TC NOTES

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AND **GUIDANCE** FROM
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CLIMATE CHANGE: ISSUES FOR SECURITIES SUPERVISORS

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CLIMATE CHANGE: ISSUES FOR SECURITIES SUPERVISORS

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CLIMATE CHANGE: ISSUES FOR SECURITIES SUPERVISORS

Introduction[1]

Climate change impacts are already being felt and are forecast to increase. Since the 2015 Paris Agreement (United Nations 2015) to limit global warming, many governments have set actions in train to reduce and adapt to climate change. This impetus is also reflected in the United Nations' Sustainable Development Goals (2021c) for the decade to 2030.

Impacts will arise from both the physical changes caused by climate change and the transition to a less carbon-intensive economy.[2] Adapting to climate impacts will mean significant changes for many companies and markets, with threats to some business models and opportunities for others. Some assets that are valuable today could be much less valuable in future and vice versa. Some changes will be mandated by governments, while others will emerge through firms' commercial strategy, in response to investor pressure, or through risk management. The scale of change needed is significant as is the funding required. Alongside bank lending, capital markets will be an important source of funding.

There is a strong international consensus that climate change and transition impacts are potentially material to investor decision making, and that there are risks to supervisory objectives that supervisors need to consider.[3] There is also a debate about the extent to which regulatory regimes should seek to facilitate or encourage green investment.[4]

This Toronto Centre Note is the fifth in a series on how supervisors can build climate considerations into a risk-based supervisory approach.[5] It addresses three key areas where climate impacts are relevant for securities supervisors in relation to financial stability, market integrity, and investor protection:

- **Issuer obligations to disclose** material information and risks;
- **Risk management in securities firms**, particularly operational resilience and the impact of changing asset values on market risk and obligations to clients; and
- **Green investing**.

This Note suggests practical steps securities supervisors can take now, points to existing standards and tools that can be used as a basis, and indicates areas where expectations and tools are likely to evolve.

[1] This Note was prepared by Jennifer Long.
[2] These concepts are discussed more fully in Toronto Centre (2017).
[3] See International Organization of Securities Commissions (IOSCO) (2019) and (2020), IOSCO Growth and Emerging Markets Committee (2019), and Network for Greening the Financial System (2019).
[4] See further discussion of possibilities for banking supervision in Toronto Centre (2019).
[5] Toronto Centre (2017, 2019, 2020a, 2020b). Relevant podcasts include Toronto Centre (2020c, 2020d, 2020e).

Getting started

Understand the climate change context

Many climate change resources already exist that can help securities supervisors plan and deliver their authority's response to climate change. It is also helpful to talk to other public authorities and to other financial supervisors to understand the wider context in the jurisdiction or region, to build on their response, and potentially to align approaches.[6]

Box 1: Climate change context – resources and how to use them

- Sources such as the Global Adaptation Index (ND-Gain) give an insight into your country's relative vulnerability to climate change and its readiness for it.[7] This may help you better understand and make the case for action locally.
- Your country's nationally determined contribution to the Paris goals and long-term strategy for low emissions development[8] will provide an insight into the wider policy framework within which firms and markets are operating, and may give you a better insight into the transition risks that issuers and regulated firms could face.
- Banking and insurance supervisors: they may already have engaged with other public authorities and with market participants. They may signpost useful resources and have experience of tools such as scenario analysis that could be useful to you and to securities markets participants.

Areas to probe when collecting this information and how it can be used include:

- Identifying whether there are any particularly acute physical risks for your country or parts of it (such as a major commercial centre at increased risk of flooding). These could pose systemic risks to financial stability or market integrity.
- Indications of how climate transition will be financed, including any commitments to issue climate bonds. This could affect the scale and nature of activity in capital markets.
- Policy commitments that could eventually bring changes to your regulatory perimeter (for example, the introduction of carbon markets or the development of water markets may lead to related futures markets needing to be regulated; and the development of sustainability indexes might require regulation of the index itself or its administrator[9]).
- Policy commitments that give an insight into the nature and possible timing of transition shocks for issuers or regulated firms, such as plans to phase out certain types of energy production or to tax certain activities.

It is also important to understand the objectives of the public policy approach and the consequent expectations of the financial sector. One approach is to focus primarily on

[6] Toronto Centre (2020e).
[7] University of Notre Dame (2021).
[8] See United Nations (2021a and 2021b).
[9] See European Union (2019b).

managing the impacts of climate transition and hence on considering risks to the financial sector and to supervisory objectives of financial stability, market integrity, and investor protection. Another approach is to see the financial sector additionally as a potential contributor both to the problem and to the solution, according to whether capital is directed towards brown activities, which conflict with climate objectives, or to green activities, which help to meet those objectives or are at least consistent with them. This Note assumes that all securities supervisors will need to address the first approach now, and that while there may be less immediate pressure in some countries to take the second approach now, there is likely to be increasing momentum in this direction in the next few years.

Addressing climate change and transition impacts necessarily involves navigating uncertainty about what physical changes will happen, to what extent transition efforts will affect the extent of climate change, and how policy responses and their commercial and societal impacts will evolve.

Analyzing various scenarios can help with navigating this uncertainty and with grasping the various dimensions of climate impacts and their scale in stressed scenarios. Toronto Centre (2020a) provides guidance for supervisors on how to develop and use climate scenarios and points to useful resources.[10] If your country's central bank has already carried out some scenario analysis on economic and financial impacts, this would also be a very helpful starting point. Even if not, thinking about the range of plausible scenarios in your jurisdiction and their likely impacts will be good preparation for your work and help you set appropriate expectations of how issuers and regulated firms should be carrying out such analysis.

While all the background and preparatory work described above is important and should help you focus your efforts effectively, it is not essential or indeed feasible to have all the answers about climate change before taking practical supervisory steps. Similarly, while it will be important for some staff to build expertise, it is not essential for all supervisors to have an in-depth knowledge of the many aspects of climate change policy. The key is to set expectations among staff and market participants that climate impacts and transition need to be considered as risks and addressed appropriately despite the potential uncertainty about what their precise effects will be.

It is also important to be clear that existing regulatory frameworks and principles provide a strong basis for supervision. Frameworks will continue to evolve to support firms and supervisors in grappling with uncertainties and challenges, and the clear willingness to align international standards will help avoid unnecessary regulatory burdens.[11] However, it may be illusory to expect a definitive end point to this process, and delay is likely to increase risks to market integrity and resilience given the significance of the issues at stake. Examples are given throughout this Note of how supervisors have referenced one or more of the existing frameworks, and the likelihood that they will evolve, in setting expectations for issuers and regulated firms.

[10] The Network for Greening the Financial System has also published a guide to climate scenario analysis and climate scenarios (2020a and 2020b).
[11] See for example Corporate Reporting Dialogue (2020) and International Financial Reporting Standards Foundation (2020a).

Lead by example

Considering how climate change and transition impact your own authority will help you gain familiarity with the issues, give you an insight into the challenges that issuers and regulated firms may face, and enhance your credibility with those entities when you set expectations that they need to act by showing that you have already done so. Practical steps to achieve this, using your research on the climate change context, are suggested in Box 2.

Box 2: How securities supervisors can lead by example on climate impacts

- Ensure your own Board and senior management understand the potential significance of climate change and transition for your authority and for securities markets.
- Assess whether there are any near-term physical risks that pose material challenges for your authority's own premises, staff, and infrastructure providers, and adapt your operational resilience[12] and business continuity plans accordingly.
- Identify the issuers and regulated entities (exchanges, securities firms, funds) and activities for which climate change poses the most significant risks and decide how to factor this into your existing assessment of risk and supervisory plans.
- Identify any key staff who need to be briefed or trained in the early stages of your work on climate change.
- Carry out a high-level mapping of existing regulatory standards relevant to climate change and transition impacts, starting with:
    - Issuer disclosure obligations;
    - Regulated entity governance and risk management obligations;
    - Asset manager obligations to clients, including valuations; and
    - Fair, clear, and not misleading marketing for retail investors.
- Consider whether the risk outlook is sufficient to warrant any dedicated governance or resource and, if not currently the case, what might prompt that judgement to change.

Convene key stakeholders

You will find it helpful to engage with stakeholders at an early stage. Key stakeholders include investors and issuers as well as regulated firms and their trade associations. This engagement can help you:

- **Gauge the existing level of awareness** of climate change and transition, and the extent to which investors, issuers, and regulated firms are already taking action and any areas where a need for change has already been identified;[13]

[12] See Toronto Centre (2021).
[13] See Canadian Securities Administrators (2018) for an example of how the Canadian authorities used stakeholder discussions to understand investor expectations and issuer experience of preparing disclosures about climate impacts and to identify areas for further work.

- **Share knowledge and enhance your own knowledge** of the issues and potential practical challenges; and
- **Formulate and then communicate your supervisory expectations**.

You may also be able to galvanize issuers and regulated firms into working together on ways to assess and act on climate risks.[14]

You may also find it helpful to engage with auditors and with the body responsible for oversight of accountants and auditors, given the interaction with accounting and audit standards and valuations (discussed further in the section on issuers below).

Set expectations

Some issuers and regulated firms may already have realized the significance of climate change and transition for their business, but for others it may be a new and potentially challenging topic. For some, your interest in climate change may come as a surprise, and there may be concerns about what your expectations are and whether they are achievable. It may therefore be helpful to:

- Communicate explicitly what your expectations are now, a timescale for review, and the fact that your expectations are likely to evolve;
- Explain why climate impacts and transition matter to your market and are relevant to existing regulatory requirements;
- Emphasize the need for early Board-level engagement;
- Direct firms to tools available to help them, or choose tools you want them to use; and
- Focus initially on the need for issuers and regulated firms to assess risks/impacts and plan how to address them, recognizing that they will need some time to implement this plan and will not have all the answers immediately.

Wherever possible, it is helpful to align your expectations with those of banking and insurance supervisors in your jurisdiction. For example, if you are considering encouraging or mandating the use of a particular framework by regulated firms, it is helpful to ensure consistency across sectors. It is also helpful to explore interdependencies between sectors. For example, banks' and insurers' ability to assess and manage their own risk exposures may be helped or hindered by the extent to which corporate clients who are issuers have understood and disclosed their own climate risk profile. Issuers who are also banks or insurers will need to meet the requirements of their own regulatory regimes as well as requirements specific to securities issuers, which may include the preparation of risk disclosures.

You may also find it helpful to give issuers and regulated firms a roadmap of how you see things evolving. The steps on this roadmap and any timescales can be indicative at this stage and refined as necessary in the light of feedback and experience.

[14] For example, the UK Financial Conduct Authority initially convened the Climate Financial Risk Forum, which then itself prepared guidance and tools for financial sector firms, such as Climate Financial Risk Forum (2020).

Engage Boards of Directors

Supervisors and regulated firms who have started to grapple with climate change consistently underline the importance of Board-level engagement. To engage Boards effectively, you may wish to consider a specific communication to securities firms.

To focus attention on key issues, you may find it useful to identify a limited number of key questions for the Boards of regulated firms to address. For those issues you judge to be most material in terms of their overall market impact, or the relevance of climate change and transition to their particular activities, Boards can be given a defined period to address the questions and report back to you. Possible questions are set out in a later section of this Note.

This approach underlines the Board and senior management's responsibility to address the issue and will also help you to see which firms are putting appropriate arrangements in place, who is furthest behind, and help you identify any common problems. This in turn will help you plan and prioritize follow-up action accordingly.

While Board-level engagement is in principle also important for issuers, you may need to use different channels to communicate, for example through firms acting as underwriters or advisers and through securities exchanges, and follow up through scrutiny of prospectuses, listing applications, and periodic corporate disclosures.

Issuers and their obligations

Obligation to disclose material risks

A key obligation for securities issuers is to disclose material risks so that investors can take these into account in their decision making. As IOSCO has pointed out, this obligation is just as relevant for risks arising from climate change and climate transition as for any other risk.[15] An example of the importance of such disclosures for investors could be where a significant share of an issuer's assets is linked to fossil fuel extraction: these could become stranded assets with little or no value.[16]

If climate-related risks have not previously been a focus for issuer disclosures in your jurisdiction, you may find it helpful to provide guidance that explicitly makes this connection for issuers and sets out an expectation that climate factors should be considered and material risks disclosed.[17]

Some issuers may be reluctant to make such disclosures, and even those who are willing to do so may find it challenging to assess climate risks given, for example, that it may involve considering longer time horizons than for some other sources of risk. Some authorities have

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[15] See discussion of IOSCO Principle 16 in IOSCO (2019).
[16] Stranded assets are assets that before the end of the economic life originally assumed can no longer earn economic returns and hence suffer from unexpected or early write-downs, devaluations, or conversion to liabilities.
[17] For an early example, see Securities and Exchanges Commission (2010).

therefore provided guidance, particularly for smaller issuers, on how to go about assessing the risks and their materiality and ensuring that disclosures are meaningful.[18]

Typical challenges supervisors and issuers face is how to ensure that risk disclosures are accurate notwithstanding uncertainty and data limitations, and sufficiently comparable to enable investors to make fair comparisons. Several disclosure frameworks have been developed that aim to address this problem, including the Task Force on Climate-Related Financial Disclosures (TCFD) Recommendations[19] prepared at the request of the Financial Stability Board.

The TCFD framework recommends some disclosures that are applicable to all sectors, and additional disclosures are recommended in certain highly-impacted sectors:

- Sectors that account for the largest proportion of greenhouse gas emissions, energy usage, and water usage – energy, materials and buildings, transportation, and agriculture, food, and forest products; and
- Banks, insurance companies, asset owners, and asset managers, because of the relevance of climate impacts to the activities they carry out.

The TCFD recommendations also cover how to use scenario analysis as a tool to consider the potential range of outcomes despite the inevitable uncertainty and data gaps. The TCFD's approach has been supported by the Network for Greening the Financial System (NGFS), a group of central banks and other supervisory authorities who underlined the importance of all publicly listed bond or equity issuers making such disclosures.

While referring to one or more of the internationally-used disclosure frameworks in national guidance does not solve the potential difficulties in preparing meaningful disclosures, it can avoid re-inventing the wheel and make it easier for issuers operating in multiple jurisdictions. Initially, it may be helpful for supervisors to raise awareness of the frameworks that issuers can use on a voluntary basis. Some supervisors are starting to go further, for example by introducing a comply-or-explain approach, or a mandatory approach, to the use of the TCFD framework in preparing financial disclosures.[20]

The TCFD recommendations are intended to provide a common basis for ensuring that key disclosures such as financial statements reflect the impact of climate change on an issuer's strategy, governance, operations, and metrics. Other key inputs to the accuracy and usefulness of financial statements are the accounting standards according to which they are prepared, and how they are audited. The key point here is that climate change may bring fundamental changes to the value of an issuer's physical and other assets. They may be worth significantly less than previously thought or become stranded assets that cease to have value before the end of their expected economic life. For example, a coal mine could cease to be viable through a combination of physical change at the location of the mine, taxes on emissions, and legislative

[18] See for example Canadian Securities Administrators (2019). See also Corporate Reporting Dialogue (2016) for further discussion of the concept of materiality in the context of climate change.
[19] See Task Force on Climate-Related Financial Disclosures (2017a and 2017b). For other frameworks, see also Sustainable Accounting Standards Board (2021) and Climate Disclosure Standards Board (2019).
[20] See for example Financial Conduct Authority (2020), part of a broader roadmap towards mandatory climate-related disclosures in the UK set out in HM Treasury (2020). New Zealand (Ministry of Business, Innovation and Employment 2021) has also announced plans to move to mandatory reporting for all listed issuers as well as larger banks, insurers, and investment managers.

restrictions on the production and use of coal. This is an example of where consideration would need to be given to impairment of the asset in the financial statements.[21]

The International Accounting Standards Board (2020) has provided a practice note for auditors on the issues to consider, which in turn references guidance available from the International Financial Reporting Standards Foundation (2020b) on how accounting standards apply to climate-related matters, with helpful pointers for specific accounting standards.[22] These approaches complement the TCFD recommendations by ensuring that the information and risks disclosed are appropriately reflected in the valuations underpinning financial statements.

Setting expectations for issuers

Examples of key short-term expectations you may wish to set, and indications of how expectations might evolve are that:

- All issuers should be aware that their obligations to disclose material information and risks include those arising from climate change and transition;[23]
- Issuers in highly impacted sectors (such as those for which additional disclosures are recommended by the TCFD) will be expected within the next three years to include meaningful disclosure of relevant climate-related information and risks in prospectuses, continuing disclosures, and financial statements, and take steps to ensure that asset valuations are consistent with this information and risks;
- All issuers will in time be expected to do the same and should start preparations now;
- You will begin your risk-based supervision of such disclosures in the following year; and
- You will consider whether further obligations (such as an obligation to comply or explain in relation to specified climate disclosure frameworks for certain categories of issuer) are needed in future, but meanwhile issuers should recognize that expectations in relation to the quality and precision of disclosures are likely to increase in the years ahead.

You may wish to point issuers to existing tools and frameworks they can use to help address these issues, including the TCFD Recommendations or alternatives such as the Climate Disclosure Board Framework (2019), Global Reporting Initiative (2020), and Sustainable Accounting Standards Board Standards (2021).[24]

You may also find it helpful to suggest that issuers start by considering the key questions in Box 3, which will help them focus on the four key dimensions of the TCFD recommendations: governance, strategy, operations, and metrics.

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[21] See International Financial Reporting Standards (2020b), IAS 36 Impairment of Assets.
[22] IFRS (2020b).
[23] IOSCO (2019).
[24] IOSCO (2020) includes an overview and high-level comparison of available frameworks. See also Sustainable Accounting Standards Board and Climate Disclosure Standards Board (2019) for guidance on using SASB and CDSB to implement TCFD.

Box 3: Key climate impact questions for issuers

1. What governance and risk management arrangements does the Board have in place to ensure that the impacts of climate change and climate transition for the firm and its investors are identified and appropriately managed?
2. What are the key physical and transition risks your firm faces from climate change and climate transition in the next 5-10 years?
3. How do you think your customers will be affected by climate change and climate transition in the next 5-10 years?
4. What are the key actions you need to take in the next 5 years to address climate change and climate transition?
5. What data and metrics will you need to track and report on progress?

Supervisory focus

You may find it helpful to focus initially on the largest issuers, and those in the highly impacted sectors, and to review the prospectuses, market disclosures, annual reports, and financial statements of these issuers. When doing so, key questions to consider are:

- Can you see any evidence that the issuer has considered climate impacts?
- If so, has it considered governance, strategy, operations, and risk management?
- What, if any, specific climate-related issues are disclosed?
- If there are some, do these seem:
    - consistent with the issuer's activities?
    - consistent with disclosures made by others in the sector?
    - consistent with other sources of data on climate impacts (such as your country's climate impact assessment or low emissions development strategy)?
    - tailored to the issuer or generic boilerplate disclosures?

Initially, you may find that the biggest problem is a lack of any evidence that climate impacts have been considered and of any disclosure at all. You may then find that issuers start to incorporate very generic boilerplate disclosures with the aim of ticking the box that there may be risks but without giving the substance or granularity needed to provide meaningful information to investors. In line with the expectations you have set about the need for disclosures to improve over time, it will be important to challenge and support issuers to move beyond such boilerplate disclosures. TCFD (2020b) provides examples of effective disclosures.

Regulated firms

Managing risks to stability, integrity, and investor protection

Under a risk-based approach to supervision, regulated firms are expected to identify and take responsibility for managing prudential risks to the soundness of the firm and potentially to wider financial stability, risks to market integrity, and risks to investor protection from the way business is conducted. Increasingly, this involves considering a wider range of issues than those traditionally seen to be financial,[25] such as those arising from climate change and transition. However, while the particular issues may initially be novel, the basic principles of a risk-based approach are the same and existing techniques such as enterprise risk management frameworks can be applied to these areas in a way proportionate to risk.[26]

This means that although you may need to do some initial awareness raising with regulated firms specifically on climate issues, you may be able to integrate climate issues into your existing risk-based approach, and likewise firms can integrate consideration of climate impacts in their existing governance and risk management.

Some potential impacts are in principle relevant for all regulated firms, though they may be more significant for some. Other potential impacts will be relevant only for firms carrying out certain activities.

Operational resilience

Operational resilience will be relevant to some extent for all regulated firms. Issues could arise from increased exposure to floods, fires, or other extreme weather events that might arise with greater frequency given climate change. These events can directly affect the entity itself or its key customers, counterparties, or suppliers of utilities, infrastructure, and services.

Furthermore, these extreme events, together with the introduction of significant climate-driven policy measures such as carbon pricing, emission caps, or withdrawal of fuel subsidies, could trigger significant changes in market sentiment and trading activity and hence place unusual demands on market infrastructure and systems.

For securities supervisors, a key objective is to protect market integrity by reducing the likelihood that such an event prevents the orderly functioning of securities markets, and by ensuring that, if there is an interruption, timely steps are taken to resolve the situation in an orderly way.

It is therefore particularly important to consider the operational resilience of infrastructure providers such as exchanges, clearing houses, settlement systems and central securities depositories, and other key entities such as market makers without which markets may not be able to function normally.

This issue encompasses not only traditional disaster recovery and business continuity planning for extreme events, but also more strategic considerations about how to ensure that key

[25] Toronto Centre (2020c).

[26] TCFD (2020a) provides useful guidance on how to incorporate climate impacts within wider risk management frameworks.

services and activities can be provided to the necessary extent in the face of significant physical, economic, technological, and regulatory change (as well as risks that are not climate-specific, such as cyber resilience). In addition to preventative measures, firms should also plan to enable a timely and orderly recovery when disruption occurs.[27]

It would also be prudent to consider whether firms undertaking custody or holding client assets have sufficiently robust arrangements in place to ensure that client assets are protected from physical risks and remain appropriately accessible even if operational challenges arise. This consideration is relevant not only for securities but also for other asset classes. Particular consideration may need to be given to the storage of commodities for physically settled futures contracts, for example if agricultural commodities are stored in locations with increased flood risk.

Changing asset values

Potential changes in the value of assets will affect regulated firms differently depending on the activities they carry out. For those firms that themselves take positions and so are subject to material market risk, changes in asset valuations could have consequences for their profitability and capital position. This is primarily a prudential concern and so of greatest concern to supervisors where an individual firm or type of firm affected could pose wider financial stability risks.

For firms advising clients on investments or managing portfolios on behalf of clients, the supervisory concerns are more about conduct and the risk of harm to investors if firms do not consider how climate impacts may affect their fiduciary duties. This risk is particularly acute in areas where there is a possibility of assets becoming stranded, but also where physical and transition changes could have a significant effect on the value of investments more widely.

Asset managers need to ensure that climate risks are appropriately and proportionately factored into their investment research, portfolio construction, risk management, and stewardship approaches. The Monetary Authority of Singapore's (2020) guidance to asset managers on environmental risk management, including climate impacts, is a useful example of how to do this with reference to both existing international standards and tools and setting the expectation that asset managers will need to keep up to date with changes as these standards evolve.

Operators of collective investment schemes (CIS) will similarly need to consider whether stated investment objectives and strategies remain appropriate and achievable in the light of climate impacts, how they will factor in climate considerations to due diligence on asset selection, and whether scheme portfolios are consistent with investment objectives and projected returns once climate risks are factored in. They will also need to consider how to ensure that asset valuations appropriately reflect climate impacts (including potentially stranded assets) and how to disclose valuations and valuation methodologies to customers.[28]

Given that climate impacts may lead to a greater frequency of extreme events that give rise to changes in market sentiment, CIS operators may need to have recourse to liquidity management tools to manage redemption shocks and illiquidity. Supervisors need to consider whether these are explicitly provided for or implicitly allowed within the applicable regulatory

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[27] See Toronto Centre (2021).

[28] These elements are all required under Principles 24, 25, and 26 of IOSCO's Objectives and Principles of Securities Regulation. See IOSCO (2017).

regime and prompt CIS operators to consider, for example, whether they can apply redemption fees or swing pricing to reduce dilution without having to suspend redemptions.

In the light of these climate-related risks to asset values, investment advisers and asset managers should review marketing materials and other communications to clients to ensure that they give a fair, clear, and not misleading impression of products, services, investment strategies, and assets, in addition to considering whether specific disclosures are needed. They may also need to consider product governance and distribution strategies, for example to determine whether there are products, strategies, asset classes, or sectors that are no longer appropriate for retail investors.

In summary, key investor protection risks for supervisors to consider include:

- **Inappropriate investment advice or discretionary portfolio management** given the potential impact of climate change and transition on asset values and the wider trading environment;
- **Insufficient or inaccurate disclosures on climate impacts by issuers and asset managers** that prevent investors from making informed decisions about buying, holding, or selling securities;
- **Investors paying inappropriate amounts for assets** that if valued in a way that takes account of climate risks would be worth much less, or that could quickly lose value, without realizing this; and
- **Loss of client assets and inability to access assets or to liquidate positions** arising from operational failures.

A further issue that may be significant is the extent to which regulated firms may suffer reputational damage from activities perceived to be contributing to climate change, from an insufficient focus on addressing climate change, or from making misleading claims that they are operating sustainably, which are then challenged. This damage could become prudentially significant for the financial services provider concerned.

Setting expectations for regulated firms

Examples of key short-term expectations you may wish to set for regulated firms, and indications of how expectations might evolve, are that:

- All regulated securities firms should consider how climate impacts affect their operational resilience and should, where necessary, take action to reduce the risk of harm to investors or market integrity (you may wish to highlight any particularly severe short-term risks in your country);
- Exchanges and other infrastructure providers, market makers, and custodians will be expected to be able to evidence within the next three years which climate impacts they have identified and how their operational resilience arrangements have been adapted;
- Asset managers and collective investment scheme operators need to review within three years how their portfolios and schemes are exposed to climate impacts in higher-risk sectors (you may find it helpful to refer to the TCFD sectors for which additional disclosures are mandated) and to assets in locations subject to acute physical risks, and have a plan in place for addressing risks arising in relation to their duties to clients; and

- Firms may be subject to more precise climate-related requirements in future and meanwhile they may be subject to increased reputational risk if they fail to consider how climate impacts affect their strategy, governance, operations, and disclosures.

Supervisory focus

Securities supervisors looking to identify higher-priority firms in relation to climate change and transition may find it helpful to consider the following in addition to any existing risk-sizing metrics used:

- **Acute physical risks**: if your country or parts of it are likely to suffer acute physical risks (for example because a major commercial centre is predicted to be affected by rising sea levels), then risks to operational resilience are potentially very significant and risks to the safeguarding of assets belonging to a regulated firm, a fund, or their clients need to be considered. As discussed above, threats to the operational resilience of infrastructure or liquidity providers are also important as they have the potential to cause or exacerbate wider market disruption.
- **Key entities in markets affected by physical or transition risk**: the business of exchanges trading commodity futures, options, or derivatives, or of securities exchanges where a significant proportion of issuers listed/securities traded are issued by agriculture, energy, or other carbon-intensive entities, could be significantly affected by climate change and transition. Similarly, if you have regulated firms that generate a significant part of their business from companies in those sectors, their business models could be significantly affected.
- **Infrastructure providers**: any infrastructure provider, such as an exchange, settlement system, or central securities depository that could face increased operational risk could pose a wider risk to market integrity if it does not have appropriate operational resilience.
- **Entities taking significant market risk**: those entities that themselves take significant market risk, for example by underwriting securities placements, acting as market makers, or dealing on their own account, could be at higher risk if the valuations on which decisions are based do not adequately reflect climate impacts. It is also important that market makers have sufficient operational resilience to be able to provide market liquidity when it is needed.
- **Asset managers and collective investment scheme operators**: in addition to considering the scale of assets under management, there could be higher risks for firms managing portfolios or funds that invest in heavily impacted economic sectors or property in higher-risk locations, particularly where such investments are marketed to retail investors.
- **Entities marketing green or climate-friendly products or services**: there could be issues for a regulated firm or a collective investment scheme if it does not deliver on or cannot substantiate its green credentials, and there may also be an increased risk of investor protection concerns through greenwashing, as discussed further in the next section.

For firms in the higher-risk categories identified above, you may wish to require Boards to send you their responses to a few key questions within a set time period and focus your initial follow-up on those who demonstrate the least engagement and understanding of the issues.

Box 4: Key climate impact questions for regulated securities firms

1. What governance and risk management arrangements does the Board have in place to ensure that the impacts of climate change and climate transition for the firm and its clients are identified and appropriately managed?
2. What are the key physical and transition risks your firm faces from climate change and climate transition in the next 5-10 years?
3. How might climate impacts affect your operational resilience in the next 3-5 years and how are you addressing this?
4. In the light of climate impacts, what changes will you need to make in the next 3 years in your services to clients?
5. What changes will you have made in a year's time and who is responsible for ensuring those changes happen?

The answers to these questions will help you to gauge the extent to which firms have engaged with identifying and managing risks relevant to their business activities and give you a basis for tracking progress and holding the Board and senior management accountable for delivery. It will also help you to identify outlier firms who appear least advanced or who have failed to address key areas relevant to their business activities and focus supervisory effort accordingly. You may also identify good practices that can be shared with other firms.

Green investing

Issues for supervisors

Some institutional and retail investors are already showing a preference for investments that contribute to climate transition, avoid investing in the sectors with the greatest adverse climate impact, or are otherwise consistent with achieving the Paris climate goals.[29] There are expectations that this preference will increase. Some jurisdictions are going further, and seeking to encourage, enable, and incentivize a preference for green investment.[30]

You may find through discussions with investor representatives that this is not yet a big issue for investors in your jurisdiction. However, investor preferences may change; there may also be public policy drivers for the issuance of climate bonds or green bonds to finance transition and for encouraging investors to allocate capital to more sustainable activities. In the meantime, some issuers and asset managers may still seek to position securities or investments as consistent with specific climate-related objectives in order to attract capital from investors

[29] For example, some institutional investors have signaled intentions by becoming signatories to the UN's Principles for Responsible Investing (2021d). The Bank for International Settlements (2021) has launched green bond funds for central banks. Various asset managers have also committed to initiatives such as the Net Zero Asset Managers Initiative (2021). European Commission (2018) also cites research among retail investors.

[30] For example, the European Commission's Sustainable Finance Action Plan (2018) sets out a range of measures that seek to mainstream climate and other environmental, social, and governance (ESG) factors in financial decision making and to channel investments towards more sustainable investments.

elsewhere. You will therefore need to consider to what extent you wish to provide a framework for those who wish to raise finance for or invest in securities or assets meeting climate-related objectives or support the emergence of green investing.

Green investing brings additional risks to investor protection and potentially to wider market integrity if capital allocation is distorted. Issues include:[31]

- Whether investors have access to information about the climate impact of the issuer or activities financed by the securities (not just how climate impacts affect the issuer or activities) and how to interpret it;
- How to assess and compare any claims made about the compatibility of the investment with a particular climate profile or objective (such as consistency with a scenario relative to a 1.5% or 2% rise in temperature by 2050);
- Whether such claims are verifiable, and by whom;
- Whether the entity setting a climate-related objective or making climate-related claims can actually deliver on the commitment (for example, if there is a shortage of assets that meet the criteria set); and
- The potential (as ever) for fraud, either through false claims or by using green marketing to attract investment to assets that are non-existent or do not have the claimed value.

Determining whether claims about green benefits or compatibility with climate-related objectives are valid is a highly complex area and counterclaims of greenwashing (falsely claiming or over-stating climate-related or other environmental benefits) are common. These difficulties arise in part because it is hard to accurately assess and compare the environmental impact of different activities. There is also scope for debate about whether it is appropriate to represent financing for one project or activity as green, while an issuer is at the same time carrying out carbon-intensive activity (for example, where a company heavily engaged in fossil fuel extraction raises finance for investment in renewable energy production, or where a fossil fuel extractor invests in technology to reduce emissions).

It has to be recognized that it is very challenging to deliver consistent and effective climate-related reporting and for supervisors to assess and where necessary enforce their adequacy. Both IOSCO's Growth and Emerging Markets Committee and the NGFS have recommended further development of taxonomies of economic activities to support the assessment and disclosure of climate risks, with reference to work in China and the European Union.[32] The aim of taxonomies is to provide a common classification of the climate impact of different activities to provide a consistent basis for the assessment of risks and for disclosures. Such a consistency of approach is not straightforward to achieve, but would support a more accurate assessment of risk, providing comfort to issuers that competitors are not benefitting from using a different basis in their assessments and disclosures, as well as potentially enabling better and less resource-intensive verification of disclosures and a more consistent basis for investor decision making.

This is therefore an area where significant international effort is underway to increase the coherence and sophistication of standards and supporting tools for regulation and supervision and for wider public policy goals, and to ensure that appropriate governance and enforcement

[31] Similar issues apply in related contexts such as ESG investing.
[32] See IOSCO GEMC (2019) Recommendation 3. See European Union (2020) for the EU's taxonomy and supporting material.

mechanisms are in place to deliver public interest objectives. For example, following a consultation in 2020, the International Financial Reporting Standards Foundation (2021) has announced its intention to work on developing international standards and supporting governance on sustainability reporting. It will initially focus on climate-related reporting, working in collaboration with IOSCO and drawing on existing frameworks such as the TCFD.[33]

Climate bonds

Climate or green bonds can play a role in helping to channel capital from those wishing to provide funding for climate transition or enhanced sustainability to appropriate projects. Essentially, these are bonds like any other but with a commitment by the issuer that the proceeds will be used to finance activities that contribute to climate transition or enhanced sustainability. In addition to all the tools mentioned in the section on issuers, which are also relevant here, specific frameworks have been developed to help provide assurance for investors about the environmental credentials of the bond and activities financed, with the two most widely referenced being those developed by the Climate Bonds Initiative Standards and Certification Scheme (2020) and by the International Capital Markets Association (2018 and 2020). Some supervisors have used these as a basis for guidelines to issuers, listing authorities and exchanges in their jurisdiction.[34] The Bank for International Settlements accepts bonds aligned to either standard for inclusion in its green bond fund.

Other frameworks and tools

The World Federation of Exchanges and UN Sustainable Stock Exchange Initiative (2019) have prepared a guide for exchanges on how to integrate climate change and other sustainability factors in their own business and operations. This is in addition to the Sustainable Stock Exchanges Initiative (2021) database of guidance prepared by exchanges for their members on ESG reporting, which also helpfully tracks which international frameworks and standards are referenced (typically each guidance references multiple frameworks).

Some jurisdictions have introduced specific frameworks to regulate the claims that financial services providers make about sustainability or ESG factors in relation to financial products and services.[35] Having such a framework is particularly important in jurisdictions that are seeking to facilitate or encourage sustainable investing to reduce the risk of harm to investors from false or misleading claims. However, interpreting and enforcing such requirements is likely to require a significant investment of resource and expertise.

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[33] See also IOSCO (2021).
[34] See for example ASEAN (2018), Securities and Exchange Board of India (2017), Superintendencia Financiera de Colombia (2020), and, for a shariah-compliant green sukuk framework, Securities Commission Malaysia (2019).
[35] See for example Articles 8-13 of European Union (2019a), which sets requirements for financial services providers claiming sustainability characteristics or objectives for investment products to disclose substantiating information and ensure that their marketing communications are consistent with it.

Setting expectations in relation to green investing

The preparatory work outlined in the first section of this Note will help you consider whether there is a short-term need or appetite to put in place a supporting framework for climate bonds or other green investments, or the likelihood that public policy will make this desirable or necessary in the coming years. In the meantime, it may be helpful to:

- Underline the core principle that representation to investors needs to be clear, fair, and not misleading;
- Indicate that you would therefore expect regulated entities to be able to document and explain the factual basis for any climate-related claims made and ensure that the claims are not overstated;
- Refer to existing tools that may help regulated firms to fulfil these responsibilities; and
- Set expectations that the need to consider the greenness of investments and the rigour of the data and evidence underlying any such claims are likely to increase in the coming years.

Conclusions

Climate change and transition are already affecting securities markets. Capital markets are expected to play an important role in financing transition, and the business of issuers in many sectors is already being affected by climate impacts, bringing risks as well as opportunities for investors. Increasing investor preference for assets consistent with the Paris climate goals, incentivized or at least facilitated by public policy, could further increase the significance of climate issues for securities markets in the coming years.

Securities supervisors can start to assess and mitigate climate-related risks to financial stability, market integrity, and investor protection now using existing core principles and standards. Key first steps are to:

- Identify any acute vulnerabilities that are so significant as to be potentially systemic;
- Set expectations among issuers and regulated firms that climate-related risks should be factored into their risk management, disclosures, and (for regulated firms) communications and services to clients; and
- Raise awareness among issuers and regulated firms, particularly in the higher-risk segments discussed above, of the tools and frameworks available to help them do this.

Establishing the climate credentials of issuers, securities, and collective investments seeking to present their activities or services as sustainable is a difficult area. Significant international effort is focused on establishing supporting tools such as taxonomies of activities, standards for audits, and financial statements and ensuring these are as coherent as possible and sufficiently robust. In the meantime, some tools are available to reduce the risk of greenwashing, but vigilance is needed, particularly in relation to the promotion of green investments to retail investors.

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