8. Specific thematic article: Environmental and climate-related risks within the FMI landscape

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Climate and environmental risks are becoming increasingly important and are also gaining attention in the financial sector. Financial market infrastructures (FMIs), custody banks and large payment transaction processors and messaging services are also increasing their focus on climate and environmental risks, the impact of these risks on their business model and risk profile, and the role that they can play in this regard in the financial community. A sample of institutions acting as FMI, custody bank, payment transactions processor and messaging services were invited to answer a questionnaire on climate-related and environmental risks. The questionnaire collected information on the institutions' assessment of the materiality of climate-related and environmental risk, the (expected) impact on the business environment in which they are operating and on their business model, their governance and the way that they deal with these risks in their risk appetite and risk management frameworks. The insights gained from the questionnaire provided input for this article.

Materiality of environmental and climate-related risks

Climate and environmental risks are often not included as standalone risks in the enterprise risk management framework, but are mainly considered by the institutions as a driver for other risk types (such as operational risk). However, some of the institutions polled have also performed a preliminary qualitative assessment of the exposure to residual climate risk in the short and medium term, and have taken steps to explicitly identify and measure environmental and climate-related risks, amongst others, to build awareness within the company around these risk types and their specificities.

All the institutions covered by this article identify physical risks[1] as an important risk category within the environmental and climate-related risks. The main physical risk drivers listed by the institutions are natural disasters and extreme weather events such as cyclones, storms, earthquakes, floods and rising temperatures, which can impact the service offered by the institutions themselves, or affect them indirectly when their service providers are hit by such types of event.

1 Physical risks: for instance, economic costs and financial losses resulting from the increasing severity and frequency of climate change-related or extreme weather events, longer-term gradual shifts in the climate, and indirect effects of climate change such as loss of ecosystem services.

Furthermore, the institutions polled also identified several transition risk drivers[1]. The main transition risk drivers listed by several institutions are increased carbon pricing and higher costs of energy sourcing, plus regulatory uncertainty, and legal and compliance risk caused by regulatory expectations with regard to climate risk. Moreover, several market infrastructures believe that tackling climate change and actively engaging to improve sustainability will be essential to maintain – and even strengthen – their brand reputation, and is necessary to meet expectations from participants and shareholders in the short to medium or long term. One of the institutions also mentions that insufficient attention to climate and environmental risks will damage their employer branding and consequently increase the risk of losing talented staff, as it will make it more difficult to attract skilled people and maintain high staff commitment. They believe that these risks are critical areas to be addressed because current and upcoming generations of employees (will) consider it essential to tackle climate and environmental issues in order to protect the planet for future generations, and consequently they believe that many employees will make employment decisions based on how a company positions itself in these areas. In this respect, they consider transparency and proper communication about their own climate and environmental measures as vital to ensure that their current and future staff are convinced that the institution they are working for is taking this seriously.

On the financial side, institutions engaging in deposit taking and credit granting have pointed out some additional potential risks resulting from climate impact which could affect the future business and profitability of the institution if these risks are not dealt with or mitigated. The exposures to those risks could materialise, for example, via their existing exposures to credit, market and reinvestment risks. Indeed, as their equity and client deposits are partly invested in securities or placed with cash correspondents, that will expose them indirectly to the climate risks of the issuers and cash correspondents. These institutions also rely on collateral as a secondary payment resort to cover certain risks; consequently, they consider this as a potential indirect exposure towards climate risks. Moreover, clients and business partners are mostly financial institutions which are also exposed to climate risks, meaning that the institutions are also indirectly exposed to the climate risk of their clients and business partners. However, FMIs assess the current materiality and inherent level of these risks as low, due to the specific nature of the activities, e.g. because ICSDs and custodians do not grant long-term credit to finance clients' physical assets.

Several institutions do not only assess the materiality of environmental and climate-related risks and/or of these risks as drivers for other risk types in their enterprise risk management framework, but also consider climate change related risk drivers specifically in capital stress testing or as part of the extreme risk scenario analysis. Main elements taken into account in that case are costs and damage to own and service providers' locations (potentially even resulting in outages of key networks and sites as well as the disruption of the supply chain) due to natural disasters, the impact of additional (government) measures and taxes, and new climate-related technologies which will increase carbon-related prices, for example, and steer client behaviour (e.g. investment strategy of CSD's and custodian's clients), reducing the value of certain types of securities in both their own and their clients' investment and fund portfolios.

Impact on business environment and product range and how to deal with this

In the short/medium to long term, the environmental and climate-related risks identified above will also affect the business environment and product range offered by FMIs, custodians and payment processing institutions,

1 Transition risk: the risk inherent in changes related to the process of adjustment aimed at reducing reliance on carbon (low-carbon economy) and its impact on climate. Risks caused by climate-related changes such as changes in public policies and legislation, technology, market and customer sentiment.

as well as providers of financial messaging services. These institutions believe that they can also play a role in the financial community with regard to tackling environmental and climate-related risks.

In order to deal with the risks identified above, and the resulting challenges for the institutions themselves and the business environment in which they operate, several institutions covered by this article have mentioned that they are reviewing and/or maturing their Corporate Social Responsibility and Sustainability strategy.

These institutions consider natural disasters and extreme weather events as significant environmental and climate-related risks which could affect their business directly or indirectly. These risks could cause service disruptions, for instance in their own data centres, impacting their ability to process transactions, but could also affect their service providers. Such service disruptions could seriously disrupt the supply chain, resulting in financial losses due to claims by clients as transactions are not processed in a timely manner, or could even lead to a permanent loss of business. Institutions state that the potential impact of natural disasters and extreme weather events will affect their future decisions with regard to new data centres and the selection of co-located data centres, in order to mitigate the impact on business continuity and related potential losses of profit and business.

Furthermore, they believe that apart from the loss of business and costs of claims due to disruption of services, their profit could also be affected by other consequences resulting from environmental and climate-related risks if they do not take sufficient measures. Failure to take adequate action will lead to higher expenses caused by increased carbon pricing and higher energy costs due to government measures (such as higher taxes on non-renewable energy sources), as well as increased energy consumption (such as increased cooling of data centres).

The results of the environmental and climate-related risk assessments will also be taken into account in the development of new products. ESG (Environmental, Social and Governance) elements which will influence future products and services include the relevance of the product with respect to climate change and the product's energy consumption. In this connection, institutions are also implementing measures to reduce their CO_2 emissions, by cutting down on business travel, increasing homeworking (compared to the pre-Covid situation), reducing the emissions from employees' commuting, greening the company's car fleet, installing additional electric charging stations, investing in solar panels and other energy-saving renovations such as replacing roof membranes and insulation of sites, replacing obsolete facilities with more energy-efficient installations, and introducing science-based targets for measuring CO_2 emissions (see also below : monitoring of environmental and climate-related risk).

If institutions implement these measures to reduce the CO_2 emissions and also take account of climate impacts in designing their product range, that will not only help them to cope with higher costs related to increased energy use and higher energy prices, but will also help them to tackle several other potential business challenges originating from the other transitional risks acknowledged by these institutions.

These climate measures are not only necessary to address the FMIs' own standards and expectations but can help the global financial industry to meet current and future climate standards and regulatory expectations. Indeed, the global financial industry will also have to adapt their products and services to progress towards sustainable offerings and operations, as clients and participants will also face additional standards and regulatory expectations. The FMIs believe that they will need to adapt their products and services and find partners within the industry to support clients in this and to meet clients' expectations. This will be necessary to remain a relevant player within the financial community. In this regard, CSDs and custodians are developing products and solutions aimed at ensuring that global investors can access relevant environmental, social and governance (ESG) information from issues or assets held in their systems.

An additional challenge noted by the institutions, which has to be tackled in order to meet the increased regulatory expectations, is the need to improve their data management so as to understand which areas should be addressed in order to bring their business operations and future planning into line with current and future global climate standards.

Besides the losses of disrupted services, the profit and risk level of institutions offering safekeeping and related (banking) services could deteriorate owing to the downgrading of companies operating in "brown" industries and companies situated in countries which are geographically more exposed to (increasingly frequent) natural disasters and weather events. For instance, assets under custody linked to carbon-intensive or weather-exposed industries could lose significant value, leading to a decline in the fee income earned on these assets.

The role that FMIs can play in the financial community

FMIs believe they have an important role to play in encouraging investments in sustainable and inclusive finance, and that they can lead by example (e.g. by setting science-based targets to reduce CO_2 emissions). These institutions think that they can use their strategic position within the financial community to facilitate the dialogue on the need for ESG changes to achieve a greener planet by improving business operations. FMIs are convinced that an FMI-driven approach can leverage their central and neutral position to address fundamental obstacles on both the supply and demand side of the market. One of the current obstacles they observe these days is the strong investor demand which is not met due to an insufficient supply of sustainable securities and cross-border information, as well as processing infrastructure. As a result, they believe that an FMI-driven approach can make sure that everyone can be involved in this process, whether they be long-standing or new market participants. According to a whitepaper by PwC and Euroclear[1], opportunities in this regard concern encouraging greater issuance of sustainable finance instruments by reducing the barriers relating to infrastructure, regulation and information and by processing ESG information flows such as ESG metrics and expanding the market to include more asset classes and participants.

Measuring, monitoring and mitigating environmental and climate-related risks

In line with the materiality assessment, environmental and climate-related risks are not generally considered as a separate category in the risk appetite statement by FMIs, but are included indirectly through other risk types or through health, safety and environmental statements. However, FMIs are increasingly including environmental and climate-related risks in their risk appetite. Several institutions mention that they are currently defining a statement on their climate-related risk appetite. Some institutions have already included a qualitative consideration without quantitative metrics in their risk appetite, and some are in the process of defining qualitative or quantitative risk appetite statements on climate risks. These risks are mainly considered in the risk appetite statement as a risk driver for operational risk and, correspondingly for business continuity; indeed, one of the main risks resulting from environmental and climate-related elements is the disruption of data centres in different geographical regions due to extreme weather events. The institutions concerned have defined and refined business continuity strategies for critical processes which are regularly tested and which should allow them, for example, to resume services from alternative locations (multiple operating sites in different locations and/or countries with distinct risk profiles). There are in general no specific internal reporting and metrics on environmental and climate-related risks, nor any specific section on these risk types within the risk reporting. However, a specific form of reporting will be set up at certain institutions, such as the inclusion of climate-related risks as a new risk in the ongoing Chief Risk and Control Officer reporting.

1 https://www.euroclear.com/newsandinsights/en/press/2021/2021-mr-21-sustainable-finance-whitepaper.html

Nevertheless, it should be noted that some of the institutions are already explicitly measuring and quantifying their CO_2 emissions, which is considered as an important element in tackling climate-related transitional risks, e.g. by using science-based ratios to calculate CO_2 emissions linked to Scope 1[1], 2[2] and 3[3], based on the Greenhouse Gas protocol[4]. In order to perform the assessment, the institutions also use external data sources, such as the IPCC (Intergovernmental Panel on Climate Change)[5], the Global Risk Report of the World Economic Forum[6], and the Risk Predictions Report of the Institute of Risk Management[7].

1 Scope 1: all direct CO_2 emissions from the activities of the institution, including fuel combustion on site.

2 Scope 2: covers indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the reporting company. Emissions are created during the production of the energy.

3 Scope 3: also called value chain emissions, all other indirect emissions which are the result of activities from assets not owned or controlled by the reporting organisation, but that the organisation indirectly impacts in its value chain. Sources include purchased goods and services, transportation, business travel, and employee commuting.

4 https://ghgprotocol.org/

5 https://www.ipcc.ch/

6 https://www.weforum.org/reports/global-risks-report-2022

7 https://www.theirm.org/

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