-us-justiz-ermittelt-gegen-sechs-vw-manager-a-1129620-2.html.

Questions:

5. Please provide your views on the proposed definitions of social risks and governance risks. As an institution, to which extent is the on-going COVID-19 crisis having an impact on your approach to ESG factors and ESG risks?

4.5 Liability transmission channels/liability risks

86. Another transmission channel of ESG risks that is often stated in discussions on ESG factors is liability risk. Liability risk relates to the risks stemming from people or businesses seeking compensation for losses they may have incurred due to ESG factors, e.g. when institutions' counterparties are held accountable for the negative impact through their activities on the environment, the society and their governance factors.

87. Sometimes, liability risk is also considered as a subset of physical and transition risks.[77] Yet, liability risks of institutions' counterparties may arise not only from environmental and climate-related risks, but also from social and governance factors. Changes in preferences may imply that business activities and forms of conducts considered acceptable today may be challenged in the future based on, for instance, a principal-agent or manufacturer-consumer asymmetry of information regarding possible environmental risks, claims of failure to appropriately dealing with climate adaptation and mitigation measures or litigation costs following complaints of discriminatory behaviour.[78]

88. Liability risks come from people or businesses seeking compensation for losses they may have suffered from the physical or transition risks from climate change. These are likely to fall under three different categories: failure to mitigate; failure to adapt; failure to disclose. This risk can be transferred by means of liability insurance, such as Directors & Officers and Professional Indemnity insurance.[79] In light of available evidence about the impact of climate change on the frequency and severity of extreme weather and climate-related events, there may be increasing issues relating to availability and affordability of cover for physical or liability risks of institutions. A lack of affordable insurance may lead to the

[77] See NGFS "Guide for supervisors –Integrating climate-related and environmental risks into prudential supervision" (May 2020).

[78] A prominent historical example of a liability risk is the litigation case against the USA tobacco industry on social and governance accounts. It culminated in 1998 in the Tobacco Master Settlement Agreement that obliged the original participating manufacturers to pay a minimum of USD206 billion over the first 25 years of the agreement.

79 See EIOPA's Opinion on Sustainability in Solvency II: https://www.eiopa.europa.eu/sites/default/files/publications/opinions/2019-09-30_opinionsustainabilitywithinsolvencyii.pdf

potential depreciation of assets and overall contraction of business opportunities and economic activities. Such protection gap may also have potential systemic effect if a lack of coverage is combined with high exposures compared to the size of the economy and public revenues as well as high levels of public debt.[80]

89. For institutions, these risks would have a straightforward effect, through their existing exposures to corporations, households, and countries, or a more complex effect, affecting their ability to conduct financial activities more broadly. Impacts on the risk profile of institutions would be then reflected in credit, market and/or operational risks (including legal risk or litigation risk). The interconnectedness in the financial sector and feedback loops between the real and financial economy can exacerbate the impact of these risks, leading potentially to financial stability concerns (see Box 7).

Box 7: Example of economic losses from ESG risks

Overall economic losses from natural catastrophes – including uninsured losses – amounted to USD330 billion in 2017, USD160 billion in 2018 and USD150 billion in 2019; each of those numbers higher than the inflation-adjusted overall loss average over the last 30 years of USD140 billion.[81] According to another estimate, the devastating wildfires in Australia in late 2019 and the beginning of 2020 caused economic damages of about USD110 billion.[82] This estimate includes, more holistically, damages to homes and businesses as well as their activities, cars, job and wage losses, farm and crop losses, infrastructure damage, auxiliary business losses, school closures and the costs of power outages to businesses and individuals as well as destruction of wildlife.

90. For the purpose of this discussion paper, **"Liability transmission channels/liability risks are the risks posed by the exposure of institutions to counterparties that may potentially be held accountable for the negatively impact through their activities on the environment, the society and their governance factors."**

Questions:

6. Do you agree with the description of liability transmission channels/liability risks, including the consideration that liability risks may also arise from social and governance factors? If not, please explain why.
7. Do the specificities of investment firms compared to credit institutions justify the elaboration of different definitions, or are the proposed definitions included in chapter 4 also applicable to them (in particular the perspective of counterparties)? Please elaborate on the potential specificities of investment firms in relation to ESG risks and on how these specificities, if any, could be reflected in this paper.

[80] https://www.eiopa.europa.eu/content/discussion-paper-protection-gap-natural-catastrophes.

[81] MunichRe, Natural catastrophe review 2017, 2018 and 2019.

[82] https://www.accuweather.com/en/business/australia-wildfire-economic-damages-and-losses-to-reach-110-billion/657235.

5. Quantitative and qualitative indicators, metrics and methods to assess ESG risks

91. In order to address ESG risks in a consistent way, it is essential not only to agree on common definitions of ESG factors and ESG risks but also on the qualitative and quantitative indicators and methodological tools to assess their financial impact. Commonly agreed ESG indicators and methods are important to support 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.

92. Whilst many institutions and supervisors have started incorporating ESG factors into their respective frameworks, the practice of assessing ESG risks by institutions and supervisors is still at early stages. Several institutions and competent authorities have started developing in-house approaches for assessing ESG risks, are working with data on ESG risks provided by dedicated ESG data providers, or are partnering with public initiatives, notably the NGFS, think tanks and academics.

93. There are a number of challenges for the integration of ESG risks in the institutions' management processes as well as into their supervision (see Figure 6). Those most often cited include:

    a. **Level of uncertainty**: The timing and effect of economic policies and related regulatory interventions, whose specific implementation is largely within the responsibility of the EU Member States, is hard to predict as it is the impact of physical risks. For example, the impacts of the emissions reduction trajectory on the future financial performance or market value of corporate assets as well as on the creditworthiness of households remain an open question. Similarly, depending on the measures adopted to contain the ongoing deterioration of environmental conditions and its impacts, a range of scenarios with very different economic and social implications is conceivable.

    b. **Insufficient data** (the inconsistency and the lack of data to identify and measure ESG risks): The scarcity of relevant, comparable, reliable and user-friendly data, is another important challenge limiting the understanding of the potential impacts of ESG risks on

the performance of financial assets. Even where data like CO_2 emissions, waste production or adherence to International Labour Organisation (ILO) conventions of a counterparty are available, it remains challenging to translate these ESG factors into expectations for the financial performance of the counterparty. The lacking reliability and comparability of the data also complicates the provision of comprehensive ESG disclosures. In this regard, further progress in terms of non-financial reporting is welcome (see Box 8)

c. **Methodological constraints**: Most of the risk management models are based on the use of historical data (i.e. historical experience) to estimate current or future risks. ESG factors, like climate change or others, are frequently not reflected in historical data. For example, it is in some cases difficult to take ESG risks into account when calculating risk parameters such as the probability of default (PD) of borrowers or loss given default (LGD), using the existing methodologies (see section 5.1.2). Another factor is understanding and translation of ESG risks into prudential risks or impact on sustainability of business models, including not harmonised definition of sustainability-oriented activities.

d. **Time-horizon mismatch** (between 'traditional' management tools and the timeframe for the materialisation of ESG risks): Especially the environmental factors often develop their full impact over decades. As an example, climate scenarios usually analyse possible climate pathways until the end of the 21st century. The transition to a carbon-neutral economy is scheduled to happen gradually over the next 30 years. By contrast, the strategic planning horizons of institutions and risk management frameworks are traditionally much shorter, largely reflecting shareholders pressures or macroeconomic factors.[83]

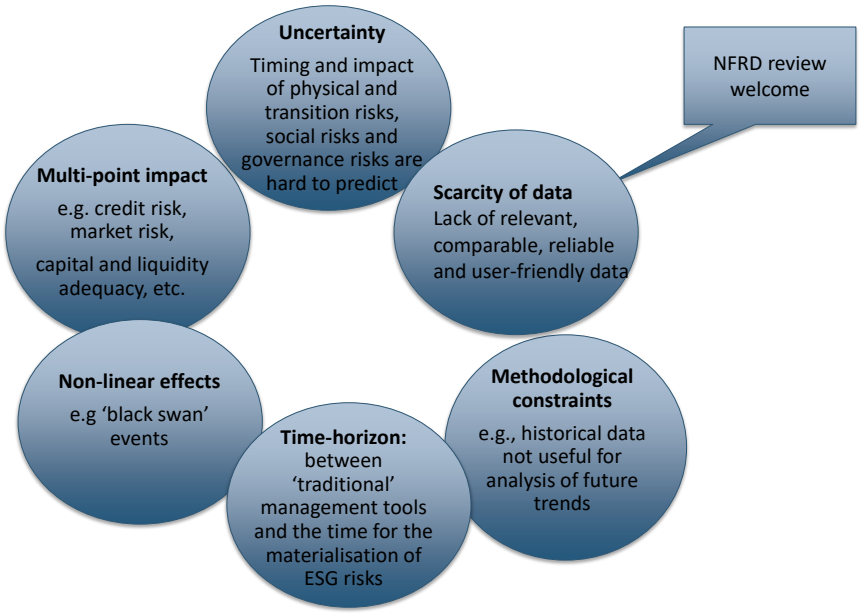
e. **Multi-point impact of ESG risks on institutions**: Given that ESG risks can drive different prudential risk categories, they can impact the financial position of institutions in multiple ways. For instance, the physical deterioration of areas in which some economic activities (e.g. agriculture, construction) operate may lead to higher credit losses, if an institution is exposed to those activities via loans or bonds,[84] or losses in market value, where the exposure is in the form of financial instruments. The necessary and politically agreed transition towards a more sustainable economy in general, and a carbon-neutral economy in particular, can also negatively affect existing business

[83] See EBA's report on undue short-term pressure from the financial sector on corporations.

[84] Barclays & acclimatise, „Credit risk impacts of a changing climate", https://www.longfinance.net/media/documents/d1.pdf.

models.[85] Credit and market losses translate into impacts on the capital adequacy and, thus, prudential soundness of an institution. Moreover, when credit agencies include ESG risks, the credit ratings of vulnerable corporates could be downgraded[86] resulting in higher risk weights of affected exposures under the standardised approach. In addition, when ESG risks impair the valuation of collateral, this can increase the LGD. ESG risks can also cause an outflow of capital, for example, after a natural catastrophe.[87] With regard to the costs of capital and funding, investors and depositors are likely to discriminate increasingly against institutions that disregard the negative effects of their activities on ESG factors.

Figure 6 Challenges of incorporating ESG risks



f. **Non-linearity**: Most of the ESG risks, especially those related to climate risk, are non-linear. This means that, for example, when (detrimental) events, e.g. increase in local or global temperature occur, their impact is greater in relation to the instantaneous magnitude of the event itself and over time.

[85] For example, Germany introduced a national emissions trading scheme on heating and motor fuels with a fixed CO_2 price starting at 25 €/tCO_2 in 2021 and gradually increasing to 55 €/tCO_2 in 2025, followed by a market mechanism: https://www.cleanenergywire.org/factsheets/germanys-planned-carbon-pricing-system-transport-and-buildings.

[86] UN PRI (2017-19), „ESG, credit risk and ratings, parts 1-3", see in particular "part 3 – from disconnects to action areas", section on "CRA examples".

[87] Brei, M, Mohan, P, Strobl, E (2019), "The Impact of Natural Disasters on the Banking Sector: Evidence from Hurricane Strikes in the Caribbean".

Box 8: Non-financial reporting

Non-financial reporting is currently one of the most useful sources of information in terms of estimating the ESG-performance of reporting companies. In order to strengthen the current non-financial reporting framework, including potential further alignments with some international standards, enhanced comparability and granularity of reported data and potential, proportionate reporting obligations for SMEs, the Commission initiated a public consultation on the revision of the Non-Financial Reporting Directive (NFRD) in February 2020.

94. The Second Annual Global Survey of Climate Risk Management at Financial Firms conducted by GARP found that the vast majority of institutions believes climate risk is either only partially included in pricing or even completely omitted.[88] The publications of the ECB's draft supervisory expectations relating to risk management and disclosure of climate related and environmental risks in May 2020,[89] the NGFS' 'Status Report on Financial Institutions – Experiences from working with green, non-green and brown financial assets and a potential risk differential'[90] and the EBA Staff Paper on ESG Market Practices[91], further highlight the importance and urgency of enhancing the tools and methods for assessing and measuring ESG risks.

95. In this section, specific aspects relevant for the assessment by institutions and supervisors of ESG risks are presented. Section 3 focuses on two aspects of the risk management framework, namely the (i) *identification* and (ii) *evaluation* of ESG risks, as needed for the *incorporation* of these risks into the institutions' decision-making (see Figure 7). Section 4 will elaborate more on the element of action. Specifically, the three elements can be depicted as follows:

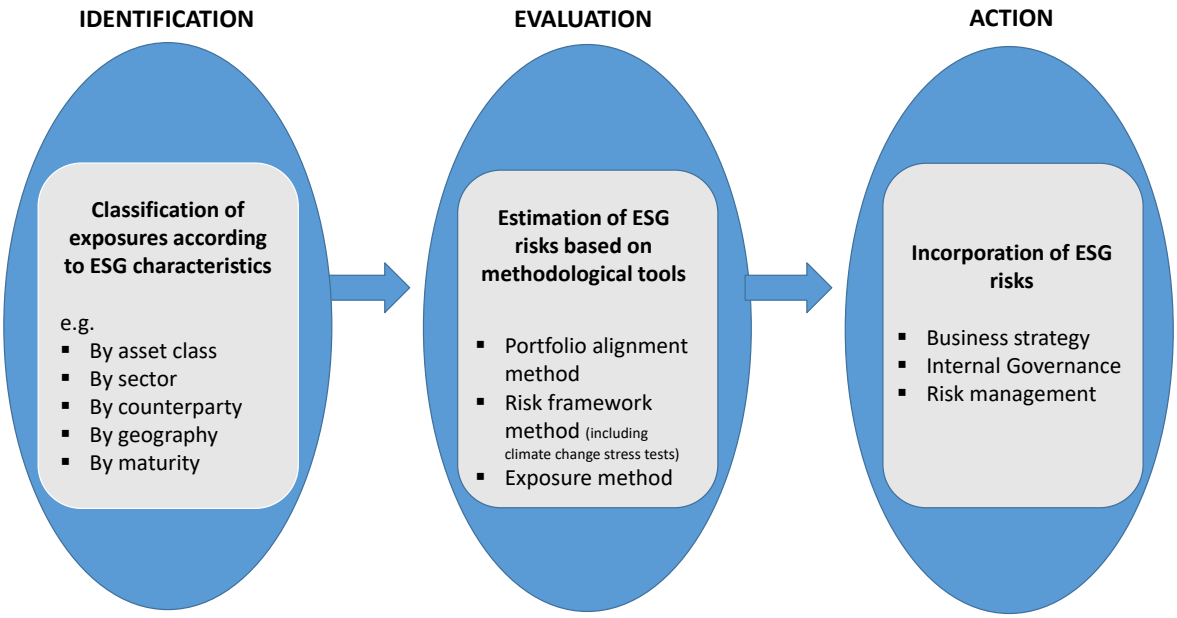
88 GARP's Second Annual Global Survey of Climate Risk Management at Financial Firms.

89 ECB Consultation paper May 2020: Guide on climate-related and environmental risks - Supervisory expectations relating to risk management and disclosure.

90 https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf

91 EBA Staff Paper No. 6 – Sustainable Finance: ESG Market Practices (January 2020).

Figure 7 Comprehensive approach to the assessment of ESG risks



a. **Identification**: This implies classifying assets according to their ESG characteristics in order to support the identification of ESG risks based on specific qualitative and quantitative indicators. This can be done, for example, through the categorisation of exposures (if applicable combined) across asset classes, sectors, counterparties, geographies or on the basis of their length of maturity or position in the life cycle of the asset. For instance, a *geographic* classification would help to identify the proportion of assets particularly vulnerable to the impact of physical risks in the form of higher sea-levels, droughts or other climate-related hazards in given regions, while a *sector* classification could be used to enhance the understanding of the share of exposures vulnerable to transition risks, for instance, in the form of regulatory changes and technological progress affecting those specific sectors.[92] This classification process allows to identify the main potential drivers of ESG risks, consistent with the significance of the different ESG characteristics, which then justify a more granular analysis on the most relevant categories (e.g. a given geography, sector), if needed.

b. **Evaluation**: Once exposures have been classified, methodological tools would need to be applied and possibly combined to assess the potential impact of ESG risks on

[92] An example of this regulatory changes is in the transport sector, with Regulation (EU) 2019/631 introducing CO_2 emission performance standards for new passenger cars and new vans for 2025 and 2030 as well as a mechanism to incentivise the uptake of zero- and low-emission vehicles, in a technology-neutral way.

the institution's 'portfolios'. Given that methodologies to quantify ESG risks are evolving, a dynamic, flexible approach would be needed. For instance, some methodologies could fit well for the evaluation of ESG risks in exposures that are potentially vulnerable to misalignment with sustainable goals, like in the case of sovereign and public debt held by countries or regions that fail to comply with the Paris Agreement goals[93], while other methods may be needed to evaluate ESG risks stemming from the specific ESG-related features of a given counterparty (e.g. the labour code applied by a given company or the level of corruption in a given country).

96. The natural outcome of the assessment of ESG risks would be a deeper understanding of the financial vulnerability of the institution to ESG risks. This would support the incorporation of ESG risks into risk management, through the adoption of a business strategy and risk management approach that supports the monitoring and control of ESG risks, including sustainability targets and limits as well as changes to the organisational set-up of the institution, when appropriate.[94]

97. Although the steps described above are clearly distinct, in order to support an adequate assessment of ESG risks, it is important to establish formal feedback loops between them, inter alia to detect any potential errors or inconsistencies in the classification cycle and/or room for improvement (e.g. more granularity) in terms of the data collection and documentation processes as well as on the methodologies applied.

98. While ESG risks materialise through their impact on prudential risk categories, it is important that institutions and supervisors are able to distinguish and form a view on the relevance of ESG risks. Like in any risk assessment, a risk-based approach that takes into account the likelihood and the severity of the materialisation of ESG risks should be followed. The materiality of ESG risks will depend on the ESG characteristics of the different exposures, since not all financing activities are likely to be equally affected by them.

Questions:

12. Do you agree with the sequential steps identified in this discussion paper for the incorporation of ESG risks in institutions' management practices? If not, please explain why.

[93] For instance, in November 2019 Sveriges Riksbank announced that consideration was being given to sustainability aspects when investing in the foreign exchange reserves and that sales of bond issued by certain jurisdictions (i.e., the Canadian province of Alberta and the Australian states of Queensland and Western Australia) had taken place on the basis of their relatively poor climate-related record.

[94] These aspects will be further discussed in chapter 6.

5.1. Quantitative and qualitative indicators for the identification of ESG risks

99. Notwithstanding the challenges, in recent years increasing efforts have been made to develop indicators that help to classify exposures and capture ESG risks in one way or another. As a result, some ESG indicators, particularly those applicable to climate-related and environmental factors, are well-known and potentially fairly simple to calculate and apply. For instance, in the context of climate change, indicators for the production of greenhouse gas emissions are well-defined and can be measured, reported and verified with a high level of accuracy based on existing standards. Specifically, the ISO 14064-1:2018 standard applies a GHG Protocol methodology.[95] In addition, the European Commission's Recommendation 2013/179 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations[96] provides further guidance on the use of environmental footprint methods.

100. At the European level, the European Commission's 'Guidelines on non-financial reporting: Supplement on reporting climate-related information'[97] from June 2019, which integrate the recommendations of the Financial Stability Board's TCFD, provide a starting-point for some climate-related indicators. Moreover, the EU Taxonomy Regulation classifies environmentally sustainable economic activities based on uniform criteria. As established by the European Parliament and the Council in December 2019, for an economic activity to be Taxonomy-aligned, the activity should be also carried out "in alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation's ('ILO') declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights".[98][99]

101. The use of ESG indicators has been supported by the development of **taxonomies,** and **standards/principles.** They are often provided by third parties, such as international institutions, Non-Governmental Organisations (NGOs), rating agencies and data vendors. Specifically,

    a. ESG **taxonomies** classify different elements within a given set (e.g. economic activities, social practices or conventions), defining them and linking them to

[95] https://ghgprotocol.org/

[96] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0179&from=EN

[97] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XC0620(01)&from=EN

[98] https://data.consilium.europa.eu/doc/document/ST-14970-2019-ADD-1/en/pdf

[99] The content of the principles included of the taxonomy, notably the 'do not significant harm' principle, are being further elaborated by the Joint Committee of the European Supervisory Authorities as part of their mandates under Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial services sector.

different categories based on certain criteria. By doing so, taxonomies can allow to discriminate between, e.g., assets, counterparties and economic activities, according to their ESG characteristics. The EU Taxonomy provides a starting point for the uniform identification and classification of economic activities that are conducive to a low-carbon, resilient and resource-efficient economy. The Taxonomy Regulation provides a harmonised set of criteria to identify environmentally sustainable economic activities, including enabling and transition activities (see Box 9). An explicit objective behind the establishment of the EU Taxonomy is to support the reorientation of capital flows towards sustainable investments. This objective is in line with the EU Commission's first Sustainable Finance Action Plan, and Art. 2(1)(c) of the Paris Agreement.

Box 9: The EU Taxonomy Regulation

According to Article 3 of the Taxonomy Regulation (EU) 2020/852), an economic activity qualifies as environmentally sustainable where it contributes substantially to one or more of the predefined environmental objectives, does not significantly harm any of the (other) environmental objectives, is carried out in compliance with certain minimum safeguards (e.g., OECD Guidelines on Multinational Enterprises and the UN Guiding Principles on Business and Human Rights), and complies with all technical screening criteria that will be specified in delegated legislation.

The six environmental objectives covered by the Taxonomy Regulation are (1) climate change mitigation, (2) climate change adaptation, (3) sustainable use and protection of water and marine resources, (4) transition to a circular economy, (5) pollution prevention and control, and (6) protection and restoration of biodiversity and ecosystems.

On the one hand, the Taxonomy encompasses economic activities that make a substantial contribution to one of those environmental objectives based on their own performance, i.e. straightforward sustainable activities. On the other hand, the Taxonomy also recognises so-called “enabling activities”. These are the provision of products or services to other economic activities which then make a substantial contribution, e.g. the production of parts for a carbon-neutral power plant.

Beyond those categories and only within the sphere of climate change mitigation, the Taxonomy further accommodates certain transition-friendly activities which are not fully sustainable, but currently lack a technologically and economically feasible low-carbon alternative. Moreover, the financing of improvement measures (capex and, if relevant, opex) for activities that are not yet sustainable can be counted as Taxonomy-aligned, if the expenditures are part of an implementation plan to meet the relevant activity threshold over a defined time period.

In this context, the Commission has been mandated to develop granular and calibrated technical screening criteria for the different economic activities on the basis of technical input from a multi-stakeholder platform on sustainable finance.[100] Delegated acts containing technical screening criteria will be developed in two phases: The first technical screening criteria, for activities which substantially contribute to climate change mitigation or adaptation, will be adopted by the end of 2020 and enter into application by the end of 2021. The second set of technical screening criteria, which cover economic activities substantially contributing to the other four environmental objectives, will be adopted by end 2021 and enter into application by end 2022.

The EU Taxonomy does not directly apply to the core business of institutions (see Art. 1(2)(b) of Regulation (EU) 2020/852), i.e. their lending activities. Further, institutions only need to report on the alignment of their activities with the Taxonomy if they are required to publish a non-financial statement or consolidated non-financial statement according to Art. 19a or Art. 29a of Directive 2013/34/EU of the European Parliament and of the Council (68), respectively.

The Taxonomy is also activity-centred: Investors need to assess to which extent a company's aggregated activities (based on, e.g., turnover or capital expenditure) are aligned with the Taxonomy. This may be based on contributions of individual activities to the turnover of a company or its capital expenditure.[101]

b. Other ESG indicators are based on **standards** that provide certain, generally well-accepted, measures or norms that allow comparative evaluations. For instance, the International Organisation for Standardization (ISO), involving a global network of 165 national standards bodies (single body in a given country), develops voluntary, consensus-based standards that are internationally recognised and that, following an independent validation and verification, provide accreditations to public and private organisations. These market-relevant certifications are sometimes mandatory in some countries and include standards, inter alia, in the field of climate change,[102] environmental management, energy management, social responsibility, occupational health and safety and anti-bribery management systems. Therefore, counterparties that can show compliance with such standards

[100] See Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088.

[101] For example, where a company conducts only one sustainable activity that contributes 30% to its total turnover, the company itself can be counted as 30% aligned with the Taxonomy. See Technical Expert Group on Sustainable Finance (2020), "Final Report", Table 3.

[102] The standards in climate change include a framework with principles and requirements for assessing and reporting investments and financing activities related to climate change, which is currently under development. See https://www.iso.org/standard/72433.html and https://2degrees-investing.org/wp-content/uploads/2017/11/ISO14097_scoping_report.pdf

may be, in principle, considered as aiming at sustainable investments. On the opposite end, some providers focus on violations of global norms or on controversies related to the achievement of SDGs, which can be used to ban or exclude counterparties/organisations from financial investment activities (e.g., the UN Global Compact principles, the Financial Action Task Force (FATF) country list).

102. Compliance with the taxonomies and standards has supported the development of **labels**, which consist of certified accreditations that formally recognise compliance of financial products with given taxonomies and standards (for instance, for the issuance of a 'green bond', for the granting of an 'energy efficiency mortgage', etc.). Finally, in order to promote the integration of markets for green financial products globally, the EU has launched together with seven other countries the International Platform on Sustainable Finance (IPSF) with the aim of ensuring a global coordination of efforts on initiatives and approaches to sustainable finance, in particular regarding labels for sustainable financial assets, including green bonds.

103. Some companies and institutions have developed their own taxonomies (standards), as a tool to support the identification of their risks. However, some authors (e.g. NGFS) do not label them as taxonomies (standards), as only those classifications that are mandatory (widely-recognised) are often considered as taxonomies (standards).[103]

104. Another important aspect for the identification and prioritisation of ESG risks relates to any other qualitative information that may inform the evolution of ESG risks across time. When assessing the relevance of ESG factors for a given exposure, institutions and supervisors need to take into account not just the conditions at the current moment in time but also information on future developments. This could refer, for instance, to information about whether the counterparty intends to support the transition through the adoption of climate adaptation or climate mitigation measures or whether the given counterparty is exposed to changes in the external environment (e.g. technological progress, changes in market sentiment) that may affect the ESG characteristics of the institution's exposures.[104] A dynamic approach should be also applied to economic activities. The EU Taxonomy, for instance, acknowledges that the criteria to identify environmentally sustainable economic activities (including the conditions for 'substantial contribution' and 'significant harm') should be adapted regularly to reflect the specific technical details needed to assess the environmental impact of an economic activity and the fast changing nature of both science and technology.[105]

[103] See, for instance, https://www.ngfs.net/sites/default/files/medias/documents/ngfs_status_report.pdf

[104] See Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088.cl

[105] The Taxonomy Regulation requires the European Commission to review the technical screening criteria for transitional activities at least every 3 years and for other activities at least every 5 years.

105. The impact of ESG factors on institutions materialises through different channels that affect the entire value chain of the activities of any counterparty to which institutions are exposed. ESG indicators must therefore incorporate information about the transmission channels as well. From this perspective, the identification of ESG indicators that can help to measure the likelihood and severity of physical risks and of the variables underlying the transition paths for the evaluation of transition risks are equally relevant. In this context, providers specialised in assessing the characteristics of financial assets (e.g., stocks and bonds) have also incorporated in their catalogues and products forward-looking, long-term **investment benchmarks**, which incorporate specific sustainability-related objectives and help to assess and compare over time the performance of sustainability-oriented investments.

106. On 17 July 2020, the European Commission adopted new rules setting out minimum technical requirements for the methodology of EU climate benchmarks. The new rules increase the level of transparency and comparability on the products developed by benchmark administrators, including the criteria for the benchmarks to be labelled as EU Climate Transition Benchmark or EU Paris-aligned Benchmark.[106]

107. Based on the above, the list of ESG factors identified in chapter 4 can be accompanied by specific indicators that support the estimation of ESG risks (see Annex 1). Like with ESG factors, the list of ESG indicators and metrics is not meant to be exhaustive and should be revised to reflect the increasing understanding of relevant sustainability concepts and potential changes in the regulatory framework and society's preferences. Moreover, an outperformance of a counterparty in relation to some specific ESG factors does not mean that the overall ESG risk is necessarily low. As an example, while a counterparty's consideration of employee rights (e.g. professional development, employment contracts, diversity) may be very satisfactory, its observance of environmental principles (e.g. CO_2 emissions) may not be so. Such potential conflicts in terms of the screening of ESG criteria are likely not to be rare and need to be taken into account in the risk assessment.

108. While some ESG indicators and metrics are well-accepted within a given jurisdiction, i.e. at national level, others are more widely recognised and can be applied across-the-board, i.e. at international level. In the illustrative examples shown in Annex 1, the most well-known ESG indicators have been chosen, when possible, and may be applicable at asset or portfolio level. They may also support the definition of Key Performance Indicators in line with the risk appetite of the institution (see chapter 6).

106 See https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-climate-benchmarks-and-benchmarks-esg-disclosures_en

Questions:

8. Please provide your views on the relevance and use of qualitative and quantitative indicators related to the identification of ESG risks.

9. As an institution, do you use or plan to use some of the ESG indicators (including taxonomies, standards, labels and benchmarks) described in section 5.1 or any other indicators, inter alia for the purpose of risks management? If yes, please explain which ones.

5.2 Methodological approaches for assessing and evaluating ESG risks

109. While providing the starting point for the identification of ESG risk, taxonomies and indicators by themselves are not sufficient for the estimation and evaluation of ESG risks (see Figure 7 above). Various methods exist for using and translating them into an assessment of ESG risks. Ultimately, all approaches have the same objective of assessing the alignment of institutions' portfolios with global sustainability goals and offering insights into the risk caused by exposures to certain sectors (for example, to climate relevant sectors). However, there are different ways of achieving these objectives. Each approach is different in terms of what it measures and how the outcome can be used by institutions.[107] The decision on which methodological approach to choose will also depend on the size, the complexity and the business model of the respective institution and consequently the approach taken by a small, non-complex institution will likely differ from the one taken by a large institution.

110. In what follows, methods for assessing ESG risks are divided into three different types of approaches

a. Portfolio alignment method

b. Risk framework method (including climate-stress test)

c. Exposure method

111. The rest of the section describes each approach in turn and provides some examples that are already applied in practice. The examples provided are by no means exhaustive and should not be understood as providing best practices or advice by the EBA to use certain methods over others. Rather, they aim at making the discussion of methods more practicable and understandable. The methods are listed in no particular order. Sequencing of the discussions

[107] Amongst the three ESG risk categories, assessment methods for the 'E', environmental risk and more specifically climate risk, can generally be said to be the most advanced and the one that currently features most prominently in discussions. This section therefore in some places has a particular focus on current practices of climate risk assessment but ways of how to assess social and governance risk are examined throughout.

should not be understood as placing higher importance or credibility on any of the three methods. [108]

112. For all methods described, the well-known issue of data gaps and often lack of reliable and comparable data applies and has to be kept in mind.

5.2.1 Portfolio Alignment Method

How aligned is an institution's portfolio relative to global sustainability targets?

113. At the core of this methodological approach is the concept of alignment. The key principle behind this approach is for institutions, investors and supervisors to understand in how far portfolios are in line with globally agreed (climate) targets.

114. Looking specifically at climate, this approach outlines in how far an institution would need to change its portfolio and activities in order to align with the Paris Agreement 2 degree scenario. It looks directly at the ultimate goal of global efforts on climate change and explicitly defines the portfolio changes that would be required by institutions to contribute to this. Assessing the alignment of the portfolio with global targets in turn presents a way to measure ESG risk for the bank itself.

115. Two examples are described in more detail in Box 10 and Box 11.[109]

Box 10: Example – PACTA Tool [110]

A well-known tool falling under this approach is the Paris Agreement Capital Transition Assessment (PACTA) tool developed by 2 Degrees Investing Initiative (2DII). The tool combines bank level portfolio information on client exposures, a database on the technology mix and production plans of individual companies and technology mix scenarios developed by the International Energy Agency (IEA) in order to assess an entity's alignment with the Paris Agreement Targets (bringing the rise in temperature to well below 2 degrees).[111]

The technology mix scenarios define pathways for CO_2 emissions for certain technologies and industries, under various climate target scenarios, implying certain required technology mixes in the energy sector. The 2DII database holds information on the production plans of individual

[108] For a more in depth discussion of existing risk analysis methods on the environmental aspect also see 'Case Study of Environmental Risk Analysis Methods', NGFS Occasional Paper (September 2020).

[109] Another example is MSCI's 'Warning potential methodology' which translates a company's contribution to global warming into a specific temperature, offering an assessment of the warming scenario a company is currently aligned with. This is translated into a portfolio aggregate that can be compared to the Paris temperature targets.

[110] PACTA Investor Briefing and PACTA general website.

[111] The tool covers listed equities, corporate bonds and a pilot on corporate loans was launched in 2019 with 25 banks.

firms for the period 2019-2024 for climate relevant sectors[112]. Production plans by individual firms together with the envisaged scenarios' pathways for different sectors are combined to assess the alignment of each firm's production plan to the scenarios developed by the IEA.

At the bank level, each client exposure is matched with the 2DII database on firms and their forward-looking production profiles is created.[113] Individual institutions can then be assessed in how far the clients they finance are aligned to the IEA targets.

The output of PACTA provides institutions with the following: i) how much of the portfolio consists of clients in transition relevant sectors, showing the share of the portfolio and the technology mix of the portfolio; ii) a comparison of step i) to peers and the market (i.e. exposure of the global universe of assets in the relevant asset class); iii) the alignment of the bank's portfolio to the scenarios over a 5 year horizon, based on the production plans of clients in its exposure. (The tool can of course also be used by other financial sector entities, such as insurers and asset management companies.)

Box 11: Example – UNEP FI's Principles for Responsible Banking

Another framework that takes the alignment approach is UNEP FI's Principles for Responsible Banking (PRB), launched in September 2019 by 130 banks from 49 countries. The aim of this framework is to 'align banks' business strategy with the goals as expressed in the SDG and the Paris Agreement. A key difference of this framework compared to the PACTA approach is that it takes into account all three components of ESG, not only the environmental component. Twenty-two 'impact areas' are defined in line with UNEP FI's Positive Impact Initiative 2018 in the social, the environmental, the governance, as well as the economic pillar. Each impact area can be mapped to at least one of the 17 SDG.

The tool allows a mapping of participating banks' exposures (by type, country and sector) to the different impact areas. The outcome is an overview for each bank in how far its exposures are positively or negatively affecting each impact area. Importantly, it builds a bank-specific list of most significant impact areas per bank. This is based on countries' needs in each impact area for the bank's countries of operation as well as impact areas related to sectors and countries where the bank is a market leader. Combined with an assessment of a bank's (relative) performance on these most significant impact areas, the tool allows banks to set targets for each individual impact area.

The tool under the PRB is not based on quantitative scenarios like the PACTA Tool. Rather it provides a more qualitative mapping of the above-mentioned 'impact areas' to sectors and

[112] Power, automotive, oil and gas, coal mining, aviation, shipping, cement and steel – representing 75% of global CO_2 emissions.

[113] When more than 80% of the clients can be matched, an analysis to the Paris Agreement can be conducted.

individual countries' level of need. It involves subjective judgement both on the side of banks (when mapping the performance on most significant impact areas) and UNEP FI (when linking sectors with impact areas). Its all-encompassing scope of ESG and its differentiation across countries and banks' own potential in the various impact areas, allows a holistic analysis on banks' portfolios.

Signatory banks of the PRB are required to publish their targets, report publicly on their impacts and progress and engage with key stakeholder on their impacts, fostering transparency and accountability.

116. Another tool prominently used by banks is the Partnership for Carbon Accounting Financials (PCAF). It is a tool to measure and disclose banks' direct and indirect emissions, based on a set of overarching accounting principles and covering nine different asset classes, from sovereign bonds to corporate and SME loan portfolios. This tool does not provide for an explicit emission target per sector or portfolio, according to which an alignment as such could be measured. The PCAF tool provides transparency on emissions attributable to banks' clients, and since climate transition commands reduced emissions by definition, disclosures under the PCAF tool can be viewed as an implicit way of measuring alignment in a broader sense.

117. Frameworks under the alignment method can be said to be very results-oriented. Providing analyses of a bank's portfolio positioning relative to global targets and goals, enables banks to understand priorities for and direct implications of their portfolio allocation. The approach looks at portfolios' attributes and their **contributions** to the sustainability and climate targets, and its outcomes provide direct guidance on portfolio alignment and allocation.

118. Whilst this approach allows for the identification of risk related to sustainable development (i.e. the sectors and exposures which are not aligned), it does not make an explicit link between sustainability targets and portfolios' (changing) **risk characteristics** (in the form of PDs or LGDs, for instance), does not take into account the relative transition abilities of industries,[114] and is sometimes found to be disconnected from banks' actual strategy and risk management. Further, the assessment of alignment with the 2 degree scenario for instance is an assessment of the portfolio as a whole and the portfolio may well contain a diverse mix of exposures, presenting different levels of alignment and hence climate risk.

[114] Some industries may be better able to transition their technologies than others. However, this is not reflected when assessing the alignment since it is based on current technologies, current potential plans to change technologies, or a one-point in time assessment of a sector and how it relates to certain impact areas. This is something that also holds true for the risk adjustment method, if exposures are classified based on current emissions or technologies.

Questions:

10. As an institution, do you use or plan to use a portfolio alignment method in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.

5.2.2 Risk Framework Method

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

119. Modelling the impact of ESG risks on banks' risk profiles has seen most progress in the form of climate stress testing. This may inter alia be attributed to the fact that climate risk by its nature is forward-looking. Stress testing over a future horizon is therefore a useful tool to model climate risk impacts, whilst other ESG risks considerations tend to be predominantly more backward-looking (although they also take into account companies' future ESG strategies and plans). This section will therefore focus in particular on risk management in the context of climate risk.

120. In contrast to the alignment method discussed in the previous section, the risk framework method focuses on the sensitivity of portfolios and the impact climate change has on exposures' actual riskiness. It does not make any statements on how the portfolio composition positions relative to global climate targets and as such does not provide an explicit guide to banks on how they would have to shift their portfolios to align.[115] Rather, it is a purely risk driven approach. Managerial actions would reflect the level of measured sensitivity or direct risks of losses considering the current level of environmental factors (or climate more specifically) and the possible developments under the selected scenario. Since climate scenarios model the transition to more sustainable activities, applying this approach will lead to a risk based greening of portfolios, at least in the medium- to long term.

121. This approach may not ensure alignment with global targets neither of the market as a whole, nor in the short-run. It is rather a tool enabling banks to manage their risks internally and allocate their portfolios in the most risk effective way, taking into account climate risk. It is about resilience, rather than explicit alignment – both of which in the long-

[115] In the context of the European Union, the incentive to align is driven by ongoing policy action, including the set up of a specific taxes and subsidies aligned to the Taxonomy.

run in theory should lead to the same results in terms of how aligned portfolios are with global policy targets, but in the short-run arguably may not.[116]

122. The most developed risk framework methods in the context of climate risk can be split into two approaches:[117]

a. *Climate stress tests* – assessment featuring fully fledged scenarios that map out possible future development paths of transition variables (e.g. carbon prices), physical variables (temperature increases) and the related changes in macro variables (e.g. output in different sectors, GDP, unemployment) and financial variables (e.g. interest rates). These scenarios are then translated into changes in portfolios' (risk) attributes.

b. *Climate sensitivity analysis* – a simpler exercise without scenarios, assessing changes in portfolios' risk attributes by changing some of the inputs in financial models based on shading and classification of exposures into 'green' versus 'non-green' (which determines an exposure's vulnerability to climate-related events and policies).

a. Climate stress testing[118]

123. Several climate stress-testing methodologies have been proposed and applied. Stress testing can take place at portfolio, industry or counterparty level and can be conducted by national competent authorities, banks themselves or external providers.[119] In most cases, stress tests to-date are run in the form of pilot exercises, since experience is lacking and the design of climate stress tests is very complex, facing several issues. Namely, challenges include assumptions made about the different climate scenarios, uncertainties about climate developments themselves (tipping points), environmental policies adopted by national and international governments/bodies and actual implication for financial and economic factors and how these are modelled, choosing appropriate time horizons (which are longer for climate stress tests than for normal stress tests), taking into account transition or physical risk, accounting for changes in technology and consumer preferences, and, importantly, data availability.

[116] Due to the well-known timing issue: some of the risks may only materialise in the long-run and accordingly can potentially slow down financial institutions' actions.

[117] Asset-based evidence such as the performance analysis of energy efficient mortgages would be another method which is under development. (See for instance the EeMAP's Final Report on the correlation between energy efficiency of mortgages and the probability if default.) Direct evidence on the historical performance of assets, if available, is an extremely valuable tool to assess portfolios' riskiness.

[118] This section focuses on transition scenario analysis, but also physical climate scenarios exist, for instance, focusing on events such as flooding and draughts caused by GHG emission.

[119] Examples of external providers of stress testing methodologies include 2DII, MSCI Carbon Delta and Mercer.

124. Climate stress tests remain work in progress and should not be expected to provide the same level of precision as standard bank stress tests.[120] To-date they remain of less comprehensive nature than the usual stress tests – they are an assessment of certain portfolios but do not make any conclusions about potential capital implications. Climate stress tests based on scenario analysis are a useful and important tool, however given their complexities and many uncertainties, they also need to be assessed and interpreted with caution.[121]

125. A broad overview of some of the stress testing exercises already performed in practice or in the pipeline is provided in Box 12 below. Section 4 will provide a more detailed discussion on stress testing methods and their limitations.

Box 12: Examples of stress testing exercises performed or planned[122]

Example 1 – De Nederlandsche Bank (DNB) Stress test on Energy Transition Risk for the Financial System 2018

The DNB's stress test on energy transition risk for the financial system has been the first climate stress test conducted by a competent authority, looking at equity and bond exposures of banks, insurers and pension funds, as well as banks' loan exposures. The stress test develops transition risk scenarios, combining policy and technological shocks, which are translated into macroeconomic variables using the NiGEM model. Industries are classified by an energy transition vulnerability factor, which is based on CO_2 emissions of both inputs and final products (and weighted by an industry's GDP contribution) and differs by scenario (based for example on an industry's ability to adapt to technological progress). Outputs from the NiGEM model on GDP, bond and equity returns are combined with the 56 industry specific vulnerability factors to arrive at industry specific impacts for bond and equity price changes and loan portfolios' impairment charges. [123]

Example 2 – Bank of England (BoE): Biennial exploratory scenario on the financial risks from climate change 2021

[120] Lehmann, A. (2020), 'Climate risks to European banks: a new era of stress tests', Bruegel Blog, 05 February, available at https://www.bruegel.org/2020/02/climate-stress-test

[121] A more detailed discussion of the challenges of scenario analysis in 'The Green Swan - Central banking and financial stability', BIS (2020).

[122] For further discussion of the different types of modelling approaches also see the 'Overview of Environmental Risk Analysis by Financial Institutions', NGFS Technical Document (September 2020).

[123] An energy transition risk stress test for the financial system of the Netherlands, DNB 2018. An acknowledged caveat of the model is the fact that sector specific impacts are derived from the outputs coming from the macro model (by applying the relevant transition vulnerability factor). The microeconomic foundations of the stress test could be improved by first calculating industry returns in each scenario and then aggregating this to a macroeconomic impact.

The discussion paper published in December 2019[124] envisages participating firms to conduct an assessment at the counterparty level. Pathways for temperature, emissions, and climate policies, as well as macroeconomic variables (including aggregate GDP and sector level GDP figures) and financial variables as provided by the Bank under various scenarios (over a 30-year horizon) are to be translated by firms into financial impacts on their counterparties and changes in asset values as a result. Changes are to be provided at every 5 year point along the scenario timeframe, assuming unchanged balance sheets. Firms are expected to build on the scenarios and inputs provided by the Bank in order to be able to model all the information they need. The exercise is to incorporate both physical and transition risk and applies to the largest banks and insurers.

In a second step the exercise envisages participating firms to indicate how they would adjust their business model in response to the scenario (reducing certain exposures and redirecting capital), providing an overview of the overall resilience of the system in the years ahead.

As a result of COVID-19 and the response received to the public consultation, the Bank has announced to postpone the launch of the exercise until at least mid-2021.

Example 3 – L'Autorité de contrôle prudentiel et de Résolution (ACPR) Pilot exercise on climate-related risks.

The ACPR published on XX the modalities of its pilot and voluntary exercise on climate-related risks. The objectives of this bottom-up analysis implemented over the 2019-2050 timeframe are threefold: *i)* encouraging banks to develop methodologies to assess climate-related risks, in particular credit risk parameters (with a focus on transition risks); *ii)* understanding their strategic reactions in the face of these risks through a dynamic balance-sheet hypothesis; and *iii)* and assessing the potential for spill-overs across the financial sectors (banks will have to consider implications from the results of the stress on insurance undertakings in their final results).

The three scenarios studied are consistent with those developed and recently published by the work-stream 2 of the NGFS. The exercise considers an orderly transition as a reference scenario and two adverse scenarios combining a carbon tax and a technology shock in the most adverse ones. Macroeconomic outputs projected with NiGEM are then mapped into 55 sector-specific shocks on turnovers and value added (corresponding to a "sudden and late transition" scenario). These sector-specific shocks are then used to project financial variables (equity and bond prices) as well as benchmark PDs, the latter relying on the Banque de France rating model. Based on available scenarios, banks will then project credit and market risks parameters selected by the ACPR. The main lessons of this exercise are planned to be published in Q1/Q2 2021.

[124] The 2021 biennial exploratory scenario on the financial risks from climate change.

126. Stress tests have also been developed for environmental stress such as pollution. An example of this is the stress test developed by the Industrial and Commerce Bank of China (ICBC) in 2015, where higher emission levies were modelled on the cement and thermal power industries, inducing higher costs and impacting PDs.[125] Other stress tests are developed explicitly for the real estate sector, given its crucial contribution to climate change but also its exposure to physical risk.[126]

127. The stress tests described in Box 12 predominantly assess transition risk. Several tools have also been developed to assess physical risk. Examples of this include the exercise run by Acclimatise and 16 participating UNEP FI banks.[127] Physical risk in the form of climate events (temperatures and precipitations) or extreme weather events and their impact (production/crop loss) are modelled on the agricultural, energy and real estate sectors. Stress on the former two comes in the form of changes in prices, revenues and costs, which translate into PD changes. Similarly, for the real estate sector, the likelihood of extreme weather events and mortgage terms are combined to derive at revised LTVs. [128] Another tool developed by a number of public institutions simulates water shadow prices (in the case of droughts), which are translated into changes in profitability and credit ratings.[129] BlackRock[130] assesses physical risks such as flooding and hurricanes across different US regions and their impact on three asset types (municipal bonds, CMBS, electric utility equities) - which have large physical collateral and for which the physical location is known. Based on a heatmap that reflects climate events' impact on the economy across the regions (GDP pathways based on direct costs such as destructions and indirect costs such as labour productivity), the study assesses whether investors in the three types of securities are pricing in physical climate risk appropriately.

b. Climate sensitivity analysis

128. Sensitivity analysis is a simpler form to integrate climate risk into financial risk modelling. It does not apply complex scenarios based on assumptions on time horizons and interlinkages between climate factors and the real economy, but instead integrates climate

[125] Industrial and Commercial Bank of China (ICBC). Impact of Environmental Factors on Credit Risk of Commercial Banks. March 2016.

[126] See for example MSCI ESG Research's scenario analysis for commercial and residential real estate.

[127] Navigating a New Climate: Assessing credit risk and opportunity in a changing climate: Outputs of a working group of 16 banks piloting the TCFD Recommendations, Part 2: Physical Risks and Opportunities - UNEP FI and Acclimatise (July 2018).

[128] Another analytical example for the real estate sector is PWC's Carbon Value Analyser, enabling a quantitative assessment of the effects of climate change policy on property values.

[129] See the Drought Stress Testing Tool developed by the Natural Capital Financial Alliance (NCFA) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

[130] Getting physical: Scenario analysis for assessing climate-related risks – Black Rock GLOBAL INSIGHTS APRIL 2019

risk directly into financial risk indicators by stressing certain inputs, based on classifying exposures according to their positive or negative climate contributions. [131]

129. Not requiring complex scenario based modelling can be seen as an advantage as it makes this approach simpler and more accessible. What it cannot provide however is a more dynamic and complex assessment of climate impacts. By definition, scenario analysis ignores many aspects, including the dynamics and interactions between different sectors, additional macroeconomic impacts resulting from climate change, and importantly it ignores negative feedback loops and the aspect of time (it is a one-point in time assessment).

130. Given the infancy of and uncertainties involved in climate risk modelling, this simpler approach can provide an insightful indication of the relative performance of 'green' versus 'non-green' exposures and banks' exposures to climate relevant sectors. The EBA's 2020 pilot sensitivity exercise will be discussed in more detail in chapter 6.

Questions:

11. As an institution, do you use or plan to use a risk framework method (including climate stress testing and climate sensitivity analysis) in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.

5.2.3 Exposure Method

How do individual exposures and clients perform in terms of ESG risk?

131. The third approach is a tool that banks can apply directly to the assessment of individual clients and individual exposures, even in isolation. The basic principle of this approach is to directly evaluate the performance of an exposure in terms of the E, the S and the G. This can then be used to complement the standard assessment of financial risk categories. Indicators used for this assessment are typically calibrated at company level, taking into account granular sectoral level characteristics to capture specific sensitivities of the ESG factors on different segments and sub-segments of economic activities.

132. This method can be described as the possibly most practical method and the most straight-forward to implement amongst the three approaches. It does not involve sophisticated scenario analysis based on many assumptions, but as a result relies on mainly

[131] Exposures can be classified based on relative emission levels of various NACE codes or application of the EU's green taxonomy, for example.

backward-looking metrics. It can be applied to individual exposures and is a systematic approach classifying exposures by their specific ESG attributes. It provides banks and investors with a tool to better understand their individual counterparties and to better understand the ESG risk of their existing portfolio.

133. Importantly, in addition to providing the crucial complementary information for standard risk monitoring by banks and investors, the evaluation of ESG risk in the form of scorings or ratings also enables signalling to and dialogue with companies and clients. Performed directly at the company level in most cases, also relative to peers, and providing detailed information and rationale on performance on all three elements, such an ESG scoring provides inputs and food for thought for companies in how they can improve their strategies and business models and what are the key areas to be looked at. Alongside pricing, such a dialogue can be an important tool to transition and transform economies into more sustainable systems.

134. Whilst crucial for both the assessment of and signalling to companies, and as such a crucial component in the transition to more sustainable economies, ESG evaluations need to be applied with care. A high level of awareness and a thorough understanding of the rationale and reasoning behind the rating outcomes is of the utmost importance to ensure effective and appropriate application of ESG evaluations.

135. Several methodologies have been developed under this approach. They can be broadly classified into the following:

a. ESG ratings provided by specialised rating agencies (e.g. Sustainalytics, MSCI, ISS ESG, RobecoSam)

b. ESG evaluations provided by credit rating agencies (e.g. S&P's ESG evaluation)

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

d. ESG scoring models developed by asset managers and data providers, publicly available (e.g. State Street's R-Factor, Refinitiv)

136. ESG ratings provided by specialised rating agencies are direct, stand-alone ratings on ESG factors, taking into account risk exposure to ESG factors as well as management's capability to deal with risks or opportunities. These ratings can be either relative to industry peers (see MSCI ESG Ratings [132] for instance) or absolute company ratings (see the rating by Sustainalytics[133]). The methodologies generally build on quantitative analysis of key

[132] See for instance MSCI's MSCI ESG Ratings Methodology

[133] For more information, see Sustainalytics website.

issues identified per industry (and hence company), as well as qualitative information collected by analysts from public information and client engagement.

137. Methods can differ quite significantly. ESG evaluations performed on companies by credit rating agencies can come in the form of an incorporation of the ESG factors into the standard credit analysis, as done, for example, by Moody's. They evaluate how ESG factors affect certain scorecard components such as cash flows and leverage, but also elements outside of the scorecard.[134] S&P on the other hand, through its ESG Evaluation, has created a separate assessment of ESG risks specifically, combining sector and country assessment with company specific factors and a qualitative assessment of a company's preparedness.[135]

138. All ESG evaluations aim to provide the needed additional input to existing financial risk assessment. Developing and interpreting the outcomes however also faces several challenges since the different approaches taken can have crucial implications for their comparability. For instance, ESG ratings often lead to very different outcomes for the same company. This is inter alia due to the fact that the importance of the same ESG factor for the same company is often assessed very differently across methodologies. Other factors contributing to the difficulties in comparing ESG ratings by different providers include the different weightings applied to the individual elements 'E', 'S' and 'G', whether, for instance, when looking at scope 1, 2 or 3 emissions for the E factor, or at the different treatment of lack of disclosure of information by companies.[136]

139. A key step towards making ESG ratings and evaluations more comparable, transparent and as such more effective in their use, is a standardisation of the relevance and importance of different ESG factors for the various industries and companies. This direction has been taken by the Sustainability Accounting Standards Board (SASB), making a crucial contribution towards laying the basis for achieving consistency in ESG assessments (see Box 13).

140. An example of applying SASB is State Street's R-Factor, a tool aimed at building on existing ESG ratings, whilst at the same time overcoming some of their short-comings. The R – Factor combines data provided by several ESG rating providers with the information on the relevance of the various ESG factors for different industries as provided by the SASB. [137] It uses raw data by ESG rating providers only for those ESG factors deemed financially material by the SASB for each company. Thereby, it removes any subjective judgement on

[134] See Moody's General Principles for Assessing Environmental, Social and Governance Risks

[135] See S&P's Environmental, Social, And Governance Evaluation Analytical Approach

[136] 'Is Tesla or Exxon More Sustainable? It Depends Whom You Ask' - WSJ Article from 17 September 2018

[137] It also includes a 4th component, corporate governance as provided by ISS Governance.

the importance of the various ESG factors per industry and company, and provides a transparent assessment on what is included in and is driving a company's rating.[138]

Box 13 - Enabling tools provided by the Sustainability Accounting Standards Board (SASB)[139]

The SASB has developed a publicly available Materiality Map, identifying financially material ESG issues for 11 sectors and 77 industries. Financially material factors are those that are likely to have a substantial impact on a company's financial and operational performance. By nature, which ESG factors are material for a company depends on the company's sector. The aim of the materiality map is to foster a common understanding of the relative importance of different ESG factors across various industries, thereby facilitating a consistent assessment of ESG risk.

The materiality map is complemented by Sustainable Accounting Standards. The latter identifies which factors should be reported and assessed to evaluate ESG performance. It provides as list of indicators relevant for a certain industry (such as for example the percentage of active workforce covered under collective bargaining agreements to assess labour force practices) and the rationale alongside this.

Whilst the SASB's tools do not provide a direct ESG rating or scoring, they have the potential to play an important role in developing these. Providing a list of standardised ESG issues across industries and sectors permits consistent application by banks and investors for their ESG assessment of clients and portfolios and at the same time can be a signalling tool for companies to identify the areas they should focus on in order to improve their sustainability performance.

Questions:

13. As an institution, do you use or plan to use an exposure method in your approach to measuring and managing ESG risks? Please explain why and provide details on the methodology used.

[138] R- Factor is the scoring system that powers Bloomberg's ESG related equity and fixed-income indices launched in September 2019. The indices are constructed by re-weighting the parent indices relative to the performance of the R-Factor (see Bloomberg SASB indices).

[139] The tools are publicly available on the SASB website.

5.2.4 Comparison of methods and their application

141. Two things are crucial in order for institutions to be able to assess and manage ESG risk and align risk management with sustainability considerations:

a. Factors considered and decisions taken at the time of exposure origination;

b. Observations made and subsequent decisions taken during the monitoring of existing portfolios. [140]

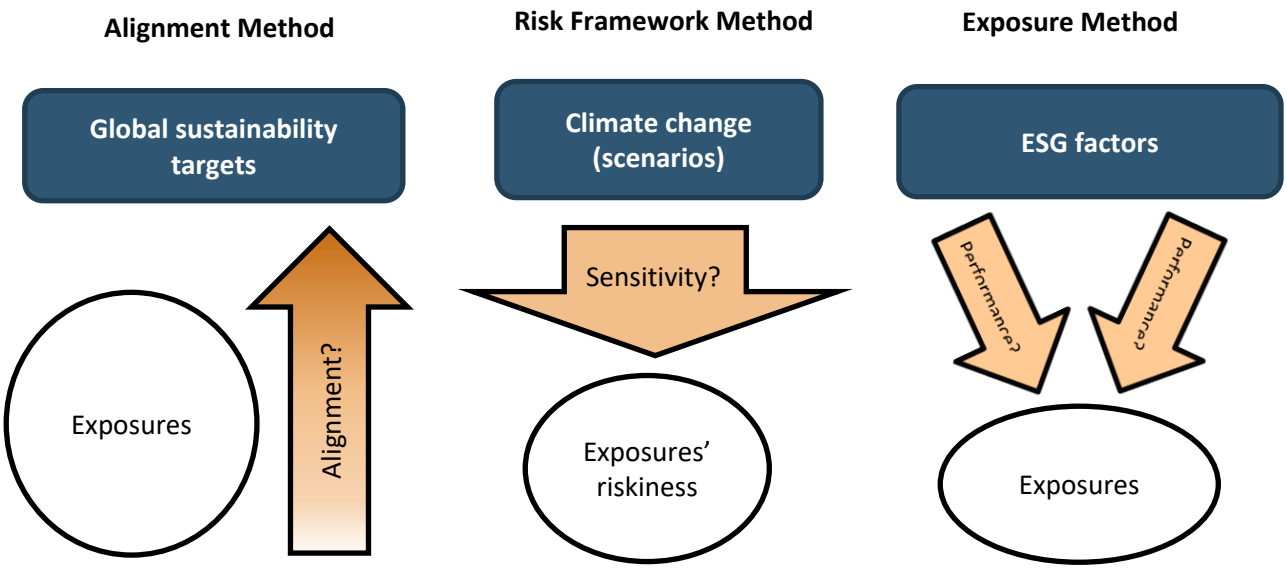
142. Exposure origination is important as it steers the future composition of the institution's portfolio and also signals to companies and markets which investments are no longer sustainable and supported by the banking sector. The EBA Guidelines on Loan Origination and Monitoring[141] specify that ESG factors should be taken into account in banks' credit risk appetite, policies and procedures. In particular, the Guidelines outline specific processes and procedures banks should have in place when providing environmentally sustainable lending, including processes for assessing the credibility and business objectives of clients.

Portfolio monitoring in the context of ESG in turn is crucial as it allows the bank to spot difficulties and areas for concern and action early on and allocate capital accordingly. In particular, it enables an institution to gain experience and build historical data on ESG and the relative performance of portfolios, which is again critical for the future policies and strategies of an institution.

[140] The two aspects have also been identified as key in the ECB's supervisory expectations on credit risk management as part of their Guide on climate-related and environment risk: 'Institutions are expected to consider climate-related and environmental risks at all stages of the credit-granting process and to monitor the risks in their portfolios.'

[141] EBA Guidelines on Loan Origination and Monitoring (sections 4.3.5 and 4.3.6)

Figure 8 Overview of the three methodological approaches



143. All three methods described above (see **Error! Reference source not found.**) lend themselves to loan origination and existing portfolio monitoring, albeit to varying degrees. The exposure method for example may provide a tool for both the exposure origination process and the monitoring of existing portfolios in that it makes direct reference to the ESG factors. Some methods again might be a more natural fit for exposure origination rather than for portfolio monitoring, or vice versa. Table 2 below explores how each approach may be used in exposure origination versus portfolio monitoring.

Table 2 The three methodological approaches in the context of loan origination and portfolio management

	Exposure origination	Portfolio monitoring
Alignment Method	▪ Understanding the state of alignment and potential for changes in the portfolio provides direction and allows for better-guided decisions on investment and sectoral focus at time of exposure origination. The method focuses more on assessing the exposure in the context of the entire portfolio composition.	▪ Understanding the positioning of a portfolio relative to targets allows identifying which parts of the portfolio are most likely to encounter difficulties in the future and require hence more attention and which portfolios may even need to be divested. ▪ Some methodologies can guide dialogue with client companies (through its insights on individual companies' investment and production plans).
Risk Framework Method	▪ Stress testing or sensitivity analysis can provide insights into vulnerabilities of sectors for future investment or credit decisions. It can help inform appropriate pricing and term structure of a loan and make portfolio allocation decisions.	▪ Understanding the impacts of climate on the portfolio's risk parameters is a crucial input to portfolio monitoring and capital allocation.
Exposure Method	▪ Providing a detailed view of ESG issues by client, the exposure method seems appropriate for the screening conducted during the loan origination process. In particular because ESG evaluation can be available at company level, it allows for a detailed and customised assessment of clients.	▪ It requires a substantial amount of evaluation in retrospect, but can be a useful tool for banks to understand in detail how their portfolio performs on ESG factors ('shading of the portfolio'), can guide dialogue with clients and directs the latter on how and where improvements need to occur. This allows for a very customised tool.

144. Previous discussions have demonstrated that the three methods are different in the questions they intend to answer, the conclusions that can be drawn from them and the messages they send to their users, but also are different in their applicability and

practicability. Therefore, the different approaches should not necessarily be seen as substitutes for each other, but can indeed be used alongside each other.

145. Features are different across the three methods, however can also vary across the practical applications within each method (the PACTA tool for instance uses scenarios, whilst the UNEP FI's PRB does not). Similarly, time horizons used vary. In some cases, time horizons up to 30 years are used for some risk framework methods, whilst the ESG evaluations under the exposure method tend to be more static and largely reliant on backward-looking data. The applications under the risk framework method and alignment method currently seem mainly focussed on climate risk, whereas the exposure method assesses all three categories ('E', 'S' and 'G'). Assessments can be made at the portfolio level (the alignment method), sector level (often observed in the risk framework method) or at the counterparty level (in the case of ESG ratings). All methods are subject to a substantial degree of subjective judgement (be it in the form of scenario choice and calibration or in the form of the choice of materiality of indicators and the assessment of management's preparedness in the case of ESG ratings).

146. In addition, some of the approaches are very interlinked. The alignment and exposure methods for instance are linked in that they can both look at the ESG performance of a client, but the alignment method introduces specific targets. Table 3 aims to set out some of the key conceptual advantages and disadvantages of each approach.

Table 3 The three methodological approaches: Pro's and Con's

	PRO's	CON's
Alignment Method	▪ Introduces explicit targets: **direct guidance**, **very executable** ▪ **Results-oriented** ▪ Aligned portfolios are conducive to **reduced reputational risk**	▪ Takes more of a **portfolio view** (not much focus on individual exposures – individual exposures may well be mis-aligned) ▪ Related to the above: focus is not on individual client dialogue (hence a potential obstacle to client transition) ▪ Can be **complex** (in the case of scenarios)
Risk Framework Method	▪ **Risk- based**: Looks directly at risk, hence **integrates well** with banks' 'way of doing things' ▪ **Dynamic** nature of scenarios allows to reflect interactions of sectors and variables as well as climate dynamics	▪ **Complex, data issues, uncertainty**, etc. (see section 4) ▪ Linking ESG risk to the actual financial risk indicators can be a '**black box'**
Exposure Method	▪ **Transparent, simple,** can be done in **isolation** ▪ **Established** methodology (ESG ratings) ▪ Links to **Key Performance Indicators (KPI) systems** ▪ **Dialogue** with firms	▪ **Comparability** issues with some ratings ▪ The outcome is generally of **qualitative** nature ▪ Of rather **static** nature – ratings/scores need to be reviewed regularly

Questions:

13. As an institution, do you use or plan to use any different approaches in relation to ESG risk management than the ones included in chapter 5? If yes, please provide details.

14. Specifically for investment firms, do you apply other methodological approaches, or are the approaches described in this chapter applicable also for investment firms?

6. The management of ESG risks by institutions

147. Building on the definitions of ESG factors, ESG risks and their transmission channels, this chapter addresses how institutions can embed ESG risks in their governance and risk management. After describing the main practices currently followed by institutions (section 6.1), this chapter is structured around the three main elements where the incorporation of the ESG risks is seen as essential:

a. business strategies and business processes (section 6.2),

b. internal governance (section 6.3) and

c. risk management (section 6.4).

148. While reviewing these areas, this chapter takes into account the practices already in place, notably from European institutions. It also identifies some of the main areas where further progress is needed for a deeper understanding and measurement of the institutions' exposures to ESG risks that can support the provision of more wide-ranging and comparable disclosures.

149. The measures identified and the recommendations made are subject to the principle of proportionality, meaning that they are to be applied in a manner that is appropriate, taking into account in particular the institution's business model, size, internal organisation and nature and complexity of its activities.

150. Smaller institutions are not immune to ESG risks and could be even more susceptible to them, for instance, if they are particularly concentrated in a vulnerable sector, geography or if they lack the resources and expertise needed to manage ESG risks. This is why it is important that all institutions effectively identify and monitor the ESG risks to which they might be exposed in the short, medium and long-run, and that they implement adequate measures to address them.

Questions:

15. Please provide your views on the extent to which smaller institutions can be vulnerable to ESG risks and on the criteria that should be used to design and implement a proportionate ESG risks management approach.

6.1 Current status of integrating ESG risks into business strategies, risk management and governance of institutions

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

ESG risks in business strategies

152. In recent years, some institutions have taken steps to account for ESG factors in their business strategies. However, much progress is still needed. For example, EBA's voluntary survey among 39 credit institutions in 2019 found that, while the overwhelming majority of respondents had already integrated sustainability considerations into their business strategies,[142] a variety of very different approaches was observed. Although the survey was voluntary and the participating credit institutions may not be fully representative for the EU banking sector, the input provided an informative overview of the need to further advance, overall, particularly in terms of the translation of the institutions' business strategies in concrete ESG risk-related objectives and/or limits..

153. ESG factors often appear to be integrated into the business strategies mostly from a Corporate Social Responsibility (CSR) perspective. Many of the actions taken by the respondents to the EBA survey could be associated with this objective, for example participating in external sustainable finance networks, supporting sustainable finance principles based on international standards or defining ESG objectives for the organisation. This is in line with other findings. A survey conducted in 2018 by the Prudential Regulatory Authority found 30% of respondents to follow this type of approach labelled "responsible",[143] and an analysis conducted ACPR in 2019 identified a similar group of "wait-and-see institutions".[144] This approach could be helpful to reduce reputational risks and resulting negative financial implications for the institution.

[142] EBA (2020) Staff Paper Series 'Sustainable Finance Market Practices' (https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf).

[143] PRA (2018), 'Transition in thinking the impact of climate change on the UK banking sector' (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).

[144] ACPR (2019), 'French banking groups facing climate change-related risks' (https://acpr.banque-france.fr/sites/default/files/medias/documents/as_101_climate_risk_banks_en.pdf).

154. On a more positive note, the EBA survey revealed that some credit institutions are also accounting for ESG risks as more immediate financial risks in their business strategies and have decided to adapt risk management frameworks accordingly. Practical steps taken to achieve this objective included, among others:

a. Establishing sectoral policies for sectors subject to increased transition risk, developing scenario analyses to assess the impact of climate change on the credit institution's portfolio or specifying exclusion criteria. Similarly, DNB's good practices publication in 2020 provides insights into how such a strategic approach to climate-related risks was adopted by one credit institution. In this case, an internal change program was introduced to understand the risks from climate change arising for the institution, the strategy was reviewed for necessary adaptions and the decisions subsequently implemented.[145] In addition, and partly combining CSR and financial risk focuses, some credit institutions also reported in the EBA survey that they evaluate the impact of their lending, engage with clients about ESG risks, setting objectives for the share of investments that would need to meet positive ESG criteria or offering products such as green bonds or loans. Lastly, selected credit institutions have focused their business model on sustainability, declaring a significant importance of ESG considerations to their business strategy.

b. According to the above-mentioned PRA survey, around 60% of the respondents had adopted the approach of considering climate-related risks as more immediate financial risks, albeit in a mostly rather narrow and short-term fashion. Another 10% were found to have chosen a more comprehensive, "strategic" approach, including a more long-term, forward-looking perspective, developing asset classifications for climate-related risk analysis and increased board engagement as well as engagement with academia or hiring of specialists. The study conducted by the ACPR also confirms progress with regard to the integration of climate-related risk into institutions' strategies and observes "advanced institutions" that have increased efforts in terms of quantifying climate-related risks, reviewing sectoral policies or aligning portfolios with climate change mitigation scenarios to reduce exposure to transition risks.

155. The EBA report on short-termism[146] shows that the average time horizon for business planning and strategy setting considered by EU banks is currently three to five years, which is also in line with the time horizon required by some supervisory requirements. However, this time horizon is not likely to immediately reflect the often long-

[145] DNB (2020), Good Practice Paper, Integration of climate-related risk considerations into banks' risk management (https://www.dnb.nl/en/news/dnb-nieuwsbrieven/nieuwsbrief-banken/nieuwsbrief-banken-april-2020/dnb388145.jsp#).

[146] EBA (2019), Report on undue short-term pressure from the financial sector on corporations (https://eba.europa.eu/sites/default/documents/files/document_library/Final%20EBA%20report%20on%20undue%20short-term%20pressures%20from%20the%20financial%20sector%20v2_0.pdf).

term impacts of climate change nor the transition to a more sustainable economy, e.g. in line with the objectives of international agreements, and may make them seem less relevant for institutions. Accordingly, the report concludes with a recommendation to integrate "requirements to implement long-term resilient business strategies" into the EU-level provisions, such as the CRD, for the banking sector.

ESG risks in governance

156. By the same token, a number of shortcomings in incorporation of ESG risks in institutions' governance practices have been identified. Despite relatively strong governance processes and strategies on climate change from a CSR perspective, climate related risks are not adequately managed as financial risks. As far as large European credit institutions are concerned, in most cases, their governance structures are insufficient to ensure an adequate response to the climate crisis.[147]

157. Globally, the involvement of the management body[148] has improved over recent years,[149] however, in some cases the management body is still not involved in managing climate-related risks or the management body merely approves climate-related policies and targets and does not play a driving role in their development.[150]

158. Based on the available public and supervisory information and assessments, institutions' internal governance arrangements currently often lack the inclusion of ESG factors and the risks they may create. Given current market practices, common shortcomings in internal governance arrangements in relation to ESG risks are:

a. Lack of strategic ownership: ESG risks management responsibility is not defined adequately in the institution.

b. Shortages of knowledge and skills: There is a shortage of knowledge and skills specific to ESG factors and risks across the institution, and such shortage is not addressed with a due training program.

c. Lack of effective third-party risk management: Institutions do not or cannot collect sufficient and/or accurate data on their customers and counterparties in respect of ESG factors to duly assess the ESG risks.

[147] "Banking on a Low-Carbon Future II – A ranking of the 20 largest European bank's responses to climate change", April 2020, ShareAction.

[148] As defined in point 7 of Article 3(1) of CRD.

[149] Second Annual Global Survey of Climate Change Management at Financial Firms, 2020.

[150] "Banking on a Low-Carbon Future II – A ranking of the 20 largest European bank's responses to climate change", April 2020, ShareAction.

d. ESG factors not sufficiently integrated into company culture:

   i. Most large international institutions have environmental and social governance programs, but these are most of the time not core features of undertakings, management and business strategy.

   ii. Processes and mechanisms for the management body and other senior functions to minimise conflict of interest are insufficient.

   iii. Remuneration policies are not integrated in the institutions' business strategy, core values and long-term interests so to account for ESG risks, to ensure sound risk management and to mitigate excessive risk taking in this area.

ESG risks in risk management

159. The above-mentioned EBA's survey conducted in 2019 showed that a growing number of credit institutions are working on determining the materiality of ESG risks. Although credit institutions assess climate-related risks (including both physical and transition) to be potential material risks for their activities, credit institutions' current efforts to put in place specific risk management processes in relation to climate-related risks are limited. In particular, it appears that credit institutions have neither yet established key performance indicators that are necessary for a robust internal risk review process, nor more sophisticated modelling approaches.

160. The EBA findings are broadly in line with the evidence found by other surveys focusing mostly on climate-related risks only. Notwithstanding ongoing efforts and the progress made, most available studies and surveys call for a more assertive integration of climate risks as a financial risk, hence moving beyond a pure reputational risk focus. Some relevant evidence in this regard is provided, inter alia by the following studies:

   a. Mid-2018, Oliver Wyman and the International Association of Credit Portfolio Managers (IACPM) conducted a climate-risk-focused survey across 45 global institutions (including 18 EU banks).[151] The survey found that institutions should treat climate risk as a financial risk, not just as a reputational one, and that they need to integrate climate risk into their financial risk management framework to effectively manage such risk and protect themselves from its potential impact.

   b. In the fourth quarter of 2019 the Institute of International Finance (IIF), in conjunction with the European Banking Federation (EBF), surveyed their members across the world

[151] https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/feb/Oliver_Wyman_Climate_Change_Managing_A_New_Financial_Risk_paper.pdf

on how they are approaching climate-related risks.[152] More than half of the participants to the survey do not seem to have specific processes for identifying and assessing climate-related risks and opportunities, and only 17% of the participants have fully integrated climate-related risks into their overall risk management framework. Data and methodological issues (e.g. in terms of measuring Scope 3 emissions, (shadow) carbon pricing, and use of a broad range of data and service providers) are also identified by the respondents, calling for a better toolkit to manage climate-related risks and support disclosures. Moreover, the IIF-EBF survey also finds that the adoption of the TCFD recommendations varies widely across geographies, with 60% of the respondents in mature economies complying (fully or partially) with TCFD recommendations compared to only 37% of financial institutions in emerging markets.

c. Another comprehensive study related to climate risk management was published by Shareaction in April 2020 and features the current practices of the 20 largest European institutions.[153] These findings suggest that the European banking sector has a long way to go in terms of addressing climate-related risks. While the surveyed banks have become much more transparent on their approaches to climate change in line with the TCFD recommendations, the sector performs the most poorly in terms of risk assessment and management of climate risks.

d. Finally, in May 2020, GARP Risk Institute published its second Global Annual Survey of Climate Risk Management at Financial Firms. In the survey, 85% of the 71 institutions show concerns over their resilience to climate change beyond 15 years.[154] The main barriers to address climate risks mentioned by the respondents relate to the availability of reliable models and regulatory uncertainty, especially in the short term. In addition, most firms state that getting internal alignment on their climate risk strategy is a challenge in the short term.

161. Some banks are conducting impact assessments of their counterparties. Impact assessments refer to the analysis of the principal negative impacts that business activities or assets have on ESG factors. These assessments could be carried out, for example, in the form of in-house ESG scoring developed by the institutions (see Chapter 5). Knowing the negative impacts caused by a business activity or an asset facilitates the analysis of potential losses when such impacts need to be internalised, e.g. via a carbon price as an example for a transition risk, and identified where there is a reputational risk.

162. The practices to reduce ESG risks are currently heterogeneous and range across institutions. They include engagement with stakeholders to promote sustainable

[152] https://www.ebf.eu/wp-content/uploads/2020/01/Global-Climate-Finance-Survey-2020.pdf.
[153] https://shareaction.org/research-resources/banking-on-a-low-carbon-future-ii/.
[154] https://climate.garp.org/insight/second-annual-global-survey-of-climate-risk-management-at-financial-firms/.

development in the finance industry, carrying out a social and environmental impact evaluation on individual loans granted, and the development of metrics for measuring the clients' potential energy savings in the context of buildings. Some institutions also mentioned the introduction of sectoral policies in economic sectors (including exclusion policies) with a high impact on the environment and/or that are potentially vulnerable to the transition towards a low-carbon economy, such as energy, mining, infrastructure and agribusiness.

163. Exclusion criteria on certain sectors and exposures are tools that institutions have begun to consider in their risk policies and risk management framework. Indeed, the findings of the EBA market practices survey shows that some credit institutions consider both positive and negative impacts of their investments and take those impacts into account for their financial decisions.

164. Asset managers use a number of approaches for the purposes of selecting exposures and implement sectoral exclusion policies:[155]

a. Exclusion: the entity excludes from its investment range controversial assets (for example, negative environmental or social impact, corruption affairs) that do not match a minimum non-financial score established by an internal methodology designed by the entity;

b. Best-in-class: the entity is ranking companies by sector with an internal methodology (for example by GHG emissions) and allows for investment only, for example, in the three first companies in every sector. No economic sector is ignored using this approach;

c. Best-in-universe: the entity rank all the assets in its investment range using an internal methodology (again for example entities can be ranked on their GHG emissions) and is only choosing to invest in the assets ranked best. This can lead to ignore certain economic sectors;

d. Best-effort: the entity is choosing to invest in companies that have shown the best improvements regarding ESG factors (e.g. biggest GHG emissions reduction). Hence, these companies are not necessarily the best in terms of "absolute" ESG indicators;

[155] See "A sustainable and responsible investment guide for central bank's portfolio management", NGFS Technical document (October 2019) and "Bilan de l'application des dispositions du décret n°2015-1850 du 29 décembre 2015 relatives au reporting extra-financier des investisseurs", joint publication from ACPR, the French Market Authority (AMF) and the French Treasury (July 2019) and BaFin "Guidance Notice on dealing with sustainability risks" (December 2019).

e. Impact: the entity is selecting specific companies that have a positive impact regarding ESG criteria previously defined by the entity, e.g. a start-up developing an innovative ecological solution;

f. Normative: the entity is selecting investments regarding their compliance with international norms and standards.

165. Based on the findings of the EBA Market practices survey, the development of scenario analysis and stress-testing tools in the EU banks is still at an early stage, as only 15% of respondents indicated that they perform scenario analysis, and only some of them indicated that they are developing such approaches for inclusion into their risk appetite.

Questions:

16. Through which measures could the adoption of strategic ESG risk-related objectives and/or limits be further supported?

6.2. Business strategies and business processes

166. From a prudential point of view, there are sound reasons for institutions to take ESG risks into account when assessing, designing or modifying their business strategy and processes. Notwithstanding the negative impacts from ESG risks that already occur in the short and medium-term, it is likely that the full impact of ESG risks will unfold over a longer time horizon. Therefore, if ESG risks are not duly taken into account in their business strategies, institutions might fail to modify their business models in a timely manner to avoid or mitigate the longer-term impacts of ESG risks.

167. Considering the relevance and potential impact of ESG risks, including them in the institution's business strategy and business processes could be seen as inevitable for the institutions' economic resilience over the long-term. By steering business into a direction that is consistent with the expected environmental and social transformation, institutions are more likely to avoid the negative impacts from ESG risks.[156]

6.2.1 Integrating ESG risks considerations into business strategies and processes

168. The UN 2030 Agenda for Sustainable Development and the Paris Agreement[157] could be considered as the main global reference documents outlining commitments and

[156] See also studies from Bank of England/PRA (2018), "Transition in thinking: The impact of climate change on the UK baking sector" and Banque de France/ACPR, (2019), "French banking groups facing climate change-related risk".

[157] Moreover, in 2021 the 168 member states of the UN Convention on Biological Diversity are likely to set more stringent global targets on the conservation and sustainable use of biodiversity.

vision for transforming the current global economy into a more sustainable one. Governments that signed up to the objectives of these documents report on policies and targets to be implemented. In the EU context, the European Commission's proposal for the so-called 'European Climate Law' sets the direction of travel for EU policy together with a more specific 'Action Plan: Financing Sustainable Growth'. These have been supplemented by the Communication on the European Green Deal in December 2019, setting an EU strategy on sustainable finance and a roadmap for future work across the financial system, which is expected to be re-visited in the second half of 2020, following the public consultation of the European Commission on a renewed strategy on sustainable finance in April 2020. All these initiatives indicate significant changes of the business environment in the upcoming years.

169. At the same time, while the re-direction of socio-economic trends towards more sustainable paths takes place, the environmental conditions continue to deteriorate across the world, and reflection on these impacts of physical risks and environmental risks more generally in business strategies is equally important. The outbreak of the COVID-19 pandemic, with its unprecedented negative economic consequences, provides a good example that environmental hazards linked to ongoing biodiversity losses are an actual threat. From a financial perspective, more often and more severe natural disasters will be associated with bigger, potentially non-insured, losses that may rapidly threaten the solvency of households, businesses and governments, and therefore affect also the institutions. [158]

170. In order to reflect the ESG risks in the institutions' business strategies and business processes, the following areas in Figure 9 were identified as the most relevant: [159]

a. monitoring the changing business environment and evaluating long-term resilience;

b. setting ESG risk-related strategic objectives and/or limits;

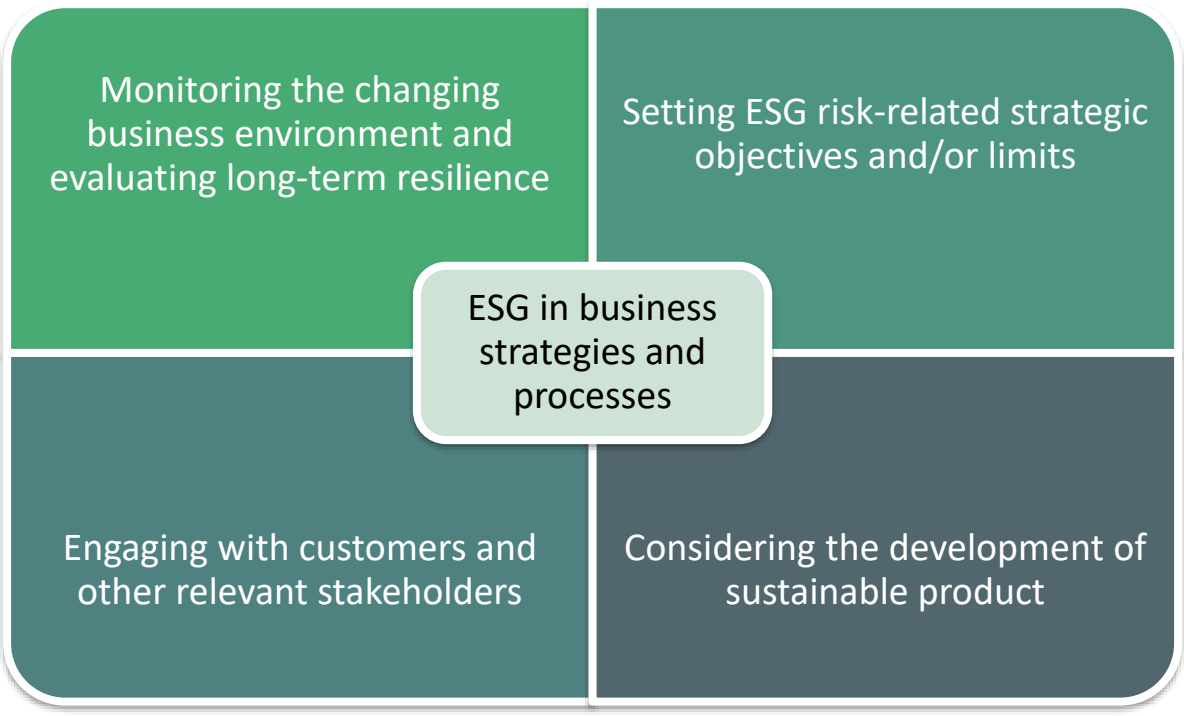
c. engaging with customers and other relevant stakeholders; and

d. considering the development of sustainable products.

[158] According to a report from the International Association of Insurance Supervisors, 70% of weather-related losses are non-insurable losses (July 2018). See https://naic-cms.org/sites/default/files/inline-files/cmte_c_climate_related_iais_sif_issues_ppr.pdf. Moreover, overall, only 35 % of the total losses caused by extreme weather and climate-related events across Europe are currently insured. This leaves an insurance protection gap, i.e. the difference between the level of insurance (measured by insured losses) and the amount of economic losses, of 65%. See https://www.eiopa.europa.eu/content/discussion-paper-protection-gap-natural-catastrophes.

[159] Building on EBA (2020), „Staff Paper Series: Sustainable Finance – Market Practices", p. 12, 13 and the results from other supervisory surveys.

Figure 9 ESG in business strategies and processes



Monitoring the changing business environment and evaluating long-term resilience

171. Expected changes in the business environment in which institutions operate are typically monitored and reflected in the institutions' business strategies. In this context, the effect of ESG factors on the **business environment** can be seen as relevant for the definition of institutions' business strategies. This implies developing an understanding and monitoring of how ESG risks can affect macro-economic conditions as well as relevant sectoral business environments, for instance, through decreases in output, changes in customer preferences or shifts in technology, and of how this could in turn have negative financial implications for the institutions.

172. Consequently, the assessment of the business environment would be translated into considerations on how and to what extent ESG factors may change the risks to which the financial institution is exposed with a view to adapting its business strategy accordingly (for example by scenario analysis). When doing so, the specific characteristics and risks of the financial institution's business model needs to be taken into account. Different risks may arise depending, amongst others, on the **geographical location, counterparties and**

the economic sectors of its exposures. For example, a financial institution lending to SMEs located on a flood-prone area would face different impacts from ESG factors than an institution in a coal-intensive region heavily involved in the funding of coal-fired power plants.

173. When assessing the potential impact and materiality of ESG risks and in determining the resulting implications for the business strategy, it is essential to extend the planning horizons, which usually consist of 3-5 years, and equally consider risks to the business model in the longer run. This extension could be aligned with relevant public policies such as, for example, the emission reduction targets set for 2030.[160] ESG risks and especially climate-related and environmental risks pose the challenge of manifesting not only in the short-run to medium-run, for example, due to an abruptly announced policy measure, but also over the following decades, because the physical impact of environmental change will affect economies and societies more permanently and severely, or because previously insufficient political action forces a sudden and comprehensive transition.

174. From a strategic point of view, institutions with a substantial proportion of their business in non-sustainable activities may face, in addition to potential financial impacts from exposures to sectors under pressure from stricter environmental or social regulation, reputational issues affecting their customers or investors base. The same could apply for institutions with a lack of commitment to sustainability objectives.

Corporate sustainability has been sometimes linked with the **long-term competitiveness** of corporations.[161] Academic research shows various elements through which the long-term competitiveness might be affected, such as short-termism leading to underperformance in the long-term, both in terms of stock market as well as accounting and/or operational performance, ultimately resulting in lower returns on investment,[162][163] or in difficulties to attract and retain high-quality staff, which may potentially translate into lower productivity and efficiency and, in the end, worse operational performance.[164]

Setting strategic ESG risk-related objectives and/or limits

175. Designing (or re-designing) business strategies in order to take into account ESG risks can be based on the institutions' existing internal processes used for translating

[160] https://ec.europa.eu/clima/policies/strategies/2030_en.

[161] Hart and Milstein (2003)

[162] The Impact of Corporate Sustainability on Organizational Processes and Performance, (Eccles, Ioannou, and Serafeim (2011)).

[163] 'From the stockholder to the stakeholder' by Oxford University and Arabesque Partners.

[164] Greening and Turban (2000)

analysis of trends and business environment into strategic objectives and/or limits. As referred to in chapter 5 some institutions have implemented portfolio alignments methods supported, for example, by adhering to **market-based principles** for sustainable banking (e.g. Principles for Responsible Banking, Equator principles). Scenario analysis is a useful tool when setting such strategies.

176. Institutions that want to align their portfolios define ESG risk-related strategic objectives and/or limits as part of such strategies. These are in many cases disclosed and, within some international frameworks, the path to the fulfilment of the set targets is also monitored (e.g. Principles for Responsible Banking).

177. ESG risks are likely to affect different regions, economic (sub-)sectors, and assets differently. In light of this, the institutions' overall objectives and targets may need to be translated into more specific targets (or limits), including exclusion policies for certain regions, sectors or activities (e.g. specific sectors or type of counterparties due to highly polluting production or very low social or governance standards).

178. In a similar fashion, institutions could **use the Sustainable Development Goals** to mitigate physical and transition risks, e.g., SDG 6-aligned investments in projects or firms providing sustainable water supplies, water storage, water-efficiency improvements or water treatment or SDG 11 to formulate a strategic objective on financing people's access to safe, affordable, accessible and sustainable transport systems, notably by expanding public transport.

179. Strategic objectives and limits can also be formulated based on the **EU Taxonomy** (see Chapter 5). Notwithstanding the fact that the transparency obligations embedded in the Taxonomy Regulation apply only to financial market participants, its centerpiece is a classification system for economic activities that qualify as sustainable from an ecological point of view. Taking into account the political endeavour to make the economy more sustainable, activities that are eligible under the Taxonomy Regulation could prima facie be assumed to carry less transition risks than others. Institutions that wish to align more closely with the EU Taxonomy could, for example, set a target on a certain proportion of their overall credit or investment portfolios to be associated with activities that qualify as ecologically sustainable under the Taxonomy. In this regard, institutions could find it useful that the Taxonomy does not only capture activities which are already sustainable, but that also the financing of improvement measures may be counted as eligible if they are part of an implementation plan to meet the applicable activity threshold over a defined period of

time.[165] Institutions could also use the EU Taxonomy as a benchmark for their funding side, e.g. through Taxonomy-aligned deposits.

Engaging with customers and other relevant stakeholders

180. Another important aspect when considering the integration of ESG risks into the institution's business processes relates to enhancing the institution's direct and indirect engagement with borrowers, investee companies and other stakeholders. Direct engagement could comprise entering into a dialogue with the stakeholder's management or exercising voting rights in its general meeting. Indirect engagement could happen via the publication of an institution's ESG risk-related strategies and expectations towards stakeholders or through dialogue with industry associations.

181. The **engagement policy** should consider at least two perspectives that complement each other: First, the *internal* perspective, i.e. which capacities and expertise an institution needs to build up in order to understand the business models of its customers and the impact of ESG factors on them. Second, the *external* perspective, i.e. how an institution can interact with borrowers, investee companies and possibly other stakeholders to mitigate ESG risks for the institution that originate from such stakeholders.

182. While an institution may focus on sustainable activities to reduce ESG risks to its financial exposures, it can also try to address these risks by starting a dialogue with its counterparties regarding their adaptation to the transition to a more sustainable economy. Especially with regard to corporate clients, the specific sectoral challenges which are likely to increase the PD or LGD of companies in the medium to long run can be discussed in order to increase awareness and potentially trigger actions by the management that reduce the credit risk inherent in these exposures.

183. On a broader scale, institutions could consider engaging with **sectoral organisations** in order to promote a mutual understanding on how ESG risks may be addressed by companies in the context of a specific industry, and certainly in line with the relevant laws, e.g. competition laws.[166]

184. If deemed necessary, institutions could assist **counterparties** with the development of an action plan to gradually reduce their exposures to ESG risks and provide the necessary funding to implement the action plan.[167]

[165] Technical Expert Group on Sustainable Finance (March 2020), "Taxonomy: Final report", par. 2.1.3, and Regulation 2020/852 (e.g. par. 40 and Article 11)

[166] BaFin (2019), "Guidance Notice on Dealing with Sustainability Risks"

[167] EBA Staff Paper Series, Sustainable Finance – Market Practices, Jan. 2020,

185. With regard to retail clients, ESG risk-related engagement could, for example, address the energy efficiency of residential homes and the effect on the future value of the property. This could have a positive effect both on their ability to repay loans and the value of the collateral in case of default.

186. Where relevant, institutions could also define an engagement policy for their market exposures. This could include high level actions such as a public communication from the institution setting out which measures it expects from investee companies to mitigate ESG risks or exerting a more direct interaction with investee companies.[168]

187. Where institutions hold equity investments that provide them with voting rights, they should take a strategic decision on how to use their voting rights in order to mitigate ESG risks stemming from investee companies. If the institution has adopted ESG risk-related objectives and/or limits, it seems reasonable to align the policy on the exercise of voting rights with them, considering potential limitations from the concept of "acting-in-concert".[169]

Considering the development of sustainable products

188. Another tool used by the institutions, to offer products and services meeting customers' expectations on one side and to timely adapt the portfolio in order to reduce ESG risks on the other, is the strategic assessment of whether to develop **sustainable products** that are evaluated to be more resilient to ESG risks. These include products typically marked as 'green' or 'social'.

189. The EBA market practices survey found that 83% of participating institutions had already entered or were planning to enter the green finance space. In the survey, 29% of the institutions were originating or developing green and energy-efficient mortgage loans, while 23% were granting or developing green commercial building loans. In the sample, 15% of responding institutions were looking into green automotive loans with high fuel efficiency and 10% into green credit or debit cards, and 15% of responding banks indicated that they were considering other types of green loans for retail customers.[170]

190. Institutions that offer **'green' bonds** use one of the existing market standards to structure their issuance. For example, the Green Bond Principles developed by the

[168] In this context, note that shareholder rights have been reinforced by the Shareholder Rights Directive II ("SRD II"). See Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement. However, the Directive only applies to listed companies and does not provide any additional rights in unlisted companies.

[169] For example, an institution that has decided to align its trading portfolio with the EU Taxonomy could try to use its voting rights in a way that the investee company's remuneration policy includes variable remuneration components, which incentivise the growth of turnover stemming from activities that are eligible under the EU Taxonomy.

[170] EBA Staff Paper Series, Sustainable Finance – Market Practices, Jan. 2020, p. 38.

International Capital Market Association or the Climate Bonds Standard developed by the Climate Bonds Initiative were the standards mostly used at the time of the EBA market practices survey. In the EU, a proposal for the EU Green Bond Standard has been developed by the Technical Expert Group on sustainable finance of the European Commission (see Box 14). This standard is aligned with the EU Taxonomy.

Box 14: Green Bond Standards

The Green Bond Principles build around four key components: (1) use of proceeds, (2) process for project evaluation and selection, (3) management of proceeds, and (4) reporting. However, the GBP do not provide criteria for eligible projects. The Climate Bonds Standard provides sector-specific eligibility criteria for assets and projects.

The proposal for the EU Green Bond standard comprises four key elements:[171]

a. alignment with the EU Taxonomy, as proceeds from EU Green Bonds should be used to finance or refinance activities that contribute substantially to at least one of the six environmental objectives, do not significantly harm any of the other objectives and comply with the minimum social safeguards. Where technical screening criteria have been developed, these should also be met, although the standard allows for deviations in specific cases;

b. publication of a green bond framework, which confirms the voluntary alignment of green bonds issued with the EU Green Bonds Standard, explains how the issuer's strategy aligns with the environmental objectives, and provides details on all key aspects of the proposed use-of-proceeds, processes and reporting of the green bonds;

c. mandatory reporting on use of proceeds (allocation report) and on environmental impact (impact report);

d. mandatory verification of the green bond framework and final allocation report by an external reviewer.

191. Several institutions offer 'green' loans to corporates, households or sovereigns. These institutions have developed either internal standards or use established market standards, for example, the Green Loans Principles from the Loan Market Association or the Energy Efficient Mortgages Action Plan (EeMAP) for residential mortgages developed by the European Mortgage Federation/European Covered Bonds Council (see Box 15).

[171] https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-overview-green-bond-standard_en.pdf

Box 15: Green Loan Standards

Comparable to the Green Bond Principles, the Green Loan Principles establish four key components: (1) the use of loan amounts for verifiable environmental benefits that must be quantifiable by the borrower, (2) the process of evaluation and selection of projects, (3) the management of funds including tracking and (4) reporting.

EeMAP is a market-led initiative that wants to create a standardised energy-efficient mortgage label in order to incentivise building owners to improve the energy efficiency of their buildings or acquire an already energy-efficient building through preferential financing conditions. The initiative follows two fundamental assumptions: (1) that improving the energy efficiency of a property has a positive impact on its value, and (2) that borrowers financing energy efficient buildings have a lower probability of default because of more disposable income in the household due to lower energy bills.[172]

192. Another product that could be used by institutions to implement their ESG risk-related objectives is securitisation. 'Green' securitisation could take the form of collateralising 'green' exposures on the balance sheet of the institution, or collateralising any exposures on the balance sheet in order to use the proceeds or freed-up capital for investments into such 'green' assets.

193. With regard to social products, these are generally less developed compared to the green products. Social products aim to finance activities with positive social outcomes. On the side of financial instruments, one example are 'social bonds' issued to raise funds for projects with positive social outcomes. There are some marked standards, such as Social Bond Principles developed by the International Capital Market Association [173] or the Association of Southeast Asian Nations (ASEAN)' Social Bond Standards developed by the ASEAN Capital Markets Forum.[174] Institutions also offer products labelled as 'social loans' aiming to support social objectives.

Conclusions and policy recommendations

- **Based on the analysis presented, the EBA sees the need for enhancing the incorporation of ESG risks into the institutions' business strategies and business processes. Adjusting the business strategy of an institution to incorporate ESG risks as drivers of prudential risks can**

[172] https://eemap.energyefficientmortgages.eu/services/.

[173] https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Social-Bond-PrinciplesJune-2020-090620.pdf.

[174] https://www.theacmf.org/images/downloads/pdf/ASBS2018.pdf.

be considered as a progressive risk management tool to mitigate the potential impact of ESG risks, in particular by:

- **Incorporating ESG risk-related considerations in setting business strategies by institutions, in particular by extending the time horizon for strategic planning [175] and by including environmental and social scenarios into the planning process based on the institutions' monitoring and understanding of long-term trends in business environment. Scenario analysis can be a good basis for setting the strategies.**
- **Setting and disclosing specific ESG risk-related strategic objectives and/or limits by institutions, including related key performance indicators, in accordance with the institution's risk appetite (e.g. using the SDG or the EU Taxonomy as a reference).**
- **Assessing the potential need to develop sustainable products or to adjust features of existing products by institutions in alignment with their strategic objectives and/or limits. When developing these products, they would ideally be aligned with available standards and labels, notably the EU Taxonomy Regulation and the EU Green Bond Standard or other relevant standards.**
- **Adjusting the institution's relevant business processes to reflect its ESG risk-related strategic objectives and/or limits in the engagement with borrowers, investee companies and other stakeholders in order to lower the ESG risks associated with those exposures.**
- **The EBA recommends to incorporate ESG risk-related considerations in directives and regulations applicable to the banking sector (e.g. CRD and CRR). In particular, the provisions on governance and risk management should be extended by the introduction of requirements to establish and implement long-term resilient business strategies, and the incorporation of ESG risks into the requirements on risk management. Such provisions would contribute to a better strategic management of the short, medium and long-term potential impact of ESG risks.**

Questions:

17. Please provide your views on the proposed ways how to integrate ESG risks considerations into the business strategies and processes of institutions.

[175] See EBA (2019), "Report on undue short-term pressure from the financial sector on corporations", p. 19 et. seq. on the time horizon of credit institutions and the mismatch with longer-term sustainability considerations.

6.3 Internal governance

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

195. This section elaborates on specific aspects relevant to ensure an internal governance framework that allows institutions to manage ESG risks, in particular related to:

a. management body and committees;

b. internal control framework; and

c. remuneration.

6.3.1 Management body and committees

196. The management body is responsible for overseeing and monitoring the implementation of the institution's strategic objectives, risk strategy and the governance arrangements.[176]

197. The role of the management body applies also in the context of ESG considerations, where the management body plays a key role to address existing gaps in the institutions' business, e.g. profile and strategy. Gaps can also arise from the uncertainties around the impact of ESG risks on the institutions' business activities and implications of the transition to a more sustainable economy for the institutions.

198. The management body in its management function plays a key role in identifying and assessing the impact, risks and opportunities of changes to the economic, environmental and social environment. To this end, the management body in its management function is responsible to ensure that there is an appropriate monitoring of such risks and developments currently affecting or that may in the future affect the institutions and the achievement of its objectives in this context.

199. The management body's involvement in overseeing the progress against the institution's ESG risk-related objectives and/or limits, coupled with an understanding of the

[176] Article 88(1) of Directive 2013/36/EU as further specified by the EBA Guidelines on internal governance, see section 1-5 Title II of the EBA/GL/2017/11

distinct elements of ESG risks and a sufficiently long-term view of the financial risks that can arise beyond standard business planning horizons, is necessary for the integration of these risks in the institutions' business models and strategies. The supervisory role of the management body is crucial to ensure that sound and well-informed decisions are taken by the management body in its management function.

200. The management body needs to understand the potential impact of ESG factors and related ESG risks on the business model.[177] Management and mitigation of the impact of ESG risks and anticipation of the possible changes in "market sentiment" of investors and the future choices of customers in a forward-looking perspective will increasingly impact the long term viability of the business model, and thus the role of the management body here is essential.

201. Once an institution has identified and assessed the relevant ESG factors and risks, the management body is better positioned to set and oversee the implementation of near and long-term goals and strategies. While recognising existing uncertainties and data gaps, these should not justify inaction in setting respective objectives or limits.

202. While setting, approving and overseeing the business strategy, it is crucial that the management body considers the short, medium and long-term effects of ESG factors and to clearly integrate these considerations in the relevant responsibilities in the organisational structure, both within business lines and within internal control functions.

203. An appropriate integration of measures to manage ESG risks in the institution's internal governance arrangements would ensure that ESG risks are effectively overseen by the management body, can be discussed by the management body and, where applicable, within its committees including its risk committee or combined committees or, if so decided by the institution, specialised committees, and that appropriate responses to such risks are developed.

204. It is equally important that the members of the management body are collectively and key function holders who are individually suitable including that they have sufficient knowledge, skills and experience with regard to ESG factors.[178]

205. Considering the relevance and potential impact of ESG risks, it is essential to include the tasks and responsibilities related to the incorporation of ESG factors into

[177] EBA Survey on sustainable finance market practices, 2020 "With regard to their internal governance around sustainability, many institutions indicated that they have already established a sustainable finance network within their organisations to, among other things, (i) transfer strategy and policies into all relevant departments, (ii) participate in external networks that support sustainable finance, and (iii) define the institution's sustainability strategy."

[178] In accordance with Article 91 CRD as further specified by the joint EBA and ESMA guidelines on the assessment of the suitability of members of the management body and key function holders.

governance arrangements of the institutions.[179] There are different ways how this could be implemented considering the size, complexity of the institutions' activities and existing governance arrangements. For example, an existing risk committee operates with necessary tools accounting for the ESG risks in the process. Where applicable, it works together with one or more specialised ESG risk-related committees overseeing ESG risks with appropriate powers and membership. This could ensure a comprehensive approach to the incorporation of ESG factors into the business strategy, business processes and risk management, but the setup of specialised ESG risk-related committees in addition to an existing risk committee should be clearly justified. In case of smaller or less complex institutions, appropriate incorporation of the ESG factors into existing governance structures could be more suitable.

206. By the same token, a clear allocation and distribution of duties and tasks between specialised committees of the management body in its supervisory function is also key. Where so established, a specialised committee for overseeing ESG risks would ensure that ESG factors and risks are well considered within the internal governance framework of institutions. Such committees support the management body in its supervisory function and facilitate the development and implementation of a sound internal governance framework with regard to ESG risks. Members of the specialised committees on ESG risks should have appropriate knowledge, skills and expertise concerning ESG risks and assist the management body in its supervisory function with regard to the extent to which institutions' activities are exposed to ESG risks. This would also allow that the organisational structure of the institutions considers the potential interaction between ESG risks and prudential risks, and that the former can drive prudential risks, in particular, in the long run. In general, neither ESG risks nor existing prudential risks should be managed or monitored on an isolated basis, but jointly.

6.3.2 Internal control framework

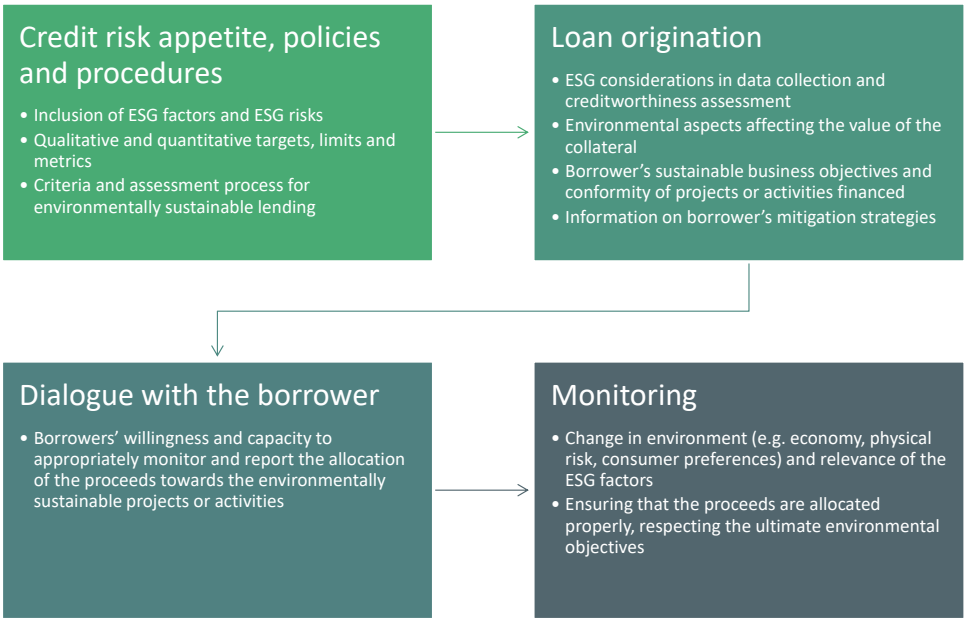
207. The management body is responsible for the implementation of an adequate internal control framework and approval of internal control policies, mechanisms and procedures. It is crucial that organisational structures, implemented by institutions e.g. around the 'three lines of defence' model, support and promote effective and prudent decision-making taking into account the criteria for the application of the proportionality principle.

208. The business lines and units taking risk have the primary responsibility for managing the risk generated by their activities throughout the lifetime of that activity. This general principle is equally applicable for the integration of ESG risks in the risk

[179] Articles 76(3), 88(2), and 95(1) of Directive 2013/36/EU, and EBA guidelines on internal governance and the EBA guidelines on sound remuneration policies sets framework for institutions to set up committees.

management and control framework. In this context, it is important to translate the ESG-related aspects of the business strategy into adequate internal processes and procedures in line with the institution's risk appetite and risk management policies, credit risk and procedures, adopting a holistic approach. For example, the incorporation of ESG risks in the assessment of borrowers' repayment capacity at the point of loan origination and the collection of relevant data for this purpose could provide necessary tools for the first line of defence to carry out its tasks effectively (see Figure 10). Similarly, institutions that originate or plan to originate environmentally sustainable credit facilities could introduce policies and procedures given various characteristics of the assets and the counterparties in question so that the staff members originating such credit facilities can account for ESG factors and risks in their activities.

Figure 10 Incorporation of ESG risks at the point of loan origination



209. Business lines and units are also adequately placed to enhance the dialogue with counterparties and clients, and to enhance due diligence in relation to ESG considerations at the point of risk taking. Business lines and units can inform counterparties about the ways in which their respective investments can be aligned with the institution's risk appetite in the context of ESG considerations in order to mitigate ESG risks (see also section 6.2.1).

210. Institutions set and operate **risk management functions** that are responsible for ensuring the proper risk controls. Incorporation of ESG risks, and in particular the specifics of ESG transmission channels (as described in chapter 4) into prudential risks categories, in this line of functions that are independent from the business lines and units would ensure

that the long-term impact of ESG risks is accounted for in the decision-making process and overall minimise the institutions' exposure to ESG risks.

211. The **compliance function** also complements the risk management framework and monitors the alignment of institutions' activities with legal and regulatory requirements on all legal aspects, including ESG regulatory aspects and sustainability as well as institutions' own internal policies. The risk management function and the compliance function play a key role in the approval of new products, e.g. environmentally sustainable credit facilities if relevant, or significant changes to existing products, processes and systems.

212. The independent **internal audit function**, among other tasks, reviews the internal governance arrangements, processes and mechanisms to ascertain that they are sound and effective, that they are implemented and that they are being consistently applied throughout the organisation. Assuming that all relevant aspects of ESG factors and ESG risks are incorporated into the institutions' governance and organisational arrangements, the internal audit function would capture these under the existing processes. At this point, it is important that members of staff in the internal audit function have the adequate skills and tools to understand and challenge specific decisions.

6.3.3 Remuneration

213. In line with Article 92 of Directive 2013/36/EU and as further specified in the guidelines on sound remuneration policies when establishing and applying the total remuneration policies, institutions should ensure that the policy is consistent with and promotes sound and effective risk management and does not encourage risk-taking that exceeds the level of tolerated risk of the institution.

214. A robust and appropriate incentives-based mechanism is important to support achieving an appropriate risk culture and should account also for ESG risks. Remuneration policies and practices are applicable to all staff, but staff whose professional activities have a material impact on the institution's risk profile ("identified staff"[180]) is subject to additional requirements. Aligning the remuneration policy with the institution's ESG objectives, e.g. long-term resilience of the business strategy under ESG considerations and risk appetite, is important to avoid conflicts of interest when business decisions are taken. Indeed, remuneration policies that are giving the right incentives to staff members to favour decisions in line with the institution's ESG considerations, would facilitate the implementation of ESG risk-related objectives, as the staff members would benefit from meeting the long-term ESG risk-related objectives for the business activities of the institution, e.g. in the context of green credit-granting or reducing exposures highly affected by transition risk. The impact of the remuneration policies on the achievement of

[180] Regulatory Technical Standard on identified staff for remuneration purposes.

sound and effective long-term risk management objectives from the point of view of ESG considerations may be especially relevant when it comes to the variable remuneration of staff whose professional activities have a material impact on the risk of the institution.

Conclusions and policy recommendations

- **Based on the analysis presented, the EBA sees a need for institutions to proportionately incorporate ESG risks in their internal governance arrangements. This should cover the management body and its 'tone at the top', allocation of tasks and responsibilities related to ESG risks as drivers of prudential risk categories in the decision-making process, adequate internal capabilities and arrangements for effective management of ESG risks, and remuneration policies that are aligned with long-term interests, business strategy, objectives and values of the institution. The EBA recommends institutions to achieve this by:**
  a. **Considering ESG risks in the advisory role of risk committees or creating specialised committees such as sustainability finance committees or ethics committees, functions or working groups at different levels, proportionate to the size, complexity and business model of the institutions, and respecting appropriate independence and conflict mitigation considerations;**
  b. **Ensuring that the relevant committees or working groups meet regularly to follow up on implications from an ESG risks perspective (e.g. strategy, reputation and ESG compliance of counterparties) and review if there is an adverse impact in relation to the relevant ESG limits of the institution;**
  c. **Clearly justifying the need for specialised committees and, where applicable, establishing a clear working procedures for the interaction of such specialised committees, if they exist, with others such as risk committee and internal control functions;**
  d. **Allocating the responsibility related to ESG risks to a member of the management body;**
  e. **Involving the risk management function at an early stage when integrating ESG risks into the risk appetite of the institution;**
  f. **Recruiting and training staff within the business units and internal control functions to enhance expertise to identify, assess and manage ESG risks;**
  g. **Ensuring that risk management functions consider ESG risks when implementing risk policies and that their controlling of the risk management framework also extends to ESG risks;**
  h. **Evaluating the extent to which the role of the risk management function needs to be modified for an adequate management of ESG risks;**

i. **Ensuring that the internal audit function includes ESG risks in its review of the effectiveness and adequacy of the internal governance arrangements, processes and mechanisms;**

j. **Encouraging staff behaviour that is consistent with the institutions' ESG risks approach;**

k. **For institutions that have set ESG risks-related objectives and/or limits, considering implementing a remuneration policy that links the variable remuneration to the successful achievement of those objectives, while ensuring that green-washing and excessive risk-taking practices are avoided;**

l. **Establishing a framework to mitigate and manage conflict of interest which incentivise, short-term-oriented undue ESG-related risk-taking, including green-washing, mis-selling of products; and**

m. **Considering ESG indicators when taking into account the long-term interests of the institution in the design of their remuneration policies and its application.**

Questions:

18. Please provide your views on the proposed ways how to integrate ESG risks considerations into the internal governance of institutions.

6.4 Risk management framework

215. As described in chapter 4, ESG risks can affect institutions in different ways and ultimately lead to financial impacts. An active ESG risk management is consequently fundamental to ensure that institutions identify such risks in a timely manner, hence being able to respond to them.

216. This section elaborates on specific aspects relevant for the institutions' risk management of ESG risks, in particular related to:

a. risk appetite, risk policies and risk limits;

b. data and methodology;

c. risk monitoring and mitigation;

d. stress testing for climate risk.

6.4.1 Risk appetite, risk policies and risk limits

217. Risk appetite means the aggregate level of types of risk an institution is willing to assume within its risk capacity, in line with its business model, to achieve its strategic objectives. The institution's risk appetite specifies the scope and focus of the risk to which the institution is exposed to.

218. Based on the EBA Guidelines on internal governance, an institution's risk management framework should provide specific guidance on the implementation of its strategies and, where appropriate, establish and maintain internal limits consistent with its risk appetite and commensurate with its sound operation, financial strength, capital base and strategic goals.

219. In general and building on definitions and transmission channels explained in chapter 4, ESG risks are understood as drivers of traditional prudential risks, and institutions should be able to capture the risks associated with ESG factors when they account for them in their risk appetite and apply their risk management frameworks with appropriate and accurate risk metrics and limits.

220. There are specific considerations relevant to incorporating ESG factors into the risk appetite framework. For example, the composition of the portfolio in line with the institution's ESG risk-related strategic objectives and/or limits, and including its concentration, and diversification objectives in relation to business lines, geographies, economic sectors and products is important also from an ESG risks perspective.

221. Depending on the overall strategy and approach to transition risk, the relevant limits might need to be reviewed or extended to new types of limits relevant from the ESG perspective (e.g. sectors excluded from eligibility based on the institution's business strategy). With regards to physical risks, institutions could set limits to consider the potential physical impact of geographical events such as floods and droughts on land, real estate, infrastructure projects and business activities in counterparty's production cycle. Similarly, from social and governance perspectives, institutions could follow strict measures to exclude from their portfolio counterparties using child labour or not respecting social and employment safeguards.

222. With regards to the risk strategy, risk appetite, and the overall risk policy it is important to ensure that these sufficiently reflect ESG factors as part of the overall framework. The risk appetite incorporating ESG risks would allow institutions to assess regularly their counterparties' risk profile also from an ESG perspective and embed this approach in all the relevant processes of the risk management framework. Risk appetite

statements incorporating ESG risks would then cascade down to group entities, business lines and units, in close interaction with the implementation of the business strategy.

223. Risk management policies could foresee limits on financing projects or counterparties which significantly harm environmental or social objectives in line with the institution's business strategy. Moreover, the institution could enter into a constructive dialogue with critical counterparties to eliminate or at least reduce the source of ESG risks from the counterparty to a level below the maximum limit set in the risk appetite framework. Further examples could consist of setting up an ESG scoring system and modifying credit conditions for borrowers included on an exclusion list, on the basis of their ESG score.

224. The risk appetite accounting for ESG risks would be implemented with the support of applicable ESG risks metrics and limits. These metrics and limits could cover key aspects of the risk appetite associated with the risk in question, as well as client segments, collateral types and risk mitigation instruments. The metrics would be mostly a combination of backward-looking and forward-looking indicators and tailored to the business model and complexity of the institution.[181]

225. As the influence of ESG risks can be expected to increase, institutions should be in a position to assess whether ESG risks are becoming material financial risks drivers and, where appropriate, use all the available risk monitoring and mitigating tools for the relevant exposures. For example, for the purposes of managing concentration in credit risk, institutions set quantitative (and qualitative) internal credit risk limits for their aggregate credit risk, as well as portfolios with shared credit risk characteristics, sub-portfolios and individual counterparties. This is highly relevant from an ESG risks point of view. For example, concentration risk towards a specific counterparty carrying out unsustainable business activities or concentration of the banking activities in a specific geographical area that is of high risk due to environmental conditions or violation of human right is a significant challenge for institutions. Institutions can account for these ESG risks only when they strive to understand the ESG risks associated with their exposures through an effective dialogue and due diligence vis-à-vis their counterparties. The incorporation of these aspects in the institution's risk appetite can be achieved by setting appropriate metrics, limits and corrective measures in case the limits will be exceeded.

226. For physical risks and transition risks, a high degree of granularity appears warranted, as it allows taking into account the differences in vulnerability within countries. Institutions should try, for instance, to identify the share of their counterparties' assets

[181] Chapter 5 provides a non-exhaustive list with indicators and metrics that can be selected for the identification of ESG risks.

located in geographical areas more vulnerable to acute or chronic physical risks and any measures taking by them to mitigate the vulnerability of those specific assets.

227. Institutions should also include in their Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP) frameworks a description of the risk appetite/tolerance levels, thresholds and limits set for the identified material risks, as well as the time horizons, and the process applied to keeping such threshold and limits up to date. This would align institutions' practices with supervisory expectations as such information is indicated in the EBA Guidelines on ICAAP and ILAAP.[182] The forward-looking approach of those frameworks should take into account the horizon of materialisation of ESG risks, for the short, medium and long term. Similarly, institutions' recovery plans should account for ESG risks as they can be prone to especially climate change and environmental degradation.

228. In addition to these and as part of the risk management policies, institutions' creditworthiness assessment of their counterparty acts as a fundamental part of the initial line of defence to understand and manage the ESG risks associated with prospective transactions. Creditworthiness assessment, where applicable, could include a sensitivity analysis (as discussed in chapter 5). Loan origination criteria aligned with institutions' risk appetite and limits, and including the information and data to be collected on specific transactions, form a central part of their ESG risks management framework. To that end, it is important that the credit decision is clear and encompasses all the conditions, including those to mitigate the risks identified in the creditworthiness assessment, such as risks associated with ESG factors, for the loan agreement.

6.4.2 Data and methodology

229. **Data availability and accuracy** is key for a robust risk management framework. Section 5.1 explained that the lack of data to identify and measure ESG risks is one of the main challenges faced by institutions. Further developments in the regulatory framework coupled with institutions' efforts to collect ESG-related data from their counterparties will play a crucial role to address these challenges in the risk management framework.

230. Furthermore, data on ESG risks are also needed for large institutions to meet their Pillar 3 disclosure requirements as per Article 449(a) of Regulation (EU) 2019/876, hence to improve transparency for the market participants and the wider public.

231. As indicated in chapter 5, even where data like CO_2 emissions, waste production or adherence to International Labour Organisation (ILO) conventions of a company are available, the translation of these ESG factors into expectations for the financial

[182] EBA Guidelines on ICAAP and ILAAP information collected for SREP purposes (EBA/GL/2016/10).

performance of the company relies on scenario analysis. Loan origination is a crucial phase to collect the necessary ESG-related information and data from the counterparties. For example, as part of loan origination, institutions evaluate the repayment capacity and creditworthiness of the borrowers typically based on financial and non-financial analysis of a corporate or retail client. In these evaluations institutions typically look into a frequently used approach by assigning a certain rating or score to the potential borrower indicating the level of risk. In some cases, although ESG factors and associated risks are relevant and present, these rating or scoring systems have not yet reflected ESG factors as relevant parameters.

232. As part of loan origination or ongoing engagement with customers, institutions gradually incorporate ESG factors evaluation into their processes, as also foreseen by the Guidelines on loan origination and monitoring (EBA/GL/2020/06). For example, a targeted due diligence assessment of the counterparties' ESG risk profile can be implemented by institutions. They can conduct a targeted due diligence assessment for instance through a qualitative questionnaire, and include ESG considerations at the very early stage of their business relationships with clients and counterparties.[183]

233. **In methodology building**, it is essential to evaluate which of the existing methods can incorporate sufficiently the ESG factors and transmitted ESG risks into prudential risk categories, and what additional methods or approaches need to be incorporated to capture exposure-based and portfolio-based risk measurement and monitoring. For example, commonly used traditional credit risk indicators, such as probability of default (PD) and loss given default (LGD) are primarily based on historical data, which in most cases, do not reflect expected impact of environmental or social factors. The assessment of ESG risks in the initial methodology building might have to build on different metrics in order to take into account their realisation timeframe, whether in the short, medium or long-term, in a forward looking-manner.

234. As the evaluation of ESG risks involves a much longer time horizon than used in the existing risk management tools, forward-looking tools such as scenario analysis and stress testing are being explored by the institutions. It is essential for institutions to evaluate which methods and metrics are the most suitable for them, considering their strategy and overall approach to ESG risks.

235. Methodological challenges due to limited availability of data could hamper this quantitative analysis, especially for social and governance risks, for which prospective analysis such as scenario analysis are less developed than for climate and environment-

[183] See also expectations 7.4 of the "SSM Guide on climate-related and environmental risks – Supervisory expectations relating to risk management and disclosure" (May 2020 – for consultation).

related risks, and common sets of indicators are not yet finalised. Given the characteristics of these risks, institutions could rely first on qualitative information and a comprehensive and thorough due diligence process in order to establish a risk profile of the different counterparties. Such analysis could exhibit certain social and governance practices that could be incompatible with the institutions' risk appetite. Nevertheless and ultimately, institutions could aim to establish quantitative metrics for assessing and monitoring social and governance risks. Improvements in data availability and quality in the context of methodology building would also enable institutions to be better informed when setting strategies and shaping the risk management framework.

236. Quantitative indicators can take the form of key performance indicators (KPIs), which capture both risk and opportunities, and allow a comparison between portfolios. Nevertheless, beyond a static monitoring of their exposures, institutions should also focus on evaluating potential current and future impact of ESG risks through scenario analysis. It might be less straightforward to translate social and governance risks into commonly agreed quantitative indicators.

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

238. With regard to **credit and counterparty risk**, ESG risks may challenge institutions in all stages of the process, from granting to monitoring. Specifically, ESG risks can impact the main credit parameters:

a. PD: An increase of the probability of default (PD) of vulnerable counterparties can be triggered by e.g. shift in social norms that reduce the demand for certain products and increases the downward pressure on revenues, or impact of severe weather conditions such as draught pushing agricultural business into default.

b. EAD: Counterparties subject to physical risk might need to draw more from their committed credit lines to respond to sudden shocks, like floods.

c. LGD: in a transition scenario, the value of stranded assets will decrease, determining lower collateral values and, in a default scenario, lower recovery values.

239. ESG risks can drive **market risks**. For example, higher downside risks can be associated with financial instruments issued by companies that are environmentally unsustainable or socially irresponsible. Understanding and establishing a direct relationship between how ESG risks impact the issuers and how the value of the related financial

instruments changes is challenging but it is important to assess and evaluate both the risk of losses and of increased volatility.

240. The level of the volatility is a further element to be considered. Investments in financial instruments issued by companies belonging to sectors perceived as not sustainable from an ESG perspective, or lacking an adaptation policy are more prone to be exposed to the effects of the news flow. Indeed, the price of such financial instruments will be more affected by policy and regulatory actions in the ESG space, as well as to the increasing percentage of investment funds allocating a minimum level of their Asset under Management to ESG compliant instruments.

241. The inclusion of ESG risks into the market risk strategy is not sufficient to ensure that the risk is properly addressed. An appropriate organisational framework is likewise needed. Such a framework shall clarify the responsibilities for deciding, implementing, monitoring and reporting the impact of ESG risks on the market portfolio of the institution.

242. ESG risks can drive **operational risk,** in particular via reputational risk and liability risk that can arise as a result of the institution's activities. For instance, institutions' financing activities that are publicly controversial (e.g. hydraulic fracturing or fossil fuel financing) might see their reputation impacted or might be subject to legal claims.

243. As evidenced in the EBA's survey on Sustainable finance market practices[184], there is a growing consensus among industry to consider ESG risks as drivers of existing prudential risks, with the exception of liquidity risk. However it is deemed important not to overlook **liquidity and funding risk**. Indeed, ESG factors could also result in funding issues for an institution or make some assets less liquid.

244. ESG factors and risks can influence both short- and medium-term liquidity and the short-, medium- and long-term funding of institutions. As a result, institutions should take into account ESG factors when managing liquidity and funding risks over an appropriate set of time horizons and under normal and stressed conditions.

245. On the asset side, ESG factors can influence the value of financial assets, which in turn might affect the liquidity of that asset, thereby creating **liquidity risk**. This risk can also arise as the result of ESG events triggering a run on the bank: environmental crisis, like social unrests, can lead to higher withdrawals or stress in liquidity positions of the institution in a specific geographical area.

246. On the liability side of the balance sheet, ESG factors can affect availability and/or stability of funding (e.g. hampered or more expensive access to market funding, unstable

[184] EBA staff paper series – "Sustainable Finance: Market practices" (n°6 January 2020).

deposits due to changing customer preferences), thereby creating **funding risk**. In this context it is important to acknowledge the potential effect of reputational issues on the funding of institutions.

247. As well as affecting the profit and loss account of institutions, both through micro-prudential factors and through macro-prudential factors, ESG risks can also affect the institutions' balance sheet. ESG factors, both independently and through the aforementioned profit and loss account, affect institutions' capital and liquidity adequacy, the risk weight of its assets, and its access to capital and liquidity.

6.4.3 Risk monitoring and mitigation

248. As stated in the EBA Action plan on sustainable finance, proactive strategies and forward-looking approaches that aim to build resilient business models in the long-term combined with adequate governance arrangements should be understood, if appropriately designed, as tools mitigating the potential impact of ESG risks. In this context, the aspects of business strategy and business process described in section 6.2 (such as clear ESG risk-related objectives and limits, engagement with counterparties to support their transition, or development of sustainability oriented products) can be considered as elements in the risk monitoring and mitigation.

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

250. In chapter 5, this discussion paper provides an overview of metrics and existing observed methods, including potential use, and advantages and disadvantages of these methods. These metrics and methods should not be seen as strict recommendations, neither as a complete list. However, institutions can consider applicability of these metrics and similar methods for monitoring of individual exposures, groups of exposures or portfolios. The following section is dedicated to stress testing as one of the tools to evaluate climate-related risks.

251. It is paramount for institutions to review and potentially adjust their business strategies and processes in order to respond to the challenges of ESG risks. Section 6.2 and section 6.3 also explained that appropriate internal governance arrangements and decision-making processes, including appropriate risks and limits in the risk management framework, are fundamental ESG risk mitigation tools for institutions. Additional and complementary measures that institutions may take to **mitigate** ESG risks depend on the source of ESG risks. For instance, if ESG factors impact credit risk, institutions can consider

credit risk mitigation tools (e.g. guarantees and collateral). If operational risk is impacted, institutions can consider taking corrective measures (e.g. insurance policies). Market risk mitigation could be diversification of portfolios, thereby reducing concentration risks, amongst others.

252. Then, institutions can manage ESG risks, at least to a certain level, by implementing an **exclusion policy or by setting specific limits** for tailor-made ESG risk indicators (see Annex 1). For instance, this can be done by integrating climate risk indicators in lending criteria (such as a maximum exposure level towards certain climate-sensitive sectors or individual counterparties).

253. **Pricing** is another element which should reflect also the risks driven from the ESG factors. Institutions should account for ESG risks in their pricing strategies. Indeed, as ESG factors are incorporated in the institutions' risk appetite and business strategies, it will also be reflected in pricing together with other characteristics of the products. Similarly, it is important that an appropriate governance structure that accounts for ESG risks, complements the maintenance of an accurate pricing approach.

254. It is equally important for institutions to link the specific ESG risk targets they set in their risk appetite with their pricing strategies in order to assess whether they can facilitate the achievement of these ESG risks targets. Similarly, the increase of ESG issuances with attractive funding costs and linked with a strict use of proceeds would provide a basis for pricing differentiation.

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

6.4.5 The climate risk stress testing framework for banks and supervisors

256. So far, central banks, supervisors, banks and academics have mainly focused on the quantification of environmental risks leaving the inclusion of social and governance risks in a stress test an uncharted territory. The reason for this is that social and governance risks present more challenges in terms of modelling and data availability than climate risks.

(i) Main challenges of a climate risk stress test framework

257. The identification of exposures affected by climate-related risks represents the base of a climate risk stress test. Up until now, only limited empirical and sufficiently granular data exist to measure actual climate risk exposures; moreover, classifying green

versus non-green exposures in a consistent way is currently one of the major challenges.[185] In addition, translating borrower level criteria into supervisory data requirements at exposure class level appears also fraught with operational issues as more granular information would be needed at activity level to identify those borrowers particularly exposed to climate risk.[186] Moreover, integrating inputs data with a broader set of climate risk indicators, like those defined by external data providers, or with public information on the borrower, could pose significant comparability and data quality issues.[187]

258. Secondly, there are significant modelling challenges in calibrating scenarios for transition and physical risks given the interactions between policy, technology, and economic sector shocks. In addition, the assumption of longer time horizons challenges the way risks are usually assessed: transition risk scenarios often consider a time span from ten to thirty years while banks and supervisors typically use one to five-year periods to conduct business planning and stress testing exercises.

259. Third, transition risks vary across sectors depending on the adaptation pace and can change in the future: early adaptation (electric cars) versus late adaptation (coal power station). In light of this, historical information would not help modelling these risks especially in the long run. Therefore, to make an accurate assessment, banks require a methodology which also embeds these forward looking features and allows for capturing major differences in risks across various sectors or companies.

260. In light of these challenges, climate stress tests remain work in progress and should not be expected to provide the same type of outcome as standard supervisory stress tests. To-date, climate stress tests remain of less comprehensive nature than the usual stress tests and given their complexities and assumptions, they need to be assessed and interpreted with caution.

(ii) Main practices for climate risk stress test

261. As shown in chapter 5, so far several climate stress-testing methodologies have been proposed and applied by supervisors and central banks. Stress testing can be run at portfolio, industry or counterparty level and can be conducted by national competent authorities, banks themselves or external providers. In most cases, climate stress tests at

[185] A publication of the taxonomy from the European commission (http://europa.eu/rapid/press-release_IP-19-3034_en.htm) represents a step forward towards a common definition of sustainable exposures but it only defines green exposures.

[186] For example, the total exposure of a holding company (energy producer) is the sum of the activities of its subsidiaries (coal power stations, renewable energy producer) or project activities. However, it is not clear how the holding company total exposure should be classified

[187] For instance, regarding borrower public information, data on carbon emissions are generally not available for smaller companies and scope 3- emissions data can be difficult to obtain.

present are run in the form of pilot exercises in order to test methodologies and check data availability.

262. Published methodologies are not always disclosed in detail and in some cases they are described at high level. In a first step, the channels through which the risk factors provided in the climate scenarios affect banks' balance sheet are identified. Then, the shocks transmission mechanism to banks exposures is modelled. Climate risk stress methodologies are applied at different levels of aggregation depending on the data granularity available (loan, obligor or at sector level) and focus mainly on credit and market risk exposures.

263. Climate stress tests usually apply pre-defined climate scenarios (certain temperature pathways), which develop for instance emission reduction pathways associated with specific climate goals. The international scientific community has developed several databases identifying climate pathways (i.e. 2 degree consistent) and the implied trajectories for economic variables and sectors. This is done mostly through Integrated Assessment Models, which combine insights from various disciplines into one single framework, using socioeconomic, energy and climate factors. Instead of looking at scenarios satisfying certain temperature targets, climate stress can also be modelled through event-based shocks. These could be in the form of carbon taxes which increase the cost base of certain companies (a policy shock), technological breakthroughs which may imply a major shift away from certain industries (a technology shock) or changes in expectations and consumer behaviour (a preference shock).

264. Climate stress test methodologies are at an early stage. Supervisors have initially started to conduct exposure analyses to identify and quantify the potential implications of environmental risks on the banking and the insurance sectors. A few supervisors have conducted such analyses and translated their results into a heat map segmented across locations and sectors while others have classified credit and market risk exposures using CO_2 emission data.[188]

265. The EBA has launched in May 2020 a pilot sensitivity analysis with the aim of testing currently available methodologies and data availability regarding climate risk (see Box 16).

Box 16: Identifying Climate Exposures

As anticipated in the EBA Action Plan on sustainable finance published in December 2019, in 2020 the EBA is running a pilot sensitivity analysis on climate risk based on a sample of volunteer banks. The aim of the exercise is to perform a preliminary comparable assessment on banks exposures in relation to climate risk, using different classification approaches and

[188] As described in section 5.2.2.

also to explore the main data and methodological challenges for banks to assess climate risks.

It is the first exercise for banks to be run at the EU level to ensure comparable results. The preliminary estimates of the amount of sustainable exposures held by EU banks will be used by the EBA as a starting point for future work on climate risk.

The 2020 Pilot sensitivity exercise on climate risk was launched in early May 2020 with a sample which includes globally operating banks as well as smaller regional banks. In total 29 banks from 10 countries participated in the exercise. The scope of the exercise is on non-SME corporate exposures towards non-financial obligors domiciled in EU countries.

In terms of methodology, the analysis to be conducted by the EBA consists of classifying the data under scope using different classification approaches (CO_2 emission based classification along with some other approaches that rely on NACE codes) to determine sustainable exposures. In parallel banks are also invited, on a best effort basis, to classify the data under scope by applying the EU green taxonomy. In a second step, the EBA will perform a sensitivity analysis assessing the impact of an increase in risk parameters (PDs) on the classified exposures by sector. The objective of this latter step will be mainly to test banks' readiness to apply the EU green taxonomy.

Some preliminary results of the exercise will be published in the EBA Risk analysis report while a more comprehensive report, showing also the outcome of the green taxonomy classification, will be published by 2021 Q1.

Conclusions and policy recommendations

- **Based on the EBA's analysis, it important for institutions to incorporate ESG risks in their risk management framework, including origination and monitoring. Origination is the initial phase where institutions have the opportunity to collect the necessary information and data in relation to the ESG risks associated with the different elements of the transaction, e.g., the product itself, collateral or counterparty. The information and data collected at the initial evaluation phase would directly feed into the monitoring process. The same information and data would be used for risk management purposes throughout the lifecycle of the transactions and products, subject to necessary review and updates. It is important that institutions achieve these goals by:**

    a. **The risk appetite framework, including not only a description of the risk appetite, tolerance levels, thresholds and limits set for the identified material risks, but also describing how the risk indicators and limits are allocated within the banking group, different business lines and branches;[189]**

[189] See section 5.3 of EBA Guidelines on ICAAP and ILAAP information collected for SREP purposes (EBA/GL/2016/10).

b. **Setting out appropriate policies and procedures as well as criteria for the assessment of the repayment capacity and creditworthiness of the counterparties taking ESG factors and ESG risks into account;**

c. **Collecting necessary information and data related to ESG risks associated with the counterparties at the loan origination phase, and review and update this information throughout the lifecycle of the transaction, where needed;**

d. **Developing risk monitoring metrics at exposure-, counterparty- and portfolio-level, and categorise them by their ESG characteristics and risk associated with these, subject to their size and complexity;**

e. **Managing ESG risks as drivers of prudential risks within their current risk management frameworks, in a consistent manner with the risk appetite, and as reflected in both ICAAP and ILAAP frameworks, and recovery plans;**

f. **When it is possible, calculate indicators such as volume of outstanding assets from counterparties particularly exposed to social and governance issues. Institutions could, for instance, replicate the indicators contained in Annex 1 of this report or Annex 1 of the (draft) delegated regulation complementing the Sustainable Finance Disclosure Regulation (SFDR), as regards principle adverse impacts and tailored them on their business model and exposures types.[190]**

Stress testing for climate risk

- **The EBA sees a need to gradually develop methodologies and approaches to a climate risk stress test. Nevertheless, some of the key principles of the EBA guidelines on stress test (EBA/GL/2018/04) for institutions remain applicable and should be used as a main reference. As the methodological and data constraints explained above will be overcome over time and in line with the current regulation, at the moment the objective of a climate risk stress test should be to assess climate-related risks and inform on the resilience of institutions' own business model and investment strategies with a milder focus on capital implications.**

- **Institutions should have a climate risk stress programme in place in line with the same features highlighted in section 6.1 of the EBA guidelines on stress test and align their stress test programme with the objective specified above. Finally, in case of modelling challenges concerning climate risk scenario, institutions could leverage on reference scenarios provided by international organization (i.e. NGFS) as a starting point.**

[190] Draft regulatory technical standards with regard to the content, methodologies and presentation of disclosures pursuant to Article 2a, Article 4(6) and (7), Article 8(3), Article 9(5), Article 10(2) and Article 11(4) of Regulation (EU) 2019/2088 – Joint Committee (draft RTS under consultation).

- **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. Other general principles highlighted in section 6.2 of the EBA/GL/2018/04 should also be followed where applicable.**

- **With regard to data infrastructure, in line with section 6.3 of the EBA/GL/2018/04, institutions should create, maintain and keep an up-to-date accurate and reliable risk data management. In this regard, institutions should ensure that their data infrastructure is proportionate to their size, complexity, and risk and business profile, and allows for the performance of climate stress tests covering all material risks that the institution is exposed to. Moreover, institutions should be able to generate aggregate data efficiently on a timely basis to meet a broad range of on-demand requests.**

- **Concerning the scope and coverage, climate stress tests should mainly focus on transition and physical risk as defined in chapter 4 having regard to both the on- and off-balance-sheet assets and liabilities of an institution including relevant structured entities. In this regard, climate stress test should also consider the correlations between usual risk types (i.e. credit and market risk) and environmental risks, and identify the related transmission channels. In addition, for the long run, a forward-looking approach rather than a probabilistic one (based on historical data) should be employed to better assess climate-related risks and their evolution along time. Other general principles highlighted in section 6.4 of the EBA/GL/2018/04 should be followed where applicable.**

- **Finally, given the higher uncertainty over climate pathways and the length of the time horizon, using multiple scenarios, instead of one or two as done in supervisory stress testing, would help to perform a broader assessment of climate risks.**

Questions:

19. Please provide your views on the proposed ways how to integrate ESG risks considerations into the risk management framework of institutions.

20. The EBA acknowledges that institutions' approaches to environmental, and particularly climate-related, risks might be more advanced compared to social and governance risks, and gives particular prominence in this report to the former type of risks. To what extent do you support this approach? Please also provide your views on any specificities associated with the management of social and governance risks.

6.5 Investment firms-specific considerations

266. The reasoning and arguments presented in this report can be applicable to investment firms that are similar to credit institutions in terms of their business models and risk profile, and that fall under the framework of CRR and CRD. The activities of these systemic and bank-like investment firms are exposed to credit risk, mainly in the form of counterparty credit risk, as well as to market risk for positions they take on own account, client related or not. In other words, those investment firms carry characteristics of credit institutions and may be subject to ESG risks in a similar manner.

267. There are also investment firms that are not systemic and bank-like. They are different from credit institutions in terms of their economic activities because they do not have large portfolios of retail and corporate loans. Therefore, the risks faced and posed by investment firms especially from an ESG point of view may have some differences compared to those faced and posed by credit institutions. For these investment firms, e.g. asset management companies, the materialisation of ESG risks would manifest in different risk metrics monitored under the IFD.

268. Given the importance of ESG risks, investment firms are expected to increasingly consider the ESG factors in their activities, investments in various assets on the markets, and potentially adjusting their investment behaviour reflecting their risk tolerance to the ESG risks (e.g. towards assets that are less prone to ESG risks or assets that create opportunities from a sustainability point of view). Such change in investment behaviour, impacted also by environmental regulation and consumer preferences, need to be supported also by adjustments in reporting and disclosure practices in line with the relevant legislative developments.

269. Investment firms carry out a set of (mutually non-exclusive) investment services and activities. These services and activities are listed in Annex I of Directive 2014/65/EU.[191] It is reasonable to expect that ESG risks may materialise and investment firms may be subject to ESG risks when investment firms perform deals on own account, as opposed to when they act on the account of their clients. When investment firms perform deals on own account through either shareholders' funding or clients' finances, the ESG risks may manifest on their balance sheets mainly through the positions they take in the markets, i.e. ESG risk may emerge via market risk, for example:

[191] The list includes: (1) Reception and transmission of orders in relation to one or more financial instruments; (2) Execution of orders on behalf of clients; (3) Dealing on own account; (4) Portfolio management; (5) Investment advice; (6) Underwriting of financial instruments and/or placing of financial instruments on a firm commitment basis; (7) Placing of financial instruments without a firm commitment basis; (8) Operation of a multilateral trading facility (MTF); and (9) Operation of another multilateral trading facility (OTF).

a. Net position risk: financial assets, which are subject to ESG risks, may lose their transaction value recorded in the trading book of the investment firms.

b. Daily trading flows: financial instruments affected by the ESG risks may lead to changes in the value of total daily trading flow.

c. Concentration risk: exposures to an individual position or group of connected counterparties may be more prone to ESG risk.

270. In addition, the type of investment and the asset for investment may drive the impact of ESG risks on the investment firms dealing on own account. Investment firms dealing in commodities or commodity derivatives that are more prone to ESG factors such as energy or agricultural products would carry a greater ESG risk.

271. For the investment firms not dealing on own account, the impact of ESG risks would be limited, if it exists at all. In these cases, the ESG factors would not manifest directly on firms' balance sheets. This would be the case especially for example, for investment firms that provide investment advice, manage portfolios on behalf of their clients, or execute orders on behalf of their clients. However, for investment firms that provide portfolio management there might be a second order effect, as their clients' portfolios managed can be affected by ESG risks in a similar fashion to credit institutions as explained in this discussion paper, for example:

a. Assets under management: when significantly concentrated, e.g. in a specific geographical location or sector, specific assets under management are more prone to material ESG risks, and the value as well as the liquidity of these assets could fall. ESG risks materialise, affecting negatively the ability of financial assets to perform and, hence, causing the depreciation of assets. The effect on the investment firm could be the loss of dissatisfied clients (thereby, reducing the assets under management) or even claims for damages, e.g., where an investment firm has failed to correctly inform clients about potential ESG risks for their portfolios according to Article 6(1)(b) of Regulation (EU) 2019/2088.

b. Customer orders handled: financial instruments affected by the ESG risks may drive volatility in the amount and value of daily client orders handled, resulting from increased demand to open or close the positions in these financial instruments.

272. It is recognised that some aspects of adjustment of business strategies and processes, internal governance and risk management framework presented in this chapter, or some methodological approaches for assessing ESG risks may not be fully applicable for the economic activities of investment firms. However, the key arguments on the need to incorporate the ESG risks into the business strategies and processes are valid also for the

activities of investment firms. Also the need to capture the ESG risks in the internal governance and risk management of investment firms, reflecting the specificities of their activities is equally valid.

Conclusions and policy recommendations

- **Based on the analysis presented, the EBA sees the need for enhancing the incorporation of ESG risks into the investment firms' business strategies and business processes. Adjusting the business strategy of an investment firm to incorporate ESG risks as drivers of prudential risks can be considered as a progressive risk management tool to mitigate the potential impact of ESG risks.**

- **The EBA sees a need for the investment firms to incorporate into their internal governance and risk management frameworks an evaluation of the relevance of ESG factors and ESG risks depending on the specific activities they provide. Depending on their assessment, the investment firms should reflect ESG risks in their governance and risk management arrangements in a proportionate manner.**

Questions:

21. Specifically for investment firms, what are the most relevant characteristics or particularities of business strategies, internal governance and risk management that should be taken into account for the management of the ESG risks? Please provide specific suggestions how could these be reflected.

7. ESG factors and ESG risks in supervision

273. Based on the mandates included in Article 98 (8) of the CRD and Article 35 of the IFD, the EBA shall assess the potential inclusion of ESG risks in the review and evaluation process performed by competent authorities.

274. Except for the mandates this discussion paper is based on, ESG factors and ESG risks are not explicitly included either in the CRD, IFD or in the SREP guidelines. Chapter 6 of this discussion paper includes a justification for the inclusion of ESG risks into the institutions' business strategies and processes, internal governance and risk management.

275. The same arguments are valid to justify the need to reflect the ESG factors and ESG risks in the supervisory review in a proportionate manner. Negative impacts on institutions from ESG risks can already occur in the short and medium-term, and it is likely that the full impact of ESG risks will unfold over a much longer time horizon.

276. This chapter elaborates details on how ESG risks could be reflected in supervisory review, building on common definitions in chapter 4 (ESG factors, ESG risks, transmission channels) and elements to be considered by institutions in chapter 6 (business strategies, business processes, governance and risk management). The measures identified and the recommendations made are subject to the principle of proportionality, meaning that they are to be applied in a manner that is appropriate, taking into account in particular the institution's business model, size, internal organisation and nature and complexity of its activities. Smaller institutions are not immune to ESG risks and could be even more susceptible to them, for instance, if they are particularly concentrated in a vulnerable sector or geography.

277. The chapter firstly includes a short overview of the existing scope of the supervisory review for credit institutions and investment firms and elaborates on the links between the ESG-related strategy, governance and exposures, and the existing elements of the supervisory review. Secondly, considering these links, the specific aspects of the ESG risks assessment relevant for the supervisory review are included. Thirdly, preliminary conclusions related to the incorporation of ESG risks into the supervisory review are included.

7.1 Scope of supervisory review in the CRD and the IFD

278. The scope of supervisory review in the CRD is defined by Article 97, under which supervisors shall review the arrangements, strategies, processes and mechanisms implemented by the institutions to comply with CRD and CRR, taking into account the technical criteria set out in Article 98, and evaluate the risks to which the institutions are or might be exposed and the risks revealed by stress testing. The technical criteria in the Article 98 cover a broad range of areas, including specific risks (such as credit risk, market risk, interest rate risk in the banking book, concentration risk, or liquidity risk) and a number of qualitative areas (such as business model, application of internal policies and procedures, or diversification).

279. The scope of supervisory review in the IFD is defined by Article 36, under which supervisors shall review the risk profile and business model, the arrangements, strategies, processes and mechanisms implemented by investment firms to comply with IFD and IFR, and the set of risks (risk to clients, risk to market, risk to the investment firm and liquidity risk), the geographical location of an investment firm's exposures, the business model, systemic risk, ICT risks, interest rate risk from non-trading book activities, and governance arrangements.

280. Building on the provisions of the CRD, the EBA developed Guidelines on common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing. These guidelines aim at achieving convergence of supervisory practices and supervisory stress testing. The supervisory review is structured around the main six SREP elements: business model analysis, internal governance and institution wide controls, risks to capital, risks to liquidity and funding, SREP capital assessment and SREP liquidity assessment.

281. IFD also includes a mandate for the EBA and ESMA to develop guidelines for supervisory review. As explained in the EBA's Roadmap on Investment Firms,[192] the mandate for the development of common SREP guidelines under Article 45 (2) of the IFD does not include a legal deadline and is expected to be conducted between 2022-2025, taking into account the findings of the final report under Article 35 of the IFD, which will be informed by this discussion paper and the feedback collected on it.

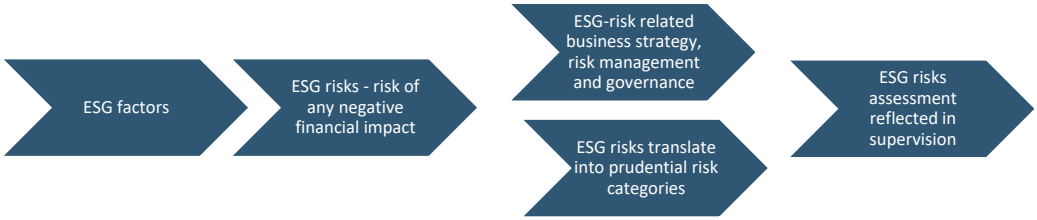
[192] https://eba.europa.eu/sites/default/documents/files/document_library/Regulation%20and%20Policy/Investment%20firms/884436/EBA%20Roadmap%20on%20Investment%20Firms.pdf.

282. As explained by the NGFS in relation to climate change, this risk has distinctive characteristics including far-reaching impact in breadth and magnitude in the foreseeable future, irreversibility of impact, and dependency on short-term actions.[193] Considering these distinctive characteristics, the NGFS also suggest that climate risks need to be considered and managed differently than currently considered prudential risks, and calls for their integration into prudential supervision. This call for action has been followed up on by the NGFS by issuing a specific guide for supervisors for integrating climate-related and environmental risks into prudential supervision.[194]

7.2 Main links between ESG factors, ESG risks and supervisory review

283. As referred to in chapter 4, ESG factors are ESG characteristics that may have a positive or negative impact on the financial performance and solvency of an entity, sovereign or individual, which then can turn into ESG risks via any negative financial impacts. While these ESG risks stemming from the institutions' counterparties are managed by the institutions themselves through appropriate governance arrangement and strategies, ESG risks also materialise in the form of prudential risks and thus should be included in the supervisory review. In Figure 11, the links between ESG factors and the supervisory review are shown in a simplified way.

Figure 11 Links between ESG factors and supervisory review



284. In chapter 6 of this discussion paper, we identified the key areas that support the institutions' sound and effective management of ESG risks. These areas include (i) business strategies and business processes, (ii) internal governance and (iii) risk management. At the same time, as explained in chapter 4 and chapter 6 of the discussion paper, ESG risks manifest through different transmission channels (e.g. physical, transition and liability risk) and can impact the overall risk exposure with a subsequent impact on capital and liquidity adequacy.

[193] https://www.ngfs.net/en/executive-summary-call-action

[194] https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_for_supervisors.pdf

285. Business strategy and business processes: Considering the relevance and potential impact of ESG risks on institutions, including sustainability considerations in the institutions' business strategy and processes is seen as inevitable for their economic resilience and viability over the long-term. Business strategies and processes are not only considered for strategic planning and product design, but also reflected in institutions' appropriate governance arrangements. When setting the business strategy, ESG factors should be taken into account also for the medium to long-term time horizon.

286. Internal governance: ESG-related additions to governance, internal controls and risk management arrangements elaborated in chapter 6 are relevant also for the supervisory review of the institution's wide internal governance and controls. The structure, the composition and the organisation of internal governance bodies play a crucial role in the efficient incorporation of ESG factors into institutions' business strategy and decision-making processes.

287. Risk management: Additional ESG-related aspect in risk management elaborated in chapter 6 are relevant also for the supervisory review. These include the overall risk management framework and more risk specific aspects relevant for the risks to capital or risks to liquidity and funding.

288. Exposures to ESG risks: ESG risks imply negative financial impacts to the institution when they materialise in the form of prudential risks and may, therefore, impact the overall capital and liquidity position of the institution (including long term). This can affect the resilience of its business model. Supervisory understanding of the institution's ESG risks exposure is very relevant for the evaluation of the risks the institution is or might be exposed to.

289. Similar to the time horizon for institutions' strategic planning and risk management (see chapter 6), the question regarding the time horizon considered by supervisors in the supervisory review comes into place when evaluating how to include ESG risks. For example, the assessment of the viability of credit institution's current business model covers the following 12 months, and the sustainability of the credit institution's strategy (as its ability to generate acceptable returns) covers a forward-looking period of at least three years, based on its strategic plans and financial forecasts. Capital requirements set in Pillar 2 are estimated to cover primarily the unexpected losses over a 12-month period, and capital guidance (P2G) is based on stressed conditions over a forward-looking horizon of at least two years, reflecting relevant stress scenarios.

290. While supervisors are certainly evaluating risks at different time horizons as part of the risk assessment, the above mentioned time horizons for business model analysis and

capital might indicate that ESG risks are likely not to be fully captured by the existing supervisory reviews due to these risks' longer time horizon.

291. The NGFS guide for supervisors for integrating climate-related and environmental risks into prudential supervision captures in quite detailed form supervisory approaches to climate-related and environmental risks up to now, and suggests that this work is still in an early stage.

292. In the following sections this discussion paper outlines specific areas for supervisory consideration to be covered under the supervisory review, reflecting the main areas covered in chapter 6, with a focus on credit institutions.

7.3 ESG risks in business model analysis

293. As outlined in chapter 6, the quantification and management of ESG risks are subject to distinct challenges and therefore credit institutions need to take ESG risks into account when formulating their business strategy. The following section describes how the integration of ESG risks into the business strategy can be evaluated by the supervisors as an additional perspective when analysing the business model of credit institutions.

294. From an ESG risks perspective, analysis of the business model implies an evaluation of the **long-term resilience of a credit institution.** In particular, this covers aspects of the long-term sustainability of the credit institution's strategy in light of e.g. a changing climate, environmental degradation and the transition towards a more sustainable economy. Chapter 6 of this discussion paper suggests four main considerations for credit institutions regarding their business strategies and business processes:

a. Monitoring changing business environment and evaluating long-term resilience

b. Setting strategies considering ESG risk-related objectives and/or limits

c. Engaging with customers and other relevant stakeholders

d. Considering the development of sustainable products

295. These aspects can then form a basis also for supervisors. The long-term resilience assessment would be a new aspect of the supervisory assessment and go beyond the minimum time horizon of 3 years currently expected based on the SREP Guidelines[195] and

[195] EBA/GL/2014/13, as amended by EBA/GL/2018/03, par. 83.

be aligned with relevant public policy such as the emission reduction targets set for 2030.[196] It would focus on the results of scenario analyses and other forward-looking tools, including qualitative assessments, in addition to more commonly used short-term performance indicators.

7.3.1 Business environment and long-term resilience

296. For the purpose of evaluating a credit institution's business model from an ESG risks perspective, it is helpful to use additional sources of information as a basis for the assessment, such as:

- forward-looking analyses conducted by the credit institution itself and studies published by relevant bodies on expected long-term developments;
- non-financial reporting in addition to financial, regulatory and internal reporting;
- ESG ratings of the credit institution itself as well as of its most material exposures.[197]

297. ESG factors and ESG risks would also enter into the **assessment of the credit institution's main activities, geographies and market position**, particularly into the determination of the materiality of the different exposures and into the identification of the peer group of a credit institution, e.g. credit institutions providing funding to areas prone to weather hazards or industries with a record of lower labour safety standards.

298. With regard to the long-term effects of ESG-risks and the transition to a more sustainable economy as agreed upon in national, EU and international strategies and agreements, a careful and, importantly, **forward-looking assessment of the future business environment** credit institutions are facing is key for the business model analysis. Competent authorities should consider among others:

- relevant political commitments such as the Paris Agreement or the European Green Deal;
- social changes resulting from, inter alia, the COVID-19 pandemic and increasing digitalisation; and
- economic effects of more frequent and severe natural disasters and increasing environmental degradation, technological developments and changing customer preferences.

[196] https://ec.europa.eu/clima/policies/strategies/2030_en.

[197] Supervisors should take into account any methodological limitations and underlying assumptions, and acknowledge that pure ESG ratings do not immediately provide an assessment of financial resilience.

299. Future **key macro-economic variables** could be informed by scenario analyses and competent authorities could leverage on the work carried out, e.g. by the NGFS.[198] The transition of the economy could also influence the **competitive landscape** in terms of other credit institutions pursuing dedicated sustainability strategies[199] and overall **trends in the market**.

7.3.2 Understanding the current business model from a ESG risks perspective

300. For the analysis of the current business model, supervisors conduct both a quantitative analysis, to understand its financial performance and the adequacy of capital and liquidity to assure stability not only in the short term, and a qualitative analysis to understand how the credit institutions' financial performance is driven by its risk appetite compared to peers and its potential success drivers and key dependencies. The impact of regulatory changes, such as carbon-pricing, minimum environmental or labour standards or an outright ban of certain activities on the creditworthiness of credit institutions' borrowers or the market values of investee companies, should be part of both such quantitative and qualitative analyses.

301. The **quantitative analysis** includes main drivers of profit and loss, balance sheet composition, asset composition and concentrations therein and the adherence to formal risk limits. Considering that ESG risks can materialise already in the short and medium-term, it seems relevant to extend the factors considered also to ESG factors.

302. In terms of understanding the impact from ESG factors on the current business model, the following considerations appear most relevant for the quantitative analysis:

a. whether the reviewed credit institution derives a significant portion of its **profitability** from assets that are more exposed to ESG risks;
b. whether the credit institution observes differences in the **profitability** of conventional loans and loans that include ESG risk-related objectives;
c. whether the **impairment** of asset values is caused (partially) by ESG risks affecting such exposures and how this is assessed and quantified by the credit institution;[200]
d. whether the **balance sheet review** reveals a problematic regional or sectoral **concentration** of assets, physical collateral or liabilities highly exposed to ESG risks, for example concentration of lending to or deposit-taking from households in a region

[198] NGFS (June 2020), "Climate Scenarios for central banks and supervisors".

[199] See EBA Staff Paper Series, Sustainable Finance – Market Practices, Jan. 2020, p. 12.

[200] For example, the demand shock experienced by the aviation industry following the outbreak of COVID-19 was aggravated by the fact that airlines were prone to economic failure even before the pandemic due to strong competition, market fragmentation, currency risks, the absence of protective restructuring regulations, or simply poor management and high leverage, see Jack Dutton (Feb. 2019), "Airline insolvencies: European carriers take the hit".

where the economy heavily depends on carbon-intensive industries or that is prone to natural hazards.

303. With regard to the **qualitative analysis** the incorporation of ESG factors is equally relevant and could comprise at least the following areas of analysis:

a. the credit institution's **internal capacities** including IT tools capable of identifying and evaluating ESG risks and sufficient staff with expertise in dealing with ESG risks;
b. the **strength of the credit institution's relationships** with stakeholders in terms of pro-actively identifying their material ESG risks and implementing engagement strategies;
c. a potential **competitive advantage** of the credit institution due to the offering of sustainable banking products.

7.3.3 Analysis of the strategy and financial plans

304. In a forward-looking manner, supervisors are deemed to analyse a credit institution's financial projections and strategic plans. The analysis encompasses the main quantitative and qualitative management objectives, the credit institution's projected financial performance, the plausibility and consistency of the credit institution's assumptions, and its ability to effectively execute its strategy and achieve its financial forecasts.

305. Building on justification provided across this discussion paper, this is one of the key areas where supervisors can extend the time horizon of their supervisory assessment and add the evaluation of long-term strategies and ESG risk-related objectives and/or limits set by the credit institutions.

306. Where the credit institution has ESG risk-related **strategic objectives and/or limits**, the following aspects are of particular interest to supervisors:

a. the reasoning for such ESG risk-related objectives and/or limits (e.g. reputation, risk mitigation, growth opportunities);
b. which financial objectives the management body tries to achieve;
c. the level of ambition of such objectives compared to the overall strategy;
d. the interconnectedness with other, potentially conflicting objectives or limits;
e. major challenges that the credit institution is facing;
f. where the credit institution aims at aligning with sustainability standards, such as the SDGs, in how far the alignment responds to ESG risks or contributes to profitability;
g. where the credit institution offers sustainable banking products, whether they are also designed to mitigate ESG risks, e.g. by reducing exposure to activities particularly affected by the transition to a sustainable economy;

h. where the credit institution engages with its customers, how this is deemed to help mitigate ESG risks stemming from such exposures.

307. Supervisors may evaluate whether the strategy and financial plans adequately respond to ESG risks, i.e.,:

a. whether ESG risks impact the **projected financial performance;**[201]
b. whether ESG risks-related objectives, sustainable banking products or engagement with customers on their preparedness and alignment with the transition are **success drivers** of the business strategy;
c. whether the credit institution accounts for the energy transition, climate change, digitalisation and other ESG issues in its **macroeconomic assumptions;**[202]
d. whether the credit institution has the **execution (know-how) capabilities** to implement any ESG risks-related objectives and/or limits, judging from the track record of previous strategic adjustments and the availability of relevant expertise while acknowledging the relative novelty and potential complexity of ESG-related strategies.

308. The absence of ESG-related considerations in the business strategy should be critically challenged, taking into account that major parts of the economy will undergo unprecedented changes in the coming decades.

7.3.4 Assessing business model viability and sustainability

309. Building on the analyses of the business environment and current business model, supervisors assess the viability of a business model in view of its ability to generate acceptable returns over the next 12 months. By incorporating ESG factors into the analysis of the business environment and current business models, these factors would then be channeled in the assessment of the business model viability.

310. The assessment of the sustainability of the credit institution's strategy, in the context of SREP understood as economic sustainability, takes a more forward-looking stance. Under this assessment, supervisors evaluate for at least the following 3 years whether the credit institution is able to generate acceptable returns given its strategy, forecasts and business environment. The assessment extends from the plausibility of the credit institution's assumptions and projected financial performance, the impact of a

[201] Think of, for example, the massive drop of 55% in share prices of British Petroleum after the accident on the offshore oil-drilling rig Deepwater Horizon within only two months: https://marketrealist.com/2014/09/bp-lost-55-shareholder-value-deepwater-horizon-incident/.

[202] See for example EU Commission, "The European Green Deal", COM(2019) 640 final, and NGFS, (June 2020), "Climate Scenarios for central banks and supervisors".

potentially different supervisory view of the business environment to the risk level of the proposed strategy and likelihood of success.

311. Under this minimum 3 year time horizon, supervisors would probably capture a broader scope of ESG risks compared to the 1 year in case of business model viability. For example:

- the massive implications for the **business environment** in which credit institutions operate coming from announced public policies such as the EU Green Deal, comprising the Climate Law, national climate and environment protection acts, carbon taxes or schemes, and moves to tackle social issues;[203]
- whether the credit institution integrates such implications into its **assumptions and projected financial performance**, namely by the performance of ESG-related scenario analyses; this also implies abstaining from simply carrying forward the historical returns and losses from carbon-intensive industries;
- whether the credit institution runs a **higher strategic risk level** by failing to adapt to a changing world despite high exposures to vulnerable (sub-)sectors or regions ('business-as-usual');

312. With the above assessments of viability and sustainability of the business model, some ESG factors would be captured, and related vulnerabilities could be identified. However, the existing assessment would probably not sufficiently enable supervisors to understand the longer term breadth and magnitude of impact of ESG risks on future financial positions and related long-term vulnerabilities.

7.3.5 ESG risk-related considerations as longer term resilience of the credit institution's strategy

313. Based on the above, it might be relevant to introduce an additional area of supervisory analysis in the business model, with a focus on sustainability as a precondition for longer term resilience. In this context it is paramount for supervisors to understand that a **high level of strategic ambition in terms of ESG risk-related objectives (and/or limits)** is not necessarily equivalent with a high risk level of the strategy; at the same time, it must be ensured that all risks are appropriately considered in the risk strategy and managed accordingly. In the context of the transition to a more sustainable economy it could be considered prudent to question the current business model and target major changes in

[203] See also ACPR (2020), "Governance and management of climate-related risks by French banking institutions: some good practices"; BaFin (2019), "Guidance Notice on Dealing with Sustainability Risks"; ECB (2020), "Guide on climate-related and environmental risks"; DNB (2020), "Good Practice – Integration of climate-related risk considerations into banks' risk management".

the future, in particular where the current business model is heavily reliant upon vulnerable (sub-) sectors or regions.

314. Finally, given the longer term **time horizon** of the transition with climate mitigation targets being set for 2030 and 2050, this forward-looking assessment would similarly require a much longer time horizon, ideally aligned with the time horizon of such public policies, e.g. the emission reduction targets set for 2030.

315. Notwithstanding the importance of analysing the short and medium term impacts of ESG risks, the forward-looking assessment of longer term resilience could become a new area of business model analysis. It should take into account the projected longer-term changes to the business environment and shed light on the question how the credit institution's business strategy responds to ESG issues which are supposed to fundamentally overhaul the economies and societies we are currently used to live in.[204] In this context it is paramount that the business strategy is informed by scenario analysis on plausible future states of the economy.

Conclusions and policy recommendations

- **In order to reflect the ESG risks in the supervisory evaluation, the EBA sees a need to proportionately incorporate the ESG factors and considerations into the business model analysis, in particular with regards to the analysis of the business environment, the current business model, the analysis of the strategy, and the assessment of the viability and sustainability of the business model. Key aspects to be considered in this regard include (sub-)sectoral and geographic concentrations, the (potential lack of) reflection of the credit institution on the impact of a changing business environment, internal capacity building, relationships with stakeholders and projected profitability and losses under an ESG risks perspective.**
- **However, the existing assessment under supervisory reviews might not sufficiently enable supervisors to understand the longer term impact of ESG risks, its breadth and magnitude, on future financial positions and related long-term vulnerabilities. In this context, the EBA sees a need to introduce a new area of analysis in the supervisory assessment, evaluating whether institutions sufficiently test the long term resilience of the business model against the time horizon of the relevant public policies or broader transition trends, i.e. exceeding commonly used timeframes of 3-5 years or potentially even the ten year-horizon already applied in some jurisdictions.**

[204] The NGFS names, as examples, key macroeconomic variables such as growth, productivity, food and energy prices, inflation expectations and insurance costs: NGFS (April 2019), "A Call for Action", p. 12.

Questions:

22. Please provide your views on the incorporation of ESG factors and ESG risks considerations in the business model analysis of credit institutions.

23. Do you agree with the need to extend the time horizon of the supervisory assessment of the business model and introduce as a new area of analysis the assessment of the long term resilience of credit institutions in accordance with relevant public policies? Please explain why.

7.4 Internal governance and institution wide controls

316. Building on the ESG specific governance arrangements covered in chapter 6, this section elaborates specific ESG aspects relevant for supervisors when assessing the credit institutions' internal governance and wide controls.

317. The main objective of the supervisory assessment of the internal governance in credit institutions' wide controls includes the evaluation of whether the credit institutions' internal governance arrangements are adequate and commensurate to the credit institution's risk profile, business model, nature, size and complexity. This assessment provides a supervisory view on whether the internal governance arrangements ensure a sound management of risks and include appropriate internal controls.

7.4.1 Overall internal governance framework

318. As stated in chapter 6, internal governance arrangements, including the involvement of the management body in providing the 'tone at the top', establishing a risk culture and setting the risk appetite and the implementation of a robust internal control framework with reporting lines clearly defined, are key aspects for a successful implementation of ESG considerations and managing ESG risks.

319. It is very relevant for supervisors to consider how the ESG factors and ESG risks management have been incorporated into the overall internal governance framework. Particularly in terms of:

- Reflection of ESG-related strategies and policies in organisational structure, responsibilities of organizational units, including the allocation of responsibilities to the management body and organization of the responsible committees. In particular, the horizontal nature and novelty of ESG factors might require particular coordination and consistency between strategic planning, risk taking and risk monitoring.

- Implementation of ESG-related aspects in credit institution's business and risk strategy, including the setting of its risk appetite. In particular, consistency between the set strategies, corporate and social responsibility statements, business processes (including products development) and risk management could be the most relevant to evaluate.

- Reflection of ESG related aspects in risk policies and their implementation. In particular, whether specifics of the ESG factors and nature of their potential impact are sufficiently reflected in the existing policies.

7.4.2 Management body, corporate and risk culture

320. The role of the management body to implement the credit institution's strategies, monitor and oversee the implementation of strategic objectives, risk strategy and the governance arrangements applies also in the context of ESG considerations. As elaborated in chapter 6 the management body plays a key role to address existing gaps in credit institutions' business profile and strategy, including the uncertainties around the impact of ESG risks on the credit institutions' business activities and implications of the transition to a more sustainable economy for the credit institutions.

321. When evaluating the organisation and functioning of the management body, particular aspects that might be relevant for the supervisory assessment of the credit institutions' internal controls of ESG risks include:

- Whether the management body in its management function appropriately directs the business considering the credit institution's ESG risk-related strategy;

- Whether the supervisory function adequately oversees and monitors the management decision-making and actions considering the credit institution's ESG risk-related objectives and/or limits; and

- Whether the management body has sufficient knowledge, skills and experience with regard to ESG factors and ESG risks.

322. As part of the evaluation of an appropriate and transparent corporate structure and risk culture, specific considerations related to ESG aspects could be considered when evaluating whether the credit institution has a clear, strong and effective communication of strategies, corporate values, training programmes, risk and other policies and whether the risk culture is applied across all levels of the credit institution. All these aspects should be considered by the audit function in its audit plan.

7.4.3 Remuneration policies and practices

323. In the area of remuneration policies and practices, the most relevant from the ESG considerations perspective is the alignment of the remuneration policy with the credit institution's long-term risk management framework and objectives (see more details in chapter 6). The impact of the remuneration policies on the achievement of sound and effective long-term risk management objectives from the point of view of ESG considerations may be especially relevant when it comes to the variable remuneration of categories of staff whose professional activities have a material impact on the credit institution's risk profile.

7.4.4 Internal control framework

324. The main elements assessed by supervisors in the internals control framework are equally relevant with regard to ESG risk-related strategies, policies and procedures. Particular ESG aspects could be considered when evaluating the 'lines of defence' model, regarding the consistency in the implementation of ESG risk-related objectives and/or limits among the risk taking, risk management and internal audit function.

7.4.5 Risk management framework

325. As for the risk management framework, it is important to ensure that ESG factors are sufficiently incorporated as part of the overall framework. When supervisors evaluate the appropriateness of the risk management framework, particular ESG aspects might be relevant when assessing:

a. whether the risk strategy, risk appetite and risk management framework are appropriate. In particular, considering whether the identified ESG risks are sufficiently reflected in the risk strategy, risk appetite and risk measurement and monitoring methods, including a set of ESG factors monitored for existing exposures to evaluate their relevance from a prudential risks perspective and modelling (e.g. new factors for credit risk models) as well as an identification process for newly relevant ESG factors;

b. whether the ICAAP and ILAAP frameworks incorporate ESG risks and transmission channels into prudential risks;

c. whether the credit institution has sufficient stress testing capabilities to evaluate ESG risks;

d. whether the risk management function has sufficient expertise in evaluating ESG risks (e.g. ability to evaluate longer term risks or specific aspects of transition risks, physical risks, social and governance risks).

326. With regard to the risk management framework, more specific considerations for credit institutions are included in chapter 6 (e.g. portfolio compositions, concentrations, diversification objectives, review of limits relevant for managing ESG risks). These aspects are relevant also for supervisors when evaluating aspects of the risk management framework. Particular ESG aspects could be considered by supervisors, when evaluating whether the risk management framework is forward-looking, and in line with the strategic planning horizon set out in the business strategy. The risk appetite appropriately accounting for ESG risks would be implemented with the support of appropriate ESG risks metrics, limits and mitigation measures in case of failure.

7.4.6 Information systems

327. As part of the internal governance framework, supervisors are also evaluating whether the credit institution has effective and reliable information and communication systems, whether these systems fully support risk data aggregation capabilities at normal times as well as during times of stress and whether such systems and the credit institution's internal processes are capable of identifying, quantifying and monitoring ESG risks.

Conclusions and policy recommendations

- **The supervisory review should proportionately incorporate ESG risk-specific considerations into the assessment of the credit institution's internal governance and wide controls, in particular how the ESG risks are incorporated into the overall internal governance framework, functioning of the management body, corporate and risk culture, remuneration policies and practices, internal control framework, risk management framework and information systems.**

Questions:

24. Please provide your views on the incorporation of ESG risks considerations into the assessment of the credit institution's internal governance and wide controls.

7.5 Assessment of risks to capital

328. In chapter 4 of this discussion paper it has been clarified that the impact of ESG risks materialises in the form of existing prudential risks (e.g. credit risk, market risk,

operational risk). This section explores in more detail which ESG factors and ESG risks are relevant for understanding and evaluating the risks to capital.

329. In assessing such risks, it is important to be mindful of the evolving understanding of ESG risks: while it is fundamental to gauge the level of risk to which credit institutions are exposed to, it is equally important how credit institutions intend to establish and improve their measurement and management of ESG risks and catch up with the latest methodological and organisational developments.

7.5.1 Assessment of credit and counterparty risk

330. In assessing how ESG risks drive the credit risk profile of credit institutions, it is important to design a minimum set of controls in order to form a view on how the credit institution is managing ESG risks.

331. A key characteristic of ESG risks, and especially climate-related and environmental risks, is their manifestation not only in the short- to medium-run, for example, due to an abruptly announced policy measure, but also over the following decades, because the physical impact of environmental change and/or because previously insufficient political action forces a sudden and comprehensive transition.

332. Consequently, supervisors will need to adapt their perspective in order to:

- Increase the importance of the assessment of the loan book's medium to long term sustainability in their credit assessments;
- Introduce controls, like scenario analysis, assessing the loan book's resilience to transition or physical risks.

Inherent credit risk

333. In order to properly capture the level of ESG risks to which credit institutions are exposed, it is important to understand the fundamental differences between the standard credit risk assessment, and their adaptations in order to take into account ESG risks. While credit risk is generally assessed in the short to medium term, the introduction of ESG controls in the credit risk assessment carries the need to enhance the extension of the horizon of the analysis through the use of forward looking metrics (e.g. scenario analysis). This is in particular the case for long-term loans such as in real estate financing, revolving credit facilities or in long-standing business relations with clients where expiring loans are usually renewed or replaced.

334. In this respect, a starting point is always the assessment of the underlying assumptions and strategies of the credit institutions, including:

- How ESG risks drive credit risk portfolio by portfolio;
- How ESG risks are included in the decision making in the loan origination phase.
- If an ESG risks driver is properly embedded in the risk appetite and risk strategy of the credit institution.

335. ESG risks should be considered in the assessment of the risk profile of the counterparty. At portfolio level, ESG risks can be assessed by means of concentration analysis (considering both counterparties and/or collateral) and with a review of the specialised lending portfolio. In the subsequent paragraphs a list of controls is provided as an example.

336. Sectoral concentration can provide an overview of the exposure to transition risk when matched with transition risk metrics. This methodology has been largely explored in assessing how sectors are impacted by ESG risks.[205] However, quantification exercises are more developed for climate and environmental risks than for social and governance factors. Supervisors might expect credit institutions to investigate such ESG sectoral concentration analysis in a qualitative form.

337. Geographic concentration can be matched with physical risk metrics,[206] which are meanwhile largely available from academics[207] or in the market of data providers. In a more simple way, supervisors might look at risk metrics matching the location of the counterparties with the physical risks that these locations could face. In the medium to long term, with the improvement of methodologies and the availability of data, geographical analysis of physical risk can be extended to the entire value chain.

338. Single name concentration analysis is a good tool in identifying exposure to environmental, social and governance risks, which can be more easily tracked to the due diligence of single counterparties. Supervisors might review due diligence policies applicable to large counterparties.

339. Specialised lending and project financing deserves a specific mention. It is likely that credit institutions will consider using such products to finance projects with low ESG risks of counterparties more exposed to ESG risks. Indeed, such products are also more

[205] Reference to e.g. Battiston.

[206] Getting started on Physical climate risk analysis in finance - Available approaches and the way forward. Institute for climate economics.

[207] See for example http://senses-project.org/.

easily linkable to ESG issues compared to the overall exposures to a single counterparty. While transition projects might carry a lower risk as they mitigate the exposure to ESG factors, supervisors need to ensure that the use of project financing does not circumvent the assessment of how much counterparties are exposed to ESG factors, for instance by granting particularly favourable terms on a project facility with low ESG risks, while the counterparty as such is heavily exposed to ESG factors.

7.5.2 Assessment of the portfolio credit quality (with focus on loan origination)

340. The incorporation of ESG risks into the review of the credit quality of the portfolio carries a number of questions. The assessment is also dependent on the availability of reliable data and information and on the development of appropriate supervisory methodologies.

341. A starting point for the valuation of exposures is the concept of stranded assets. Assets impacted by the transition (e.g. high polluting assets) or by physical events (e.g. floods) are potentially affected by lower valuations.

Quality and effectiveness of risk management and controls

342. An important element in assessing the capability of credit institutions to deal with ESG risks is the review of the management and control framework steering the credit strategy. A comprehensive supervisory review will aim at assessing how the framework incorporates ESG considerations, how responsibilities are assigned and how the risk is identified, measured, controlled and monitored.

343. As further described in Chapter 6 and the EBA Guidelines on loan origination and monitoring, a strategic approach to managing ESG risks can include setting ESG risk-related objectives and/or limits in the credit institution's strategy. Supervisors will consequently check that the credit strategy is fully aligned and properly reflects the underling ESG risk appetite. Performing these assessments also implies controlling how the responsibilities for implementing and monitoring the ESG related targets are set.

344. The EBA Guidelines on loan origination and monitoring also include significant criteria on which supervisors can build for the ESG review.[208] These include, among others, the minimum requirements for credit institutions that plan to engage in environmentally sustainable activities, including:

[208] Paragraphs 56 to 59 of EBA Guidelines on loan origination and monitoring.

- a list of the projects and activities, as well as the criteria, that the credit institution considers eligible for environmentally sustainable lending or a reference to relevant existing standards on environmentally sustainable lending;

  the process by which the credit institutions evaluate that the proceeds of the environmentally sustainable credit facilities they have originated are used for environmentally sustainable activities.

345. With the set of controls listed above, supervisors might be able to infer the risk that the credit institutions engage in greenwashing activities. The result of such analysis will not only inform the assessment of the credit control framework of the credit institutions, but also support the analysis of the related reputational risk.

7.5.3 Assessment of market risk

346. Investors and market participants show a growing awareness of the importance of ESG risks. Although the level of ESG issuances is still low compared to the size of the financial markets, demand for ESG investments is increasing. At the same time, more and more investors are implementing negative screening policies and proxy voting policies which are solidly grounded in ESG considerations. For such reasons, it is important that supervisors assess how credit institutions proactively monitor the impact of ESG risks on their market risk positions.

347. This can be achieved by reviewing whether the proper set of controls to detect the emergence of ESG risks is in place, for instance, with the methodologies reported in chapter 5 and whether credit institutions have put in place a proper ESG strategy for market risk.

348. By reviewing the market risk strategy, supervisors will find important information on how the credit institution responds to ESG risks in the financial market. The presence of specific investment criteria, including ESG checklists and the requirement on a proper due diligence on market investments are all positive signs of how much the credit institution has engaged with the topic.

349. As per the lack of data, supervisors might check that credit institutions have clear policies for deciding on investments where they lack reliable ESG data. In this respect, the presence of negative screening policies or exclusion criteria, for example, can provide comfort that the credit institution is carefully reflecting on its market exposures even in cases where the appropriate data are not available.

7.5.4 Assessment of operational risk

350. Operational risk is also heavily affected by ESG risks. This includes e.g. the failure to evaluate compliance of the credit institutions' exposures with existing ESG standards, which might lead to future financial impacts via reputational or legal damages.

351. In this respect, supervisors might consider the extent to which the activities in which the credit institution is involved or the exposures that the credit institution is financing increases the risk of future reputational or legal damages. Supervisors can review if the credit institution has understood such risks and properly assessed them. Among others, a signal of understanding of the risk might be the decision, by credit institutions, to link their operational and business activities to ESG standards, which provide a direction in which institutions can steer their business.

352. In this respect, specific attention shall be devoted to liability risk. Credit institutions that fail to properly assess the ESG profile of their products might be involved in future miss-selling claims, with the risk of financial impacts.

7.5.5 Risk identification, measurement, monitoring and reporting of social and governance risks

353. While efforts on measuring and quantifying environmental risks are ongoing, supervision of social and governance risks is mostly approached from a qualitative angle. The EBA is aware that qualitative and quantitative indicators and methods for the assessment of risks may be more advanced for environmental risks compared to social and governance risks. In this respect, supervisors might assess, in a first phase, whether credit institutions are making progress in developing their quantitative frameworks for the assessment of environmental risks. In the medium term, however, it is reasonable to expect that both credit institutions and supervisors will have accumulated enough experience on the topic to be able to incorporate in a proportionate manner all ESG risks in their risk identification, measurement, monitoring and reporting frameworks.

7.6 Assessment of risks to liquidity and funding

354. While the link between the ESG risks and liquidity and funding is seen by the credit institutions as more indirect, it is deemed important to not overlook these links when evaluating the risks to liquidity and funding. For example, the NGFS Guide for supervisors refers to liquidity risk in the context of a lack of reliable and comparable information on climate-sensitive exposures, which could create uncertainty and cause procyclical market dynamics, including fire sales of carbon-intensive assets, and potentially liquidity problems.

As indicated in chapters 4 and 5, ESG factors could also result in funding issues for a credit institution (e.g. deriving from reputational risk associated with a firm which does not integrate climate risks or other ESG risks in its strategy) or make some assets less liquid (e.g. behavioural changes of investors due to shifting preferences).

355. Supervisors assess the credit institution's short- and medium-term liquidity risk to ensure that the credit institution maintains adequate levels of liquidity buffers, under both normal and stressed conditions. Under this assessment the ESG factors and ESG risks seem to be the most relevant to consider when conducting:

- evaluation of liquidity needs in the short and medium term, in particular the impact of shocks on the credit institution's liquidity needs. For example, ESG factors can influence the value of financial assets, which in turn might affect the liquidity of that asset. Alternatively, situations of environmental crisis or social unrests can lead to higher withdrawals or stress in liquidity positions of the credit institution in a specific geographical area.

- evaluation of liquidity buffer and counterbalancing capacity, in particular characteristics of stress scenarios and periods considered in the evaluation of the credit institution's liquidity needs and ability to monetise liquid assets. For example, factors such as the above-mentioned lack of reliable and comparable information on climate-sensitive exposures causing procyclical market dynamics.

- supervisory liquidity stress testing, where specific vulnerabilities related to ESG factors can be evaluated in more details.

356. ESG factors and ESG risks are also relevant when assessing the inherent funding risk. On the liability side, ESG factors can affect availability and/or stability of funding (e.g. hampered access to market funding, unstable deposits).

357. Supervisors assess the credit institution's funding risk and whether the medium- and long-term obligations are adequately met with a range of stable funding instruments under both normal and stressed conditions. Under this assessment the ESG factors and ESG risks seem to be the most relevant to consider when conducting:

- evaluation of risks to the stability of the funding profile, in particular if the ESG factors might imply material changes to the existing assumptions;

- evaluation of actual market access, in particular due reputational issues from perceived lack of ESG incorporation or behavioural changes in investors preferences (e.g. preference to invest in green bonds)

358. The third component in the assessment of risks to liquidity and funding is the governance and risk management framework underlying liquidity and funding risk. Under this assessment, at least following the elements could include ESG risk-specific considerations:

a. the liquidity risk strategy and liquidity risk tolerance, in particular when evaluating liquidity risk tolerance considering ESG objectives reflected in business model and its overall integration in risk appetite framework;

b. risk identification and measurement, in particular whether the ESG factors and ESG risks are reflected in key assumptions recognising interaction between different risks, and in evaluation of ability to access financial instruments;

c. the credit institution's liquidity-specific stress testing, in particular whether ESG factors have been reflected;

d. the credit institution's liquidity contingency plans, in particular whether the assumptions used in these plans might need to be adjusted to reflect ESG factors; and

e. the credit institution's funding plans, where some aspects might need to be updated considering the ESG factors impacting funding abilities of the credit institutions mentioned above.

Conclusions and policy recommendations

- **The impact of ESG risks materialises in the form of existing prudential risks (e.g. credit risk, market risk, operational risk). For this reason, the supervisory review should proportionately incorporate the ESG risks as drivers of financial risks, in particular risks to capital and risks to liquidity and funding. The assessment of ESG risks shall integrate and complement the already existing set of supervisory review, for both the assessment of the level of risk and the review of the risk-specific controls. The use of scenario analysis and stress testing is very relevant, particularly when assessing the resilience of credit institutions against specific scenarios.**

  - **In order to facilitate the integration of the ESG risks into the supervisory framework the EBA sees the need to implement the ESG risks definitions to legally and undoubtedly embed ESG risks under the scope of the supervisory review. In accordance with Article 16 of Regulation (EU) No 1093/2010, on the basis of the outcome of this discussion paper and as embedded in Article 98(8), the EBA can capture these risks in dedicated guidelines and, based on the recognised materiality of the ESG risks, these risks should be introduced in the CRD and IFD.**

Questions:

25. Please provide your views on the incorporation of ESG risks considerations in the assessment of risks to capital, liquidity and funding.

26. If not covered in your previous answers, please provide your views on whether the principle of proportionality is appropriately reflected in the discussion paper, and your suggestions in this respect keeping in mind the need to ensure consistency with a risk-based approach.

27. Are there other important channels (i.e. other than the ones included in chapter 7) through which ESG risks should be incorporated in the supervisory review of credit institutions?

Annex 1 Non-exhaustive list of ESG factors, indicators and metrics

This Annex proposes a non-exhaustive list of ESG factors and corresponding indicators that can help institutions and supervisors to identify ESG characteristics. They can be applied in a proportionate manner to financial transactions conducted with entities, sovereigns or individuals and allow for the aggregation and comparability of ESG characteristics across such financial transactions. Factors and indicators should be considered in the context of the performance and characteristics of the counterparty under consideration, not the institution's own performance.

The list presented is solely an illustration of some of the key aspects and elements to be considered for the management of ESG risks. It should not be understood as an exhaustive or final inventory of all relevant factors and indicators, not least because these will evolve and will need to be updated over time. The applicability of the various ESG indicators will depend on the specific nature and underlying characteristics of the given exposures, taking into account the materiality of the ESG risks. Further, the evaluation and interpretation of the metric values and outcomes will crucially depend on an exposure's nature and specific circumstances and may need to be considered on a case-by-case basis.

Information in this Annex is based on i) international standards such as the United Nations Environment Programme Finance Initiative (UNEP FI), the Global Reporting Initiative Sustainability Reporting Standards, work by the Sustainable Accounting Standards Board, the EU regulation on sustainability-related disclosures in the financial services sector, the proposal for an EU regulation on the establishment of a framework to facilitate sustainable investment, the EU non-financial reporting directive (NFRD), the ILO International Labour Standards, ii) different National Competent Authorities' guides in respect of ESG risks, iii) national or EU-wide reports on specific ESG topics iv) credit rating agencies' methodologies, v) responses of banks to the EBA survey on market practices, vi) information from non-financial corporates' Annual Reports and ESG Reporting.

The indicators are further refined into concrete metrics. The latter are of both quantitative and qualitative nature. Some define clear calculations and formulas, depending on the relevance and context, some are in the form of an absolute measure (totals), others in the form of a relative measure (ratio). Some qualitative information on ESG characteristics can also be included in the form of certifications on the observance of ESG-standards/norms by third-party verifiers (e.g., in the form of labels), which may not necessarily be included in this list.

References for terms applied in this Annex

(a) '**GHG emissions**' as defined in the GHG Protocol methodology (https://ghgprotocol.org/calculation-tools) or the ISO 14064-1:2018 standard and, where appropriate, with the European Commission's Recommendation 2013/179 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations;[209]

(b) '**scope 1, 2 and 3 GHG emissions'** mean the greenhouse gas emissions referred to in point (1)(e)(i-iii) of Annex III of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014;[210]

(c) '**Tonnes of** CO_2**'** mean tonnes of carbon dioxide equivalent as defined in Article 3(j) of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC;[211]

(d) **'Carbon footprint'** an absolute or relative measure of GHG emissions as defined in points (a) and (c);

(e) **'fossil fuel sectors'** relates to the production, processing, distribution, storage or combustion of fossil fuels, with the exception of investment related to clean vehicles[212] as defined in Article 4 of Directive 2009/33/EC of the European Parliament and of the Council on the promotion of clean and energy-efficient road transport vehicles;

(f) '**national emissions reduction commitments'**, for EU countries, obligations to reduce emissions of a given substance, specifying the minimum emission reductions that have to be achieved in the target calendar year, as a percentage of the total of emissions released during the base year (2005), as per Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, pp. 1-31). For other countries, refer when available to intended nationally determined contributions to reduction in GHG emissions under the United National Framework Convention on Climate Change (UNFCCC);

(g) **'energy consumption intensity'** measures the energy consumption per unit of activity, output, in the meaning of Directive ((EU) 2018/2002) amending the Energy Efficiency Directive (2012/27/EU);

(h) **'renewable energy sources'** mean energy from renewable sources referred to in Article 2(1) of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion and use of energy from renewable sources (recast)[213];

[209] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0179&from=EN

[210] OJ L 171, 29.6.2016, p. 1.

[211] OJ L 275 25.10.2003, p. 32.

[212] Proposal for a Regulation on the European Regional Development Fund and on the Cohesion Fund (COM(2018)372)

[213] OJ L 328 21.12.2018, p.82

(i) **'non-renewable energy sources'** mean energy from sources other than those referred to in point (h);

(j) **'water consumption intensity'**, in the meaning of Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy with a view to protecting the sustainable use and environmental status of all waters;

(k) '**hazardous waste'** means hazardous waste as defined in Article 3(2) of Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives [214] and radioactive waste;

(l) **'non-recycled waste'** means any waste not recycled within the meaning of 'recycling' in Article 3(17) of Directive 2008/98/EC;

(m) **'water pollutants'** mean Direct Nitrates (scope 1), Direct Phosphate emissions (scope 1), Direct Pesticides emissions (scope 1), Direct emissions of priority substances (scope 1) as defined in the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy[215], Council Directive of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (91/676/EEC) [216], Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment[217] and Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)[218];

(n) **'air pollutants'** mean Direct Sulphur dioxides (SOx/SO2) emissions (Scope 1), Direct Nitrogen oxides (NOx/NO2) emissions (Scope 1), Direct Ammonia (NH3) emissions (Scope 1), Direct Particulate matter (PM2.5) emissions (Scope 1), Direct Non-methane volatile organic compounds (NMVOC) emissions (Scope 1), Direct total heavy metals (HM) emissions (Scope 1) as defined in Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC[219];

(o) **'biodiversity and ecosystem change'** means the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), released in May 2019;

(p) '**protected area'** means an area designated under the European Environment Agency's Common Database on Designated Areas (CDDA)[220];

(q) **'area of high biodiversity value outside protected areas'** means an area not subject to legal protection, but recognised for important biodiversity features by a number of governmental and non-governmental organisations, including habitats that are a priority for conservation, which are often defined in National Biodiversity Strategies and Action Plans prepared under the United Nations (UN) Convention, 'Convention on Biological Diversity', 1992;

[214] OJ L 312, 22.11.2008, p. 3

[215] OJ L 327, 22/12/2000, p. 1w

[216] OJ L 375, 31.12.1991, p.1

[217] OJ L 135, 30.5.1991, p. 40

[218] OJ L 334, 17.12.2010, p.17

[219] OJ L 344, 17.12.2016, p.1

[220] https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-14

(r) **'gender pay gap'** means the difference between average gross hourly earnings of male and female income-earners for equal work or work of equal value, as a percentage of male gross earnings;
(s) **'human rights policy'** means a policy commitment approved at highest decision-making level on human rights;
(t) **'workplace safe and healthy'** as specified in the Directive 89/391/EEC, the so-called **OSH "Framework Directive"**, which lays down the main principles to encourage improvements in the safety and health of workers at work, and the requirements developed thereafter by the Commission and the European Agency for Safety and Health at Work (EU-OSHA).

Table 4.A Environmental factors

FACTOR		INDICATOR	METRIC
ENVIRONMENTAL FACTORS [221]			
Climate Change	**Production of GHG/ CO_2 emissions**	Total GHG emissions (broken down by scope 1, 2 and 3 carbon emissions)	Tonnes of CO^2 (please see points (a), (b) and (c) above)
		Carbon footprint	Tonnes of CO^2 (please see points (c) and (d) above)
		Fossil fuel sectors	% or total (please see point (e) above)
		Lack of reduction initiatives in the use and production of fossil fuels	% or total (please see point (e) above)
		Compliance with Paris Agreement targets	See point (f) above
		Lack of initiatives to reduce GHG/ CO_2 emission	(please see points (a), (b) and (c) above)
	Energy efficiency	Energy consumption intensity	In Gigawatt hours(GWh) (please see point (g) above)
		Use of renewable sources of energy	% or total (please see point (h) above)
		Lack of initiatives to reduce the use of non-renewable energy	(please see points (h) and (i) above)

[221] Environmental factors have been grouped on the basis of the six environmental objectives which are defined in article 5 of the EU Regulation on the establishment of a framework to facilitate sustainable investment. The list includes climate change mitigation' and 'climate change adaptation' objectives under the group 'climate change'. Factors, indicators and metrics refer to the assessment of the counterparties, not the institution itself.

FACTOR	INDICATOR	METRIC
Water use and availability	Water consumption intensity	% or total - weight in tonnes of water consumption(please see point j)
Circular economy	Production of hazardous waste	% or total - weight in tonnes of hazardous waste (please see point k)
	Reusability /Recyclability	% or total - weight in tonnes of non- recycled waste production (please see point l)
	Lack of initiatives to reduce the production of waste	(please see point l)
Biodiversity and healthy ecosystems	Emissions of air pollutants	Weight in tonnes of air pollutants (please see point m)
	Emissions of water pollutants	Weight in tonnes of water pollutants (please see point n)
	Presence /Operations (e.g. own, via value chain) in geographic areas particularly vulnerable to biodiversity and ecosystem change'	% or total (see point (o) above)
	Presence /Operations (e.g. own, via value chain) in protected areas or areas of high biodiversity value outside protected areas	% or total (see points(p) and (q) above)
	Operations (e.g. own, ia value chain) affecting IUCN Red List species and/or national conservation list species	% or total (see point (p) and (q) above)

Table 5.A Examples of physical risks with environmental and social impacts

ENVIRONMENTAL HAZARD[222]	INDICATOR	METRIC
Heatwaves	Health and productivity impacts	Max and Min temperature per year / in different months of the year (°C)
		Heatwaves per year with 5 or more days above given temperature (e.g. 35 (°C))
	Losses	Presence / Operations (e.g. own, via value chain) in areas likely to be affected by heatwave impacts
Water availability, droughts	Health and productivity impacts	Trend in meteorological drought (i.e. precipitation deficit) and hydrological drought (i.e. low runoff or river flow deficit) (% change)
		Water stress (i.e., ratio of total water withdrawals to available renewable water supplies)
	Losses	Presence / Operations (e.g. own, via value chain) in areas likely to be affected by water scarcity
Floods	River flooding frequency	Number of severe flood events
	Coastal erosion	Presence / Operations (e.g. own, via value chain) in areas likely to be affected by coastal erosion impacts
	Coastal flooding	Area below a, e.g., 50 - years-flood level)
	Losses	Presence / Operations (e.g. own, via value chain) in areas likely to be affected by floods impacts Total financial insured losses per year triggered by floods
Wildfires, hurricanes, earthquakes and mass movements	Health and productivity impacts	Number of significant events / Trend in last 10 years
		Surface affected (km^2) per year
	Losses	Presence / Operations (e.g. own, via value chain) in areas likely to be affected by these events
		Total financial insured losses per year triggered by these events
Biological hazards	Health and productivity impacts	Frequency of disease outbreaks that imply public health emergencies recognised by the World Health Organisation
	School and work absenteeism	Number of people affected and number of hours lost because of the impact of the event.

[222] All terms defined according to the EM-DAT (International Disaster Database) and the European Environment Agency, when appropriate. Indicators refer to the assessment of the counterparties, not the institution itself.

Migration	Number of internal or international displacements due to natural disasters.
Homeless	Number of people whose house is destroyed or heavily damaged and therefore need shelter after an event.
Deaths	Number of people who lost their life because the event happened.

Table 6.A Social factors

FACTOR	INDICATOR	METRIC
SOCIAL FACTORS [223]		
Community/ Society	Relations with local communities (networks)	Establishment of business in rural and economically and socially underdeveloped areas
	Social impact of products and services	Products' potential to reach rural areas and groups of society where development gaps exist
Employee relationships/labour standards	Freedom of association and right to organise	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 1 and 2
	Forced labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 3 and 4
	Minimum age and child labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 5 and 6
	Equal remuneration	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 7
		Average gender pay gap
		Average ratio of the annual total compensation for the highest individual to the median annual total compensation for all employees (excluding the highest-compensated individual)
	Discrimination	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 8

[223] Social factors have been grouped on the basis of the main stakeholders of the society with which institutions may interact, those being the society as a whole, employees, customers, and all stakeholders regarding human rights and poverty. In addition, the fundamental conventions of the International labour standards (ILO) have been included in the list of factors. Factors, indicators and metrics refer to the assessment of the counterparties, not the institution itself.

FACTOR	INDICATOR	METRIC
		Number of incidents of discrimination (i) reported and (ii) leading to sanctions
	Human capital management and employee relations (training and development opportunities)	Share of employees attending training courses in a given year
		Frequency of performance assessment per employee
	Workplace health and safety	Number/rate of accidents, injuries, fatalities frequency
		Number of workdays lost to injuries, accidents, fatalities, illness
		Ratio of man vs women in total workforce
Customer relationships	Customer protection and product responsibility	Extent to which products are monitored once introduced on the market
		Extent to which product recall procedures are in place
		Number of incidents of product recalls/withdrawals
		Handling and degree of transparency on management's actions following product recalls/withdrawals
	Personal data security and privacy	Number/rate of data security incidents in which personally identifiable information (PII) was at risk
		Explanation/Disclosure of policies and practices relating to user privacy
		Monetary losses (total amount in EUR) incurred as a result of legal proceedings associated with user privacy
		Degree of transparency on management's approach to identifying and addressing data security risks

FACTOR	INDICATOR	METRIC
	Rights of the customers to gain information about ESG factors	Percentage of significant product/ service categories that comply with information and labelling that includes information on sourcing, content (i.e. substances that might produce an environmental or social impact), safe use of the product or service, disposal of the product and environmental or social impacts
		Degree of transparency on the management's approach to marketing and labelling ESG related information
		Publication of information on ESG performance (in the form of stand-alone reports or by integration into Annual Reports)
	Quality and innovation in customer relations	Number of customer complaint incidents
Human Rights	Contribution to human rights projects	Engagement in social projects aimed at supporting and advancing human rights issues in regions of concern
Poverty/famine	Contribution to poverty reduction	Engagement in poverty reduction/aid programmes
		Employment opportunities for economically less advantaged groups

Table 7.A Governance factors

FACTOR	INDICATOR	METRIC
GOVERNANCE FACTORS [224] [225]		
Ethical considerations	Integrity of conduct/conduct frameworks	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
	Values and Ethics	Alignment with the Charter of Fundamental Rights of the EU
	Bribery and corruption	Compliance with United Nations Convention against Corruption
		Identification of insufficient actions taken to address breaches in procedures and standards of anti-corruption and anti-bribery
		Convictions and violations of anti-corruption and anti-bribery laws (Number of cases and amount of fines)
	Accountability /Rule of law	Alignment with the Worldwide Governance Indicators (World Bank)
Strategy and risk management	Strategy Implementation, Operational Execution and monitoring	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
	Internal controls and risk management policies and procedures	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
Inclusiveness	Discrimination	Gap between males and females or any other minority groups in the given region in education access and/or outcomes, representation in government positions and/or boards, salary income, etc.
		Lack of a diversity strategy in place (e.g. age, gender, minority groups)

[224] Governance factors have been grouped across four main subheadings by identifying a common principal feature of the underlying factors, those being: ethical considerations, sound risk management structures, organization and functioning of the management body and transparency. Factors, indicators and metrics refer to the assessment of the counterparties, not the institution itself.

[225] Note that the factor 'Systemic risk management', which is used in the Sustainability Accounting Standards Board (SASB), has not been included, as it is considered that the existing prudential framework has specific provisions to address the systemic risks of institutions.

FACTOR	INDICATOR	METRIC
		Percentage of employees and individuals within governance bodies as per the various diversity categories defined in GRI standard 405-1.
Transparency	Observance of disclosures of information rules and practices	Reliance on high quality, broadly recognised national, EU-based or international frameworks when preparing non-financial statement, including disclosure of the framework chosen
		Compliance with Non-Financial Reporting Directive

Questions

28. As a financial institution, do you use or plan to use some of the indicators and metrics included in Annex 1? If yes, please describe how they are used in relation to your ESG risk management approach.

29. If relevant, please elaborate on potential obstacles, including scope of applicability, granularity and data availability, associated with the indicators and metrics included in Annex 1.