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# Submission to the BCBS consultation on a disclosure framework for climate-related financial risk

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**CETEx – the Centre for Economic Transition Expertise** – was established in 2024 at the London School of Economics and Political Science as a specialised research and policy centre to support the ambitious reforms required to deliver sustainable, inclusive and resilient economies and financial systems across Europe. The Centre is hosted by the Grantham Research Institute on Climate Change and the Environment and has founding funding from the Sequoia Climate Foundation, ClimateWorks Foundation, Children’s Investment Fund Foundation, Sunrise Project and European Climate Foundation.

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## **About this submission**

This is a response to the Basel Committee on Banking Supervision consultation on a disclosure framework for climate-related financial risk made on behalf of CETEx at the Grantham Research Institute on Climate Change and the Environment. It was submitted to the BCBS on 14 March 2024. The authors have grouped their responses by theme, rather than by answering every question chronologically. For more information on the consultation, visit [www.bis.org/bcbs/publ/d560.htm](http://www.bis.org/bcbs/publ/d560.htm)

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## **Disclaimer**

The authors declare no conflict of interest in the preparation of this submission. The views in this submission are those of the authors and do not necessarily represent those of CETEx or the Grantham Research Institute.

# Introduction

Climate change exposes financial institutions to material risk. This is the case over the long term, but increasingly also in the short term, as the physical impacts of climate change intensify, and a growing number of governments implement climate change mitigation and adaptation policies. As a result, financial regulators across jurisdictions are incorporating climate-related financial risk (CRFR) assessments into the supervisory purview.

The Basel Committee on Banking Supervision (BCBS) has put forward a powerful analysis of the unique characteristics of CRFR, which resist traditional risk-management techniques (BCBS 2021a; 2021b; 2022a). It is fitting for the BCBS to work towards a coordinated approach that allows for comparability across banking and supervisory activities, thereby minimising the risk of unintended consequences from overly divergent approaches across jurisdictions. Addressing the cross-jurisdictional and international dimension of CRFRs is required given BCBS's mandate of strengthening the regulation, supervision and practices of banks with the purpose of enhancing financial stability.

The CRFR disclosure framework put forward by the BCBS in November 2023 is therefore a greatly welcomed development (BCBS, 2023). The well-thought-through and effective proposals build on the BCBS's previous efforts to integrate these risks into Pillar 1 (FAQs on climate-related financial risks; BCBS, 2022b) and Pillar 2 (Principles for the effective management and supervision of climate-related financial risks; BCBS, 2022a).

This commentary serves as the contribution from CETEx to the BCBS's public consultation on a Pillar 3 disclosure framework for CRFR. Below, we discuss the prudential benefits as well as limitations of the BCBS's proposals.

## Key messages

- It is fitting for the BCBS to work towards a **coordinated approach** that enables comparability across banking and supervisory activities. Addressing the cross-jurisdictional and international dimension of CRFRs is required, given the BCBS's mandate to strengthen the regulation, supervision and practices of banks with the purpose of enhancing financial stability globally.
- The inclusion of detailed **qualitative and quantitative information** on CRFRs, pertaining to both physical and transition risks, is crucial for the third pillar of the Basel framework to reflect the unique features of CRFRs.
- Qualitative and quantitative information complement each other in critical ways. For example, transition plans with **specific targets** ('forecasts') enable the assessment of banks' exposure to transition risk (Dikau et al., [2022](#); NGFS, [2023](#)). Specifically, transition plans can: 1) support the use of existing risk-based prudential instruments; 2) provide insights into the material risk that the bank will be exposed to under its current strategic and operational orientation; and 3) provide information about the alignment of the financial sector as a whole with transition pathways.

- The disclosure of **quantitative transition risk**, which covers Scope 1, 2 and 3 emissions per client sector, is valuable. While we recognise that banks currently face challenges in obtaining all the required information, data improvements in data and emergence of new methodologies will very soon enable banks to meet increased disclosure requirements, provided that an influential body like the BCBS provides regulatory certainty and leads in this direction.
- By supporting the **disclosure of financed and facilitated emissions**, the BCBS can also encourage efforts to increase the robustness of the Partnership for Carbon Accounting Financials' (PCAF) methodology or facilitate the emergence of new and rigorous alternatives that banks can use.
- Assessing transition risk on a **sectoral basis** is essential, as banks have different business models, and some are particularly exposed to high-risk sectors. However, the sectoral approach needs to ensure that disclosed emissions are transparently attributed to real economy sectors, rather than under the blanket of financed emissions, subject to verification by appropriate third-party assurance.
- For many banks, capital markets and financial advisory services are of strategic importance. Including the **trading book and facilitated emissions** as a mandatory disclosure will support the development of a consistent, bank-wide approach to decarbonisation. The disclosure of such emissions should therefore be informed by the bank's business model and not be subject to jurisdictional discretion.
- The scope of the BCBS's approach to physical risks is so far mostly limited to climate change. However, risks to other ecosystem services can also be material from a prudential perspective. An increasing number of central banks have assessed the degree to which their banking or financial system is exposed to nature loss and environmental degradation, looking **beyond just climate-related aspects**.
- In finalising and implementing the Pillar 3 disclosures, the BCBS should be mindful of possible **unintended consequences in the Global South**, where many regions are highly vulnerable to extreme weather events, with potential to increase costs of financing further, or even prevent access to finance. Physical risk disclosures should take into account ongoing, but still incomplete, national and international initiatives, which also enable emerging markets and developing economies to reduce their transition and physical risks. Furthermore, temporary proportionality clauses for reporting climate-related risks could be put in place for smaller and less sophisticated borrowers.
- Improving quality and consistency of climate change-related disclosures will enable market participants to better exercise discipline with regard to banks' management of related risks. It will further lay the **groundwork for improved supervisory methodologies and practices**, and enable broader stakeholder engagement.

# Assessment of the overall approach to Pillar 3 treatment of CRFRs

The inclusion of detailed information on CRFRs, pertaining to both physical and transition risks, is crucial for the third pillar of the Basel framework to reflect the unique features of these risks. Pillar 3 disclosures serve to ensure adequate risk management by banks through market discipline. The qualitative and quantitative information made available enables investors to assess a bank's exposure to climate factors as drivers of risk, also via peer comparison. Pillar 3 disclosures also provide important information to societal stakeholders. Global standards are needed to ensure comparability and prevent fragmentation. Without dedicated disclosures concerning the approach of individual banks to the climate transition and required adaptation, the Pillar 3 framework simply fails to meet its prudential objectives.

As understanding of the short-, medium- and long-term impacts of climate change on banks' balance sheets deepens, several jurisdictions (including the EU, Brazil and Singapore) have begun to incorporate climate change, as well as broader environmental and social aspects, as part of mandatory prudential disclosures. The BCBS consultation is broadly consistent with such existing national efforts, though narrower, leaving ample space for jurisdictional approaches and adaptations (**Q4, Q47**).<sup>1</sup> Most notably, the BCBS framework is exclusively focused on financial materiality. This contrasts with approaches in other jurisdictions that take broader double materiality or impact approaches to risk assessment. This is the case, to a certain extent, in the EU where the 2022 Pillar 3 ESG disclosure standards include quantitative disclosures on climate change transition risk mitigation, such as the volume of sustainable financial products on banks' balance sheets. In contrast, under the BCBS proposal, such information is treated as qualitative disclosures of banks' climate resilience, reflecting a more basic approach on which jurisdictions can build. Importantly, the BCBS approach does not preclude the individual jurisdictions from adopting a more expansive approach toward materiality. Furthermore, under the BCBS disclosure proposals, banks have more flexibility to disclose their short-, medium- and long-term approach to CRFRs. Such flexibility is welcomed to the extent that it enables banks to adapt to jurisdictional transition paths (including different industrial policies and time horizons) (**Q8, Q49**).

The disclosure of the bank's approach to transition planning is not just of strategic importance, but is first and foremost of prudential importance as it is essential information concerning a bank's exposure to material financial risk (Dikau et al., 2022; Network for Greening the Financial System, 2023). First, adequate disclosures can support the use of existing risk-based prudential instruments, guiding attention to weaknesses in the management of climate and environmental risks today. Second, fine-grained transition plans provide insights into the material risk that the bank will be exposed to under its current strategic and operational orientation. Finally, adequate disclosures provide information about the alignment of the financial sector as a whole with transition pathways. Without detailed and accurate information on transition and adaptation planning being readily available to investors, it is very difficult for the Pillar 3 framework to serve its prudential purpose for CRFRs.

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<sup>1</sup> Where the observations refer to specific questions raised by the BCBS consultation, this is marked accordingly.

# Substantive comments on proposed Pillar 3 treatment of CRFRs

The BCBS's proposed approach to CRFR distinguishes between qualitative and quantitative disclosures. Qualitative disclosures, for which the scope of application is still to be determined, relate to overall banking strategy, governance and risk management. A separate set of disclosures concerns banks' approaches to transition, physical and concentration risks. Narrative information is a necessary complement to the quantitative disclosures, given the still emerging development of methodologies and geographical, sectoral and jurisdictional heterogeneities related to CRFR (**Q16**, cf. BCBS, 2021a).

Our substantive comments focus on the quantitative transition (CRFR1, CRFR3, CRFR4, CRFR5) and physical (CRFR2) disclosure proposals the BCBS put forward for consultation. On a general level, we note that it will be essential to ensure that supervisors can meaningfully engage with the disclosures, and their robustness will require appropriate revisions to the 2022 Principles on CRFRs, especially on forward-looking qualitative disclosures. As an intermediate step, at least a common framework for assurance of the disclosures is needed; for example, with regard to the credibility of the sectoral approach adopted by the bank and the related attribution of emissions (**Q10**). Furthermore, the revised Principles on CRFRs should also specify in greater detail cross-border supervisory cooperation regarding the monitoring of global CRFRs, including the trade-offs in transition/physical risk identification, mitigation and management (**Q8**).

## Quantitative disclosures of transition risk

CRFR1 covers Scope 1, 2 and 3 emissions per client sector as well as the forecasts (targets, see below), provided these are available to a bank. Given developing methodologies and current banking practices, greenhouse gas (GHG) emissions represent the most reliable and credible proxy for transition impact on financial risk that a bank faces vis-à-vis its counterparties and clients, especially when analysed jointly with mid- and long-term transition plans. The inclusion of on- and off-balance sheets (such as lines of credit) in CRFR1 is deemed valuable in capturing the risks to a bank's business model. However, to better capture the risk exposures, the BCBS should also consider covering exposures for time horizons of less than 5 years, i.e. 1-2 and 3-5 years.

While we recognise that banks currently face challenges in obtaining all the required information to assess exposure to transition risk, the BCBS should indicate a rough timeframe for when emissions reporting, including of forward-looking Scope 3 emissions, will become mandatory. Improvements in data availability and granularity, the further development of Partnership for Carbon Accounting Financials and emergence of new methodologies will very soon enable banks to meet increased disclosure requirements, provided that an influential body like the BCBS provides regulatory certainty and leads in this direction.

Under the BCBS proposal, jurisdictions retain discretion on whether to require disclosures of energy intensity of sectoral exposures (CRFR3), energy efficiency of real estate exposures (CRFR4) and facilitated emissions (CRFR5). While recognising the need to retain jurisdictional flexibility, to achieve the purpose of the disclosures, we propose refinements regarding the financed/facilitated emissions metrics, sectoral approach and transition planning.

## Financed emissions (Q6, Q24, Q25, Q29)

The quantitative transition risk approach proposed by the BCBS relies on the methodology developed by the PCAF to measure facilitated emissions. This raises the question of whether the requirement to follow a specific methodology, e.g. PCAF's, to calculate financed emissions would be useful. A significant number of banks are already publishing their financed emissions according to PCAF. Looking at disclosure practices, it became apparent that banks often fail to provide sufficient details on methodological choices or assumptions used. Instead, they often referred to the PCAF methodology, which itself allows for significant methodological variation.

References to existing and well-established methodologies and frameworks is highly recommended. In the absence of alternatives, consideration could be given to how the PCAF methodology and its guidance documents could be improved. For example, during the development of the standard to calculate 'facilitated emissions', it became clear how financial institutions have different interests and influence the methodology development (Bryan, 2023). Despite some banks using an attribution factor of 100% to account for emissions linked to underwriting deals, which is also favoured by other external stakeholders, the PCAF standard requires a weighting factor of 33% (PCAF, 2023: 32).

It is important to point out that PCAF is an industry-led initiative: its Board of Directors comprises financial institutions, which are tasked with monitoring and steering the progress of PCAF and the methodologies. Consequently, any reliance on such a methodology should be based on risk considerations such as principles for precaution, integrity, accountability and transparency. By supporting the disclosure of financed and facilitated emissions, the BCBS can also encourage efforts to increase the robustness of the PCAF methodology, or allow for the emergence of new and rigorous alternatives that banks can use.

## Sectoral approach (Q16, Q20, Q21, Q27, Q28)

Assessing transition risk on a sectoral basis is essential, as banks have different business models, and some are particularly exposed to high-risk sectors (Q24). In this context, the BCBS proposal anchors the standards in the Task Force on Climate-Related Financial Disclosures and the S&P/MSCI's Global Industry Classification Standard methodology, which is a highly welcome step to facilitate comparability of transition risk across sectors.

However, the sectoral approach needs to ensure that disclosed emissions are transparently attributed to real economy sectors, rather than under the blanket of financed emissions, subject to verification by appropriate third-party assurance.

In its guidance material, the BCBS signals a move towards industry-specific disclosure requirements, singling out the real estate sector as an example of where special reporting requirements could be considered. The rationale for this from a climate change and financial stability perspective is evident. As the proposal highlights, 36% of Europe's GHG emissions are either directly or indirectly related to the real estate sector (for example, via construction, heating or the production of cement). Financial stability considerations come into play because of the important role of real estate assets as collateral, and exposure of these assets to the increasingly frequent and intense physical impacts of climate change.

In the United States, mortgage-backed securities account for more than US\$11 trillion of securities outstanding (Fuster et al., 2022), including 23% of the US bond market (Carey, 2023). The dramatically increasing risk of floods presents a serious threat to the valuation of these products, with an estimated US\$1 trillion of US coastal real estate exposed to sea-level rise (Gaul, 2019).

This is a welcomed approach, and we encourage the BCBS to extend industry-specific disclosures to other sectors as well. With the BCBS's mandate in mind, additional disclosures could be extended to sectors – provided that climate risks are material to the sector, and the sector is of systemic importance to the financial system. Industry-specific disclosures can also be a good starting point for the BCBS to consider the integration of broader social, and especially nature-related, risks into its framework. For example, biodiversity loss and the degradation of ecosystems represent a big systemic risk to economies dependent on agriculture, comparable in size to the real estate sector in advanced economies. The development of industry-specific disclosures can be left to jurisdictional discretion.

## Transition planning

Transition plans are both a strategic and risk management tool, and an essential component to adequately assess the transition risk exposure of banks by market participants and supervisors. The disclosure of robust and credible transition plans is also an important tool to ensure that increased CRFR disclosures translate into client engagement by banks, rather than divestment from vulnerable sectors and economies (**Q5**). Given the dynamic nature of transition risks, banks' disclosures regarding climate resilience should be clearly linked to forward-looking transition planning (**Q15**). Reference to "forecasts" rather than "targets" in the proposal is not aligned with the current banking practice. The proposed transition plan metrics are also not sufficiently clearly anchored in existing approaches, especially given that banks already disclose emission targets and forward-looking information regarding sectoral decarbonisation pathways. Furthermore, BCBS members are signatories of the Paris Agreement, and this should be reflected in the target setting under the relevant disclosures (**Q20, Q37**).

The BCBS may also consider including voluntary common disclosure frameworks for CRFR mitigation measures, such as disclosures related to assets identified as 'sustainable' (**Q36**), as well as detailed information on how banks are supporting their counterparties with climate change mitigation and adaptation through their funding. This information is important for three prudential and financial regulation reasons: (a) it gives supervisors and other authorities an indication of the collective financial contribution that banks are making to bridging the funding gap necessary to achieve a net zero transition; (b) it indicates which instruments and measures banks would like to use, potentially highlighting regulatory measures that financial authorities could implement to support banks in this process; and (c) it discourages banks from simply divesting or disinvesting from high-risk assets, and thereby taking a more proactive approach to financing the transition.

## Facilitated emissions (Q51)

For many banks, capital markets and financial advisory services present a significant revenue stream. Furthermore, such activities are of strategic importance for many client relationships. The disclosure of facilitated emissions should therefore be informed by the bank's business model, and not be subject to jurisdictional discretion.

To ensure consistency across a bank in its approaches to engage with sectors and companies regarding their decarbonisation, it is essential to avoid any differences based on financial services offered. Including the trading book (Q6) and facilitated emissions (Q51) as a mandatory disclosure will support the development of a consistent bank-wide approach to decarbonisation.

## Quantitative disclosure of physical risks (Q14, Q20, Q33)

As a consequence of climate change, the intensity and frequency of extreme weather events are increasing, with significant impacts on the real economy that can spill over into the financial sector. This makes adequate disclosures an important component of understanding the exposure of banks to CRFR.

We would like to express our concern regarding the definition of geographic locations subject to such risks, as it may lead to unintended consequences. Particularly in the Global South, where many regions are highly vulnerable to extreme weather events, it could increase costs of financing further, or even prevent access to finance. It also fails to recognise the adaptation measures that states and businesses can take to improve their resilience to climate-related extreme events. For this reason, physical risk disclosures should take into account ongoing, but still incomplete, national and international initiatives, which also enable emerging markets and developing economies (EMDEs) to reduce their transition and physical risks.

The scope of the BCBS's approach to environmental risks is so far mostly limited to climate change. However, risks to other ecosystem services can also be material from a prudential perspective. An increasing number of central banks have assessed the degree to which their banking or financial system is exposed to nature loss and environmental degradation, looking beyond just climate-related aspects; examples include: Brazil (Calice et al., 2021); France (Svartzman et al., 2021); Malaysia (World Bank and Bank Negara Malaysia, 2022); Mexico; and the Netherlands (De Nederlandsche Bank, 2020).

However, a key challenge faced is gaining access to geospatial data on the location of loan utilisation (i.e. the location of the economic activity). To better understand these environmental risks, we believe the current disclosure proposal should consider how the available information could also be used to inform other environmental-related financial risks (Q14). For example, for physical CRFRs as well as environmental-related risks, accurately distinguishing between the location of the headquarter and where the economic activity is taking place is essential. Furthermore, the proposal could also include disclosure requirements for environmental-related risks in its templates (Q20).

# Outlook

Common standards on bank CRFR disclosures are needed to ensure global comparability of approaches and prevent fragmentation. The BCBS proposal is an important step in the right direction, provided it is finalised in a timely manner – though it does not go far enough, as the above substantive comments indicate.

Markets (and supervisors) need a combination of both emissions and forward-looking plan indicators to assess transition risks. Improving quality and consistency of climate change-related disclosures will enable market participants to better exercise discipline with regard to banks' management of related risks. It will further lay the groundwork for improved supervisory methodologies and practices, as well as enable broader stakeholder discipline (**Q1, Q11**). Where improved disclosure enhances CRFR management, this could decrease legal risks to which the banks are exposed (**Q9**).

Nevertheless, we want to reiterate the potential unintended side effects of increased climate-related risk disclosures on a global scale. Many EMDEs face difficulties in measuring physical and transition risks, and this could lead to capital flight by international banks; shadow banking; and financial retrenchment by domestic banks from vulnerable sectors of the economy (Knaack and Zetterli, 2023) in which these risks are concentrated, particularly micro-, small- and medium-size enterprises or the agricultural sector (**Q5, Q42, Q43**).

Temporary proportionality clauses for reporting climate-related risks could be put in place for smaller and less sophisticated borrowers. This would encourage continued access to finance to implement decarbonisation and resilience strategies, which is ultimately what the BCBS is aiming to support with its welcomed proposals.

## References

- Basel Committee on Banking Supervision (BCBS) (2018) *Basel Committee Charter*. Basel: Bank for International Settlements. [www.bis.org/bcbs/charter.htm?m=78](http://www.bis.org/bcbs/charter.htm?m=78)
- BCBS (2021a) *Climate-related financial risks – measurement methodologies*. BCBS. Basel: Bank for International Settlements. [www.bis.org/bcbs/publ/d518.htm](http://www.bis.org/bcbs/publ/d518.htm)
- BCBS (2021b) *Climate-related risk drivers and their transmission channels*. Basel: Bank for International Settlements. [www.bis.org/bcbs/publ/d517.htm](http://www.bis.org/bcbs/publ/d517.htm)
- BCBS (2022a) *Principles for the effective management and supervision of climate-related financial risks*. Basel: Bank for International Settlements. [www.bis.org/bcbs/publ/d532.pdf](http://www.bis.org/bcbs/publ/d532.pdf)
- BCBS (2022b) *Frequently asked questions on climate-related financial risks*. Basel: Bank for International Settlements. [www.bis.org/bcbs/publ/d543.pdf](http://www.bis.org/bcbs/publ/d543.pdf)
- BCBS (2023) *Disclosure of climate-related financial risks, consultative document*. Basel: Bank for International Settlements. [www.bis.org/bcbs/publ/d560.htm](http://www.bis.org/bcbs/publ/d560.htm)
- Bryan K (2023) Investment banks squabble over carbon footprint of underwriting deals. *Financial Times*, 7 July. [www.ft.com/content/ca549b24-ece5-46c2-85fb-5fe1aa24d296](http://www.ft.com/content/ca549b24-ece5-46c2-85fb-5fe1aa24d296)
- Calice P, Diaz Kalan F, Miguel F (2021) *Nature-related financial risks in Brazil*. World Bank Group Policy Research Working Paper no 9759. <https://openknowledge.worldbank.org/server/api/core/bitstreams/cc9d5070-cf6d-5622-a2fc-974381e89486/content>
- Carry J (2023) Mortgage-backed securities – headwinds on the decline. BNP Paribas Asset Management. Web page. <https://viewpoint.bnpparibas-am.com/mortgage-backed-securities-headwinds-on-the-decline/>
- De Nederlandsche Bank (2020) *Indebted to nature: exploring biodiversity risks for the Dutch financial sector*. [www.dnb.nl/media/4c3fqawd/indebted-to-nature.pdf](http://www.dnb.nl/media/4c3fqawd/indebted-to-nature.pdf)
- Dikau S, Robins N, Smoleńska A, van 't Klooster J and Volz U (2022) *Net zero transition plans: a supervisory playbook for prudential authorities*. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science. [www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/Net-zero-transition-plans-a-supervisory-playbook-for-prudential-authorities.pdf](http://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/Net-zero-transition-plans-a-supervisory-playbook-for-prudential-authorities.pdf)
- European Central Bank [ECB] (2024) ECB steps up climate work with focus on green transition, climate and nature-related risks. Press release, 30 January. Frankfurt: ECB. [www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr240130~afa3d90e07.en.html](http://www.ecb.europa.eu/press/pr/date/2024/html/ecb.pr240130~afa3d90e07.en.html)
- Fuster A, Lucca D and Vickery J (2022) *Mortgage-backed securities*. Federal Reserve Bank of New York Staff Reports, no. 1001. [www.newyorkfed.org/medialibrary/media/research/staff\\_reports/sr1001.pdf](http://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1001.pdf)
- Gaul G M (2019) *The geography of risk*. Sarah Crichton Books. <https://us.macmillan.com/books/9780374160807/thegeographyofrisk>

Knaack P and Zetterli P (2023) *Climate risk and financial inclusion: a regulatory perspective*. Consultative Group to Assist the Poor. [www.cgap.org/research/publication/climate-risk-and-financial-inclusion-regulatory-perspective](http://www.cgap.org/research/publication/climate-risk-and-financial-inclusion-regulatory-perspective)

Network for Greening the Financial System [NGFS] (2023) *Stocktake on financial institutions: transition plans and their relevance to micro-prudential authorities*. Paris: NGFS. [www.ngfs.net/sites/default/files/stocktake\\_on\\_financial\\_institutions\\_transition\\_plans.pdf](http://www.ngfs.net/sites/default/files/stocktake_on_financial_institutions_transition_plans.pdf)

Partnership for Carbon Accounting Financials (2023) *Facilitated Emissions Standard*. <https://carbonaccountingfinancials.com/files/PCAF-PartB-Facilitated-Emissions-Standard-Dec2023.pdf>

Svartzman R, Espagne E, Gauthey J, Hadji-Lazaro P, Salin M, Allen T, Berger J, Calas J, Godin A and Vallier A (2021) *A “silent spring” for the financial system? Exploring biodiversity-related financial risks in France*. Paris: Banque de France. Working Paper no. 826. [https://publications.banque-france.fr/sites/default/files/medias/documents/wp826\\_0.pdf](https://publications.banque-france.fr/sites/default/files/medias/documents/wp826_0.pdf)

World Bank and Bank Negara Malaysia (2022) *An exploration of nature-related financial risks in Malaysia*. Kuala Lumpur: World Bank. <https://documents1.worldbank.org/curated/en/099315003142232466/pdf/P175462094e4c80c30add50b4ef0fa7301e.pdf>