

Sustainable Edge - Methodology report

14.5.2020

Introduction

This report is part of the Sustainable Edge project. The report describes the method that is used by the CICERO team to assess the greenness of companies. Project partners can refer to this report in order to gain a better understanding of how and why the CICERO team arrived at the specific assessments of the companies which are analyzed in the Sustainable Edge project.

In chapter 1, the report provides project partners with an overview of the problem which the Sustainable Edge project aims to solve, namely the lack of consistent and comparable company disclosure on climate risks and impacts. Chapter 2 describes the methodology which CICERO applies to assess companies' activities, investments and governance. Chapter 3 takes stock of what has been achieved under the project so far and gives an outlook on the next phase of the project.

Chapter 1: The Problem

Climate changes affects companies in all sectors

Physical risk is related to changes in the climate system, which lead to increased frequency and intensity of extreme weather events, sea level rise and other types of acute and long-term hazards causing e.g. changes in agricultural productivity, damages to buildings and production facilities, and disruptions to supply chains, among other impacts. Abrupt and unforeseen changes in the physical climate increasingly create disruptions to businesses and assets.

Transition risk relates to changes in climate policies, technology shifts and liability concerns, as we move towards a low-carbon future. Transition changes are due to implementation of measures and policies aiming at reducing climate change, foremost emissions of greenhouse gases (GHG). At the global level physical and transitional climate risks are related since a physical impacts scenario depends on strategies, policies, and measures that have been undertaken in past decades, and that directly or indirectly have affected greenhouse gas emissions. Due to the inertia of the climate system the effects of greenhouse gas emissions will first play out decades later. This means that in the longer term we have a choice between various combinations of physical and transition risks.

Physical risk can impact all sectors via direct damages and indirect business disruptions, whereas transition risk is concentrated in heavy-emitting sectors (CICERO, 2018). All sectors will be impacted by indirect effects, such as disruptions to supply chains and markets through cross-border effects from climate disruptions affecting neighbors and trade partners (NOU, 2018). As so many activities are exposed to climate risk, a multitude of sectors needs to transition towards operations which are resilient to physical climate risk and which contribute to reducing greenhouse gas emissions to net-zero by the middle of the century (CICERO, 2019).

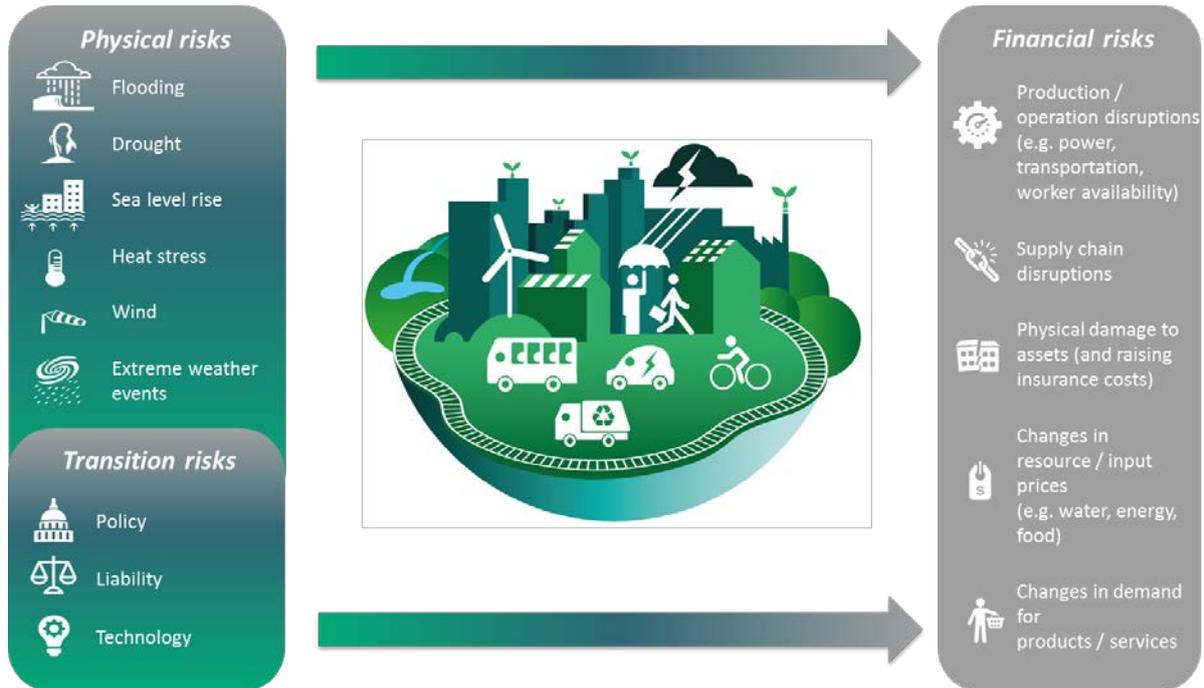


Figure 1: How climate risk becomes a financial risk for the economy. Source: CICERO, 2017

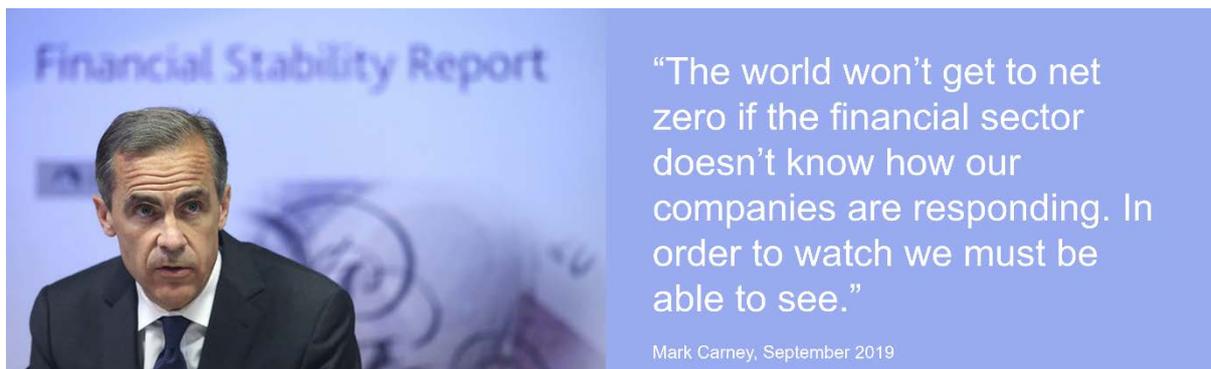
The financial sector is becoming aware of climate related risks

Investors, lenders and asset owners are increasingly aware of both the need for a global economic green transition and the financial risks posed by climate change. At the same time, the financial sector is key to steering the economy through this broad landscape of challenges. With capital availability exceeding what is necessary to finance the transition to a 2°C world and avoiding the worst impacts of climate change, the sector has the financial interest to take informed decisions on how to address climate risks. (CICERO, 2019b).

In order to avoid climate risk in their portfolios and in order to contribute to low emissions and a climate resilient economy and society, the financial sector needs to be able to include climate risk in their decision making and pricing. *Correct pricing of risk in financial markets* is essential for efficient and informed economic decision making. Inadequate pricing of risk can lead to imbalances and shocks in the financial system through their exposure to a wide range of assets exposed to physical and transitional impacts. The task of including climate risk of companies into decision making in finance is complicated by the fact that the financial sector as of now is not able to identify in a systematic way companies that have started a green transition and are positioned to avoid some degree of climate risk, and to gauge where in the transition process a given company is (CICERO 2019b).

The financial sector lacks climate risk disclosure from companies

The financial sector is beginning to integrate climate risk into their business models and demanding climate related information tailored to financial decision making. The information on climate risk for companies that is available to the financial sector does not yet contain clear signals on climate risk and transition. There are currently two main sources for this sort of information at the company level: 3rd party providers of environmental-, social- and governance (ESG) data, and financial and sustainability reporting by companies themselves. Both kinds of information are a valuable start but are characterized by limitations and inconsistencies (CICERO, 2019b).



Source: Bank of England, 2019

ESG data providers

A growing market of services and information sources exists and is being developed to meet this demand. Current services and products include i) environmental social and governance (ESG) information that covers climate to some degree, ii) specialized approaches to physical and transition risk and iii) approaches combining aspects of climate risk and impact. (CICERO, 2019b).

There are several structural limitations in the present landscape of ESG data providers which limit their usability. Among the main limitations are:

1. There is a lack of consistency and transparency on methods making comparison across and within services difficult. It can be difficult to understand how climate risk is assessed and weighted as one element of an ESG method, and also to combine an analysis of physical risk and transition risk services. There are a limited number of approaches focusing on holistic climate risk and impact. Providers have different approaches regarding their relative weights on materiality, i.e. which indicators are used to measure climate risk. The aggregation of data and completion of data gaps with assumptions is another area where providers use varying approaches.
2. Many of the current methodologies rely heavily on carbon emissions as a proxy for climate impact and risk. While emissions give a good indication of an entity's contribution to climate change, they are not forward looking and for many sectors emissions are concentrated in the supply chain (scope 3) where there is a lack of consistent reporting. Emissions also do not reflect physical climate risk. ESG ratings have also been criticized for inconsistent evaluations. Several ESG scoring, rating and index providers focus on benchmarking within sectors. This combined with a number of metrics focused on social and corporate governance procedures can give non-logical conclusions for investors focused on climate.

Company reporting

The second source for climate risk information of companies which is available to the financial sector is financial and sustainability reporting by the companies themselves. Also, in this case several challenges exist as to the usability of reported information for the financial sector:

1. There is not one accepted standard for how companies should report on climate risk or climate impact. The number of voluntary reporting initiatives is large and growing, such as the Global Reporting Initiative, The Greenhouse Gas Protocol, Carbon Disclosure Project and others. This means that reporting from different companies on different standards is not comparable in a systematic way.
2. Reporting by companies, including reporting according to the above-mentioned standards, may not provide climate risk information in a way that allows integration into existing systems on the side of financial institutions. This situation is exacerbated by the fact that financial institutions themselves are

not certain what kind of information they need in order to integrate climate risk into decision making. This is partly due to a lack of capacity. Also, financial institutions depend on quantification of risk. Climate risk, especially transition risk, can only partly be quantified in a meaningful way, e.g. by applying internal carbon prices to the portfolio.

Regulatory approaches to improving climate risk disclosure

One new approach to climate risk was presented by the Task Force on Climate-related Financial Disclosure (TCFD) in 2017. The Task Force was created by the Financial Stability Board in response to a request by the G20 finance ministers.

The recommendations of the TCFD are designed to be high-level and applicable to all organizations, with the stated goal of encouraging reporting that is consistent, useful for decisions, and forward-looking. The focus of the recommendations is on the material financial impacts of climate-related risks and opportunities for companies (TCFD, 2017b). This focus on financial materiality sets the TCFD apart from the majority of so-called non-financial disclosure reporting guidelines in that the TCFD explicitly creates a framework for climate risk to be disclosed as a part of financial reporting (PWC, 2017). The recommendations are structured into four areas of disclosure as described in Figure 2.

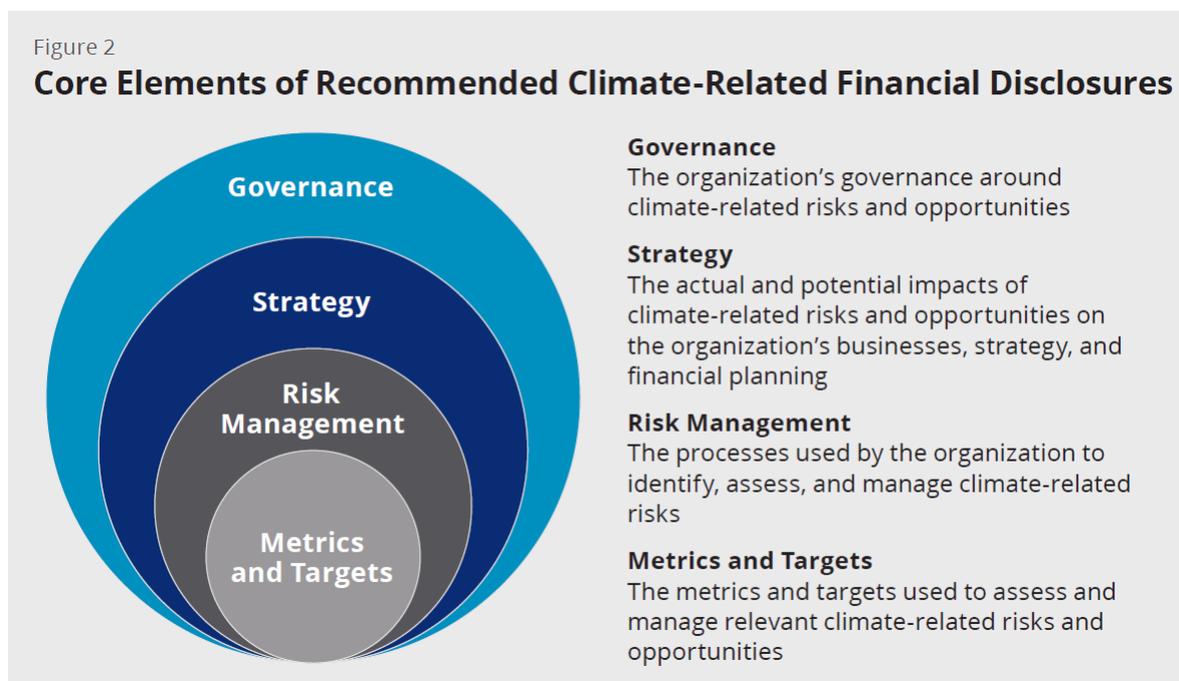


Figure 2 Recommendations for Climate-related Financial Disclosure. Source: TCFD, 2017.

A central recommendation from the TCFD is to use climate scenarios to bound the risks that lie in different futures and climate pathways for corporations as well as financial actors. The TCFD recommends stress-testing across a range of scenarios, including a 2 °C scenario (TCFD, 2019b). The inclusion of scenario stress-testing is one way that TCFD practically encourages companies to implement and report on forward-looking climate risk assessments.

Support for TCFD is strong among financial sector actors. There are 1027 current supporters of the TCFD (February 2020, Acclimatize) including major banks, asset managers, pension funds and insurers (TCFD, 2019a). However, the uptake of TCFD reporting was slow to start. A 2018 report from the consultancy EY, which surveyed 500 companies across highly impacted sectors in 18 key markets regarding their implementation of the TCFD recommendations, finds that "most companies are lacking high quality disclosure aligned to the T of understanding of how to engage in the recommended scenario stress-testing. A more recent survey by the credit

agency S&P Global, found that of the largest 2500 companies in the world, 70 % have at least limited TCFD filings (Trucost, 2019). The TCFD published a review of climate-related financial disclosures over three years for over 1000 companies. The review found that while disclosure has increased, the level of disclosure is still insufficient for investors, and the Task Force expressed concern about the lack of decision-useful information on climate. A key area where better information is needed is on the link between climate impacts and financial impact on business (TCFD, 2019a).

The EU has adopted ambitious climate targets and has major investment needs in sustainable infrastructure. To support the engagement of private finance, the EU has begun implementation of a comprehensive action plan on Sustainable Finance. The aim of the action plan is systematic changes to the EU financial system, the goals being to re-orient capital flows towards sustainable investment, manage financial risks stemming from climate change, resource depletion, environmental degradation and social issues, and foster transparency and long-termism in financial and economic activity (TCFD, 2018). EU’s Technical Expert Group (TEG) is assisting the development of, among others, guidance on improved corporate disclosure of climate-related information. One of the cornerstone policies to be developed by the TEG is the EU taxonomy for Sustainable Activities (EU, 2019c). The latest draft of the taxonomy, released in March 2020, lists criteria and thresholds for a large number of activities across various sectors. The taxonomy will contribute to building capacity and establishing a common language on climate finance. However, it presents a binary approach to identifying green activities - an approach that has been met with mixed reactions from the market. Mark Carney, former Governor of the Bank of England, stated in a speech at the UN Secretary General’s Climate Action Summit in 2019 that “Mainstreaming sustainable investing will require a richer taxonomy – 50 shades of green” (Carney, 2019).
CFD recommendations” (EY, 2019). Part of the reason for the slow uptake is a lack of guidance and tools, and a lack

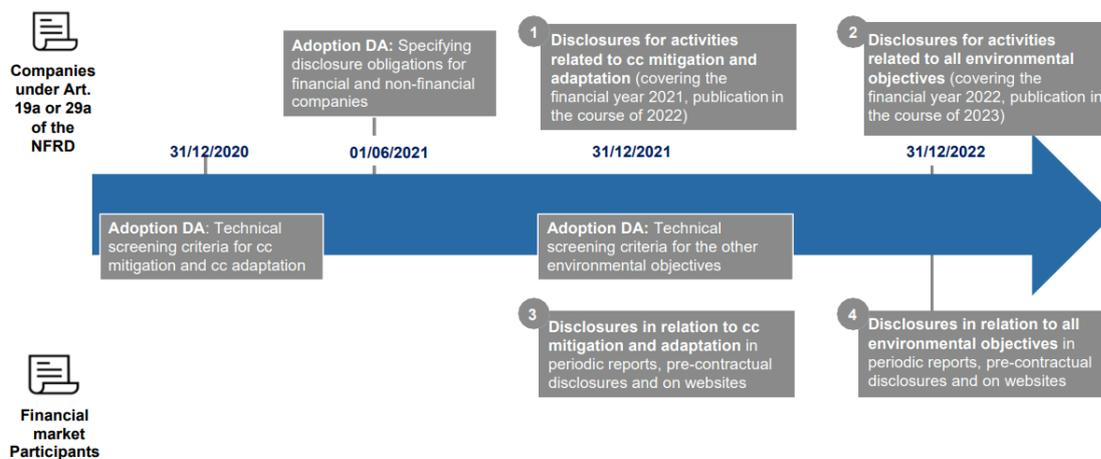


Figure 3 Timeline for the implementation of the EU Sustainable Finance Action Plan. Source: Taxonomy: Final report of the Technical Expert Group on Sustainable Finance (EU, 2020)

The Sustainable Edge approach

The Sustainable Edge project aims to address the lack of consistent and comparable company disclosure on climate-related risks and impacts. The project will build on CICERO’s Shades of Green method, CICERO’s experience from the green bond market, and on the regulatory initiatives of the TCFD and the EU.

Chapter 2 – Assessing the greenness of companies

In order to enable the financial sector to include climate risk assessments into investment decisions and pricing, and thus to facilitate greener investment decisions, the Sustainable Edge project develops a methodology with two main goals:

1. To identify companies which aim to transition towards a low carbon and climate resilient future. Progress toward transition should be quantified and tracked over time.
2. Provide an assessment of companies' environmental governance structure, including an assessment of how companies respond to the TCFD recommendations on climate risk.

Internal assessment approach:

We are carrying out several assessments to meet the objectives outlined above utilizing quantitative as well as qualitative methods. Assessments will mostly be based on company reporting, information provided by the companies directly to us, as well as information from public sources, academic publications and grey literature.

In order to identify companies' transition efforts and to track progress we will assess the status quo of the greenness of companies. To provide a forward-looking perspective we will also assess the greenness of companies' investments. Both our methodology as well as the definition and application of "activities" and "investments" are adapted to the respective companies and sectors. For these assessments we will build upon our well-established and award-winning CICERO Shades of Green rating method from the green finance market. We use the term "shading" of activities for the assessment of the greenness of an activity and the allocation of one of the shades of green or brown in the spectrum (see figure 4). We also consider the latest version of the "EU taxonomy" when assessing the greenness of activities and investments.

In order to provide an assessment of companies' environmental governance structure, we will assess companies' commitments to a green transition pathway to a low carbon and climate resilient future aligned with climate science, including concrete steps on how to achieve longer-term targets¹. This assessment will be summarized in a "governance score", as we do in our second opinions in the green finance market².

The "Shades of Green" methodology and its application in this project

The Shades of Green methodology was introduced in 2015. It is rooted in CICERO's climate science and developed to be applied to the green finance market. This method is focused on avoiding lock-in of greenhouse gas emissions over assets' lifetime and on promoting transparency on resiliency-planning and strategy. We take a long-term view on activities that support a low-carbon and climate resilient society. We assess the greenness of companies' activities in a way that is understandable and useful to investors and lenders.

We allocate a shade of green to activities and investments depending on how well they are aligned with a low-carbon, climate resilient future. We have taken an iterative approach to methodology development with the involvement of financial sector partners and engagement with companies to guide our process. A key strength of this methodology lies in the facilitation of a dialogue between investors and companies to understand how green the companies are and to track their progress in aligning with a low carbon and climate resilient future.

For a successful transition we need all sectors, including those that would not qualify for a green shading today, to move towards low-carbon and climate resilient solutions. In the Sustainable Edge project, in order to cover the spectrum from "greenest to brownest" activities, we expanded the shades and added light brown, medium brown and dark brown (see figure 4). By assessing a company's current activities and investments via our expanded methodology, we gain a snapshot of current climate-risk exposure. By shading investments, we provide a forward-looking assessment of companies' efforts towards a green transition. Over time, the shading of activities and planned investments can be updated annually to track companies' progress towards transition.

¹ IPCC reports, Paris Agreement

² See Shades of Green Best Practices 2019, p. 15f.

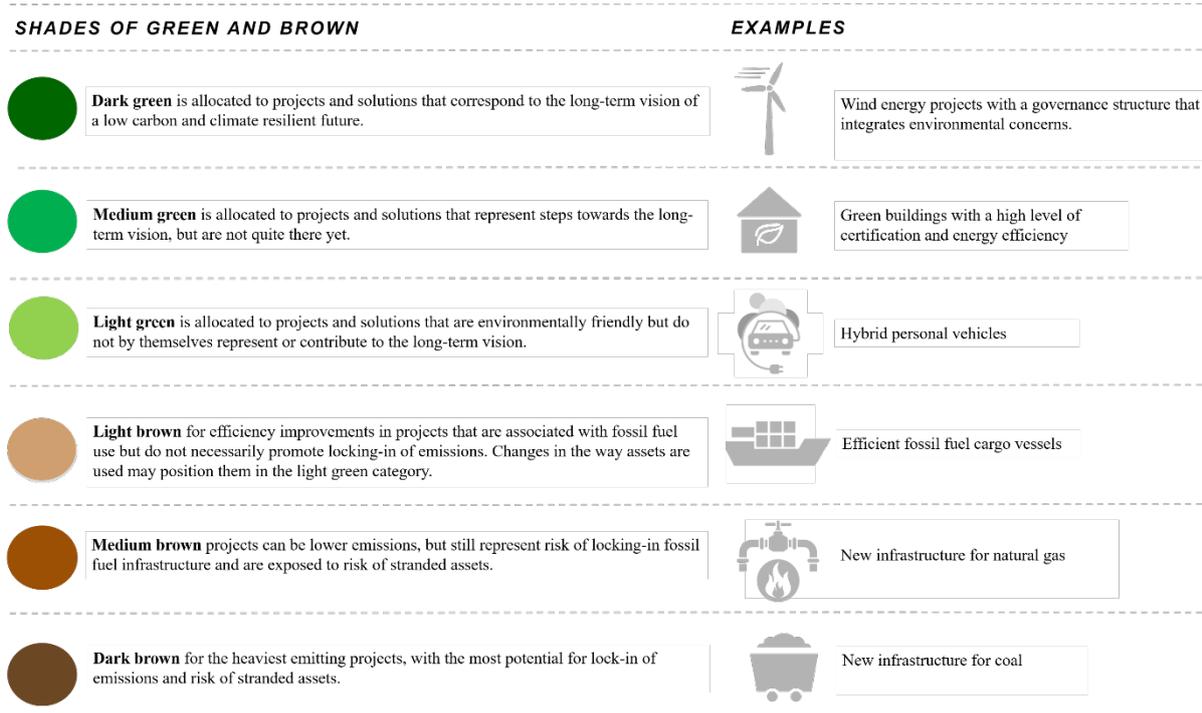


Figure 4: Expanded Shades of Green rating method

Thanks to its unique rating method, CICERO Shades of Green has received several awards from investors for our work in the green bond market. See our report³ for more details about CICERO's Shades of Green methodology.

Assessing and quantifying the greenness of company activities and investments

At the current stage of the project we intend to carry out this assessment as described in figure 5. As a starting point we define companies' main activities and related revenue streams. We prefer to define activities along revenue streams as this links revenues with exposure to climate risk. However, we can use other indicators, such as market value, if revenue data is not available. We may consider the underlying assets in cases where the activity is of a general nature, or in cases where companies pursue several variations of an activity, and assets can help to reflect these variations. We also take into consideration information on impacts of activities, upstream and downstream footprints, and, if deemed relevant, information on the assets.

We apply our extended Shades of Green methodology to assess the greenness of the defined activities, related revenue streams and investments. In this process we also take into consideration the thresholds of the EU taxonomy. Some of the factors we consider include the avoidance of locking-in fossil infrastructure, contribution to technological advancement of the sector, downstream and upstream emissions, and regional considerations.

Based on this assessment we calculate the respective green and/or brown shares of revenues and investments. We are thus able to establish the % share of revenues which comes from e.g. dark brown activities, and the % share of investments into e.g. dark green activities. The former will show the degree to which current revenues are exposed to climate risk, the latter the degree to which the technologies, machines, buildings etc. which the company invests in and intends to use for its operations in the near future, are exposed to climate risk. We believe this reflects the intention of the EU Technical Expert Group on Sustainable Finance, which requires companies to disclose the proportion of turnover and capital expenditures aligned with the Taxonomy⁴.

³ CICERO Shades of Green. Best Practices 2019.

⁴ EU Technical Expert Group on Sustainable Finance. Taxonomy: Final report of the Technical Expert Group on Sustainable Finance. March 2020

If assessments are updated on an annual basis, investors will be able to track companies' progress in the transition to operations that are in line with a net-zero carbon and climate resilient future.

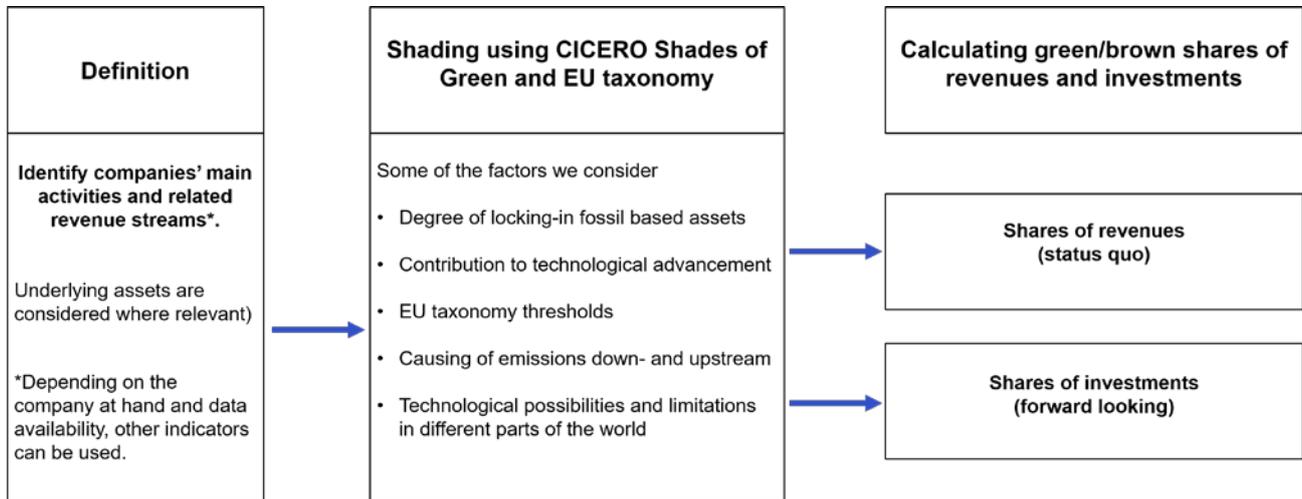


Figure 5: The assessment process

Assessing companies' environmental governance structure

In order to evaluate companies' awareness, handling, and integration of climate risk in their operations, as well as their commitments and abilities to transition, we will assess their environmental governance structures. Mirroring our approach to second opinions in the green bond market⁵, we want to assess whether companies show a wholistic approach to climate risk where activities and investments are matched with governance structures that cover all operations and set the company on a long-term path towards transition.

This evaluation will be based on the governance score method, used in our second opinions on green finance frameworks, which also take into consideration the TCFD recommendations. The governance score rates companies' governance "fair", "good" or "excellent". We will consider a number of indicators (see below). The overall score will rate companies' awareness and handling of climate and other environmental risks and impacts. We use current best practices from existing companies to establish the "excellent" benchmark.

Below we summarize the kind of information we would include in such an assessment. This may change as the project is further developed, and we incorporate learnings from the application to different types of companies in different sectors.

- 1) Transparency on environmental governance structures
 - Targets the company has set for itself and the steps to get there
 - Policies covering resilience against physical climate risk
 - Environmental and climate policies for the supply chain
 - Emissions reporting (e.g. scopes, reporting standards)
 - Environmental certifications (e.g. ISO)

⁵ See Shades of Green Best Practices 2019, p. 15f.

- 2) TCFD, follow-up of recommendations on disclosure
 - Risk perception – how does the company see its own future in a net-zero emissions, climate resilient world?
 - Strategy to mitigate and reduce climate risk
 - Scenario-analysis and how results are fed back into strategy considerations
 - The metrics the company uses to track performance and progress towards targets
 - Distribution of responsibilities to follow up on climate risk at board level and across organization

- 3) Commitment to continued climate risk reporting
 - Progress since previous Sustainable Edge report (if applicable)
 - Commitment to TCFD reporting on both transition and physical risk

Metrics and targets

Special attention will be given to climate-relevant indicators for company reporting. In order to compare companies' climate risk exposure and impact we need meaningful indicators which are specific for each sector. CICERO will suggest a number of indicators that cover elements of transition and physical risk and environmental impacts by sector. We would encourage financial institutions to demand reporting on such indicators from companies to establish a broader dataset of comparable metrics across companies within a sector. This will enable the financial sector to compare companies and provide material for engagement. If companies start reporting on these indicators, lenders and investors will also be able to pinpoint companies' progress towards defined targets, e.g. for real estate developers to reach energy efficiency targets in its buildings, or to certify a share of its building portfolio under defined certification schemes.

Existing indicators in this space tend to focus on climate impacts, such as emissions to water and air, and especially CO₂ emissions. Emissions from scope 1, 2 and 3⁶ will be featured in the analysis reports in order to show where the greatest impact of an activity is. For example, the largest climate impact of oil and gas production are the emissions from the combustion of said oil and gas, not the direct emissions from the production sites. However, emissions do not tell the entire story as efficiency improvements can improve the emissions intensity, but the risk of locking in emission-intensive technologies is not regarded. Sustainable Edge will focus on indicators that provide a more complete picture of climate risk.

Chapter 3: Project achievements, lessons learned, next steps

Achievements so far

The project team has so far finalized three *sector briefs* for the sectors real estate, agriculture and shipping. These are short reports summarizing the climate impacts, climate risks and climate-related regulations of a sector. The sector briefs are supposed to support capacity building on climate risk in financial institutions. A further three sector briefs, for aquaculture, road transport, and aluminum are at advanced stages of production. We have finalized one company analysis in the real estate sector and are working on various others.

⁶ Scope 1: Direct emissions from owned or controlled sources; Scope 2: Indirect emissions from generation of purchased energy; Scope 3: All indirect emissions that occur in the value chain of the reporting company including up- and downstream emissions

Lessons learned

We had hoped to have achieved a higher number of company analyses at this point. We have encountered varying degrees of responsiveness from companies, which determines how quickly we are able to draft the analysis reports. One way to make it less resource-demanding for companies to participate in the project is to streamline our gathering of information, documentation and data from companies. To that end we have developed standard forms and tables for each sector. Companies are asked to fill out these forms and tables. Our hope is that this gives us enough information to start the shading process without overburdening the companies.

Another lesson learned is that the TCFD recommendations are a very valuable concept to understand and communicate the climate risks companies are facing. However, the recommendations are complex and rather demanding especially for smaller organizations.

Next steps

This report provides an overview of our methodology as it stands now. We underscore that the methodology is work in progress. Learnings from application of the methodology to different companies in different sectors will enhance it over time. For the next phase of the project, from April to the summer of 2020, we intend to add the sectors aquaculture, fishing and aluminum to the project, in addition to the sectors covered in the first phase, and conduct company analyses. The addition of other sectors, such as offshore supply, is under discussion. In order to support reporting in line with TCFD recommendations we will have a stronger focus on developing climate relevant Key Performance Indicators (KPI) for each sector. We believe that such KPIs will answer to the increasing attention around measuring companies' progress towards climate transition. In addition, KPIs are part of the "language" that both companies and the financial sector use today in terms of internal systems for assessing risk and performance, and in reporting. This will provide comparable and quantified climate risk disclosure.

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