

How can Slovenian banks implement TCFD recommendations?

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Recent years have brought an increasing number of frameworks proposed by regulators, central banks, and trade associations to support the flow of private capital towards sustainable development. Many of these are related to climate change and the necessity for a transition towards a lower-carbon future. The European Commission's Sustainable Finance Action Plan, which will require financial market participants (incl.) to disclose the degree of environmental sustainability of their products, and the recommendations of the Task Force for Climate Related Financial Disclosures, better known as TCFD recommendations, are just two examples. In this article we discuss the recommended TCFD framework, which is increasingly considered a standard for climate-related reporting and provide guidance for its implementation by banks (in Slovenia).

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1. Introduction

The Paris Climate Agreement of December 2015 has significantly impacted the attitudes towards climate change globally. Recent years brought an increasing number of disclosure frameworks by governments, regulators, and multilateral organizations to support the flow of private capital towards sustainable development. A good example is the European Commission's Action Plan on Financing Sustainable Growth and the recent European Green Deal which aim to make Europe climate neutral by 2050 while creating a common language for sustainable finance. As part of the Action Plan financial market, participants will be required to provide more disclosures on the impacts of climate-related risks and opportunities on the value of their assets and liabilities and be more transparent about the degree of environmental sustainability of their products.

Given that climate change is a global problem and requires global solutions, the whole financial sector has a critical role to play. Central banks and other regulatory bodies are urged to implement measures to shift investment towards

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low-carbon sectors and enforce the existing or planned climate-related regulations.¹ The governors of central banks started warning that companies, which do not consider the climate-related financial risks and fail to adjust to a low-carbon future, will fail to exist. Central banks began integrating the monitoring of climate-related financial risks into their daily supervisory activities, financial stability monitoring and board risk management. To increase the awareness of how climate-related risk can increase credit, market, business and reputational risks of banks, central banks started performing the so-called climate-change stress tests.² The results of these tests should lead to better understanding of how climate-related risks should be measured and managed through improved systems, processes, and training. Together with supervisory guidelines, stress tests should also encourage banks to adopt longer-term strategies which will improve the sustainability of their business models.

The financial impacts of climate-related risks are often overlooked due to different perceptions of what is considered material to companies and because of the difficulties in measuring climate risk. And while climate reporting requirements, frameworks and guidelines have been around for over a decade, the reporting landscape remained fragmented. This resulted in inconsistent information that is not fit for use by banks, investors, or others. Namely, without the right information, assets and liabilities may be incorrectly priced or valued, leading to a misallocation of capital.

¹ Recent reports suggest that while major banks increasingly pledge to become the so-called net-zero banks by 2050, many of them are not taking meaningful measures to phase out of all fossil fuel financing. In response to such reports central banks are urged to take further action. See also: <https://www.responsible-investor.com/articles/banking-industry-slammed-for-climate-hypocrisy-as-latest-fossil-lending-figures-released>.

² See <https://www.fitchratings.com/research/banks/bank-climate-change-stress-tests-10-09-2020>.

Consequently, the (EU) regulatory agencies started pushing for climate reporting, with the proposed frameworks mostly being based on the TCFD recommendations. The recommendations by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) created during climate negotiations in Paris in 2015, provide a solution in this respect. The TCFD recommendations emerged to help investors, banks and other stakeholders understand their financial exposure to climate risk and help companies disclose this information in a clear and consistent way. In this article we describe the TCFD recommendations and discuss their relevance for financial institutions, in particular banks. We propose a pathway for the implementation of climate-related reporting by banks in Slovenia and conclude with some final remarks.

TCFD recommendations and why they are important

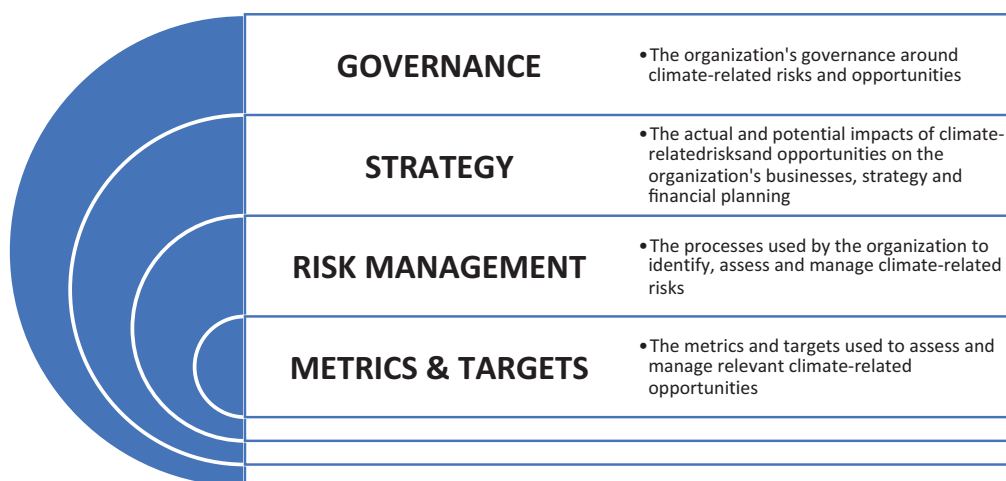
The TCFD has developed a set of recommendations for organizations to voluntarily disclose climate-related financial risks in their regular reports to their investors, banks, insurers, and other stakeholders in a consistent way.³ The recommendations refer to disclosures on *governance, strategy, risk management and metrics and targets* associated with climate-related risks and opportunities (see Figure 1).

According to the TCFD recommendations, organizations are encouraged to

- achieve board-level *governance* of climate risk and opportunity assessments,
- develop *strategies* aligned with global climate targets,
- disclose *risk management* processes and
- report annually on greenhouse gas (GHG) emissions and/or other relevant *metrics*.

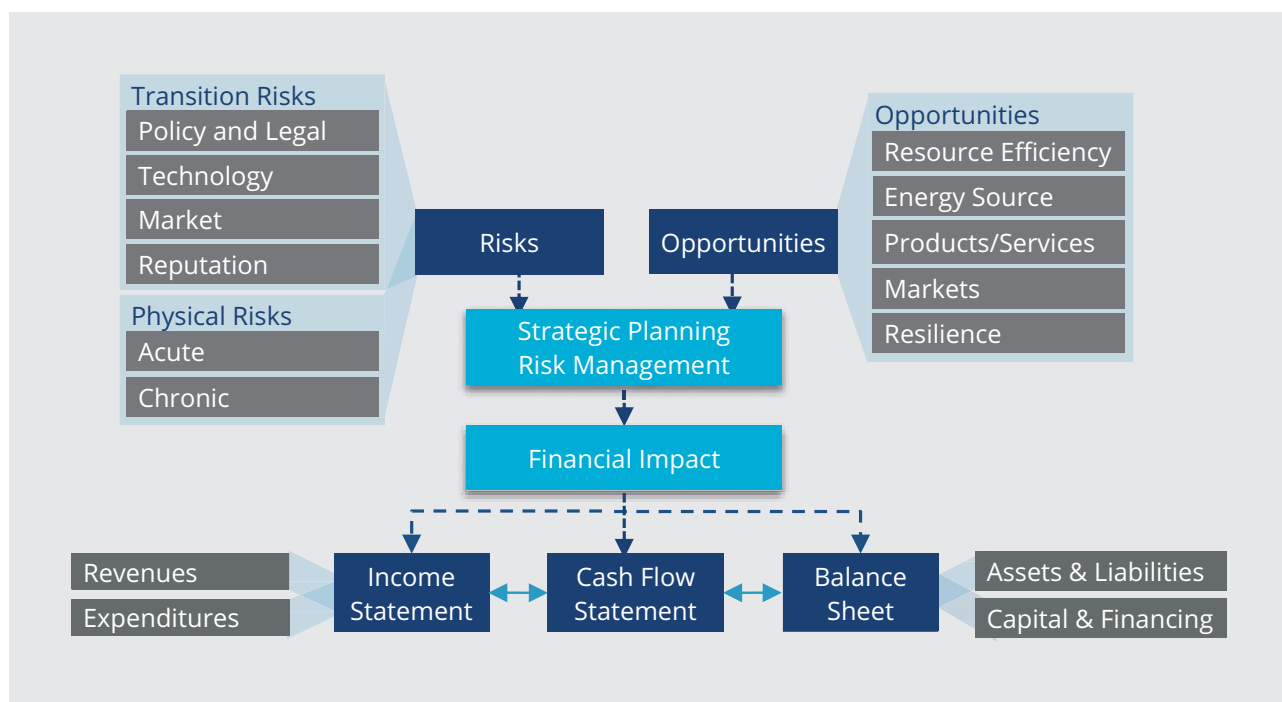
³ For more information on TCFD see <https://www.fsb-tcfid.org>.

Figure 1: Core elements of recommended climate-related financial disclosures



Source: TCFD (2017a).

Figure 2: Overview of climate-related risks, opportunities and financial impact



Source: TCFD 2017a.

The strategy part includes a recommendation for organisations to conduct scenario analysis and assess how their financial position would change under different global temperature increases, including the Paris Agreement's 2°C trajectory. The increased support for the TCFD recommendations suggests that organisations are acknowledging climate risk as financial risk.⁴

The financial impacts of climate issues on organizations depend on the climate-related risks and opportunities an organization is exposed to and its decisions on how to capture those opportunities and managing those risks. The latter can be managed through mitigation, transfer, acceptance, or control. After the issues have been assessed and the responses determined, an organization can consider what their impacts on revenues, expenditures, assets and liabilities, and capital and financing could be. Figure 2 illustrates the main climate-related risks and opportunities that organizations, according to the TCFD, need to take into account as part of their strategy or risk management to assess the possible financial implications.

Climate-related issues can affect several aspects of an organization's current, but also future financial positions. In case of banks, the TCFD has found evidence that climate-related risks and opportunities primarily affect their finan-

cial position through their revenues and by affecting the value of their assets and liabilities (TCFD 2017b). Banks should, for example consider the potential opportunities for enhancing or creating new revenues through the provision of services and products that contribute to climate mitigation and adaptation. At the same time, the changes in policies, technology, and market dynamics related to climate change could substantially affect the valuation of their clients' assets and liabilities and thus their ability to repay loans.

1. Relevance of TCFD for financial regulators and supervisory agencies

Climate disclosures by banks are presently probably more advanced than those by other financial institutions, due to legislation and other regulatory initiatives, such as the Article 173 of the French Energy Transition law⁵ and the UK Prudential Regulation Authority's supervisory oversight of climate-related financial risks. While some of the most advanced banks are already describing the methodologies they apply for climate scenario analysis and report on their exposure to high carbon sectors, there is generally limited comparability between banks, also because there are no standardised methodologies and metrics in place (Climate Financial Risk Forum 2020).

⁴ More than 1000 organizations are currently supporting TCFD recommendations, including corporates with a combined market cap of USD 12trn and investors with USD 138.8trn of assets under management. See TCFD Press Release of FEBRUARY 12, 2020. https://www.fsb-tcf.org/wp-content/uploads/2020/02/PR-TCFD-1000-Supporters_FINAL.pdf

⁵ This law came into effect on 1 January 2016 and brings requirements for firms (incl. financial institutions) to measure their GHG footprint, assess exposure to transition and physical climate risks and portfolio alignment with a 2°C pathway etc.

One of the recommendations by the TCFD was for the companies (incl. banks) to produce various scenarios of *plausible futures* to analyse and disclose how different climate outcomes might affect their financial position. The *Network for Greening the Financial System*, a coalition of central banks focused on the environment, has recently published its own set of scenarios that its members can use to avoid climate-related failures. Most central banks are yet far from using these scenarios or act on them as the coronavirus pandemic has temporarily postponed plans of this sort.⁶

Stress tests are one of the biggest tools in the arsenal of central banks for assessing how banks can withstand economic shocks. Climate stress tests, which can provide key data on exposure to so-called stranded assets and help with risk assessment amid concern about the economic impact of climate change. In a 2018 climate stress test, the Dutch central bank predicted that a climate shock could knock 3% off the value of banks' assets and damage capital ratios. The Dutch model will be rolled out more broadly by other regulators, and the tests will show where climate risks and fossil fuel exposure are sitting in the system and which banks are better prepared to deal with them.

France's financial regulator, the *Autorité de Contrôle Prudentiel et de Résolution*, or ACPR, will publish the results of its first climate stress test in April 2021 and the European Banking Authority also plans to develop a climate stress test. The Bank of England is already working on a climate stress testing process although it has postponed its stress tests due to the pandemic.⁷ The BoE's tests will be mandatory, while in France, the ACPR's stress tests will be voluntary, although the major banks will take part.

Even though the stress tests might be temporarily postponed, banks need to be able to explain what steps they have taken to ensure that their capital levels adequately cover the risks to which they are exposed, including climate-related risks. They cannot rely solely on insurance companies to pay for climate-related losses. While disclosures on climate-related information are currently still largely voluntary, they are soon expected to become mandatory, hence banks should not wait to be forced to disclose. The UK Government has already announced that it will mandate TCFD-aligned disclosures for certain large organizations within three years under its Green Finance Strategy and the Bank of England has already issued guidance on how to mitigate climate risks.⁸ In April 2020 the Swedish Government has told its financial regulator, *Finansinspektionen*, which was already exploring climate scenario analy-

sis and stress testing, to monitor the Paris-alignment of loan books and investment portfolios. *Finansinspektionen* will also help develop tools and techniques for measures and reporting on climate for the finance industry to help the Swedish government meet its commitment to enhance transparency and align private capital with the Paris Agreement.⁹

Possibly the truest implementation of the TCFD recommendations so far has just been announced by New Zealand's Government which became the first in the world to make the TCFD framework mandatory across the financial system. While many other countries, including Australia, Canada, the UK, France, Japan, and the European Union are developing templates for climate risk reporting New Zealand is taking lead. According to the proposals, all listed issuers, banks, asset managers and insurers with assets over NZ\$1bn will be required to disclose their exposure to climate-related risks and their policies to address such risks. The new regime will be applied on a *comply or explain* basis. New Zealand's audit regulator, the External Reporting Board, will develop a climate reporting standard and the Financial Markets Authority will oversee enforcement. The legislation could come into force as early as 2023 which brings New Zealand in a position to establish international best practice.¹⁰

4. Expectations by ECB regarding climate disclosures and the role of EBA¹¹

Like many other central banks the ECB, as a member of the *Network for Greening the Financial System*, has paid increasingly more attention to climate change related risks in recent years and climate related risks have been identified as key risk driver on the SSM Risk Map for the euro area banking sector. Accordingly, ECB is assuming that climate change related risk will have both a direct and indirect effects for banks, which are expected to be reflected in the consequences for the continuity of banks' operations and the risk profiles of their assets (ECB, 2019). As climate change related risks are anticipated to intensify over a medium-term, banks should act in a timely manner and adequately integrate these risks into their risk management framework (ECB, 2019). The ECB is closely following the developments that are predicted to impact euro area banks and is accordingly developing supporting initiatives. So, just recently ECB published a "Guide on climate-related and environmental risks" that outlines the ECB's view regarding

⁶ See *Network for Greening the Financial System* (2020).

⁷ See S&P Global Intelligence (2020).

⁸ As reported by Reuters (2020)

⁹ See <https://www.responsible-investor.com/articles/swedish-regulator-to-monitor-paris-alignment-of-country-s-investment-portfolios-and-loan-books>

¹⁰ Reported by Responsible Investor (2020).

¹¹ This section is based on ECB (2020) and EBA (2019).

“...the safe and prudent management of climate-related and environmental risks...” as they could be handled under the current prudential framework. With the guidelines the ECB is expressing its expectations how banks in the euro zone should consider climate related and environmental risks when it comes to their business strategy, governance and risk management frameworks and how to provide greater transparency by enhancing their climate-related and environmental disclosures (ECB 2020a).

As specifically noted in the Guide itself, the recommendations published in the documents are not binding for banks, but they rather serve as a basis for supervisory dialog (ECB 2020a), which means supervised institutions will be given certain flexibility in their coping with climate-related risks.

As regards the application of the guidelines the ECB distinguishes between significant and less significant institutions. While on the one hand significant institutions are expected to fully apply the principles from the guide and the guidelines will be used in the ECB’s supervisory dialog, the less significant institutions on the other hand will follow the directions of their local NCAs that may issue their own guidance on climate-related and environmental risks. Nevertheless, the ECB is expecting from NCAs to apply the main standards of the guidelines also in the supervision of less significant institutions, taking into account the proportionality principle as regards their risk profile and business model.

The ECB’s supervisory expectations specifically refer to three major areas, first, to banks’ business models and strategy, second, to governance and risk appetite and third, to risk management framework in supervised institutions. When shaping their business models and implementing business strategies banks are expected to understand and take into account the influence of climate related and environmental risks on the environment in which they operate. The impact analysis should comprehend material risk factors not only in the short but also in the long term, so banks’ management could be able to make informed business and strategic decisions. The aforementioned stress tests and scenario analyses can be used as an effective tool for this kind of the analyses. Additionally, climate-related and environmental key performance indicators (e.g. carbon emission footprint of institution’s assets, average energy label of the mortgage portfolio, etc.) can be integrated in the bank’s strategic framework with the aim to make strategic goals quantifiable.

Based on the CRD requirements banks are expected to put in place robust governance arrangements that allow for effective identification, management and monitoring of relevant risks and this is how ECB’s guidelines expect institutions to integrate climate-related and environmental risks in

the governance process. More specifically the management body of a supervised bank is expected to allocate roles and responsibilities to its members and to dedicated committees responsible for climate-related and environmental issues. The management body is also expected to effectively execute the oversight role regarding the bank’s exposures and responses to climate-related and environmental risks. An essential part of this process is also the inclusion of the climate-related and environmental risks in the institution’s risk appetite framework, which means that exact descriptions of climate-related and environmental risks in the risk appetite statement (RAS) are needed, followed by appropriate key risk indicators and adequate limits for climate-related and environmental risks. Guidelines also suggest the institutions to explicitly assign responsibilities for climate-related and environmental risks within the institution’s organizational structure and responsibilities are expected to be adequately documented in the relevant governance documents.

Further, the ECB guidelines expect banks to incorporate climate-related and environmental risks as risk drivers into their existing risk management frameworks, meaning that these particular risk categories have to be monitored over sufficiently long time horizon and these risks have to be properly identified and quantified within the bank’s process of ensuring appropriate capital adequacy. Thus climate-related and environmental risks need to be integrated into credit, operational, market and liquidity risk management and appropriately elaborated within the ICAAP process. As regards credit risk supervised institution are expected to integrate climate-related and environmental risk at all stages of the credit granting process and credit processing. Credit risks with regard to climate-related and environmental factors are expected to be adequately monitored, risk classification procedures are expected to be adjusted and loan pricing is expected to reflect various costs driven by climate-related and environmental risks. Similarly, operational risk management should integrate the adverse impact of climate related events on business continuity and reputational and liability risks.

Market risk positions of banks, with regard to climate-related and environmental risk factors are expected to be monitored as well and closely scrutinised by developing stress testing scenarios where the following crucial risk aspect should be considered:

- The impact of the physical and transition risk,
- The evolvement of climate-related and environmental risk factors under various scenarios, which are not entirely based on historical data, knowing that this kind of risk might not be reflected in historical records at all, and

- Short, medium- and long-term materialisation of climate-related and environmental risks, depending on the scenarios considered.

It is essential for the supervisors to modify the usual stress testing playbook as the nature of climate-related risk scenarios is typically substantially different from the usual macroeconomic shocks defined by the supervisory authorities and implemented in each stress testing exercise. The usual approach with a scenarios design of a single adverse macroeconomic shock where the effects are extrapolated over a three year period is just not suitable approach for a credible and meaningful climate related risk scenario design where shocks may be much more versatile and consequences expanded well over a couple of years' time period (Lehmann, 2020). The ECB's guidelines represent a step in the right direction as they will effectively enable supervisors to integrate climate-related and environmental risks into the existing supervisory framework, which is exactly what The central bank Network for Greening the Financial system (NGFS) already called for last year when they request regulators and supervisors to integrate climate-related risks into standard financial stability monitoring and supervision.

The second significant EU institution that substantially contributes to the regulatory framework for the banking sector in the EU is European Banking Authority (EBA). The EBA's position on all the environmental aspects of the banking sector regulation is presented and elaborated in the Action Plan on Sustainable Finance, published in December 2019. In the action plan we can identify three mandates for the EBA in the area of sustainable finance and they all rest on the provisions already integrated in the recently revised CRR2 / CRD5 package. Although the EBA action plan addresses the ESG risk in general, it can be seen in the context of explained tentative activities that the environmental component and climate related risks are going to be positioned in the forefront of the ESG risks related engagements. The three main EBA's mandates as explained in the EBA Action Plan are as follows (EBA, Action Plan, 2019):

- to assess the potential inclusion of ESG risks in the supervisory review and evaluation process performed by competent authorities;
- to require large institutions with publicly listed issuances to disclose information on ESG risks, physical risks and transition risks;
- to assess whether a dedicated prudential treatment of exposures associated substantially with environmental and/or social objectives and activities would be justified as a component of Pillar 1 capital requirements. In particular, the assessment of methodologies, appropriate criteria and potential effects is expected.

Based on its mandate the EBA is determined to pursue a particular sequence of engagements, starting with the strategy and risk management, as it is essential to understand institutions' current business mix from a sustainability perspective in order to measure and manage it in relation to their chosen strategy. The latter can then be used for scenario analysis (EBA, Action Plan, 2019) and subsequently the supervised institutions and regulator(s) can conduct their empirical evaluation of appropriate prudential measures. The timeline for EBA regulatory activities on sustainable finance has been laid out in its own work plan with key priorities identified over a period until the mid-year 2025.

5. A pathway for implementing TCFD recommendations by Slovenian banks

In response to the regulatory shift towards mandatory climate-related financial disclosures in the EU, Slovenian banks will need to provide climate risk-related disclosures in line with the TCFD recommendations. Banks are expected to publish meaningful information and key metrics on climate-related and environmental risks that they deem to be material for their banking books, trading books and debt and equity underwriting activities (see ECB 2020a).¹² In this section we describe a best practise approach to climate-related risk and strategy disclosures that banks are recommended to follow.

In line with the principles for effective climate-related financial disclosures set out in the TCFD recommendations, disclosures should have the following characteristics:

- represent relevant information;
- be specific and complete;
- be clear, balanced, and understandable;
- be consistent over time;
- be comparable among companies within a sector, industry, or portfolio;
- be reliable, verifiable, and objective;
- be provided on a timely basis.

Banks need to consider that their key audiences (i.e. investors, clients, credit rating agencies, regulators and civil society) will have different informational requirements and have to provide climate disclosures accordingly. While civil society will likely focus on what bank are actively doing to facilitate the transition and build climate resilience through their loan provision and how they fair against the industry best practice, the regulators will primarily look at the quality and clarity of disclosures that ensure correct pricing of risks

¹² According to ECB (2020) these disclosures also need to be aligned with the European Commission's Guidelines on non-financial reporting: Supplement on reporting climate-related information.

and efficient financial markets (Climate Financial Risk Forum 2020).

In addition, banks need to define key consideration in their assessment of the materiality of climate-related and environmental risks in their disclosure policies, the frequency of disclosures and their form. If climate-related risks are not deemed material, the bank needs to document its judgement with the available qualitative and quantitative information that underpinned its assessment.

Banks in the EU are furthermore expected to disclose **financially material climate-related risks** in accordance with the European Commission's *Guidelines on non-financial reporting: Supplement on reporting climate-related information*, which integrates the TCFD recommendations and provides guidance consistent with the EU Non-Financial Reporting Directive.¹³ The expected disclosures are related to business model and strategy, governance and risk management. When banks disclose figures, metrics and targets as material, they are expected to disclose or reference the methodologies, definitions and criteria related to these disclosures.

Banks are expected to provide climate-related disclosures at the firm - and product level and cover both, risks and opportunities across the four core elements as recommended by the TCFD. At the firm level, they are supposed to disclose their climate strategy and processes for identifying, assessing and managing climate-related financial risks and opportunities and how these processes are integrated in their overall risk management practice and processes.

Banks should also disclose - at the firm and at product level - how they contribute to the transition to a net zero economy and build resilience to physical climate risks through development of products such as green bonds, green mortgages, green loans, etc.

Figure 3 summarises the most important annual climate disclosures for banks and the steps banks should take in the process of defining their climate strategy and its implementation. As such, Figure 3 also illustrates the pathway for banks to the implementation of TCFD recommendations. According to the last step in Figure 3, banks are expected to disclose Scope 1, Scope 2 and Scope 3 greenhouse gas emissions (GHG) for their assets, whereby they can adopt a step-by-step, granular approach to measuring carbon emissions of their assets. In addition to disclosing climate-related metrics on the products they provide, banks are also expected to report on the greenhouse gas emissions (scope 1 and 2) that are a direct result of their own operations.

Banks can disclose the climate-related information in different forms: as a separate, TCFD report, as part of their annual sustainability reports or integrated in their annual (financial) reports.

6. Useful tools for TCFD implementation

Many tools are available to (Slovenian) banks to facilitate their implementation of the TCFD recommendations. Next to the guides by the TCFD that are available through its *Knowledge Hub*¹⁴ other collaborative initiatives by and for financial institutions can provide further guidance. Examples include the *UN Environment Finance Initiative's (UNEP FI) pilot* with sixteen of the world's leading banks to conduct scenario-based assessments of transition-related risks and opportunities as proposed by the TCFD recommendations, a climate scenario analysis tool for bank lending books by the *2° Investing Initiative* and the proposal for standardised carbon accounting by the *Partnership for Carbon Accounting Financials (PCAF)*. Their relevance is briefly described below.

UNEP FI cooperated with 16 of the world's leading banks and management consultancies Oliver Wyman and Mercer to develop transition- and physical assessment models and metrics to enable scenario-based, forward-looking assessment and disclosure of climate-related risks and opportunities. The developed methodologies (and case studies) enable banks to be more transparent about their exposure to climate-related risks and opportunities, in line with the TCFD recommendations. Using the methodologies, banks can start assessing physical climate risks in their loan portfolios and evaluate their impacts on key credit risk metrics (*Probability of Default* and *Loan-to-Value* ratios). The forward-looking assessments offer longer-term insights that go beyond the usual stress-testing horizon of 2-3 years.¹⁵

After extensive testing with 17 global financial institutions the *2° Investing Initiative (2DII)* has just launched a climate scenario analysis tool for bank lending books.¹⁶ In this way 2DII is expanding its *Paris Agreement Capital Transition Assessment (PACTA)* methodology beyond equities and bonds, to offer financial institutions a more granular view of the alignment of their corporate loan books by sector and

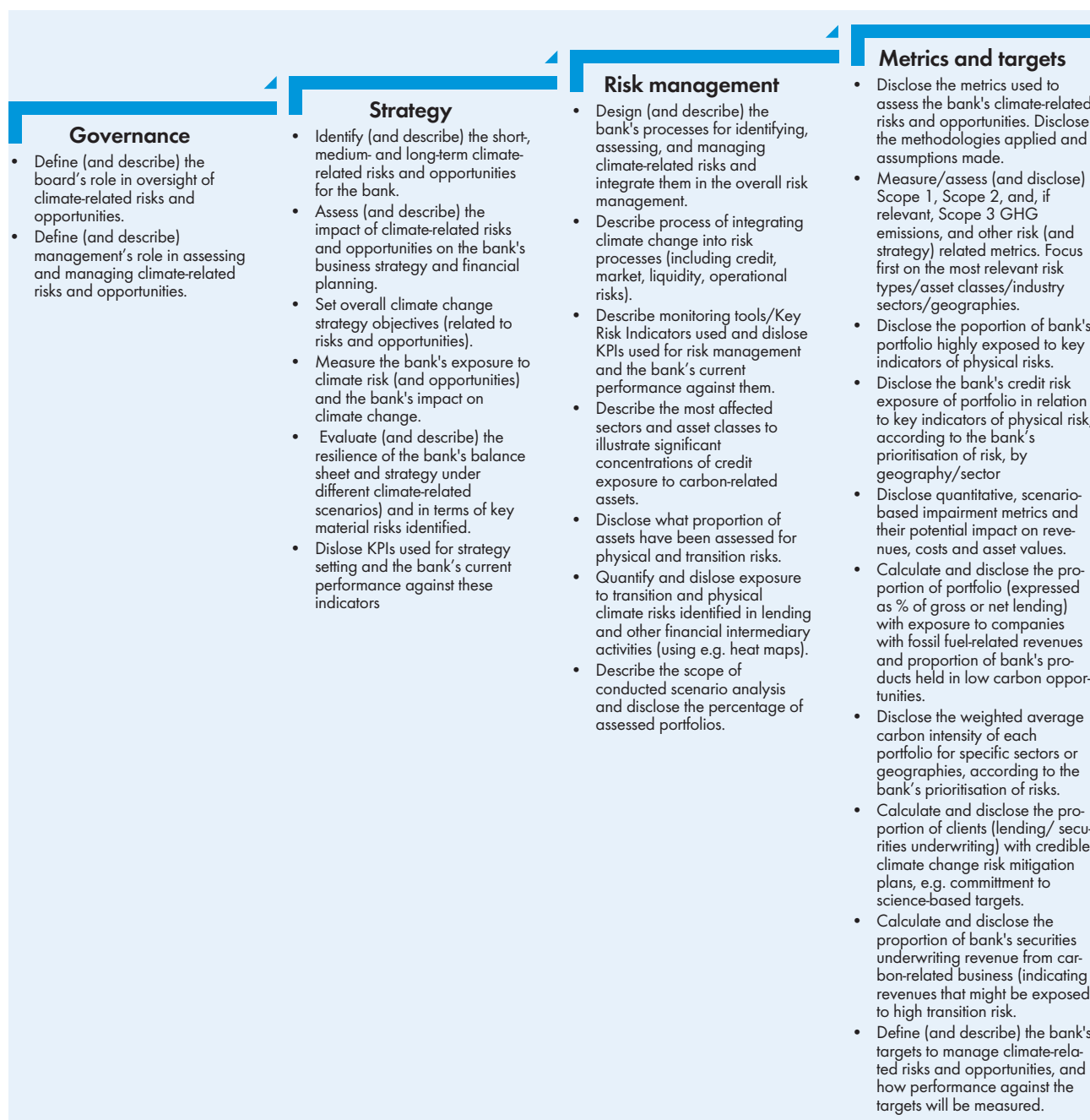
¹⁴ https://www.tcfddhub.org/resource/?search_keyword=&order=desc&orderby=resource_date

¹⁵ The following two reports by the UNEP FI summarise the results of the pilot: *Extending our Horizons: Assessing Credit Risk and Opportunity in a Changing Climate* (April 2018) which details the jointly developed methodology for scenario-based assessment of the transition-related risk and opportunities, and *Navigating a New Climate: Assessing Credit Risk and Opportunity in a Changing Climate* (July 2018) which covers assessment methodologies for physical risk).

¹⁶ For more information on PACTA for banks see their website here: <https://www.transitionmonitor.com/pacta-for-banks-2020/>

¹³ Directive 2014/95/EU - also called the non-financial reporting directive (NFRD) - lays down the rules on disclosure of non-financial and diversity information by large companies. Companies are required to include non-financial statements in their annual reports from 2018 onwards.

Figure 3: Implementation path of TCFD recommendations for a bank



Source: Deželan & Košak, based on TCFD (2017), ECB (2020a) and Baker (2019).

related technologies, at both the corporate client and portfolio level. The freely available PACTA for Banks methodology enables banks to make their lending towards aligned with Paris-based climate scenarios, set climate targets and engage with clients on their contribution. The Partnership for Carbon Accounting Financials (PCAF)¹⁷ is an industry-led partnership that aims to standardise carbon accounting for the financial sector and promotes measurement and disclosure of greenhouse gas emissions of

loans and investments in a standardised way. Namely, without transparent and rigorous carbon accounting the sector will not be able to decrease the level of carbon emissions it finances. The open-access, free-of-charge PCAF initiative allows banks and investors globally to assess the greenhouse gas emissions of their portfolios as they align their business strategies with the Paris Climate Agreement.

Concluding remarks

In this article we focus on the disclosures of climate-related risks and opportunities by banks (and other financial institu-

¹⁷ More information on PCAF can be found on their website: <https://carbon-accountingfinancials.com/>

tions). Note however, that banks are expected to consider other environmental risks disclosures as well and include risks stemming from other environmental factors, such as water stress, biodiversity loss, pollution, etc. in their regular disclosures. Given how rapidly disclosure frameworks and the needs of market participants are evolving, banks are strongly advised to start incorporating climate-related disclosures into their regular disclosures. This article provides a framework for the provision of such disclosures based on the TCFD recommendations.

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