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SUSTAINABLE FINANCE

MARKET PRACTICES

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ABSTRACT

This paper aims to assess the understanding of environmental, social and governance (ESG) considerations within the banking context and examines the current market practices in this area. To that extent this paper sets out the various definitions of ESG factors and also sets out how these then are converted into and treated as ESG risks.

This paper relies upon the lessons learnt from a survey developed by the EBA to gain insights into current market practices with regard to credit institutions' approach to incorporating ESG considerations into their frameworks. The survey especially aimed to collect information from credit institutions on current practices in the following areas: definitions of ESG factors; incorporation of sustainability into business strategies; governance, policies and risk management applicable to ESG risks; ESG and climate-related disclosures; and green financial products.

KEYWORDS

ESG, ESG risks, sustainable finance

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Introduction

Sustainable finance has become part of the lexicon of both supervisors and financial institutions in recent times. It has been described as 'the provision of finance to investments taking into account environmental, social and governance considerations'.[1] To that end environmental considerations have been referred to as climate change mitigation and adaptation, as well as the environment more broadly and the related risks (e.g. natural disasters). Social considerations have been referred to as issues of inequality, inclusiveness, labour relations, investment in human capital and communities. Finally, the governance of public and private institutions, including management structures, employee relations and executive remuneration, has a pivotal role in ensuring the inclusion of social and environmental considerations in the decision-making process.[2]

This paper aims to assess the understanding of environmental, social and governance (ESG) considerations within the banking context and examines the current market practices in this area. To that extent this paper sets out the various definitions of ESG factors and also sets out how these then are converted into and treated as ESG risks.

This paper relies upon the lessons learnt from a survey developed by the EBA to gain insights into current market practices with regard to credit institutions' approach to incorporating ESG considerations into their frameworks. The survey, conducted from May - June 2019, especially aimed to collect information from credit institutions on current practices in the following fields: definitions of ESG factors; incorporation of sustainability into business strategies; governance, policies and risk management applicable to ESG risks; ESG and climate-related disclosures; and green financial products. The survey was conducted on a voluntary basis and yielded responses from 39 banks. The results referred to in this paper originate from that survey unless stated otherwise. In addition to this survey, this paper also relies upon publicly available information obtained from various institutions' and bodies' websites and reports, as well as observations resulting from pilot studies and other initiatives.

This work was undertaken with the underlying objective of gaining an understanding of market practices with regard to: (i) the development of a uniform definition of ESG risks; (ii) the development of appropriate quantitative and qualitative criteria for the assessment of the impact of ESG risks on the financial stability of institutions; (iii) the arrangements, strategies, processes and mechanisms to manage ESG risks; and (iv) methods and tools to assess the impact of ESG risks on lending and financial intermediation activities.

Initiatives to date

The growing awareness of the area of sustainable finance has come about as part of a global response to climate issues. There has been reaction to this on international and European levels.

From an international perspective, governments have agreed and committed themselves to ambitious targets, as outlined in both the Paris Agreement on climate change and the United Nations (UN) Sustainable Development Goals (SDGs).

The 2015 Paris Agreement,[3] which nearly 200 countries have agreed to, seeks to strengthen the global response to climate change in a bid to limit 'the increase in global average temperature to well below 2˚C above pre-

[1] See European Commission: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en [last accessed 1 October 2019]

[2] See https://ec.europa.eu/info/business-economy-euro/banking-and-finance/green-finance_en [last accessed 14 November 2019]

[3] United Nations Framework Convention on Climate Change, The Paris Agreement, December 2015.

industrial levels'. In order to reach this goal a transition to a low-carbon economy is required. From a market perspective this transition may result in an uncertain landscape of risks and opportunities.[4]

The 2030 Agenda for Sustainable Development was adopted by all UN Member States in 2015. It consists of 17 SDGs with 169 associated targets in a bid to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources.[5]

At the European level this has been translated into the European Commission's action plan.[6] The action plan consists of three objectives, which are: (i) to reorient capital flows towards sustainable investment in order to achieve sustainable and inclusive growth; (ii) to manage financial risks stemming from climate change, environmental degradation and social issues; and (iii) to foster transparency and long-termism in financial and economic activities. These objectives are supported by 10 actions, which include: (i) establishing an EU classification system for sustainable activities; (ii) creating standards and labels for green financial products; (iii) fostering investment in sustainable projects; (iv) incorporating sustainability when providing financial advice; (v) developing sustainability benchmarks; (vi) better integrating sustainability in ratings and market research; (vii) clarifying institutional investors' and asset managers' duties; (viii) incorporating sustainability into prudential requirements; (ix) strengthening sustainability disclosure and accounting rule-making; and (x) fostering sustainable corporate governance and attenuating short-termism in capital markets.

These initiatives have been supported and recognised by banking supervisors and regulators, which have demonstrated the importance of sustainability issues through the establishment of various task forces such as the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), which was set up to develop voluntary, consistent climate-related financial risk disclosures for use by companies for the provision of information to investors, lenders, insurers and other stakeholders. In addition, the Network for Greening the Financial System (NGFS), a network consisting of central banks and supervisors, was established with the purpose of meeting the goals of the Paris Agreement and enhancing the role of the financial system in managing risks and mobilising capital for green and low-carbon investments in the context of environmentally sustainable development.

Why are banks reacting to the sustainable finance issue?

Reaction to sustainability issues has not just been the preserve of international governments and organisations. Reaction is currently happening within banks. It has been stated that, because of pressure from customers and investors, as well as regulators, banks have already begun to recognise that there are sustainability risks and they have begun supporting the transition to a more sustainable economy through the integration of sustainability factors into their risk management models and governance frameworks.[7]

This statement is, to a certain extent, supported by our survey responses, which found that banks base the motivation behind their sustainability strategy upon many factors, including making use of new business

[4] United Nations Environment Programme Finance Initiative, 2018, Extending our horizons: assessing credit risk and opportunity in a changing climate: outputs of a working group of 16 banks piloting the TCFD recommendations, Part 1: Transition-related risks and opportunities, p. 8.

[5] Transforming our world: the 2030 Agenda for Sustainable Development, September 2015. Available at: https://sustainabledevelopment.un.org/post2015/transformingourworld [last accessed 20 December 2019]

[6] Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, Action plan: financing sustainable growth, COM/2018/097, 8 March 2018 Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097 [last accessed 20 December 2019]

[7] Alexander S.K. and Fisher P., 2018, Banking regulation and sustainability. Available at SSRN: https://ssrn.com/abstract=3299351 or http://dx.doi.org/10.2139/ssrn.3299351, p. 2 [last accessed 20 December 2019]

opportunities to satisfy customer needs and supporting business with a positive social, environmental and reputational impact. The order of ranking is detailed in Table 1.

Table 1: Banks' motivations behind their sustainability strategies

Motivation	Ranking
Supporting ethical business	1
Business opportunities	2
Anticipating regulatory changes	3
Customer and investor demands	4
Anticipating changes in economic and risk factors	5
Reputational costs	6
Anticipating changes in clients' behaviour	7
Promoting human capital	8

Definitions of environmental, social and governance criteria

The term ESG was first coined in the landmark study *Who Cares Wins* by the UN Global Compact[8] nearly 15 years ago. This laid the foundations for environmental, social and governance investing.

The term ESG is used throughout this report; however, how it is interpreted is dependent upon how it is determined, i.e. whether it pertains to an ESG Factor, an ESG issue or an ESG risk. From a high-level perspective, a factor is a characteristic of a stock or asset for which the exposure to that particular characteristic is known. The ESG issue is essentially the issue an asset may face; the issue may vary depending upon the asset type, the sector, size, geographic location and the stage in the life cycle. The issues may originate outside the asset itself but may affect its ability to perform (i.e. temperature rise, increased water scarcity, changing regulations or tariffs). The asset itself may cause issues and impact upon the surrounding environment or communities (e.g. pollution, water effluent, quality of life, labour conditions).[9] Thus, these can have impacts upon an asset or the asset can have impacts that create ESG issues; these in turn can have financial consequences for the investor, the bank and the counterparty.[10] Thus, what was an ESG-related factor or issue becomes an ESG risk[11] for the bank to manage.

[8] UN Global Compact, 2004, Who cares wins: connecting financial markets to a changing world: recommendations by the financial industry to better integrate environmental, social and governance issues in analysis, asset management and securities brokerage. Available at: https://www.unglobalcompact.org/docs/issues_doc/Financial_markets/who_cares_who_wins.pdf [last accessed 20 December 2019]

[9] Weber B. and Rendlen B., 2019, Guidance note: Integrating ESG factors into financial models for infrastructure investments, WWF and B Capital Partners. Available at: http://awsassets.panda.org/downloads/wwf_guidance_note_infra_.pdf [last accessed 20 December 2019]

[10] Weber B. and Rendlen B., 2019, Guidance note: Integrating ESG factors into financial models for infrastructure investments, WWF and B Capital Partners. Available at: http://awsassets.panda.org/downloads/wwf_guidance_note_infra_.pdf [last accessed 20 December 2019]

[11] ESG risks are discussed further in this paper as part of risk management.

Definitions of ESG factors

A fundamental part of the market practices survey was to determine the current definitions of ESG factors that banks are using. The survey results demonstrated that, given that there is no common definition, banks have been relying upon various international frameworks and standards to define ESG factors, although some of them use their own definitions. This demonstrates that there is a current lack of commonality with regard to ESG factors. This raises issues because, if banks are using different definitions of ESG factors, then there may be different outputs from a risk management perspective and differences in the outcomes of disclosures. To determine if there is any commonality in existing approaches, the international definitions and banks' own definitions of ESG factors were analysed.

International initiatives

To date there are multiple variations on the theme of what an ESG factor is. One of the often-quoted frameworks in which ESG factors are defined is the United Nations Principles for Responsible Investing (UNPRI), which have been used as examples in various reports and impact statements.[12]

The UNPRI define ESG factors as outlined in Table 2.[13]

Table 2: Examples of UNPRI definitions of ESG factors

Environmental	Social	Governance
- climate change - greenhouse gas emissions - resource depletion - waste and pollution - deforestation - biodiversity loss	- human rights - modern slavery - child labour - working conditions - employee relations	- bribery and corruption - executive pay - board diversity and structure - political lobbying and donations - tax strategy

However, in addition to these principles the banks reported on a number of initiatives that they are currently using (as set out in table 3), of which the Global Reporting Initiative Sustainability Reporting Standards was the

[12] For example, see European Commission, Commission Staff Working Document, Impact assessment accompanying the document Proposal for a Regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment and Proposal for a Regulation of the European Parliament and of the Council on disclosures relating to sustainable investments and sustainability risks and amending Directive (EU) 2016/2341 and Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2016/1011 on low carbon benchmarks and positive carbon impact benchmarks, SWD(2018) 264 final, Brussels, 24.5.2018. Available at: https://ec.europa.eu/transparency/regdoc/rep/10102/2018/EN/SWD-2018-264-F1-EN-MAIN-PART-1.PDF [last accessed 20 December 2019]

[13] UNPRI, 2019: https://www.unpri.org/pri/an-introduction-to-responsible-investment/what-is-responsible-investment [last accessed 20 December 2019]

most cited. In addition, other initiatives such as the Equator Principles, the United Nations Environment Programme (UNEP) Finance Initiative (FI) Principles for Responsible Banking and the Natural Capital Protocol + Supplement (Finance) were mentioned. A detailed overview of these predefined definitions is given in Annex 1.

Table 3: Predefined definitions of ESG reported in the survey

Initiatives including predefined ESG definitions	Number of responses
The Global Reporting Initiative (GRI's Sustainability Reporting Standards)	21
Principles for Responsible Investment	20
Equator Principles	17
UNEP FI — Principles for Responsible Banking	13
Natural Capital Protocol + Supplement (Finance)	3

When the various definitions that are currently in place are examined, it appears that there is commonality across the various initiatives as set out in Table 4.

Table 4: Examples of ESG factors defined by international organisations, provided by banks and common areas suggested

Provided by	Environmental	Social	Governance
INTERNATIONAL FRAMEWORKS AND INITIATIVES*	Energy use and efficiency Greenhouse gas emissions Air pollutants Water use Waste management (water, solid, hazardous) Use of ecosystem services – 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
PROVIDED BY BANKS	Consumption of materials, energy and water Production of greenhouse gas emissions, other emissions to air and water Production and management of waste and waste water Protection of biodiversity	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	Set of rules or principles defining rights, responsibilities and expectations between different stakeholders in the governance of the bank Values that determine the definition of governance: executive pay, Board of Directors independence, composition and structure, shareholder rights, internal audit,

Provided by	Environmental	Social	Governance
	Research and development in low-carbon and other environmental technologies	employee relations, diversity issues, gender equality, workplace 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	Water use and consumption Biodiversity Greenhouse gas emissions	Labour and workforce considerations Human rights	Rights and responsibilities of directors Remuneration

**Sources of international frameworks and initiatives: GRI, 2019; UNPRI, 2018; UNEP FI and WBCSD, 2010.*

Banks' own definitions of ESG factors

In response to the survey, a number of banks explained that ESG factors cover a wide range of issues and that the specific ESG criteria that the banks apply are dependent upon the sector and the product.

Some banking institutions refer to ESG factors as a concept of sustainability, and a number of them explained that in their understanding it means alignment with the SDGs.

A small number of banking institutions provided examples of ESG factors relevant at a company level, which are summarised in Table 4. On the environmental side, these might include measures that look at how a company promotes environmental protection, such as efficient use of energy and material resources, reduction of greenhouse gas and other emissions to air and water, and recycling of waste. The social component might include factors that consider how a company manages relationships with its employees, customers and suppliers. The governance dimension might contain factors such as board independence, management compensation, audits and internal controls, and shareholder voting rights.

Are there common definitions?

Taking into account the use of both international initiatives and banks' own initiatives, although there is no clear-cut singular view on what ESG factors are, generally the survey of banks reveals commonalities in the areas stated in Table 4.

Although there is commonality in approaches, there are divergences on a number of aspects – in particular in the area of governance; banks tended to view it as the governance of their own banks as opposed to the governance of companies that they are dealing with. Moreover, although the survey demonstrated encouraging results in respect of efforts that banks are making with regard to sustainable finance, a somewhat surprising statistic picked up in the survey results illustrated that around 30% of the banks do not currently use a definition for climate-related risks. One respondent answered, 'At the moment we don't use ESG definitions and we don't consider the definitions to be relevant from our prudential risk management perspective.' To that end, it appears that there is a disparity in approaches to sustainability issues and a common approach is required.

The results demonstrate that a common definition should be established to ensure that there is commonality in approaches across all EU banks.

Strategy

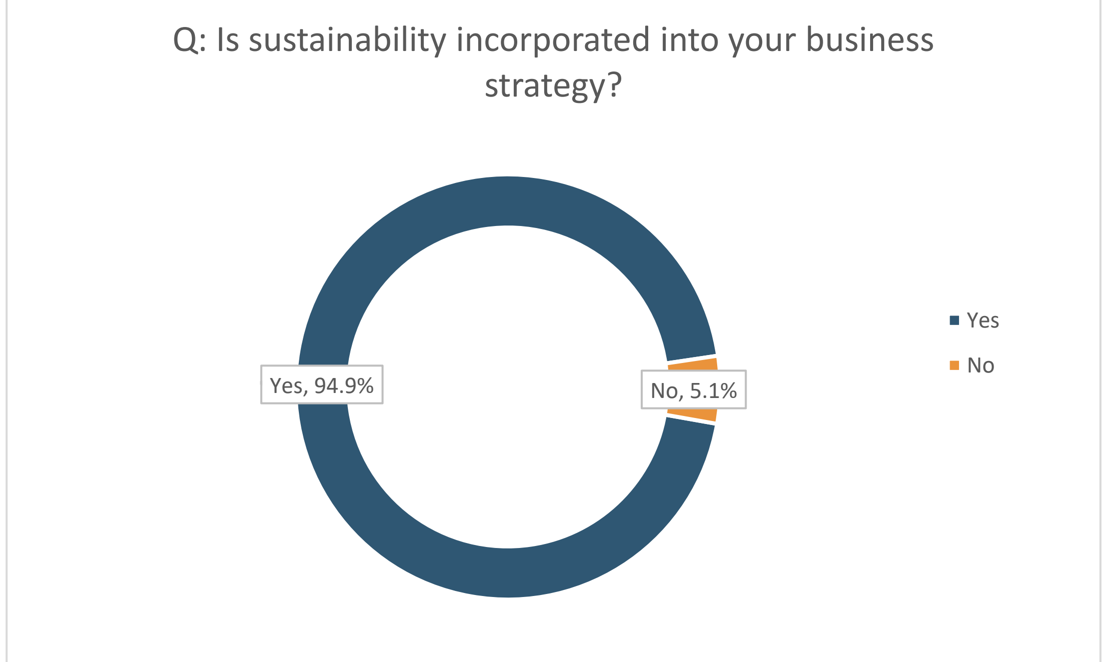
A fundamental part of the questionnaire was to establish whether sustainability is embedded into banks' business strategies and what the motivational factors were behind this. Moreover, respondents were asked whether they considered the impacts (both direct and indirect) their activities had on ESG issues and whether there were dedicated teams in place to embed sustainability across all areas of the business.

Incorporation of sustainability into business strategy

As highlighted earlier in this report, there are a number of motivational factors for industry to base its strategies upon, such as making use of new business opportunities to satisfy customer needs and supporting business with a positive social, environmental and reputational impact and the anticipation of regulatory changes.

Almost all institutions in the survey incorporate sustainability into their business strategies in various ways, mainly by participating in external networks that support sustainable finance; defining ESG objectives; publishing related policy statements; approving of and supporting specific principles based on international standards; and staff training. Only two respondents to the survey indicated that sustainability is not currently incorporated into their business strategy. (Figure 1)

Figure 1: Percentage of institutions with sustainability incorporated into their business strategies



Survey responses regarding how strategy on sustainability is embedded across global business objectives

Table 5: Survey responses regarding how strategy on sustainability is embedded across global business objectives

How is the strategy embedded into your global business objectives	Number of respondents indicating yes
Membership of external networks supporting sustainable finance	29
Defined environmental, social and governance objectives	26
Published policy statement	25
Public endorsement of specific principles (e.g. UN Principles for Responsible Banking)	25
Staff training and objectives	23
Disclosure following TCFD recommendation	12
Other	10

Although many of the overarching responses indicated that the incorporation of sustainability into business objectives remained at the corporate social responsibility (CSR) level, there are data to suggest that some banks are taking sustainability beyond CSR and into the heart of their businesses.[14]

Examples provided by banks include:

- the development of products such as green bonds and loans, which must be compliant with specific requirements in terms of the use of funds, transparency and close monitoring of the projects that receive the funds (see also the last section of this paper);
- linking a part of the variable remuneration of general management to qualitative targets, including CSR targets;
- engagement with stakeholders to promote the contribution of the financial industry to sustainable development;
- carrying out a social and environmental impact evaluation (together with the traditional financial evaluation) on an individual basis for each loan granted to legal entities;
- the development of metrics for measuring the bank's clients' potential energy savings in the context of buildings;
- introducing sectoral policies in economic sectors 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;

[14] Among this sample of banks going beyond CSR, two cooperative banks indicated that sustainability is embedded into their business models and at the core of their businesses.

- granting favourable conditions for credit to companies that are in the process of adopting a circular business model, after performing a technical assessment of the circularity of the business model;
- involvement in the development and endorsement of the UN Principles for Responsible Banking, which will assist banks in identifying their most significant positive and negative social, economic and environmental impacts;
- the application of inclusion measures in investments was also mentioned.

Moreover, the results demonstrate that a certain number of banks are viewing sustainability as part of their wider business strategy by integrating climate risk, in particular, into financial risk management frameworks and expanding the responsibility and capabilities of those teams, thus moving beyond treating such risks as reputational risks and towards treating them as financial risks.

This is reflected in other surveys carried out by banking supervisors. For example, the UK Prudential Regulation Authority (PRA)[15] saw a transition in approach with a movement away from banks examining climate through the prism of CSR and towards viewing it through the lens of financial risk. Similarly, the French Prudential Supervision and Regulation Authority (ACPR) identified a growing recognition of climate-related risks by risk management functions, underlining the fact that these issues are now considered beyond the CSR function and the reputational risk perspective.[16]

Direct and indirect impacts of activities financed by banks

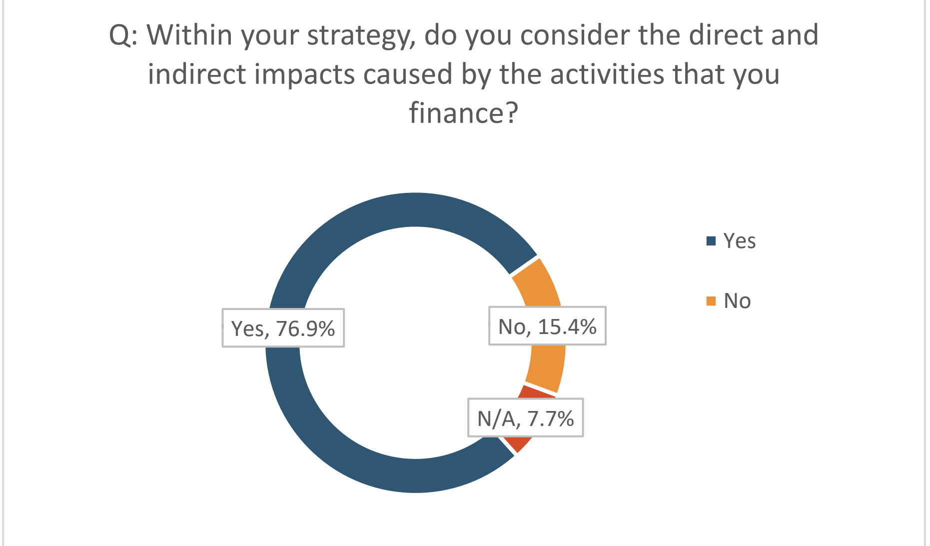
ESG-related factors or issues, as stated previously, could have impacts upon or from an asset. As part of the survey, respondents were asked whether they took into account the impacts, both direct and indirect, of the activities that they finance as part of their business strategy.

As indicated in figure 2 below, 77% per cent of banks surveyed indicated that they do consider the direct and indirect impact of activities that they finance, some of them mentioning that they have environmental and social risks procedures to minimise potential negative direct and indirect impacts.

[15] Bank of England, Prudential Regulation Authority, Transition in thinking: the impact of climate change on the UK Banking Sector, September 2018. Available at https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D [last accessed 20 December 2019]

[16] ACPR, French banking groups facing climate change-related risks, April 2019. Available at https://acpr.banque-france.fr/sites/default/files/medias/documents/as_101_climate_risk_banks_en.pdf [last accessed 20 December 2019]

Figure 2: Direct and indirect impacts of institutions' financed activities



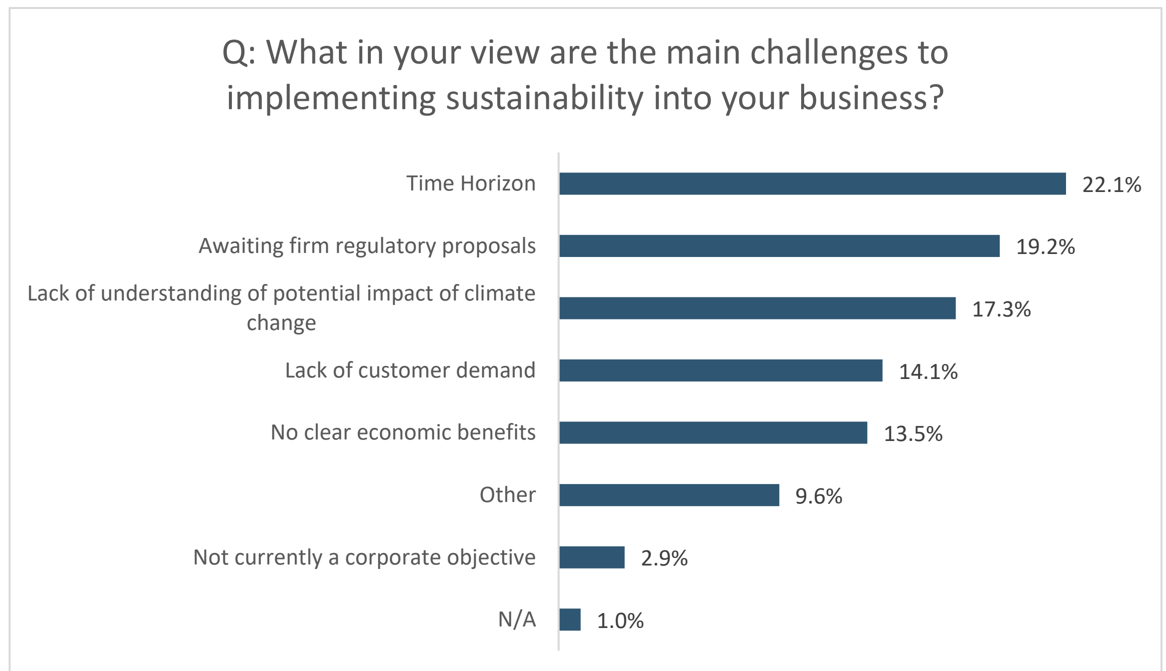
Some examples of impacts considered by banks include:

- *Direct and indirect impacts*, i.e. (i) impacts the banking institution has on the environment and society directly by using natural resources in carrying out its operations, and (ii) indirect impacts through its credit activity and the projects it finances. Referring to the potential impact of ESG factors upon their assets, some banks have mentioned the gradual integration of environmental and social risks into the bank's risk management framework to achieve mitigation of these risks based on the principle of prudence.
- *Local and global impacts* of investments, credits and purchases, especially in the context of climate change and considering greenhouse gas emissions. Banks state that they take into consideration international conventions such as the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, the 10 principles of the UN Global Compact and stakeholders' views. As a result, some banks use or apply international initiatives, such as the Science Based Targets initiative (SBTI) and the recommendations from the TCFD, to develop scenario methodology for assessing the climate impact for the full lending portfolio. Ongoing work on increasing the number of industry sector guidelines to establish key sector principles (e.g. fossil fuel sector guideline) has also been mentioned. In parallel, some banks measure and report annually the positive climate impact from their green lending book and develop metrics for measuring the bank's clients' potential energy savings, in relation to buildings or houses, for example.
- *Negative and positive impacts* regarding the screening of investments in the financial markets: (i) damaging investments for which the bank applies exclusion criteria, e.g. arms manufacturing companies, manufacturers of specific components for the military industry, tobacco manufacturing companies, other companies linked to the tobacco industry, sovereign debt from countries with a medium or low Human Development Index (HDI)); (ii) inclusion measures — setting a target for the percentage of financial investments that must be directed to companies with high ESG ratings or ranking and to sovereign debt of countries with a high or very high HDI.

Challenges

Although the overall results related to strategy appear to demonstrate an encouraging trend towards banks embedding sustainability into their business strategy, obstacles remain (figure 3). Many banks stated that there are still challenges with regard to implementing sustainability within the business, with the most cited reasons being time horizon, awaiting regulatory proposals and lack of understanding of the potential impacts of climate change.

Figure 3: Main challenges to implementing sustainability



Governance, policies and risk management

A central part of the survey was to gain insights into the governance, policies and risk management of banks. As stated in the section above, the survey responses indicate that there is an undertaking by some banks to move sustainability beyond a purely CSR function and incorporate it into other business functions. That transfer, although it has extended into governance and policies, does not appear to have been driven to the same extent into the risk management function, as will be demonstrated in the section on risk management below.

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.

A vast majority of the institutions surveyed indicated that they have developed specific policies on implementing a sustainable business strategy. However, institutions are taking divergent approaches to handling sustainability in practice. Generally, one can nonetheless observe that it seems to be reflected in coordinated activities across business areas and feeds into credit and lending policies.

Some institutions indicated that they develop specific internal policies for sustainable transactions, focused on the design and promotion of sustainable financial products and the integration of ESG factors into the assessment of investment decisions and the granting of loans.

Although environmental aspects appear to be well understood, notably from a climate perspective, the survey tried to gain insights into whether the E, S and G factors and risks were subject to different governance and policy procedures. A number of banks did not reply to this question — however, of those that did, the results were split down the middle with 51.4% of banks indicating that there is no difference in treatment between the E, S and G factors and risks, and 48.5% indicating that there should be different approaches for these.

Environmental, social and governance risks

ESG-related factors or issues — notwithstanding whether these are impacts upon or from an asset —can have both positive (business opportunities) or negative (business risks or threats) impacts leading to financial gains or losses.[17] ESG factors and issues can be referred to as those factors and issues that trigger ESG risk. In essence, what was an ESG-related factor or issue becomes an ESG risk for the bank to manage. Thus, building on a developing EU definition of sustainability risk,[18] an ESG risk has been defined as the risk of the negative financial impact stemming, directly or indirectly, from the impact that ESG events may have on the bank and on its key stakeholders, including customers, employees, investors and suppliers.

- Environmental risk is defined as the risk of negative financial impact stemming, directly or indirectly, from environmental issues.
- Social risk is defined as the risk of negative financial impact stemming, directly or indirectly, from social issues.
- Governance risk is defined as the risk of negative financial impact stemming, directly or indirectly, from governance issues.

Approaches to risk management

Risk management has been cited as perhaps the key mechanism to enable banks to move and reallocate capital away from unsustainable activities towards more sustainable sectors of the economy, while still following their commercial objectives.[19] However, although respondents cited a move of capital towards sustainable investment as one of their business objectives, the fact that the survey results indicate that sustainability is not being driven into the heart of risk management poses a paradox and may justify action from regulators and supervisors.

Banks were asked in the survey whether they considered sustainability a way of doing business or whether it should be approached from a risk management perspective. The responses to the survey were mixed: approximately 44% of banks see sustainability as a broad area that affects the way that a bank does business and lends to the economy, so it should be reflected as both an opportunity and a risk and a matter of the bank's CSR, whereas about 30% of respondents see sustainability as something that should be looked at from a risk management perspective alone.

Regulatory approaches with regard to banks' risk management are currently evolving. At the international level, there have been some small steps towards encompassing sustainability into risk management through regulations. With regard to the E element, Basel III requires banks to assess the impact of specific environmental risks on their credit and operational risks exposures; however, these are quite narrow[20] transaction-specific risks.[21] At the EU level, the implementation of the European Commission's action plan should result in

[17] Weber B. and Rendlen B., 2019, Guidance note: Integrating ESG factors into financial models for infrastructure investments, WWF, B Capital Partners. Available at: http://awsassets.panda.org/downloads/wwf_guidance_note_infra_.pdf, p. 7.

[18] REGULATION (EU) 2019/2088 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 November 2019 on sustainability-related disclosures in the financial services sector. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R2088&from=EN

[19] Alexander S.K. and Fisher P., 2018, Banking regulation and sustainability. Available at: SSRN: https://ssrn.com/abstract=3299351 or http://dx.doi.org/10.2139/ssrn.3299351, p. 2. [last accessed 20 December 2019]

[20] University of Cambridge Institute for Sustainability Leadership in association with UNEP Financial Initiative, 2014, Stability and sustainability in banking reform: are environmental risks missing in Basel III? Available at: https://www.unepfi.org/fileadmin/documents/StabilitySustainability.pdf [last accessed 20 December 2019]

[21] For example, paragraph 510 of Basel III (Pillar 1) requires banks to appropriately monitor the risk of environmental liability arising in respect of the collateral, such as the presence of toxic material on a property.

mainstreaming — or making part of everyday practice — financial institutions' ESG risk management and, concerning the banking sector, the EBA is mandated to assess the appropriate arrangements, strategies, processes and mechanisms for managing ESG risks. Recently, there has also been growing interaction between regulators, supervisors and banks with regard to climate-related risks in particular, and a number of authorities have started to alert industry to their expectations to enhance the management of those risks[22].

The survey results demonstrate that banks are currently considering and determining the materiality of ESG factors. However, banks are finding alternative vehicles to traditional risk management for this and have yet to identify key performance indicators that are necessary for a robust internal risk review process.

Institutions responding to the survey are using or developing various risk management tools. Some of them provide ESG-related advice to help clients manage ESG-related risks and assign ESG risks rating to (a subset of) clients as a result of specific ESG risk assessment processes, and they tend to be taking ESG risks into account in their credit policies to identify both risks and opportunities. Indeed, some institutions indicated that they have lending policies targeting renewable or green energy projects and, in parallel, lending policies or restrictions on mining or the financing of new coal plants. This somewhat supports the proposition that it is through 'their lending activities, including corporate loan portfolios, that banks can play the most influential and impactful role in catalysing the transition to the low carbon economy'.[23]

Generally, as indicated in table 6, banks appear to be treating ESG factors and issues as drivers of existing prudential risk categories and seeing them as a channel of most risk categories with the exception of liquidity risk.

Table 6: Prudential risk categories affected by ESG factors

Prudential risk categories affected by ESG factors/issues — bank responses	Prudential risk categories
Credit risk/counterparty default risk	Credit risk/counterparty default risk
Market risk	Market risk
	Liquidity risk
Operational risk	Operational risk
Insurance risk	Insurance risk
Strategic risk	Strategic risk
Reputational risk	Reputational risk[24]

Climate-related risk management by banks

[22] See for example EBA Action Plan on Sustainable Finance, 6 December 2019. Available at: https://eba.europa.eu/sites/default/documents/files/document_library//EBA%20Action%20plan%20on%20sustainable%20finance.pdf [last accessed 20 December 2019]

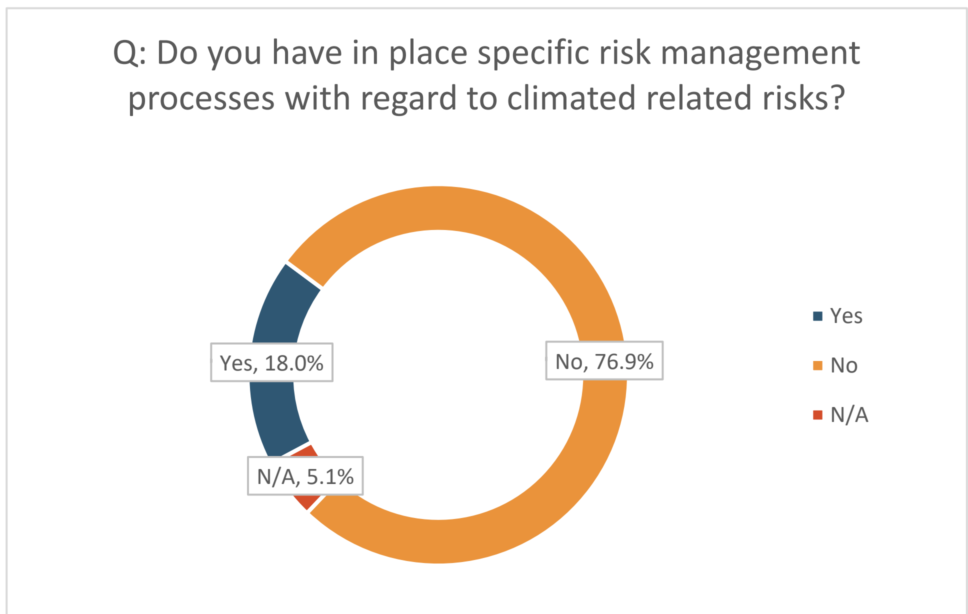
[23] United Nations Environment Programme Finance Initiative, 2018, Extending our horizons: assessing credit risk and opportunity in a changing climate: outputs of a working group of 16 banks piloting the TCFD recommendations, Part 1: Transition-related risks and opportunities, p. 8.

[24] See BaFIN, Guidance notice on dealing with sustainability risks (consultation) 20 September 2019. Available at: https://www.bafin.de/SharedDocs/Downloads/EN/Merkblatt/dl_mb_umgang_mit_nachhaltigkeitsrisiken_en.html

Climate risks entail a multitude of elements that banks need to consider, including the breadth of the risk and its magnitude, envisaged nature and dependency on short-term actions and whether it has an uncertain time horizon.[25] Given the nature of these risks, one of the biggest challenges for banks in the area of risk management is to ascertain the ability and resilience of firms to achieve an appropriate transition path.[26]

A crucial finding of the survey was that, despite most institutions indicating that transitional and physical risks[27] related to climate change are the main potential material risk for the institution that deserves most prominent attention from a prudential risk management perspective, very few institutions (fewer than one in five) have specific risk management practices in place.

Figure 4: Institutions with specific risk management processes in place



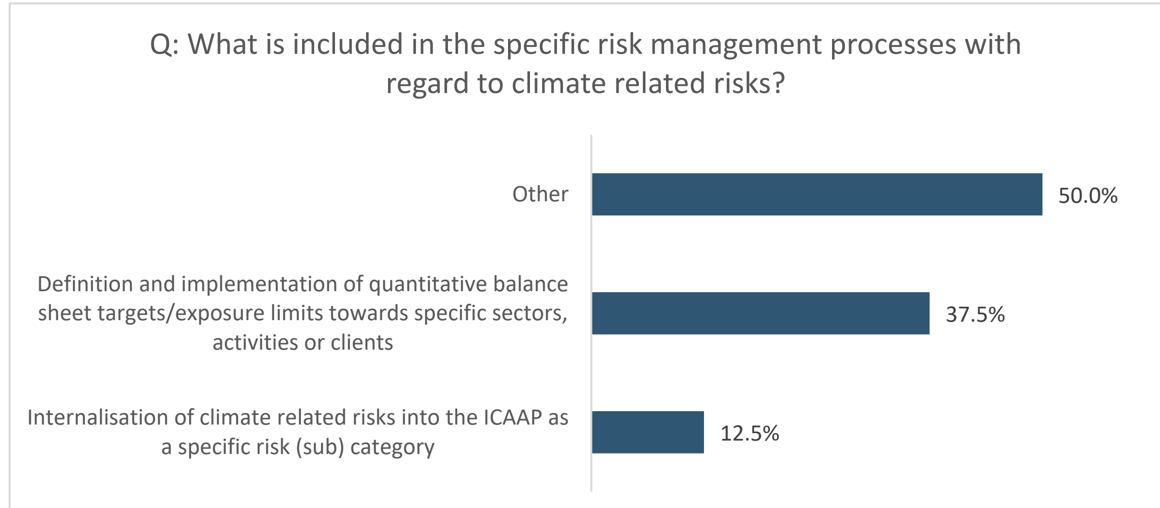
Of those that do engage in specific risk management processes with regard to climate risk, the processes that are used include internalising climate-related risks into the Internal Capital Adequacy Assessment Process (ICAAP) as a specific risk category; balance sheet targets and exposure limits; developing scenario analysis; committees setting the overall risk appetite for the firm; exclusion criteria; and stress tests.

[25] A call for action, Climate change as a source of financial risk, First Comprehensive Report, NGFS, April 2019. Available at: https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf [last accessed 20 December 2019]

[26] See Carney M., A new horizon, Speech delivered at European Commission conference: A Global Approach to Sustainable Finance, 21 March 2019.

[27] Physical and transition risks are discussed in the next section.

Figure 5: Climate-related risks included in specific risk management processes



Physical and transition risks

The TCFD recommendations grouped climate risks into the categories of transition and physical risks[28] and the respondents to the survey were asked to categorise their approaches to climate risk against the backdrop of these two categories. It has been suggested that the work of the TCFD in relation to the grouping of climate risks can be extended more generally to ESG risks;[29] however, this section deals with physical and transition risks in the context of climate only.

Physical risks have been described as those risks that can affect financial stability directly through the impact of more frequent and or severe disasters, weather events and gradual climate changes. When physical risks materialise they can cause damage to property, disrupt the economy, e.g. trade, and heavily erode collateral and asset values. Value losses can be abrupt in particular in climate risk-sensitive geographical areas.

Transition risks are derived from making adjustments towards achieving a lower carbon economy. Transition risks occur when financial markets are harshly affected by the uncertainties related to the timing and speed of adjustments towards a low-carbon economy, including the impacts of policy action and technological improvement on the asset prices of carbon-related stocks.[30] These risks materialise when mitigation policies, technological advances or changes in the market sentiment or consumers' demand lead to value adjustments, especially if they are abrupt and unanticipated. This can be the result of unexpected policy measures and swift changes in consumer preferences. In addition to these market risks stemming from transition risks, there are also credit risks that can evolve depending on the policy measures, market reaction and impact of new technologies, ultimately leading to lower profitability and higher default rates,[31] as well as operational risks whereby business continuity is impacted by severe weather events. Overall, a large range of assets will have to

[28] Task Force on Climate-related Financial Disclosures (TCFD, Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017) available at https://www.fsb-tcfd.org/publications/final-recommendations-report/ [last accessed 20 December 2019]

[29] Weber B. and Rendlen B., 2019, Guidance note: Integrating ESG factors into financial models for infrastructure investments, WWF and B Capital Partners. Available at: http://awsassets.panda.org/downloads/wwf_guidance_note_infra_.pdf, p. 8. [last accessed 20 December 2019]

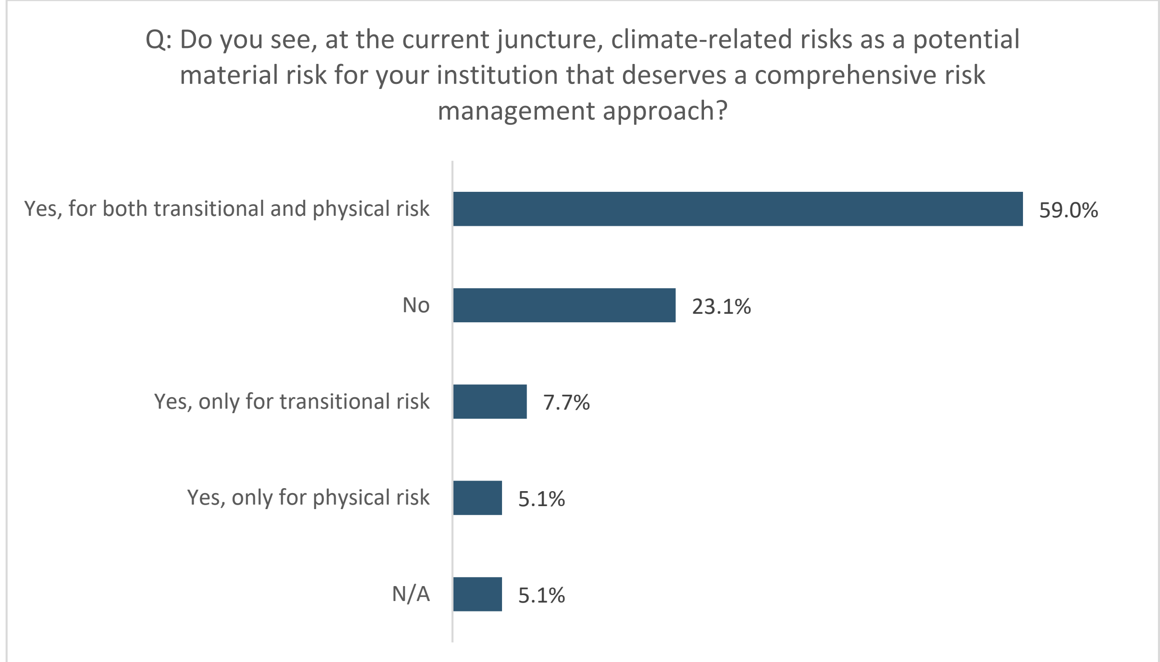
[30] Giuzio M., Krusec D., Levels A., Melo A.S., Mikkonen K. and Radulova P., 2019, Climate change and financial stability, European Central Bank, Financial Stability Review, May 2019. Available at https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart201905_1~47cf778cc1.en.html#toc1, p. 3. [last accessed 20 December 2019]

[31] Giuzio M., Krusec D., Levels A., Melo A.S., Mikkonen K. and Radulova P., 2019,Climate change and financial stability, European Central Bank, Financial Stability Review, May 2019. Available at https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart201905_1~47cf778cc1.en.html#toc1, pp. 3-4.[last accessed 20 December 2019]

be reassessed and revalued as changes in policy, technology and physical risks create new costs and opportunities.[32]

With regard to physical and transitional risks (figure 6), nearly 59% of respondents felt that there should be a comprehensive risk management approach for both transitional and physical risks. As stated earlier, many respondents treat climate risk as a financial risk and therefore state that they see climate risk as having a potentially negative impact on clients' wealth and thus affecting the financial system.

Figure 6: Climate-related risks as a potential material risk



Although our respondents recognised the importance of both physical and transition risks, they are dealing with these risks in divergent ways. Some respondents highlighted that they are dealing with this through credit risk, as it may affect their clients' profit and loss and thus increase default rates, while others are viewing it through their exposure level and the size of their exposures to mortgage lending etc. In addition some banks have highlighted this as an operational risk as it involves higher costs of doing business, while some have stated reputational risk, whereas others stated that they are reviewing their corporate structures in relation to these risks.

Time horizon

Underpricing of transition risks can occur if investors' time horizon is shorter than the actual horizon over which the transition is expected to occur.[33] In the UK the PRA found that for banks the financial risks from climate change have a tendency to be beyond their planning horizons. The PRA's survey of 90% of the UK banking sector, representing over USD 11 trillion of assets, found that these horizons averaged 4 years — i.e. this creates a

[32] Carney M., A new horizon, Speech delivered at European Commission conference: A Global Approach to Sustainable Finance, 21 March 2019. Available at https://www.bankofengland.co.uk/speech/2019/mark-carney-speech-at-european-commission-high-level-conference-brussels [last accessed 20 December 2019]

[33] Carney M., Breaking the tragedy of the horizon — climate change and financial stability, Speech at Lloyd's of London, 29 September 2015. Available at: https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability [last accessed 20 December 2019]

mismatch, as the time horizon is shorter than that for risks to be fully realised and prior to climate policies taking effect.[34]

To that extent the survey results (see figures, 7, 8 and 9) indicated that there is still much divergence among banks over the time horizon that is most appropriate to tackle transition and physical risk.

Figure 7: The most appropriate time horizon: less than 3 years

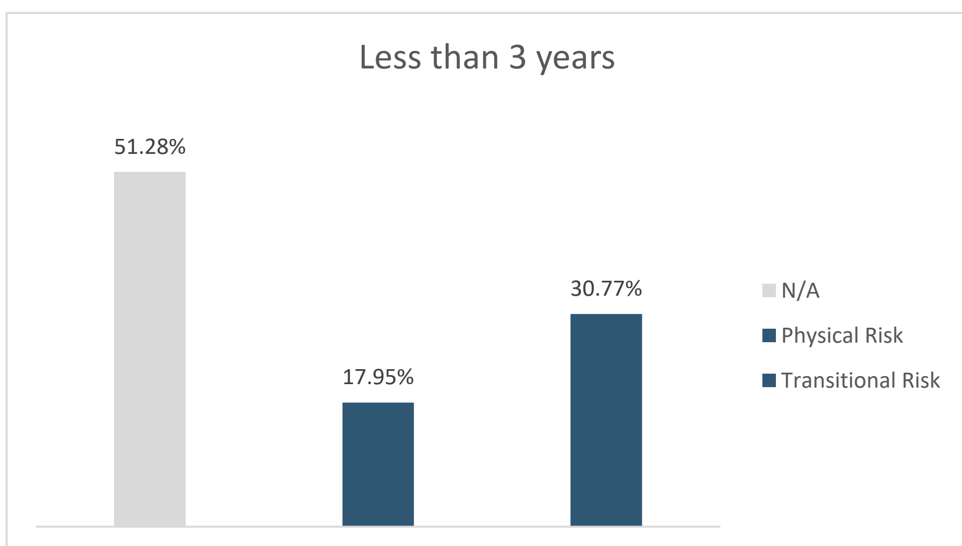
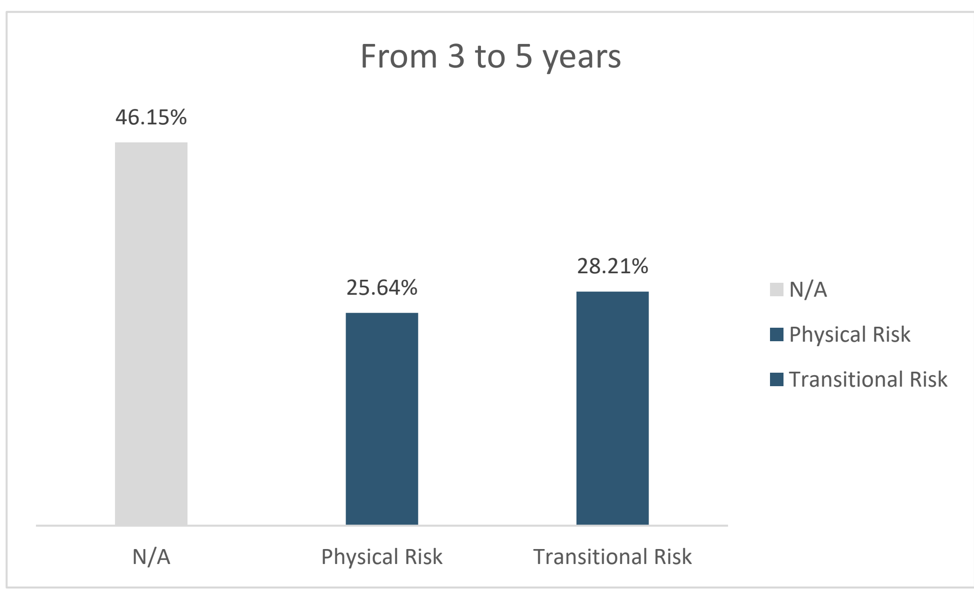
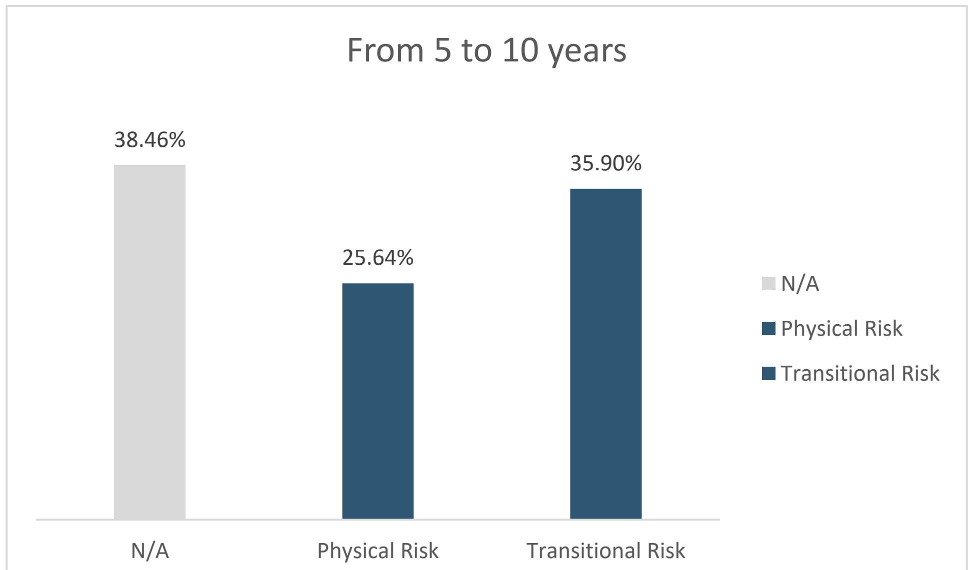


Figure 8: The most appropriate time horizon: 3 to 5 years



[34] Bank of England, Prudential Regulation Authority, 2018, Transition in thinking: the impact of climate change on the UK banking sector. Available at: https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/report/transition-in-thinking-the-impact-of-climate-change-on-the-uk-banking-sector.pdf?la=en&hash=A0C99529978C94AC8E1C6B4CE1EECD8C05CBF40D [last accessed 20 December 2019]

Figure 9: The most appropriate time horizon: 5 to 10 years



Scenario analysis

The survey sought to gain some insights into whether banks were conducting or engaging in scenario analysis or stress testing as part of their governance and policies around sustainability. To that end only 15.38% of respondents indicated that they perform a scenario analysis. Some indicated that they are currently developing scenario analysis in order to incorporate it into their risk appetite.

To give some of the granularity behind the stress testing and scenario analysis approaches that are currently being employed, the answers included sensitivity analysis of the client risk derived from both the physical and transition risks associated with climate change in order to inform the bank's risk management and credit process; top-down balance sheet stress testing, as well as targeted, bottom-up analysis of specific sector exposures; and stress tests for climate-related risks. Some banks indicated that they also perform scenario analysis on the operational risk management framework, the objective of which is to enrich the internal data of potential operational risk events with rare (low frequency-high impact) events that may have adverse financial and qualitative impacts on the bank.

One bank indicated that it conducted a scenario analysis for its loan portfolios for the sectors most sensitive to climate-related transition risks, i.e. the oil and gas and utilities (electricity and gas) industries. This analysis is based on the assumptions of energy demand outlined in common climate change scenarios (e.g. the International Energy Agency's New Policy Scenario and the Sustainable Development Scenario). In this respect, although sectoral analysis is useful as an initial determination of a financial institution's exposures to transition risk, it has been stated that it fails to determine certain specificities and differences within sectors.[35]

Banks also mentioned the study conducted by the UNEP FI in conjunction with Oliver Wyman and a working group of 16 banks to develop methodologies for assessing risk and opportunities connected with the transition to a low-carbon economy. That study addressed the 'strategy' component of the TCFD recommendations regarding the use of scenario analysis for forward-looking assessments of transition-related impacts.[36]

[35] Giuzio M., Krusec D., Levels A., Melo A.S., Mikkonen K. and Radulova P., 2019, Climate change and financial stability, European Central Bank, Financial Stability Review, May 2019. Available at: https://www.ecb.europa.eu/pub/financial-stability/fsr/special/html/ecb.fsrart201905_1~47cf778cc1.en.html#toc1, p. 7 [last accessed 7 November 2019]

[36] United Nations Environment Programme Finance Initiative, 2018, Extending our horizons: assessing credit risk and opportunity in a changing climate: outputs of a working group of 16 banks piloting the TCFD recommendations, Part 1: Transition-related risks and opportunities.

The main aim of that methodology was to help banks assess the transition-related exposures in their corporate loan portfolio, in which there may have been concerns regarding potential policy and technological impacts from a low carbon transition as well as capturing the associated opportunities.

The scenario analysis employed in the study took on the guise of a sensitivity analysis that was used to inform strategic planning and portfolio composition as well as insuring that institutions are aware of climate. The sensitivity test has an extended time horizon (more so than the 5 years in a firm-wide macro-stress test). In addition, the challenges around climate-related transition risks present other issues, including limited information for assessing how a climate transition scenario may affect the creditworthiness of certain borrowers and industries; the need for substantial coordination within organisations; and, to be useful for banks, the methodology must be repeatable, systematic and consistent.

This pilot exercise used a three-step methodology. It comprised three modules for modelling purposes that are transition scenarios to provide plausible views of how transition risk may evolve across sectors over the next few decades. Borrower-level calibration — allowing banks to tailor approaches and overcome a lack of empirical data to estimate changes in credit outcomes — and portfolio impact assessment, together with the scenarios, provided a structured analytical framework making the approach repeatable, systematic and consistent.

This pilot study found that there was a need for a methodology that can accommodate different scenarios and bank exposures to risk. It provided a methodology that is adaptable and can be used for different sectors, risks, scenarios and timeframes.

Disclosures

Transparency plays a key role in promoting market discipline through the disclosure by institutions of meaningful, consistent and comparable information, reducing asymmetry of information between institutions and users of information and helping stakeholders to make informed decisions. Transparency is also a cornerstone of the Commission's action plan on sustainable finance, which describes transparency of market participants' activities as being essential to a fully functioning financial system. The Commission's action plan seeks to improve transparency on sustainability factors by institutional investors and asset managers and on climate change by corporates, including credit institutions.

In June 2017, the TCFD released its final recommendations, which provide a (non-binding) framework for companies and other organisations to develop more effective climate-related financial disclosures.[37]

In June 2019, the Commission published its Guidelines on reporting climate-related information, which integrate the TCFD recommendations and are a supplement to the general non-binding guidelines on non-financial reporting adopted by the Commission in 2017.

In April 2019, the NGFS issued six recommendations aimed at facilitating the role of the financial sector in achieving the objectives of the Paris Agreement.[38] One of the recommendations is to achieve robust and internationally consistent climate- and environment-related disclosure; and the NGFS encourages all companies issuing public debt or equity, as well as financial sector institutions, to disclose in line with the TCFD recommendations.

[37] Task Force on Climate-related Financial Disclosures (TCFD, Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017) available at [last accessed 20 December 2019] https://www.fsb-tcfd.org/publications/final-recommendations-report/

[38] Network for Greening the Financial System (NGFS), First comprehensive report – a call for action (April 2019) https://www.ngfs.net/en/first-comprehensive-report-call-action

Finally, the amended Capital Requirements Regulation (CRR2) includes the requirement for large institutions to disclose information on ESG risks, including transition and physical risks, from June 2022 as part of their Pillar 3 report. CRR2 also includes the mandate for the EBA to implement these disclosures in a way that conveys sufficient comprehensive and comparable information on institutions' risk profiles.

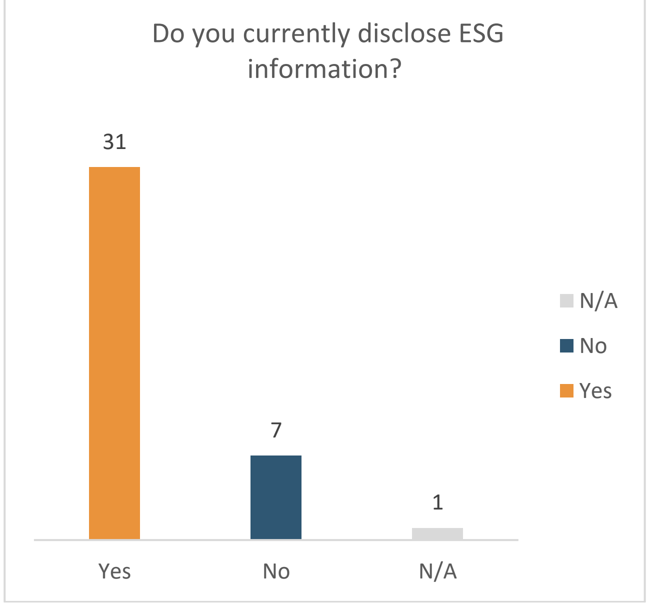
This section presents the results of the survey of EU banks' current ESG and climate-related disclosure practices, which also relied on other sources, notably those assessing the implementation by banks of the TCFD recommendations.

Environmental, social and governance disclosures

The vast majority of the banking institutions that participated in the survey on market practices currently disclose ESG information (31 out of 39), as non-financial information included in their published financial statements or the annual report as part of their CSR; only 2 out of 31 institutions include climate-related information in their Pillar 3 report.

Although this may be explained by the absence at this moment of explicit Pillar 3 requirements on ESG, this demonstrates that, despite the fact that ESG factors need to be increasingly considered under a financial risk management perspective, the actual integration of prudential disclosures is still in its very early stages. This also means that a significant part of the survey's answers, and of EU banks' current disclosure practices, deals with the impacts of institutions on the external world and with the internal and 'responsible' practices of institutions (e.g. diversity, own carbon emissions, fiscal performance) rather than financial risks.

Figure 10: Number of institutions that currently disclose ESG information

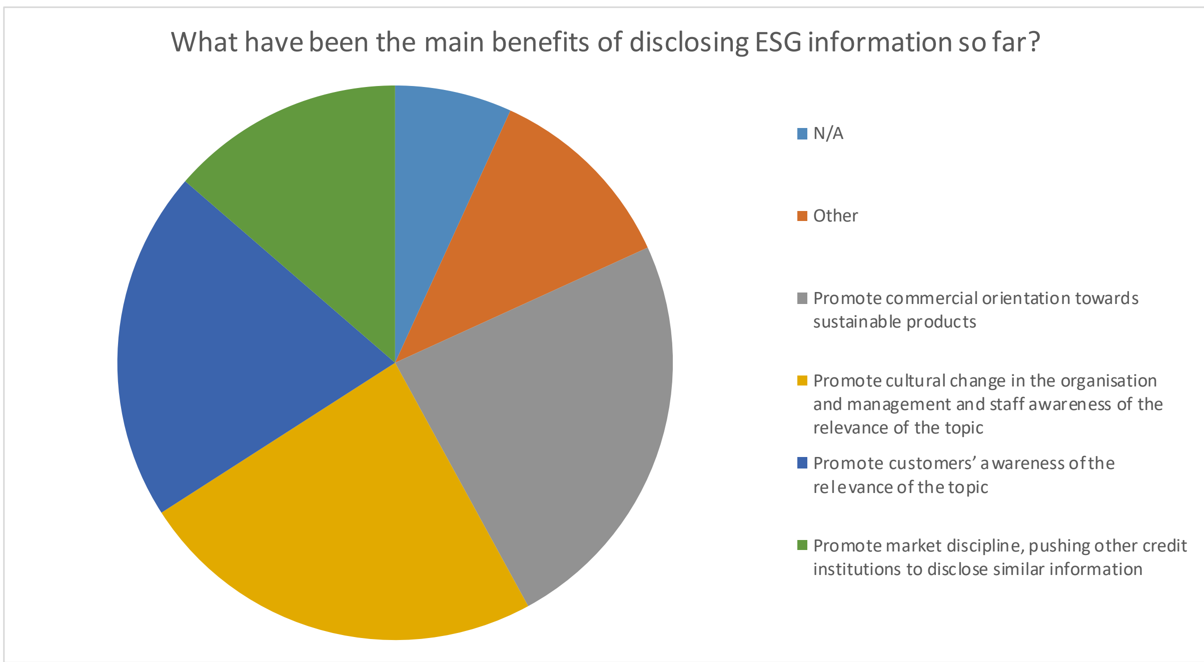


Banking institutions are currently split regarding their transparency on the definitions and taxonomy applied in their disclosures. Out of the 31 institutions that currently disclose ESG information, 15 responded that they provide transparency on the definitions and taxonomy behind their disclosures (e.g. definition of ESG or climate-related risks, or internal taxonomies for green finance purposes, ex. pool of eligible assets/mortgages for green covered bonds) while 12 responded that they do not. The definitions are included in most cases in the institutions' annual reports, published on their websites, and are based either on international guidelines and standards, such as TCFD, Sustainability Accounting Standards Board, GHG protocol, Global Reporting Initiative Standards, or on criteria created internally by the banks.

In terms of the content of ESG disclosures, EU banks disclose mainly their strategy around sustainability issues, their commitments and adherence to international initiatives and external sustainability standards, their governance in relation to ESG challenges and, concerning financial and reputational risk management, the environmental and social risk policies applicable to certain sensitive sectors and the use of sector norms.

As regards the main benefits of disclosing ESG information (see figure 11), the majority of the banking institutions pointed out that ESG disclosure promotes commercial orientation towards sustainable products and leads to a cultural change in the organisation and management as well as raising staff awareness of sustainability. Another important benefit is the promotion of customers' awareness of the importance of sustainability and the promotion of market discipline, pushing other credit institutions to disclose similar information and influencing the wider banking sector to become more sustainable. Other benefits reported by the banking institutions are the achievement of a higher ESG rating, the enhancement of the institution's reputation, transparency towards investors and the attraction and employment of talented individuals at every level of the organisation who are motivated by the sustainable goals and the value-based and impact-driven mission of the bank. Together with the benefits arising from this kind of disclosure, banking institutions also mentioned the regulatory driver, as they disclose ESG information in compliance with national and European legislation on disclosure of non-financial information.

Figure 11: Main benefits of disclosing ESG information so far



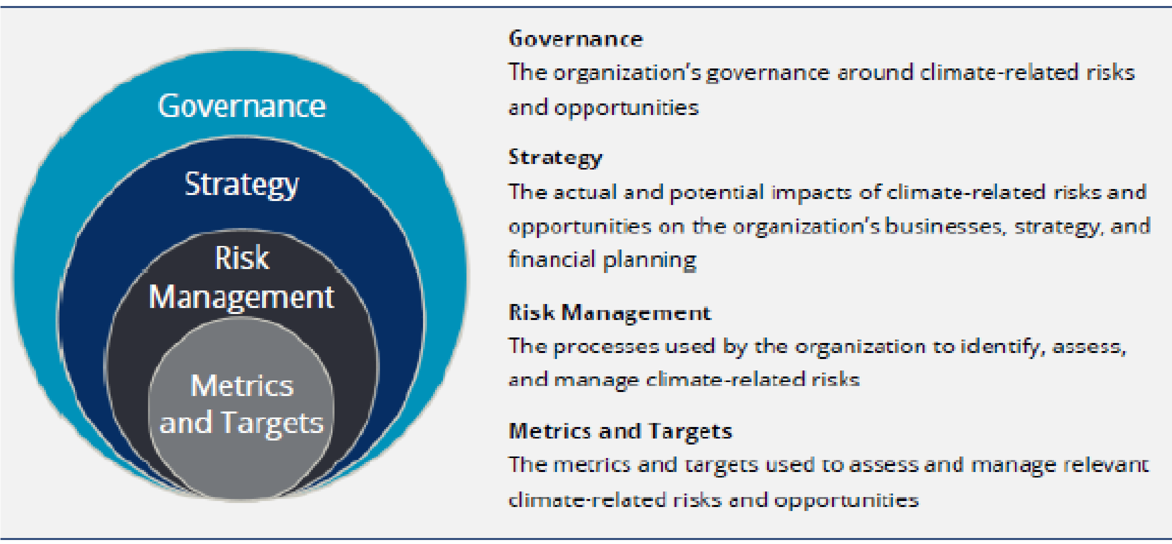
According to the findings of the survey, two of the main challenges when disclosing ESG information are the absence of commonly agreed definitions and criteria for the classification of counterparties, products, exposures and collaterals in terms of sustainability. Other challenges for this type of disclosure include the measurement of greenhouse gas emissions, in particular scope 3 emissions, the identification of exposures subject to physical risk and the absence of sufficient and reliable available or exploitable ESG data.

Climate-related disclosures

Implementation of the TCFD recommendations at international level

The TCFD issued 11 main guidelines on company disclosure, bracketed under four broad headings: (i) governance; (ii) strategy: (iii) risk management; and (iv) metrics and targets.

Figure 12: The main guidelines for company disclosures



Source: TCFD implementation report June 2019

The TCFD published two status reports in 2018 and 2019 on disclosure data analysed using artificial intelligence, which assessed the implementation of the recommendations made in 2017 and 2018. It should be noted that this assessment was made on a sample of companies, including banks,[39] at the international level. The results are not fully replicable at the EU level, but the findings help to put EU banks' practices into perspective.

The TCFD found that (see figure 13), for nearly every recommended disclosure, the percentage of banks disclosing relevant information was higher than average across all companies reviewed. Banks' disclosure of information in alignment with the TCFD recommendations increased from 2016 to 2018 for all 11 recommended disclosures. There was a significant increase of 14% in disclosure of both governance (a) and risk management (c) between 2016 and 2018, showing that banks are increasingly disclosing the board's oversight of climate-related issues and the integration of climate-related risks and opportunities into overall risk management processes.

[39] The artificial intelligence technology reviewed disclosures from 104 banks in three sub-industries: regional banks; large, diversified banks; and investment and asset management firms. The 104 banks ranged in size from about USD 4 trillion to USD 8 billion in assets, with a median asset size of over USD 200 billion.

Figure 13: Percentage of banks reviewed by TCFD disclosing TCFD aligned information

Source: TCFD implementation report June 2019

Implementation of TCFD recommendations at the EU level

Although most of the respondents to the survey do not fully implement the TCFD recommendations at this stage, almost half of them disclose information on both climate change-related risks and opportunities arising from their efforts and actions to mitigate and adapt to climate change. When disclosing information on climate-related risks, institutions report on both transition risk and physical risk. Some institutions publish or plan to publish dedicated TCFD reports while others include TCFD reporting in their annual or CSR reports.

Large and internationally active institutions seem to be at a more advanced stage in implementing TCFD, which is consistent with results from other industry surveys:

- A survey by the Global Financial Markets Association found that the majority of 22 large and globally active financial institutions follow the TCFD recommendations while all remaining firms indicated that they plan to do so.[40]
- A survey conducted by Oliver Wyman and the International Association of Credit Portfolio Managers (IACPM) across 45 global financial institutions, which included 18 EU banks, found that the vast majority of institutions plan to implement the TCFD recommendations fully or partially, and especially those in the EU (see Figure 14).[41]

Figure 13: Institutions planning to implement the TCFD recommendations

Yes, fully 5 14 7 26
Yes, partially 2 3 8 13
No 2 1 3 6
Asia Europe Americas

Source: Oliver Wyman / IACPM Survey, November 2018

To gain a better insight on the climate-related information that banking institutions participating in the survey on market practices are disclosing and on the implementation of the TCFD recommendations, EBA staff conducted research on the content of climate-related public disclosures for a narrower sample of 10 banks out of the 39 banks that participated in the survey. The following practices were observed:

- Governance: some institutions provide details regarding management's role and the board's oversight (e.g. frequency of discussions on climate-related risks and opportunities and main decisions taken), and a few go deeper in describing the allocation of responsibilities between the different units involved in climate-related risks and opportunities.
- Strategy: some institutions describe the main objectives and components of their strategy, covering one or more of the following aspects: impact of the institution on the climate (e.g. pledges to provide certain amounts of sustainable or green finance); risks posed by climate change (e.g. opinion on the materiality of those risks for the institution); and an assessment of new opportunities (e.g. consulting and strategic support activities in the green sector). A few distinguish between different time horizons and announce that they will measure their strategic resilience against transition scenarios by assessing the alignment of their portfolios with Paris Agreement objectives.
- Risk management framework: practices vary and include the description of the approaches taken towards climate risks (e.g. either as a new type of risk or as a driver/aggravating factor of traditional risks (credit, market, operational); the processes to determine the materiality of climate-related risks; the methodologies used to measure transition risks of clients or transactions; the sectors identified as vulnerable to transition risks; or the mitigating mechanisms in place.
- Metrics and targets: a few institutions start disclosing metrics and targets, among which are:
    - exposures to higher transition risk sectors;

[40] Global Financial Markets Association, Sustainable Finance Survey Report, July 2019 available at [last accessed 22 December 2019] https://www.gfma.org/correspondence/gfma-2019-sustainable-finance-survey-report/

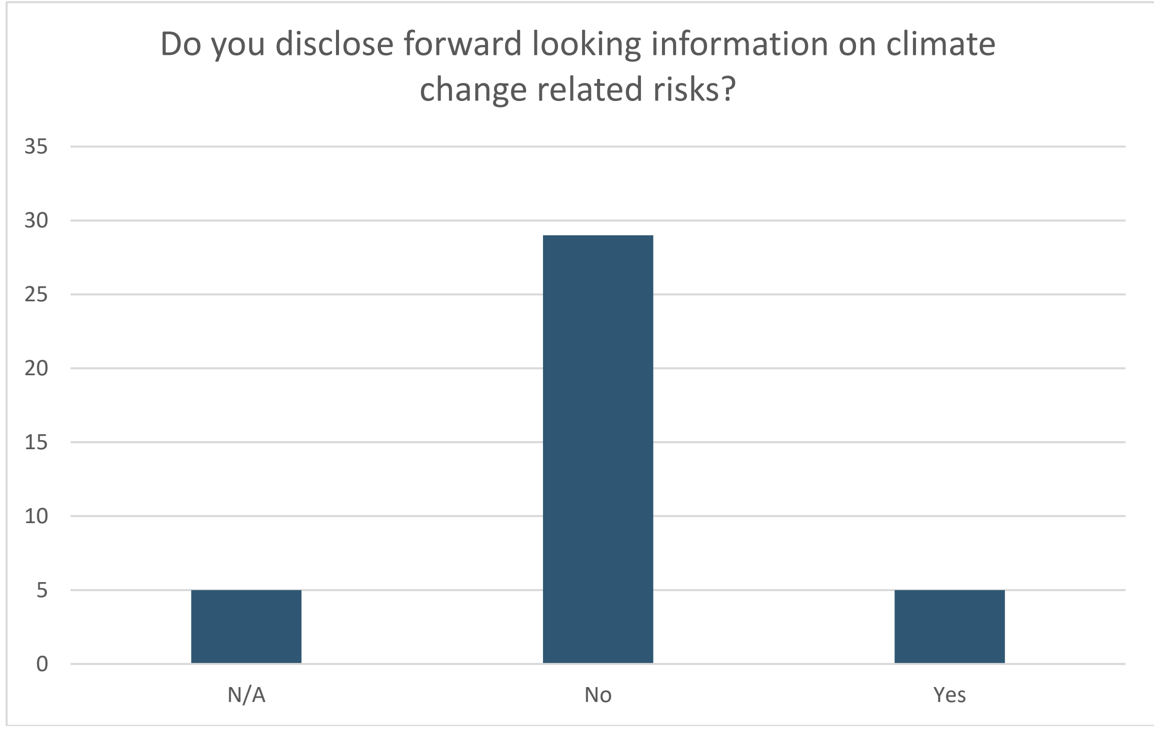
[41] Oliver Wyman, Climate Change, Managing A New Financial Risk, February 2019, available at [last accessed 22 December 2019] https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2019/feb/Oliver_Wyman_Climate_Change_Managing_a_New_Financial_Risk1.pdf

- carbon-related assets;[42]
- energy mix being financed and alignment of this mix with International Energy Agency scenarios;
- carbon footprint, scopes 1, 2 and 3 (indirect financed emissions), at entity or portfolio level;
- targets for reduction in financing certain activities, e.g. high-carbon activities;
- targets for increasing finance for certain activities, e.g. volume of climate-related products and services and amounts of commitments for green and/or sustainable financing.

Based on the answers to the survey and on the EBA staff research**,** the following items seem to be missing or are very preliminarily implemented in banks' disclosures compared with the TCFD recommendations:

- Forward-looking information and results of scenario analyses. One finding from the survey is that the vast majority of banking institutions do not disclose forward-looking information on climate change-related risks. Only 5 out of 39 institutions reported that they disclose forward-looking information on climate change-related risks, and the use of scenario analysis when doing so appears extremely limited. This is to some extent consistent with the findings included in the TCFD status reports assessing the implementation of the TCFD recommendations. According to the TCFD status report, companies are still at an early stage of the process of using climate-related scenarios internally, developing their approaches and learning how to integrate scenarios into corporate strategy formulation processes.

Figure 14: Forward-looking information on climate change related risks



- Comprehensive description of the management organisational structure.
- Details of the processes for managing, including decisions to mitigate, transfer, accept or control those risks, or the processes for prioritising climate-related risks.
- Measuring potential financial impacts. This is to some extent linked to the issue of scenario analysis and again consistent with the TCFD implementation report, highlighting that the top area identified by users of

[42] TCFD defines carbon-related assets as assets tied to the energy and utilities sectors (Global Industry Classification Standard). Non-carbon-related assets, such as renewables, water utilities, and nuclear power excluded.

climate-related financial disclosures as needing improvement is for companies to provide more clarity on the potential financial impact of climate-related issues on their businesses.

- More developed metrics and targets. This is consistent with the results of the Oliver Wyman/IACPM study on the time needed by institutions to implement the various categories of TCFD disclosures (see figure 16).

Figure 15: How long do you expect it will take for your company to implement the TCFD recommendations?

At most institutions, the governance pillar is expected to be in place first; the other pillars will take more time and effort to implement

	1 year	2–3 years	4–5 years	More than 5 years
Governance	17	17	5	
Strategy	9	18	11	1
Risk Management	4	25	10	
Metrics and Targets	1	25	13	

Source: Oliver Wyman / IACPM Survey, November 2018

Benefits and challenges of TCFD implementation according to EU banks

Banking institutions that follow the recommendations provided by the TCFD were also asked to describe the main benefits and challenges of applying them.

The majority of the institutions pointed out that the application of the TCFD recommendations provides clarity on the strengths and weaknesses, threats and opportunities that climate change presents to the banks and helps them to identify at an early stage the actions that they need to take in the future with regard to climate risk management. It also fosters transparency on institutions' efforts to reduce their climate footprints through their climate-related risk management frameworks, governance or strategies, relevant for key stakeholders, such as non-governmental organisations, staff and customers. Moreover, it enhances consistency and comparability of information among banks and companies in other sectors, thereby harmonising climate-related financial disclosure. Lastly, banking institutions mentioned that the implementation of climate-related scenarios helps them not only to confront risks arising from climate change but also to gain from the opportunities that will arise moving towards sustainable financing.

As regards the challenges to following the recommendations provided by the TCFD, banking institutions have focused on the lack of available data, which are necessary for performing scenario analysis as a basis for TCFD-related disclosures. They also reported a lack of methodological convergence among banks, which may undermine the comparability of the information disclosed. Other challenges in the application of the TCFD recommendations include the integration of ESG models and metrics within the existing processes and policies, the risk of violating business secrecy in the event of disclosing too detailed figures, and the danger of double counting greenhouse gas emissions as a result of the look-through approach for scope 3 measurement in the banking industry.

Commission's non-binding guidelines

Under the Non-Financial Reporting Directive (2014/95/EU), which requires large public interest entities with over 500 employees (listed companies, banks and insurance companies) to disclose certain non-financial information, the Commission has published non-binding guidelines to help companies to disclose the relevant non-financial information more consistently and comparably. As part of its action plan on financing for sustainable growth, published in March 2018, the Commission updated its non-binding guidelines on non-financial reporting, specifically with regard to the reporting of climate-related information, integrating the TCFD recommendations and taking account of the forthcoming taxonomy on sustainable activities.

Banking institutions indicated in the survey that they anticipate that the implementation of the updated non-binding guidelines on non-financial reporting and the other EU initiatives relating to disclosures will result in a standardised and harmonised framework of disclosure with consistent definitions and requirements. A common reporting framework will, in turn, create a level playing field for all banks, improve transparency for their members, employees and society as a whole and foster comparability of information. Banking institutions also support the encouragement to describe impacts and not just risks.

However, banking institutions are concerned with the practical implementation of the updated non-binding guidelines on non-financial reporting. For example, one bank questioned the delivery of meaningful life cycle analyses while another found the disclosure of the information regarding the scope 3 emission and the identification of sustainable economic activities challenging.

Other comments raised by institutions and the way forward

Some institutions raised concerns about the disclosure burden for precisely those institutions that have made progress towards sustainability compared with other institutions. Banking institutions also found it difficult to have granular and sophisticated quantitative and qualitative reporting on social and governance risks, as these dimensions are not always quantifiable on a granular basis and are subject to cultural bias. In addition, they consider that the more prescriptive the ESG criteria are, the greater the risk of misalignment with local conventions due to differences between countries.

Finally, banks consider that the inclusion of climate risk in their strategies and processes will require extensive information as well as appropriate tools, metrics and detailed guidance. In this respect, data quality and availability plays a key role in banking institutions. In particular, banks identified that, although climate-related financial disclosures depend on data available from other companies, data are not always easy to collect and exploit. Institutions consider that setting common data definitions and data requirements should help to improve the availability and management of data. Technology should also play a role in terms of availability of the necessary data.

Green products

Green finance and development of a green financing framework

Green finance is a fast expanding market. A review by the Climate Bond Initiative[43] in 2018 concluded that the total global issuance was USD 377 billion and that Europe has become the largest regional market with USD 141

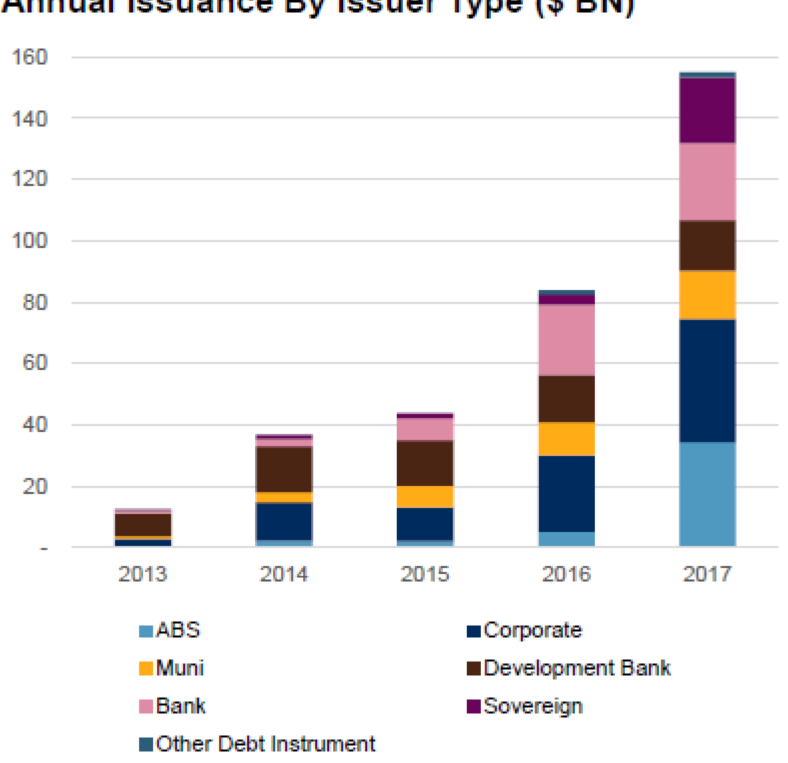
[43] The Climate Bonds Initiative is an international investor-focused not-for-profit organisation working to mobilise the USD 100 trillion bond market for climate change solutions.

billion of cumulative green bond issuance and 144 issuers since 2010 when the first European green bond was issued.

In particular, since the Paris Agreement a notable emphasis has been put on green finance and market actors are becoming increasingly enthusiastic about it. In addition, the scope of green finance has expanded beyond the public spectrum and private actors are becoming more and more involved.

The green bonds market has become somewhat of a trendsetter for green finance. These green bonds, often externally reviewed on the 'green' aspect, have been issued to finance and re-finance assets and projects with a positive environmental contribution.

Figure 167: Annual green bonds issuance by issuer type



Source S&P Global Ratings, March 2018

As the figure 17 illustrates green finance is mainly based on bonds of which a high percentage are green issues from corporates and banks.

It is also expected that the volume of finance needed to support the transition towards more sustainable economies will change the current allocation of financial flows between carbon-intensive activities and green-compatible activities, thereby increasing the investments in green bonds going forward. In Europe, according to the European Commission, the investment gap to achieve the 2030 targets the EU agreed in Paris is estimated at around EUR 180 billion per year.

Banks play a key role in the development of a green finance market, given their unique position in facilitating capital flows through their lending, investment and advisory roles. Within banks there are also the underwriting skills and development expertise that are critical to the transition towards a more sustainable environment. The

challenge for the banking industry lies in bridging the supply and demand for green products while taking into account the entire spectrum of risks that may arise in this new environment.

Market developments

Green bonds

The two green standards currently most used by the market have been developed by the International Capital Market Association (ICMA)[44] (established standards for green bonds, transparency and disclosure) and the Climate Bonds Initiative (established certification scheme for green bond label based on climate standard). Some banks and rating agencies have also constructed indices to allow investors to benchmark the performance of green bonds. Furthermore, on 18 June 2019, the TEG published its Report on EU Green Bond Standard Report[45]. The TEG proposes that the Commission creates a voluntary, non-legislative EU Green Bond Standard to enhance the effectiveness, transparency, comparability and credibility of the green bond market and to encourage the market participants to issue and invest in EU green bonds. The proposal builds on best market practices.

Table 7: Overview of green standards developed by the market

	Green bonds principles	Climates bond initiative	Green bond indices
Who developed it?	A group of over 50 large financial investors (ICMA)	A non-profit organisation focused on international investors	Each index is run by a bank or a credit-rating agency
What is it?	A set of voluntary principles that outlines good practice for the process of issuing a green bond including: The use of proceeds Process evaluation and criteria Management of the proceeds Reporting	A standard that issuers can have their green bond certified to The standards define what is green and the technology specifications define types of climate-related projects They are multi-sector standards covering, for example, solar and wind energy investments, low-carbon buildings, transport, water, agriculture and other sectors	The indices are designed to help investors benchmark green bond performance The inclusion on a green bond index could improve issuers' reputation, credibility and visibility to investors

Green assets/loans

The development of green assets standards and products is lacking compared with bonds. The most widely used in the EU are the green loans principles from the Loan Market Association (LMA) and the energy efficient mortgages action plan (EeMAP) for residential mortgages developed by the European Mortgage Federation/European Covered Bonds Council (EMF/ECBC). Furthermore, the EBA is currently consulting on the

[44]Green Bond Principles, Voluntary Process Guidelines for Issuing Green Bonds, ICMA, June 2018, available at [last accessed 22 December 2019] https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/

[45] Report on EU Green Bond Standard, EU Technical Expert Group on Sustainable Finance, June 2019, available at https://ec.europa.eu/info/files/190618-sustainable-finance-teg-report-green-bond-standard_en [last accessed 22 December 2019]

Guidelines on loan origination and monitoring[46] which include Environmental factors and green lending: ESG factors have been included in the risk management policies, credit risk policies and procedures.

The **Green Loan Principles**[47] promote the development and integrity of the green loan product. These principles aim to propose a methodology to identify green loans that can be used by the market.

Green loans are defined as 'any type of loan instrument made available exclusively to finance or re-finance, in whole or in part, new and/or existing eligible Green Projects'.

What constitutes eligible green projects is set out in Appendix 1 of the Green Loan Principles, which is the same indicative list of projects issued by the ICMA for green bonds. In the same way as Green Bond Principles, the Green Loan Principles establish four components that should characterise a green loan:

- The use of funds. The use of the loan should be described in the financial documentation. All projects should offer clear, verifiable environmental benefits that must be quantifiable by the borrower.
- The process of evaluation and selection of projects. The borrower should inform the banks of the environmental objectives and the process chosen to determine how the projects are the eligible.
- The management of funds. The amount of the green loan should be recorded in a specific account and lend itself to adequate tracking to ensure transparency and promote the integrity of the product.
- Reporting. The borrower should provide information on the use of the funds on an annual basis until the funds have been used.

EeMAP[48] is aiming to create a standardised energy-efficient mortgage according to which building owners are incentivised to improve the energy efficiency of their buildings or acquire an already energy-efficient property by way of preferential financing conditions.

The project is developing a pan-EU framework of guidelines for energy efficiency mortgages, which entered an operational phase in June 2018. Nearly 40 major banks from across Europe are participating in the pilot.

This initiative will help to identify the green feature of existing mortgages and incentivise origination of green mortgages, which in turn should enable issuers to have a greater basis for generating new securitisation and issuing green covered bonds.

External verification and ESG issuer ratings

External reviews and second opinions from independent parties reviewing the green issuance framework and adherence to the green principles and standards, green credentials, and management of the use of the proceeds and reporting and disclosure are becoming more standardised in the green bond market. Over 98% of the green bonds issuance in Europe benefit from at least one external review and 93% of those include a second party opinion, over half of them coming from Vigéo-Eiris and CICERO.

Furthermore, many credit-rating agencies (including Standard & Poor's, Moody's and Fitch Ratings) have recently developed ESG scores for entities (issuers) separate from the ratings on the green bonds, which usually apply only to a specific security. The issuers' ESG scores assess both the relevance and the materiality of ESG elements to the rating decision. They are sector-based and entity-specific. These ESG scoring systems have been introduced for all asset classes including non-financial corporates, banks, non-bank financial institutions, insurance, sovereigns, public finance, global infrastructure and structured finance.

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[46] See European Banking Authority (EBA), Consultation Paper, Draft Guidelines on loan origination and monitoring, June 2019, available at [last accessed 22 December 2019] https://eba.europa.eu/regulation-and-policy/credit-risk/guidelines-on-loan-origination-and-monitoring

[47] Loan Market Association, Green Loan Principles, December 2018 available at [last accessed 21 December 2019] https://www.lma.eu.com/application/files/9115/4452/5458/741_LM_Green_Loan_Principles_Booklet_V8.pdf

[48] See https://eemap.energyefficientmortgages.eu/

The EBA's monitoring of green finance market developments

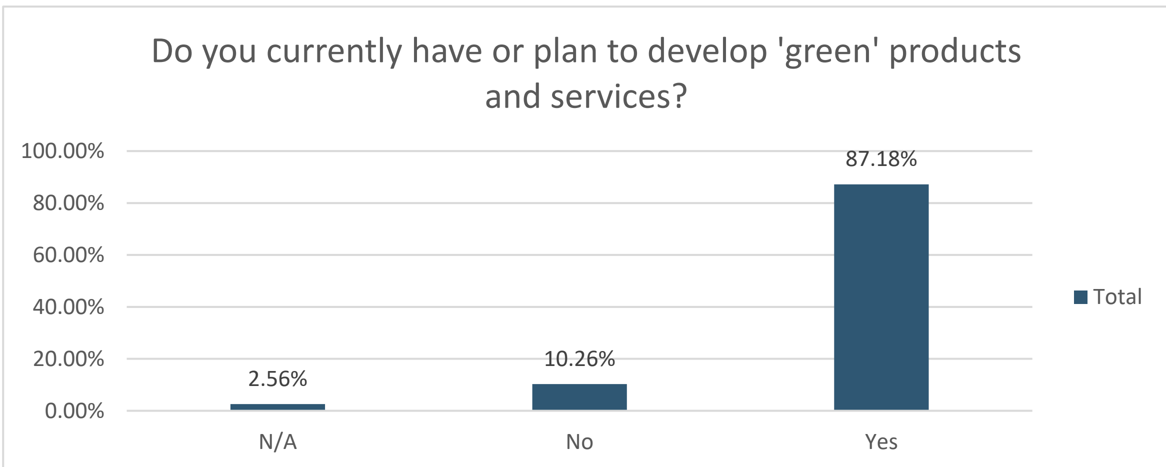
In the light of the major role banks are expected to play in the development of a green finance market, the EBA has recently started to monitor new trends and developments in this area with a semi-annual questionnaire directed to banks (EBA risk assessment questionnaire[49]).

The first results of this exercise seem to confirm the growing importance of green financing and highlight some of the many challenges that need to be overcome to create a fully functioning and reliable green financing market going forward.

The initial results highlight that 22% of bank analysts believe that the proportion of green assets and liabilities compared with the overall balance sheet of the banks will increase within 1 year, while 72% expect that there will be a slight increase only. Six per cent of the analysts believe that the overall green assets and liabilities of banks will decline over the next year.

Furthermore, as demonstrated in figure 18, 87% of the banks responding to the questionnaire have or are planning to develop green products and/or services based on environmental considerations.

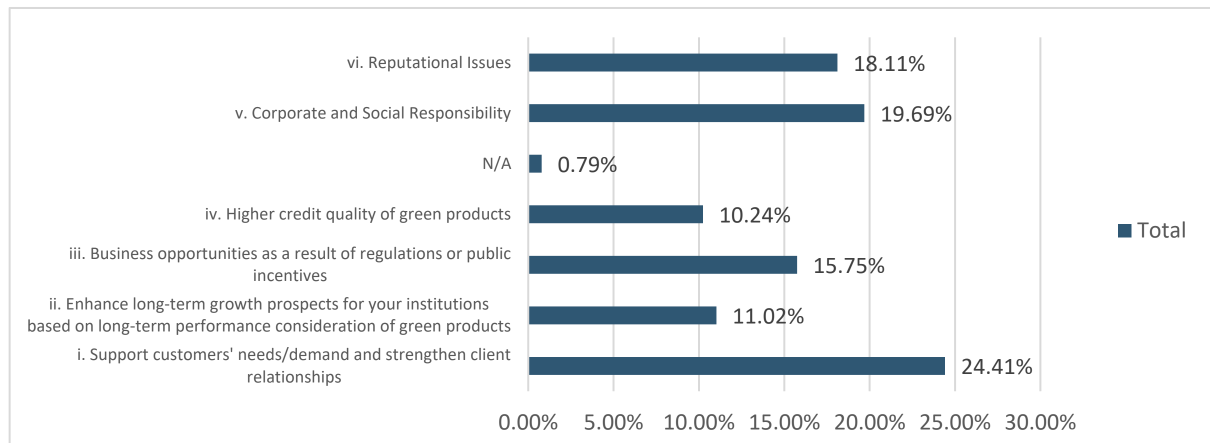
Figure 178: Plan to develop green products and services



The main motivations (figure 19) mentioned by banks to enter into the green finance space include supporting customers' needs and strengthening client relationships (24%), CSR reasons (20%), and reputational value (18%).

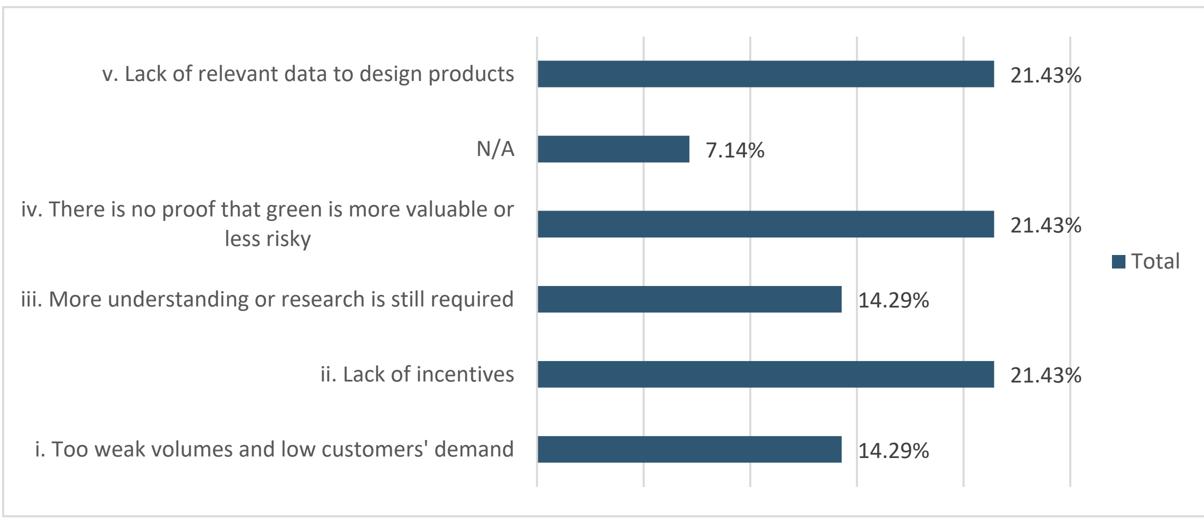
[49] The EBA conducts semi-annual risk assessment questionnaires (RAQs) among banks and market analysts. The June 2019 booklet (https://eba.europa.eu/sites/default/documents/files/documents/10180/2854739/916f8c4b-7099-4aba-ac1f-882cfd4c3583/RAQ%20Booklet%20Spring%202019.pdf) presents a summary of the responses to the RAQs carried out in spring 2019. For this edition, 62 banks and 18 market analysts submitted their answers.

Figure 19: Main motivations for developing green products and services



The main barriers (figure 20) to entering into the green finance market include lack of data (21%), lack of incentives (21%) and not enough proof that 'green' is more valuable or less risky than 'normal' bonds or assets (21%). Other barriers include a lack of understanding and research and, in addition, weak volumes and low customer demand.

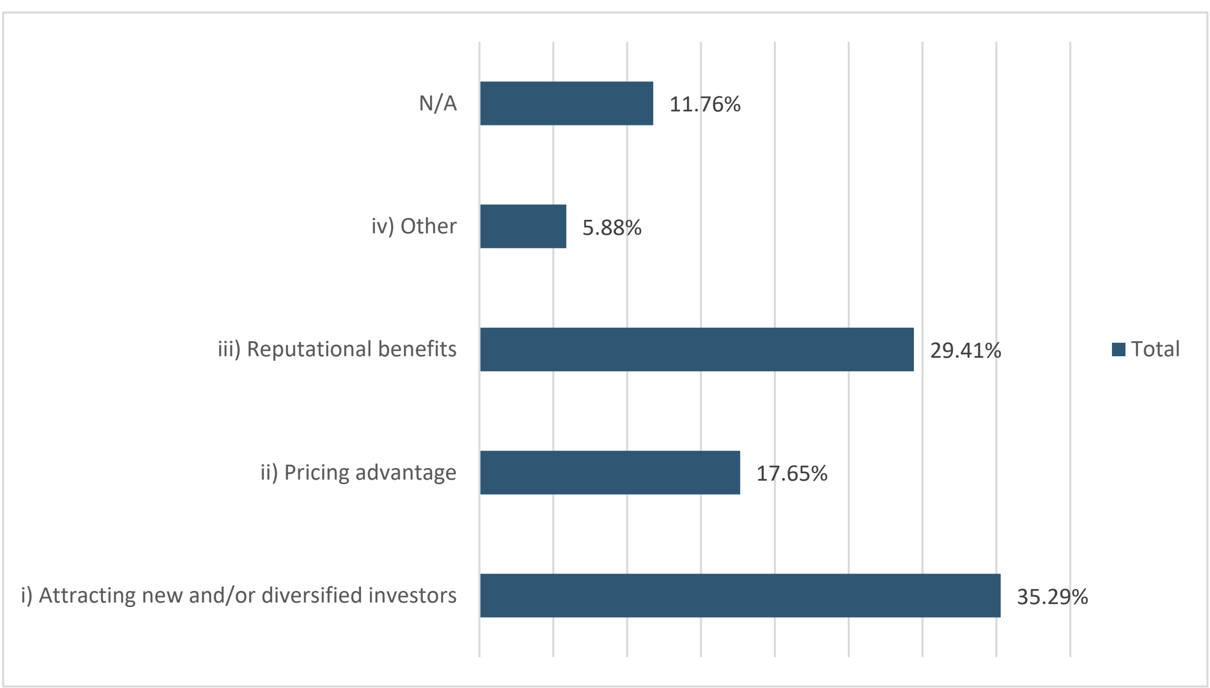
Figure 20: Main barriers to entering the green finance market



Green bond issues

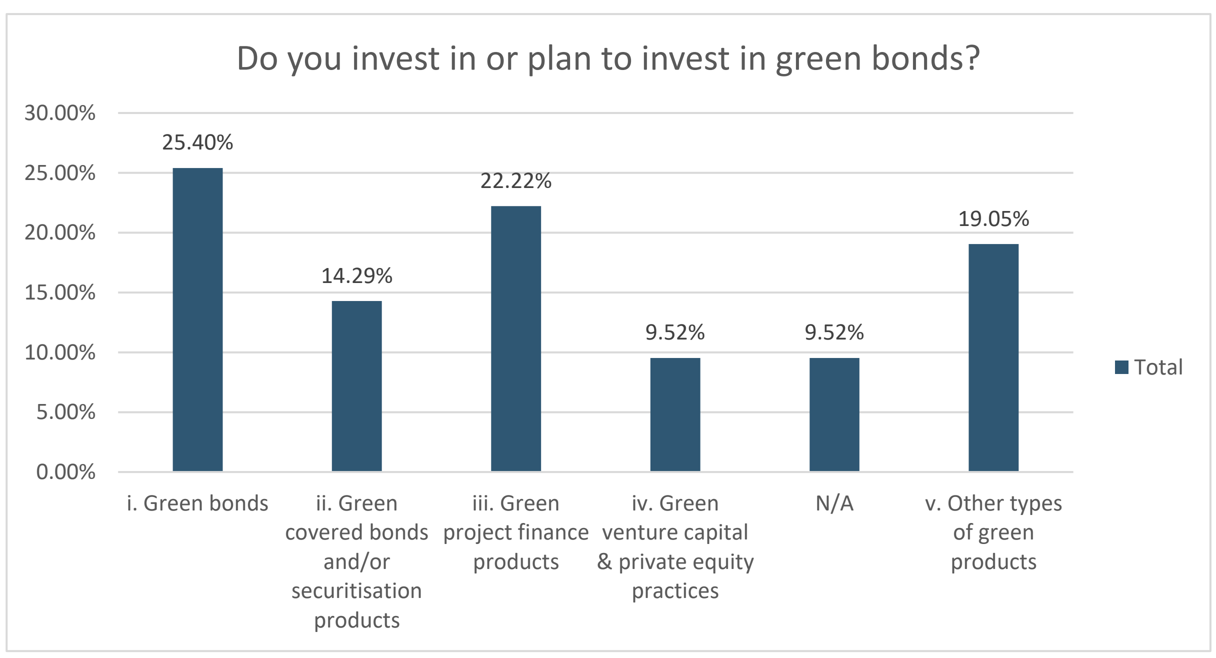
Diversification of the investor base was mentioned as one key reason for banks to enter into the green bonds market as an issuer (35%), followed by reputational benefits (29%) and possible pricing advantage (17%) (figure 21.

Figure 181: Reasons to issue green bonds



Furthermore, out of the banks (83%) that entered or plan to enter the green finance space, 25% invest or plan to invest in green bonds and 15% in green covered bonds and/or green securitisation. Twenty-two per cent of banks are or will be investing in green project finance, while only 9% are looking into green venture capital and private equity and 19% of banks are also looking into different green products to invest in (figure 22).

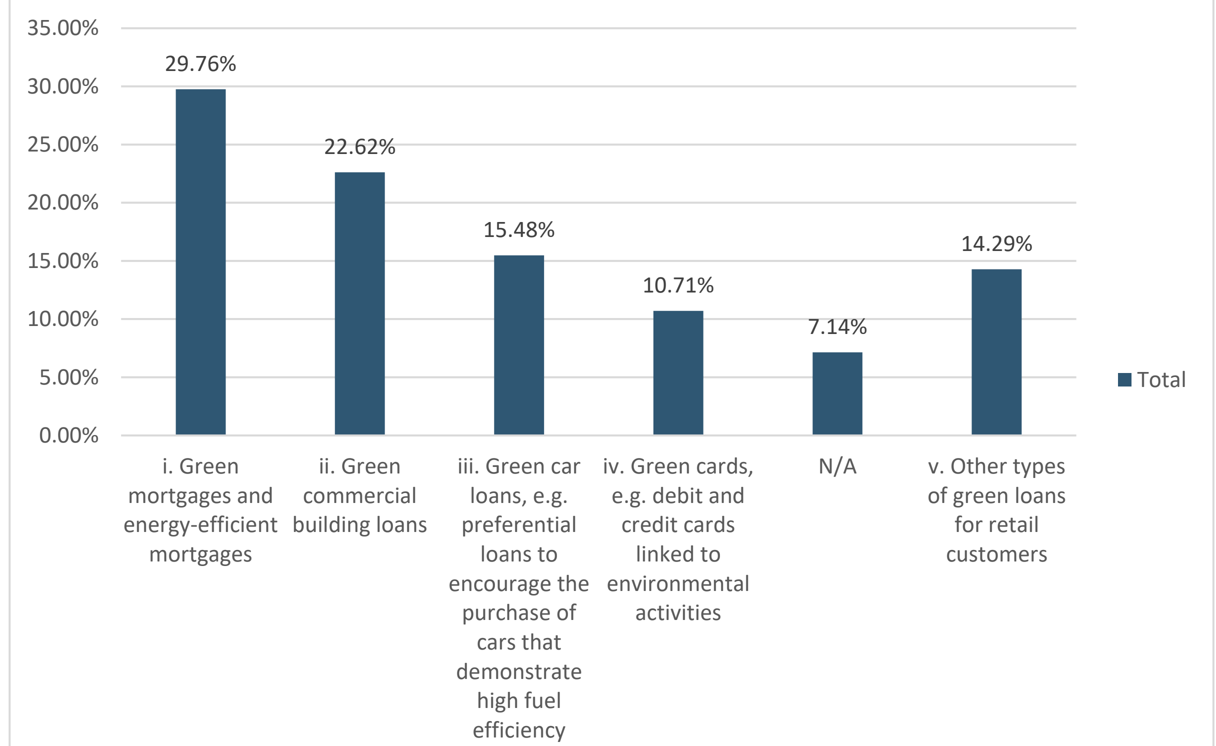
Figure 192: Plan to invest in green bonds



Green assets

As mentioned above, 83% of banks in the questionnaire responded that they have already entered or that they plan to enter the green finance space. Twenty-nine per cent are originating or developing green and energy-efficient mortgage loans, while 23% are granting or developing green commercial building loans. Fifteen per cent of banks are looking into green car loans with high fuel efficiency and 10% into green credit or debit cards, and 15% of banks indicated that they are considering other types of green loans for retail customers (figure 23).

Figure 23: Have or plan to develop green loan products



Development of a green finance framework as a next step?

Although some notable development has taken place, green finance still faces a range of limitations affecting both the supply of and the demand for green products. Some of these challenges are specific to green projects. Others are more generic to most long-term projects in some markets. Numerous papers, notably produced by institutions such as the European Commission,[50] the Organisation for Economic Cooperation and Development (OECD),[51] the G20[52] and the UNEP FI,[53] have already identified most of the impediments to the scaling-up of green finance, including:

[50] European Commission, 2016, Study of the potential of green bond finance for resource efficient investments. https://ec.europa.eu/environment/enveco/pdf/potential-green-bond.pdf [last accessed 22 December 2019].

[51] OECD, 2019, Global outlook on financing sustainable development. https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/Global-Outlook-on-Financing-for-SD-2019.pdf [last accessed 22 December 2019]

[52] G20 Sustainable Finance Study Group, 2018, Developing sustainable debt products for long term institutional investors. http://www.g20.utoronto.ca/2018/g20_sustainable_finance_synthesis_report.pdf [last accessed 22 December 2019]

[53] United Nations Environment Programme, 2017, Green finance progress report. http://unepinquiry.org/wp-content/uploads/2017/07/Green_Finance_Progress_Report_2017.pdf [last accessed 22 December 2019]

- *Lack of green assets*. Entities willing to originate green loans and/or to issue green bonds often have difficulty in defining and identifying green assets within their balance sheet because of the lack of common definition and indicators to assess the 'greenness' of assets. In addition, the data management systems are currently inadequate.
- *Reputational and legal risks related to environmental integrity*. In particular, the lack of a common definition of and criteria for green assets might be a source of misunderstanding that could eventually harm the name of the originator of the green loan or the issuers of green bonds through accusations of green-washing and lead to potentially higher transaction and refinancing costs.
- *No clear pricing advantage of issuing green bonds versus a conventional bond.* Green bonds currently have financial features that are identical to conventional bonds. With the exception of the ring fencing of the proceeds required by the green label, green bonds have the same financial characteristics of conventional bonds issued from the same issuers (e.g. same credit quality).
- *Lack of clear understanding of structural features of green products.* Green products are relatively new and many investors have not yet built up full knowledge and understanding of the risk and return characteristics of these products, which might be aggravated by the lack of credit ratings and historical data.
- *Insufficient volume to reflect investors' needs.* One particular challenge often identified by the literature is the insufficient volume of green investments. Similar to the conventional bond market, green bonds require a large volume of green assets to be able to issue and some entities might face difficulties in finding a sufficient volume of green assets to issue bonds.[54] Symmetrically, the minimum volume of bond issuances usually required by institutional investors can be an obstacle for them to enter into the green bond market.
- *Lack of liquidity of the green finance market*. As green markets are still small and nascent in many countries, investors may refrain from investing in green bonds, as they perceive them as less liquid than other assets.

Conclusions

The results of the survey, as detailed throughout this paper, demonstrate that banks are increasingly aware of ESG and climate-related risks; however, the actual incorporation of those risks into strategies, governance and risk management is in the early stages and there are divergent approaches and starting points.

The survey results demonstrated that there are divergent approaches with regard to the definition of ESG factors. These approaches taken by banks as demonstrated in the survey, may be of particular relevance for the work on developing an EU taxonomy as they demonstrate the particular nuances of banks.

We observed an encouraging trend towards embedding sustainability into business strategies, while we note that this takes place through a variety of channels and as a result of a mix of underlying motivations, with risk considerations currently not ranking first. Some obstacles to more systematically incorporating sustainability in strategy-setting still need to be overcome, such as the need to increase understanding with regard to the potential impact of climate change and the relevance of factoring in long-term time horizons.

Governance arrangements and risk management processes applicable to ESG and climate-related risks are developing, at varying degrees depending on the level of advancement of each institution. Overall, despite the growing acknowledgment that climate-related risks in particular deserve attention from a prudential risk management perspective, the actual incorporation in the risk management framework, the development of proper risk management functions to handle these risks and the elaboration of robust risk identification and assessment tools are still at preliminary stages.

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[54] Institute for Climate Economics, 2017, Green bonds: what contribution to the Paris Agreement and how to maximize it? https://www.i4ce.org/wp-core/wp-content/uploads/2017/12/2017-I4CE-Green-Bonds-Energy-Transition-Exec-Sum.pdf [last accessed 22 December 2019]

ESG and climate-related information is increasingly included in EU banks' disclosures, because of international (TCFD) and European (Commission guidelines on climate-related information) initiatives. We observe, nonetheless, that this information is mostly included in non-financial reports and deals to a large extent with impacts of institutions and general corporate responsibility matters rather than financial risks stemming from ESG factors. Going forward, forward-looking information and more developed metrics and targets, among other things, still need to be developed.

The results of the survey demonstrate that banks' internal classification and development of green assets is still its infancy and there are divergent approaches being implemented on the various asset different asset classes. On the other hand, the green bonds market has been developing very fast but still faces a range of limitations affecting both the supply and the demand of green products.

Our research has highlighted the need for the private and public sectors to pursue and amplify their work on sustainable finance. To this end it is suggested that the mandates contained in the CRR/Capital Requirements Directive, which the EBA will act on over the next few years, are timely.

Annex

Table 8: Overview of the Principles for Responsible Investment Initiative and the integration of environmental, social, and governance factors

Principles for Responsible Investment	Source
Principles for Responsible Investment (supported by the United Nations). Three groups of signatories: (i) asset owners (i.e. institutional investors who invest capital); (ii) investment managers, managing on behalf of asset owners of capital; and (iii) service providers, providing consulting services, information and data (this category includes sustainability rating agencies). These signatories are committed to practising and promoting six principles around ESG issues: (1) incorporating ESG issues into investment analysis and decision-making processes; (2) being active owners and incorporating ESG issues into the ownership policies and practices of investors; (3) seeking appropriate disclosure on ESG issues by the entities in which investment is made; (4) promoting acceptance and implementation of the principles within the investment industry; (5) working together to enhance the effectiveness of investors in implementing the principles; (6) reporting on the activities and progress of investors towards implementing the principles	PRI, 2019 https://www.unpri.org/pri/an-introduction-to-responsible-investment/what-are-the-principles-for-responsible-investment
'The PRI works to understand the investment implications of ESG factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions to better manage risk and generate sustainable, long-term returns. The PRI works with signatories to identify key Environmental, Social, and Governance issues in the market and coordinates engagements, publications,	Gasperini, 2019 https://doi.org/10.1007/978-3-319-71063-1_19-1

Principles for Responsible Investment	Source
webinars, podcasts, and events to address them. Examples of ESG factors are numerous and ever-shifting'.	
'An ESG factor is an issue that is qualitative or quantitative in nature, which may be material to financial analysis. Such factors manifest at a macro, country, sector or company level: At a macro level, ESG megatrends can influence the global economy and may have a profound long-term impact. Examples are resource scarcity and climate change. Country and sector level ESG factors are diverse and often interconnected. Examples are legislative changes and supply chain issues. At a company level, ESG analysis is specific to size, structure and the nature of operations. Material issues may arise from the following categories of company-level assessment: A. Environmental assessment may include a company's resource efficiency in terms of waste, greenhouse gas emissions and water and energy use; and its efforts to improve this efficiency. B. Societal assessment aims to determine the company's social license to operate, its trade practices and exposure to corruption risk. It can also include product safety, customer loyalty, relationships with the communities in which the company hopes to do business, compliance with labelling laws and marketing practices: a. Human rights assessment deals with discrimination, forced labour, indigenous rights and procurement practices. b. The assessment of labour practices seeks to evaluate human capital management (including gender diversity), work safety, labour and union relations. C. Corporate governance assessment of companies may deal with remuneration practices, board composition and board policies, risk controls and corporate disclosure practices.'	PRI, 2013 (p. 44) https://www.unpri.org/download?ac=312
'A definitive list of environmental, social and governance (ESG) issues does not exist. It would not be possible or desirable to produce a list, or a set of definitions, that claimed to be exhaustive or definitive. Any such list would inevitably be incomplete and would soon be out of date. Nonetheless, the table in PRI 2018 (p. 3) provides examples of ESG issues, for guidance purposes: Environmental (E): Issues relating to the quality and functioning of the natural environment and natural systems; Social (S): Issues relating to the rights, well-being and interests of people and communities; Governance (G): Issues relating to the governance of companies and other investee entities'.	PRI, 2018 (p. 3) https://www.unpri.org/download?ac=1453

Table 9: Other international initiatives

International initiatives	Source
The Global Reporting Initiative (GRI) aims to help organisations to better understand, manage and communicate their impacts on issues relating to sustainability. The GRI Sustainability Reporting Standards (GRI Standards) include requirements, recommendations and guidance for organisations, and they cover many different sustainability topics for reporting on economic (including governance), environmental, and social sustainability performance information. The approach of the GRI Standards is to enable organisations to identify and report on material topics.	GRI, 2019 https://www.globalreporting.org/standards/media/2458/gri_standards_brochure.pdf
Equator Principles 'The Equator Principles establish thresholds and criteria to determine, assess and manage environmental and social risk in projects. They apply globally to all industry sectors and to four financial products: (i) project finance advisory services; (ii) project finance; (iii) project-related corporate loans; and (iv) bridge loans.' 'It is an international voluntary framework for managing environmental and social risk in project lending and the basis on which most instruments for management of nontechnical risks have been created in international lending.' 'The financial institutions that are signatories of the Equator Principles undertake to conduct due diligence on the projects they finance in accordance with the World Bank environmental and social standards and notably the International Finance Corporation's Performance Standards, and they also undertake to ensure that the borrower analyses the potential impact of their project and draws up action plans to reduce these impacts as much as possible and offset those that cannot be avoided.'	Equator Principles Association, 2019 Wendt, 2015 Cochard, 2015
UNEP FI — Principles for Responsible Banking The bank aligns its business strategy with the objectives of the Sustainable Development Goals (SDGs), and the Paris Agreement. Signatories of the six principles are required to: 'Use the SDGs, the Paris Climate Agreement and other relevant national, regional or international frameworks to identify, assess and be transparent on significant (potential) positive and negative impacts resulting from the bank's capital allocation decisions and its provision of products and services. Define key performance indicators (KPIs) to address, reduce and mitigate significant negative impacts and to realize opportunities to continuously expand and scale up positive impacts. Undertake forward-looking assessments of sustainability-related risks and opportunities at transaction, portfolio and strategic level and manage and mitigate significant risks.'	UNEP FI, 2018 https://www.unepfi.org/wordpress/wp-content/uploads/2019/06/PRB-Consultation-Document-12-Web-june-2019.pdf
Natural Capital Protocol + Supplement (Finance) 'The Protocol is a standardised framework for organisations to identify, measure, and value their direct and indirect impacts (positive and negative) and dependencies on natural capital. Financial institutions are largely aware that sustainability or	

International initiatives	Source
'environmental, social, and governance' (ESG) issues can create risks for their banking, investment, and insurance outcomes. These institutions are also increasingly recognizing opportunities from active consideration of ESG factors'.	Natural Capital Coalition, Natural Capital Finance Alliance, VBDO, 2018, p. 4 https://naturalcapitalcoalition.org/finance/

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