Research Document Working Paper

The Role of Regulators in the Regulation of Climate Risk and ESG matters

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Policy Research and Planning

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The views expressed in this outline are those of the staff of the Policy Research and Planning Department, and do not necessarily reflect the views of the Trinidad and Tobago Securities and Exchange Commission.

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Executive Summary

This working paper explores the growing importance of regulating climate risk and Environmental, Social, and Governance (ESG) matters within the financial sector. It examines the evolving regulatory landscape, key initiatives, challenges, and implications for financial markets in Trinidad and Tobago.

Key Findings:

- Climate change poses significant financial risks to the global economy, including physical risks (extreme weather events) and transition risks (policy changes, technological advancements).
- Financial regulators play a crucial role in addressing these risks by:
  - Assessing and supervising climate-related financial risks faced by financial institutions.
  - Mandating climate-related disclosures from financial institutions and corporations.
  - Incorporating climate-related scenarios into stress tests.
  - Promoting the development of green financial products and markets.
- Securities regulators also play a key role, focusing on:
  - ESG disclosure requirements for listed companies.
  - Developing green taxonomies and standards to prevent greenwashing.
  - Addressing greenwashing and protecting market integrity.
- International frameworks such as the Task Force on Climate-related Financial Disclosures (TCFD) and the European Union (EU) Taxonomy Regulation act as and provide benchmarks for ESG practices and green finance.

Challenges and Opportunities:

- Trinidad and Tobago needs a framework to address climate-related risks and ESG matters within the local securities industry.
- The development of a robust regulatory framework presents an opportunity to attract sustainable investments and promote green financing initiatives.

Recommendations:

- This paper identifies Gaps and recommends some legislative amendments.
- The following short-term and medium-to-long-term initiatives should be looked at to establish and regulate green finance in Trinidad and Tobago under the oversight of the Trinidad and Tobago Securities and Exchange Commission (TTSEC):

Short-Term Priorities

- **Regulatory Alignment:** Green finance securities should be registered within the existing framework to ensure seamless integration.
- **Public Awareness & Capacity Building:**
  - TTSEC should provide training programs for market participants on green finance issuance, reporting, and certification.

    - Investor awareness campaigns should highlight the benefits of green finance to drive market demand.
- **Climate Stress Testing:** Climate-related risks should be incorporated into TTSEC's stress testing framework.

Medium to Long-Term Initiatives (Legislative Action Required)

- **Green Bond Standards:** Develop clear criteria for eligible green projects, incorporating local adaptation finance needs.
- **Mandatory Use of Proceeds & Reporting:** Require full allocation of funds to sustainable activities, with annual impact reporting to prevent greenwashing.
- **Certification & Third-Party Verification:** Green bonds should undergo independent verification, with oversight from TTSEC and potential collaboration with international bodies.
- **Incentives for Issuers:** Explore tax incentives, subsidies, and expedited regulatory approval to encourage green bond issuance.
- **Market Infrastructure & Supervision:** Establish dedicated green bond listing requirements and ongoing compliance monitoring through TTSEC and the Trinidad and Tobago Stock Exchange.
- **Regional & Global Alignment:** Harmonize green finance standards with Caribbean counterparts and align TTSEC's framework with global best practices (e.g., Green Bond Principles, EU Green Bond Standard, UN SDGs).
- **Greenwashing Risk Mitigation:** Introduce enhanced ESG disclosures, enforce compliance through penalties, and revoke green bond designations in cases of misrepresentation.

By implementing these initiatives, Trinidad and Tobago can foster a robust green finance ecosystem, attract sustainable investments, and contribute to global climate goals. Overall, this working paper highlights the need for proactive regulation to address climate risk and promote sustainable finance in Trinidad and Tobago. By implementing a robust framework, the country can enhance financial stability, attract responsible investments, and contribute to a greener future.

1. Introduction

Climate risk and Environmental, Social, and Governance (ESG) factors have gained prominence in the financial industry over recent years. The increasing prevalence of climate-related risks has necessitated a profound shift in the regulatory landscape. As global concerns about climate change and sustainability continue to grow, financial regulators and securities regulators have begun to incorporate these considerations into their regulatory frameworks. These regulators play a pivotal role in ensuring that the financial markets accurately price climate risks and that investors have the necessary information to make informed decisions regarding ESG matters.

Financial institutions, as key players in the global economy, are particularly exposed to these risks. Consequently, financial regulators have been tasked with developing and implementing frameworks to mitigate and manage such exposures. Climate-related risks could contribute to financial instability given their systemic nature and the historical reliance of the financial system on long-term relationships with assets and activities emitting greenhouse gases. Financial regulators have a mandate to detect and mitigate risks to the financial system. The European Central Bank (ECB) and Bank of England (BoE) have started taking action regarding these risks. However, these efforts are still in their infancy and other large jurisdictions notably including the US and emerging economies have so far been much slower to act (Campiglio et al., 2018). One reason is that there exists an array of regulatory tools in different jurisdictions other than central banks, financial regulators and supervisors themselves that could also address climate-related risks in the financial system and the economy more broadly.

As a member of the Small Island Developing States (SIDS), it is imperative that policymakers in Trinidad and Tobago recognise the need to develop a plan and framework for facing the ever-increasing challenges and financial costs associated with climate-related risks. This working paper represents a key step in that direction by exploring the role of financial and securities regulators in the regulation of climate risk and ESG matters, analysing the evolving regulatory landscape, key initiatives, challenges, and implications for financial markets. In particular, this paper seeks to address the following questions:

1. How do financial (especially securities) regulators imbed climate risk into Financial Stability Assessments? Is it done via legislation or other methods?
2. How do securities regulators treat with green financing? In particular, what are the possible AML/CFT links associated with green financing and how do they detect greenwashing?
    a. This will include a Jurisdictional review for Green Financing frameworks.
3. What are the disclosure requirements for climate risk and ESG matters?
4. What are the Challenges and Opportunities in regulating Climate Risk and ESG Matters?
5. What are the Gaps in the local regulatory framework?
    a. This section will focus on a Gap Analysis of the legislative frameworks in Trinidad and Tobago.
6. What is the Way Forward in our jurisdiction?
    a. This section will provide recommendations for the Way Forward in developing a framework for Climate Risk, ESG matters and Green Financing.

It is the intention that this working paper will form the basis for the development of a robust regulatory framework for climate-related risks and ESG matters as well as the treatment of green financing instruments within the local securities industry.

2. The Importance of Regulating Climate Risk and ESG Matters

2.1 Background and Context

The subsection on background and context explores the historical and contextual factors that have led to the current role of financial regulators in regulating climate risk and ESG matters. These include the evolution of regulatory frameworks and shifting perspectives on environmental, social, and governance issues in the financial sector. Understanding these factors is essential for comprehending the necessity of regulatory interventions and the complexities they address.

Climate change is set to become one of the most significant challenges of the twenty-first century, having potentially catastrophic global environmental, social, and economic consequences. It is also an issue of immense injustice, as it largely affects the poorest countries and communities, despite them having contributed least to the problem. Failure to comply with plans to limit global warming will lead to extremely challenging climate conditions, likely rendering many parts of the planet unviable. Even if all commitments towards carbon neutrality by 2050 are implemented, temperatures will still rise by more than +2 °C (Campiglio et al., 2018), with potentially irreversible effects on the climate and destructive consequences for human civilization.

Reasons that have led to growing acknowledgement of climate change as a risk that needs to be monitored, and to a lesser extent proactively managed, in industrialized countries and by the public and financial sectors have been explored by policymakers. In the past, concerns about climate change were mainly restricted to the environmental agenda, aimed at modifying the behaviour of individuals and companies. However, in recent years, and in particular after the financial crisis of 2007 – 2008, there has been a shift of the climate change debate into the financial arena, and climate change has started to be viewed more as a risk to financial assets (J. Richardson, 2009). Partially overlapping with that, there has also been a shift from the passive monitoring and consideration of market-wide and systemic risks to a more proactive policy-dominated framework.

2.2 Importance of Addressing Climate Risk

Taken together, these views show the significant impacts climate change can cause for an economy and welfare. Hence, there is potential ground for justifying regulatory involvement. These arguments indicate that there is a need to assess the extent to which climate-related physical risks can affect the stability of the financial system and thereby the economy. Further, there is a need to analyze the state of exposure of the financial system to these risks, and what possible policy measures could be warranted to prevent systemic crises in the future (J. Oguntuase and O. Ajibare, 2018).

SIDS like Trinidad and Tobago are prone to rising sea levels. Thus, it is imperative that our financial institutions recognise Climate risk in their operations and look for mitigants to ensure investor protection. Since the country is a carbon producing economy, it should be implementing measures to reduce footprint. This will necessitate the capital market being able to facilitate the funding of green initiatives which can then contribute to economic diversification and attract

Foreign Direct Investment. Another issue that would need to be addressed is for local insurance companies to embed climate risk calculations into their premiums.

2.3 Theoretical Framework

Despite the growing concern regarding ESG matters, financial regulators globally do not appear to actively manage climate risk as part of their mandates. This is contrary to the activities of some other regulators such as competition authorities and telecommunications regulators. A few hypotheses are formed based on the theoretical underpinnings of financial regulation, examining the independence of regulators, the entry of behavioural economics, and the changing priorities of international organisations such as the IMF and the Basel Committee. The hypotheses will assist in understanding the global landscape of financial regulation and the role financial regulators play in managing climate risk.

The regulatory philosophy or theoretical foundation of financial regulation is used as a starting point for understanding the global financial regulatory landscape (Ojo, 2006). The nature of regulation by financial regulators varies from prescriptive and interventionist in ‘the old world’ to less interventionist in ‘the new world’. This is the nature of financial regulation. The latter encompasses the broad-based regulating of financial firms in areas such as the wholesale fixing of interest rates and the mandating of accounting systems to promote competition by one set of regulators, whilst a different set of regulators undertake to return to the market as self-correcting and promulgate ‘light touch’, principles-based regulation instead.

This working paper seeks to understand how and why the understanding of the discipline of financial regulation across the world changed over time. It does not seek to defend nor to refute either position, but rather will consider the empirical reality of global financial regulation as understood by regulators over time. The understanding of the discipline of financial regulation will consider the apparent contradiction in the presence of both ‘the old world’ and “the new world’ regulatory philosophies, by exploring the relevance of parochial interests in shaping the gradual process of supra-national harmonisation of regulatory philosophies within a globalised economy. With this wider theoretical framework, global differences in the financial regulatory approach to climate change would be examined.

The choice between an "Old World" versus "New World" approach to climate risk and ESG (Environmental, Social, Governance) regulation depends on the regulatory environment, priorities, and cultural contexts of the regions in question. The following outlines how these approaches differ and how they might be balanced.

Old World Approach (Europe)

- **Characteristics**: The EU tends to favour a highly structured, top-down approach with detailed regulatory frameworks, like the EU Taxonomy for Sustainable Activities and the Sustainable Finance Disclosure Regulation (SFDR). These regulations set explicit standards and define what counts as “sustainable,” often holding companies to stringent requirements.

- **Advantages**:
    - Provides clear standards that reduce ambiguity for companies and investors.
    - Creates accountability and ensures that companies are working toward EU-aligned climate goals.
    - Reduces "greenwashing" by enforcing strict reporting and transparency standards.
- **Drawbacks**:
    - Can be costly and complex for companies to comply with, especially smaller businesses.
    - Runs the risk of slowing innovation by being overly prescriptive.
    - May lack flexibility in addressing emerging challenges and different business models.

2. New World Approach (U.S., Canada, parts of Asia)

- **Characteristics**: This approach is generally more flexible, with less prescriptive requirements with greater focus placed on voluntary guidelines and market-driven incentives. In the U.S., for instance, the Securities and Exchange Commission is still exploring standardized ESG disclosures, but there's currently less direct oversight and more emphasis on market responses to investor demand for sustainable practices.
- **Advantages**:
    - Encourages innovation by allowing companies to set their own goals and frameworks.
    - Can reduce compliance costs and adapt to the unique needs of individual sectors.
    - Fosters a climate of corporate responsibility driven by consumer and investor pressure.
- **Drawbacks**:
    - Lack of standardization makes it harder for investors to compare ESG metrics across companies.
    - Increased risk of greenwashing, as companies can make vague or misleading claims without strict oversight.
    - Limited alignment with global sustainability targets if companies or sectors fall behind.

A Balanced Approach

There is an argument for utilising a balanced approach as both approaches have strengths that could work well together. In a balanced model, the following characteristics would be applicable:

- **Core Standards**: Establish baseline regulations on key ESG disclosures, climate-related financial risks, and sustainability metrics, similar to the Old-World approach. This could create some level of uniformity for investors and accountability for companies.

- **Flexibility for Innovation**: Allow flexibility in how companies meet these standards, letting them choose initiatives suited to their business model. This New World-inspired element would encourage innovative ESG practices without overburdening companies.
- **Incentives for Going Beyond**: Provide incentives, such as tax breaks or investment advantages, for companies that exceed the core ESG standards.

A combined approach would create a clear, reliable framework to guide global ESG efforts while allowing for innovation and adaptability. Europe's established standards could lead the way in regulation, while the flexibility and market-driven incentives common in the New World could encourage wider adoption and dynamic responses to emerging risks.

2.4 Climate Risk in Financial Markets: The Interplay Between Climate Risk and Finance

Climate change affects countries in several ways. The most drastic consequences on the economies of countries occur due to either extreme weather events (floods, storms, hurricanes, droughts, large temperature fluctuations etc) or large systematic shifts in climate population behaviour (elevations in sea level or a change in the overall temperature). The financial consequences of natural disasters and climate change on economic variables can vary (Battiston et al., 2019) in the overall range of months to years or on the overall scale of billions.

Climate change challenges the optimal allocation of capital due to the long time over which climate change processes develop – typically in the range of decades. However, most currently explored scientific investments develop in the overall range of years. Hence, the states of highly volatile systems like climate, ecosystem, economic etc. taken out of their boundaries and being put in disregard to negatives could lead to large systematic negative consequences (frequency, amplitudes etc) in other processes (e.g., economy) in the future (Campiglio et al., 2018).

When discussing these matters, it is important to grasp the main concepts involved. Any analysis on this topic will require focus on the three (3) main risks that should be accounted for and included in same:

- **Climate risk:** This refers to the potential financial losses that can result from climate change-related events, such as extreme weather events, regulatory changes, and shifts in market sentiment. Climate change manifests in a variety of financial risks and its associated risks are often categorized into two main types: physical risks (e.g., extreme weather events) and transition risks (e.g., policy changes, technological advancements).
- **Physical risk:** This includes the direct impacts of climate change, such as damage to assets due to extreme weather events.
- **Transitional risk:** This refers to the financial risks associated with the transition to a low-carbon economy, including regulatory changes, technological advancements, and shifts in consumer behaviour.

These risks can significantly impact financial institutions, corporations, and investors. As noted by Buhr and Macheras, "Climate change poses a systemic risk to the financial system, with potential implications for financial stability" (Buhr and Macheras 2016, 27).

2.5 The Role of Financial Regulators

Financial regulators are entrusted with maintaining financial stability and protecting consumers. As such, their role in addressing climate risk encompasses several key areas:

- **Risk Assessment and Supervision:** Regulators must assess the climate-related financial risks faced by financial institutions and develop robust supervisory frameworks for evaluation of these risks. The Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) has provided a valuable framework for assessing and disclosing climate-related risks (Financial Stability Board 2017).
- **Disclosure Requirements:** Mandating climate-related disclosures from financial institutions and corporations is essential for enhancing transparency and informing investors. The EU's Sustainable Finance Disclosure Regulation (SFDR) is a prominent example of such requirements (European Union 2019). See Appendix 1 below for list.
- **Stress Testing:** Incorporating climate-related scenarios into stress tests can help assess the resilience of the financial system to climate shocks. The Bank of England has been a pioneer in this area (Bank of England 2021).
- **Green Finance Promotion:** Supporting the development of green financial products and markets is crucial for facilitating the transition to a low-carbon economy. Central banks and supervisors, through initiatives such as the Network for Greening the Financial System (NGFS), have been actively involved in promoting green finance (Network for Greening the Financial System 2019).

Securities regulators also play an important role in regulating Climate Risk and ESG Matters, which includes the following key areas:

- **ESG Disclosure Requirements:** Securities regulators play a crucial role in ensuring that investors have access to material information related to climate risk and ESG factors. In recent years, several securities regulators have introduced or proposed mandatory ESG disclosure requirements for publicly listed companies. The U.S. Securities and Exchange Commission (SEC) has been actively considering new rules requiring companies to disclose material climate-related risks and opportunities, as well as information on their ESG practices. The European Securities and Markets Authority (ESMA) has also been at the forefront of promoting standardized ESG disclosures within the EU.
- **Green Taxonomies and Standards:** Securities regulators have been involved in the development of green taxonomies and standards to facilitate the classification of sustainable investments. The EU Taxonomy Regulation, for example, provides a framework for determining whether an economic activity can be considered environmentally sustainable. This regulation is aimed at preventing greenwashing and ensuring that investors can easily identify and invest in genuinely sustainable activities. Securities regulators play a key role in overseeing the implementation and enforcement of such taxonomies to maintain the integrity of sustainable finance markets.
- **Addressing Greenwashing and Market Integrity:** Greenwashing, defined as the practice of making misleading claims about the environmental benefits of a product or service, poses a significant challenge to the credibility of ESG investments. Securities regulators are responsible for monitoring and enforcing against greenwashing practices to protect investors and maintain market integrity. The SEC, for instance, has established a Climate and ESG Task Force to identify and address potential violations of ESG-related

disclosure requirements. Similarly, ESMA has issued guidance on the supervision of ESG disclosures and has conducted reviews to assess the accuracy and reliability of ESG ratings and labels.

2.6 Criteria for determining Quality of ESG Disclosures

To determine if a firm has high-quality ESG disclosures, regulators like the TTSEC should focus on several key elements. These elements help to ensure that the ESG information provided is comprehensive, transparent, and aligned with global standards, enabling stakeholders to make informed decisions. Here are the essential elements TTSEC and similar regulators might look for:

1. Materiality and Relevance

- **Material ESG Issues**: The firm should identify and report on ESG issues that are material to its industry and operations, i.e., those that significantly impact financial performance or affect stakeholders.
- **Stakeholder Engagement**: Evidence of engagement with key stakeholders to identify relevant ESG issues can support the materiality assessment and ensure the disclosures reflect the firm's impact and stakeholder priorities.

2. Transparency and Accuracy

- **Clear Data and Metrics**: ESG disclosures should include quantifiable, verifiable data (e.g., carbon emissions, diversity ratios) to ensure accuracy and transparency.
- **Balanced Reporting**: High-quality ESG reports should be balanced, presenting both positive and negative aspects of the firm's ESG performance.
- **Audits or Verification**: External assurance or verification of ESG data enhances reliability and provides credibility to stakeholders.

3. Alignment with Standards and Frameworks

- **Global Standards**: Disclosures aligned with established frameworks like the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD), or the United Nations Sustainable Development Goals (SDGs) provide consistency and comparability.
- **Local Relevance**: The firm should also consider local guidelines or standards set by the TTSEC or regional frameworks relevant to Trinidad and Tobago.

4. Governance and Accountability

- **Board Oversight**: Disclosure of the board's role in ESG strategy, oversight, and integration into governance practices.
- **Management of ESG Risks**: Information on how the firm identifies, assesses, and manages ESG risks, such as climate risks or social issues, can indicate robust governance.
- **Incentives and Policies**: Disclosure of ESG-related policies (e.g., diversity, ethics, anti-corruption) and incentives for management to achieve ESG objectives can show accountability.

5. Consistency and Comparability

- **Historical Comparisons**: Including historical data allows stakeholders to see trends and assess improvements or deteriorations over time.
- **Peer Benchmarking**: Comparison with industry peers can help assess relative performance and adherence to sector norms.

6. Future Orientation and Targets

- **ESG Goals and Targets**: The firm should disclose specific, measurable targets for future ESG performance (e.g., emissions reduction targets, diversity goals) and timelines to demonstrate commitment.
- **Progress Tracking**: Regular updates on progress toward ESG targets provide transparency and indicate whether the firm is meeting its commitments.

7. Accessibility and Clarity

- **User-Friendly Format**: The ESG information should be presented in a clear, accessible manner that enables stakeholders to understand and navigate the disclosures easily.
- **Digital Accessibility**: Providing digital or interactive reports can improve stakeholder engagement and make data more accessible.

Incorporating these elements into ESG disclosures helps TTSEC ensure that firms provide high-quality, decision-useful information, supporting the development of sustainable and responsible business practices in Trinidad and Tobago.

2.7 Regulation of Climate Risk

Financial and securities regulators embed climate risk into Financial Stability Assessments (FSAs) using a blend of legislation, regulatory guidance, and analytical methods aimed at identifying and mitigating climate-related risks in the financial system. Here's an overview of how these regulators integrate climate considerations:

- **Legislative and Regulatory Mandates:** In jurisdictions such as the EU, climate risk integration into FSAs is often mandated through legislation. Regulations like the Sustainable Finance Disclosure Regulation (SFDR) and the Corporate Sustainability Reporting Directive (CSRD) require companies, especially in the financial sector, to disclose information about climate-related risks and sustainability factors. These disclosures help regulators identify potential risks to financial stability, especially by allowing for uniform, comparable climate data across entities. Additionally, the European Central Bank (ECB) conducts climate stress tests on banks to assess how different climate scenarios might impact financial institutions' resilience.[1]

  In the United States, the Financial Stability Oversight Council (FSOC) and the Securities and Exchange Commission (SEC) play crucial roles. Although the U.S. does not yet have

[1] See the October 2022 final report from the Financial Stability Board (Supervisory and Regulatory Approaches to Climate-related Risks: Final report - Financial Stability Board) and the July 2024 report from the European Commission (Report on the monitoring of climate-related risk to financial stability - European Commission).

a comprehensive legislative framework specifically for climate disclosures, the SEC has proposed rules to mandate climate-related disclosures for public companies. These rules would require firms to report their greenhouse gas emissions, physical risks (e.g., vulnerability to extreme weather events), and transition risks (e.g., potential costs from shifting to a low-carbon economy). Such disclosures would align with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), a global framework that has become a standard for climate reporting.[2]

- **Scenario Analysis and Stress Testing:** Regulators increasingly use scenario analysis and stress testing to understand the potential impacts of climate change on financial stability. For instance, the Network for Greening the Financial System (NGFS), a coalition of central banks and supervisors, has developed a set of climate scenarios that regulators use to assess systemic risks. These scenarios cover various trajectories, including rapid carbon transition and severe physical impacts, allowing regulators to model potential losses across the financial system. The ECB and other EU regulators have integrated NGFS scenarios into their stress-testing frameworks, providing a forward-looking assessment of banks' vulnerability to climate risks.[3]

  Similarly, the FSOC and Federal Reserve in the U.S. have explored the feasibility of climate stress tests for major financial institutions. This approach includes evaluating how banks and insurers would be affected by adverse climate-related events, both in the near term (e.g., hurricanes) and in the long term (e.g., gradual regulatory changes).[4]

- **Voluntary and Supervisory Guidance:** Beyond legislation and mandatory disclosures, some regulators encourage voluntary reporting frameworks and supervisory guidance. The TCFD framework, for example, is widely adopted globally and provides a structured way for companies to disclose climate-related risks. In many cases, these voluntary disclosures fill information gaps and help investors and regulators assess climate exposure. The Financial Stability Board (FSB), which oversees the TCFD, has promoted the adoption of TCFD recommendations, which are now integral to both mandatory and voluntary reporting standards in various regions.[5]

- **Data Collection and International Coordination:** Effective climate risk assessment requires robust data. Regulators worldwide face challenges in collecting standardized, high-quality data on climate risks, especially from non-financial sectors whose operations are also vulnerable to climate change. International bodies like the FSB and the NGFS focus on coordinating efforts to close these data gaps, setting priorities for improved climate-related financial data. Through data sharing and harmonizing reporting requirements, these organizations help national regulators strengthen their climate risk assessment tools and foster consistency across jurisdictions.[6]

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[2] See the following links from the Financial Stability Board (Climate-related Risks - Financial Stability Board) and Deloitte (FSOC Report on Climate -Related Financial Risk).
[3] See the July 2024 report from the European Commission (Report on the monitoring of climate-related risk to financial stability - European Commission)
[4] See the following report from Deloitte (Deloitte (FSOC Report on Climate -Related Financial Risk).
[5] See the following link from Financial Stability Board (Climate-related Risks - Financial Stability Board)
[6] See the following report from Deloitte (Deloitte (FSOC Report on Climate -Related Financial Risk).

The integration of climate risk into FSAs is therefore achieved through a multi-faceted approach, combining mandatory disclosures, scenario analysis, supervisory guidance, and global collaboration. This approach enables regulators to better monitor and mitigate the financial system's exposure to climate-related risks, ensuring resilience amid an uncertain climate future.

Securities and financial regulators are increasingly embedding climate risks into financial stability assessments through a combination of policy frameworks, analytical tools, and industry engagement. Here are the key ways they address climate risks:

1. Defining Climate Risks and Their Impact on Stability

Physical Risks: Regulators evaluate risks stemming from climate-related events like extreme weather, floods, or wildfires that could impact financial assets, firms, or economies.

Transition Risks: They assess the economic and financial consequences of transitioning to a low-carbon economy, including policy shifts, technological changes, or market re-pricing of carbon-intensive assets.

These risks are linked to systemic financial stability through their potential to:

- Trigger sudden revaluations of assets.
- Affect the solvency of companies and financial institutions.
- Alter credit and market risks in portfolios.

2. Scenario Analysis and Stress Testing

Regulators employ scenario analysis to evaluate how climate risks might affect financial institutions and markets under various conditions. Key frameworks include:

- Network for Greening the Financial System (NGFS): Provides standardized climate scenarios.
- Stress Testing: Regulators require financial institutions to conduct climate stress tests to measure exposure to adverse climate outcomes. Examples include:
- The European Central Bank's (ECB) climate stress test.
- The Bank of England's Climate Biennial Exploratory Scenario (CBES).

Stress tests focus on:

- The financial sector's resilience to extreme climate scenarios.
- Time horizons extending beyond typical financial cycles to account for long-term risks.

3. Integration into Regulatory Supervision

Disclosure Requirements: Regulators mandate or encourage financial institutions to disclose climate-related risks using frameworks like the Task Force on Climate-Related Financial Disclosures (TCFD).

Risk Management Practices: Institutions are required to incorporate climate risks into their internal governance and risk management practices, including credit, market, and operational risk assessments.

Portfolio Analysis: Examining the carbon intensity of portfolios and potential stranded assets (e.g., fossil fuels).

4. Data Collection and Analytics

Data Gaps: Regulators prioritize closing gaps in climate data, such as firm-level carbon emissions, supply chain exposures, or sectoral vulnerabilities.

Advanced Analytics: Use of artificial intelligence, geospatial data, and probabilistic modelling to better understand climate impacts on financial systems.

5. Climate-Focused Market Oversight

Greenwashing Risk: Securities regulators ensure that climate-related financial products (e.g., green bonds, ETFs) adhere to stated sustainability goals and prevent misleading claims.

Carbon Market Oversight: Monitoring the integrity and stability of carbon markets, including carbon credits and offsets, which are critical for transition risk mitigation.

6. Policy and Advocacy

Regulatory Coordination: Working through bodies like the Financial Stability Board (FSB) and NGFS to develop international standards for climate risk integration.

Advocacy for Green Finance: Encouraging investments in sustainable projects and incentivizing the shift to low-carbon economies.

7. Reporting and Transparency

Regular inclusion of climate risks in Financial Stability Reports (FSRs) highlights their potential systemic impacts. For example:

- IMF: Integrates climate risks into its Article IV consultations and Global Financial Stability Report.
- FSB: Evaluates how climate risks intersect with financial stability globally.

By embedding climate risks into financial stability assessments, regulators aim to ensure that financial systems are resilient to both immediate and long-term climate-related disruptions, reducing systemic risks and promoting a stable transition to sustainable economies.[7]

[7] **Case Studies**

- *European Union*: The EU's Sustainable Finance Disclosure Regulation (SFDR) and its taxonomy for sustainable activities explicitly link climate risks with financial stability goals.
- United States: The SEC has proposed enhanced climate-related disclosures, and the Federal Reserve has started climate stress tests for large banks.
- Asia-Pacific: The Monetary Authority of Singapore and Reserve Bank of Australia actively assess climate risks in financial systems.

3. International and Jurisdictional Review

3.1 International Standards for ESG

Several international frameworks, standards, and guidelines play a vital role in setting benchmarks for Environmental, Social, and Governance (ESG) practices across industries. These standards are designed to ensure transparency, comparability, and consistency in ESG reporting and to help businesses and investors manage sustainability-related risks and opportunities.

Below are the key ESG international standards and frameworks:

- **International Organisation of Securities Commissions (IOSCO):** The IOSCO report on sustainable finance (FR04/2020) highlights the role of securities regulators in fostering sustainable investments through transparent disclosures and preventing greenwashing. It examines the regulatory landscape, market initiatives, and challenges around ESG frameworks. Key issues include inconsistencies across sustainability reporting standards, a lack of common definitions for sustainable activities, and difficulties in comparing ESG metrics. The report proposes that IOSCO play a central role in improving disclosure practices, coordinating globally, and enhancing investor protection within sustainable finance. The key areas discussed in this report are as follows:
    - The Role of IOSCO in Sustainable Finance:
        i. IOSCO aims to enhance the disclosure of environmental, social, and governance (ESG) risks by issuers and asset managers.
        ii. It promotes global coordination to avoid fragmentation in ESG standards and tackles risks like greenwashing.
    - Survey of Regulatory and Industry Initiatives:
        i. Surveys from 34 regulators and 130 industry participants highlight the fragmented use of ESG frameworks, with many calling for converging standards.
        ii. The report emphasizes challenges in standardization and calls for IOSCO's involvement in guiding sustainable finance efforts globally.
    - Current ESG Disclosure Frameworks:
        i. Various frameworks like TCFD, GRI, and SASB are assessed, noting difficulties in comparability, reliability, and consistency.
        ii. The lack of common definitions and metrics creates challenges in assessing sustainable activities across industries and jurisdictions.
    - Challenges and Investor Protection:
        i. Key challenges include Greenwashing, which includes misleading claims about sustainability performance, the existence of multiple frameworks that resulted in diversity in ESG frameworks thereby hampering comparability, and the presence of Data Gap that has resulted in the absence of reliable and standardized ESG data.
- **Global Reporting Initiative (GRI):** The GRI provides the most widely used standards for sustainability reporting, helping companies disclose their environmental, social, and governance impacts. The key components of the GRI Standards include:
    - The coverage of environmental (e.g., emissions, water usage), social (e.g., labour practices, human rights), and governance (e.g., anti-corruption) indicators.

    - The promotion of transparency and stakeholder engagement (Global Reporting Initiative 2024).
- **Sustainability Accounting Standards Board (SASB):** The SASB focuses on material ESG issues that impact financial performance, providing industry-specific standards. The framework covers 77 industries, with standards tailored to each sector; and also emphasizes materiality. This ensures that companies disclose only ESG factors relevant to their business (Sustainability Accounting Standards Board (SASB) 2024).
- **Task Force on Climate-Related Financial Disclosure (TCFD):** The TCFD focuses specifically on the financial risks posed by climate change and provides guidelines for companies to disclose these risks in financial reports. Its recommendations are primarily focused on climate-related governance, strategy, risk management, and targeted metrics. The TCFD framework has become a major benchmark, with regulators, such as the UK's Financial Conduct Authority, making TCFD-aligned disclosures mandatory (Task Force on Climate-Related Financial Disclosures 2024).
- **The International Sustainability Standards Board (ISSB):** The ISSB was established by the International Financial Reporting Standards (IFRS) with the primary aim of developing globally consistent sustainability reporting standards. One of its core elements is the consolidation of key frameworks such as the SASB, TCFD and Integrated Reporting. Its focus is on financially material ESG issues which provide investors with decision-useful information (International Financial Reporting Standards (IFRS) 2024).
- **The United Nations Sustainable Development Goals (SDGs):** The SDGs provide a global framework for addressing social, economic, and environmental challenges. While not a reporting standard, the SDGs guide companies and governments in aligning their activities with global sustainability priorities. There are 17 goals, covering issues such as poverty, climate action, gender equality, and responsible consumption. Companies use the SDGs to align their ESG strategies with global sustainability objectives. It is noted that many businesses incorporate SDG-aligned targets and disclosures into their sustainability reports (The United Nations - Department of Economic and Social Affairs 2024).

The various international ESG standards, frameworks, and guidelines reflect a growing commitment to managing sustainability risks and enhancing transparency in corporate and financial reporting. While organizations like **GRI** and **SASB** emphasize reporting ESG performance, frameworks such as **TCFD** focus specifically on climate-related financial risks. New initiatives, including the **ISSB**, aim to harmonize reporting standards globally to reduce fragmentation and improve comparability for investors and stakeholders. Together, these standards provide a comprehensive foundation for businesses and investors seeking to align with global ESG principles and ensure sustainable growth.

These frameworks will continue to evolve as regulators, companies, and investors deepen their understanding of ESG risks and opportunities. As regulatory pressures increase, it is likely that **mandatory ESG disclosures** and **harmonized international standards** will become more prevalent across global markets.

3.2 International Standards for Green Financing

There are various frameworks that are available that act as international standards for Green Financing, which will be discussed in greater detail below.

Green Equity Principles: The World Federation of Exchanges (WFE) introduced its *Green Equity Principles* in March 2023, providing a global framework to help exchanges classify stocks and shares as environmentally sustainable. This framework aims to increase transparency, reduce greenwashing, and promote the flow of capital into sustainable activities.

The WFE's framework is structured around five key pillars:

- **Revenues/Investments**: Ensuring a significant portion of revenues or investments is derived from sustainable activities.
- **Use of Taxonomy**: Adhering to recognized environmental taxonomies, such as the EU or other regional frameworks, to maintain consistency.
- **Governance**: Implementing oversight mechanisms to ensure compliance with sustainability claims.
- **Assessment**: Conducting regular evaluations to maintain the credibility of the green classification.
- **Disclosure**: Ensuring transparency through annual reporting and public disclosure of relevant information.

The primary goal of the framework is to guide exchanges in identifying and promoting green equities while helping investors and issuers align with sustainable finance objectives. For companies, being classified as a green equity can boost their visibility and attract sustainability-focused investors.

Green Bond Principles (GBP): The GBP was published by the International Capital Market Association (ICMA) and it seeks to provide guidelines for the issuance of **green bonds**—a type of debt instrument dedicated to financing environmentally friendly projects. The key components of the GBP are as follows:

- **Use of Proceeds:** Funds must be allocated to green projects (renewable energy, sustainable water management, pollution control, etc.).
- **Process for Project Evaluation and Selection:** There must be clear procedures for the identification of suitable projects.
- **Management of Proceeds:** There must be transparency in how funds are tracked.
- **Reporting:** Annual updates on project outcomes and use of funds are required.

Climate Bonds Standards – Climate Bonds Initiative: The Climate Bonds Standard was published by the Climate Bonds Initiative as a certification scheme for bonds. Its primary purpose is to ensure that these bonds contribute to climate change mitigation or adaptation goals and it also specific eligibility criteria for various sectors such as but not limited to energy, transportation and water. The key elements of the Climate Bonds Standards include the following:

- **Sector-Specific Criteria:** There are detailed guidelines for eligible green projects.
- **Verification Process:** There shall be independent third-party verification of the bond's compliance with the Standards.

- **Certification:** Once the verification process has been completed, bonds that meet the requirements shall receive certification from the Climate Bonds Initiative.

3.3 Jurisdictional Frameworks for ESG

Enhancing Risk Management Frameworks: Financial regulators, such as central banks and prudential authorities, have begun to incorporate climate risk into their risk management frameworks. The Financial Stability Board (FSB) has recognized climate change as a systemic risk to the global financial system and has called for greater integration of climate-related risks into financial stability monitoring. Central banks, such as the European Central Bank (ECB) and the Bank of England (BoE), have issued guidelines and conducted stress tests to assess the resilience of financial institutions to climate-related risks.

Supervisory Expectations and Guidelines: Regulators have also issued supervisory expectations and guidelines to ensure that financial institutions adequately manage and disclose climate risks. For example, the Prudential Regulation Authority (PRA) in the United Kingdom has set out expectations for banks and insurers to embed climate risk management into their governance frameworks and risk assessment processes. Similarly, the European Banking Authority (EBA) has issued guidelines on the management of ESG risks, emphasizing the need for banks to incorporate these risks into their overall risk management frameworks.

Encouraging Disclosure and Transparency: One of the key roles of financial regulators in the regulation of climate risk and ESG matters is to enhance disclosure and transparency. The Task Force on Climate-related Financial Disclosures (TCFD), established by the FSB, has developed a voluntary framework for companies to disclose climate-related financial risks. Many regulators have encouraged or mandated the adoption of TCFD recommendations to improve the consistency and comparability of climate-related disclosures. For instance, the UK Financial Conduct Authority (FCA) has made TCFD-aligned disclosures mandatory for premium-listed companies.

The key Disclosure Elements include the following:

1. *Climate Risk Disclosures*:[8]
    - Physical Risks: Exposure to climate events (e.g., floods, hurricanes).
    - Transition Risks: Impacts of regulatory, market, or technological shifts during the low-carbon transition.
    - GHG Emissions: Reporting of Scope 1, 2, and, where material, Scope 3 emissions.
    - Scenario Analysis: Stress testing for financial resilience under various climate scenarios.

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[8] The U.S. Securities and Exchange Commission proposed the following climate disclosure rules mandate public companies to report:

- Greenhouse gas (GHG) emissions (Scope 1, 2, and, in some cases, Scope 3).
- Material climate-related risks to operations and financial performance.
- Climate-related governance and risk management.

It is noted that there will be an emphasis on alignment with TCFD and GHG Protocol standards.

2. *Governance and Oversight*:
    - How boards and management oversee ESG risks and opportunities.
3. *Materiality Assessments*:
    - Evaluating financial and environmental materiality (e.g., CSRD double materiality).
4. *ESG Integration*:
    - Strategy and performance related to ESG criteria.
    - Investment product labelling (e.g., SFDR in the EU).

3.4 Jurisdictional Frameworks for Green Financing

Summary of Jurisdictions

Jurisdictional frameworks for green financing reflect diverse approaches based on national priorities, regulatory philosophies, and market dynamics. The **EU's taxonomy and mandatory disclosures** set a high bar for regulatory rigor, while **China's state-led model** demonstrates how government intervention can drive rapid adoption. In the **United States**, green finance remains largely market-driven, but emerging federal regulations may soon introduce more standardization. Countries such as **Japan, Singapore, and Canada** rely on a mix of incentives, voluntary frameworks, and disclosure requirements to promote green finance.

Despite these variations, there is a growing trend toward **harmonization** of green finance frameworks, with global initiatives such as the **TCFD** and **ISSB** promoting convergence. As climate risks continue to impact economies worldwide, robust jurisdictional frameworks will play a critical role in channelling financial resources toward sustainable development and achieving global climate goals. See **Appendix 2** below for more information.

4. Challenges and Opportunities in Regulating Climate Risk and ESG Matters?

4.1 Data Availability and Standardization

A significant challenge in regulating climate risk and ESG matters is the availability and standardization of data. Inconsistent and incomplete data can impede regulators' ability to monitor and assess these risks effectively. To address this challenge, regulators are working to develop standardized reporting frameworks and data repositories that provide reliable and comparable ESG information. Collaborative initiatives, such as the International Financial Reporting Standards (IFRS) Foundation's work on global sustainability standards, are also critical in advancing data standardization.

4.2 Balancing Flexibility and Prescriptiveness

Regulators face the challenge of balancing flexibility with prescriptiveness in ESG regulation. While prescriptive regulations can provide clear guidelines and reduce uncertainty for market participants, overly rigid rules may stifle innovation and fail to accommodate the diverse nature of ESG risks and opportunities. Consequently, regulators are increasingly adopting a principles-based approach that provides flexibility while setting out clear expectations for ESG practices and disclosures.

4.3 Global Coordination and Harmonization

Climate risk and ESG matters are global issues that require coordinated regulatory responses. However, the lack of harmonization across jurisdictions poses a challenge for both regulators and market participants. Divergent regulatory approaches can lead to fragmentation, inefficiencies, and increased compliance costs. To address this challenge, regulators are engaging in international collaboration through forums such as the International Organization of Securities Commissions (IOSCO) and the Network for Greening the Financial System (NGFS). These initiatives aim to promote the convergence of ESG regulations and facilitate cross-border cooperation in addressing climate-related financial risks.

5. Gap Analysis of Trinidad and Tobago's Legislative Framework for Climate Risk and ESG Matters

While Trinidad and Tobago has taken steps to address climate change through initiatives like the National Climate Change Policy and the Carbon Reduction Strategy, its legislative framework for climate risk and ESG matters still exhibits significant gaps.

Key Gaps:

1. *Lack of Comprehensive Climate Risk Legislation:*
   - **No dedicated climate risk law:** Trinidad and Tobago lacks a specific law that directly addresses climate risk and its implications for the financial sector. This limits the ability to enforce regulations and establish clear accountability mechanisms.
   - **Limited integration into existing laws:** While climate change is acknowledged in some existing laws, it's not comprehensively integrated into the regulatory framework, leading to potential inconsistencies and gaps in coverage.
2. *Insufficient ESG Disclosure Requirements*:
   - Limited mandatory disclosures: The country's current disclosure requirements for ESG matters are limited, hindering investors' ability to assess the sustainability risks and opportunities of companies operating in Trinidad and Tobago.
   - Lack of standardization: The absence of standardized ESG reporting frameworks makes it difficult to compare information across different sectors and companies, limiting investors' decision-making capabilities.
3. *Weak Enforcement Mechanisms*:
   - Limited resources and capacity: The regulatory bodies responsible for overseeing climate risk and ESG matters may lack the necessary resources and capacity to effectively enforce existing regulations.
   - Insufficient penalties: Penalties for non-compliance with climate-related regulations may not be sufficiently deterrent, reducing the incentive for companies to adhere to standards.
4. *Limited Integration of Climate Risk into Financial Stability Assessments*:
   - Lack of quantitative assessment: The Central Bank of Trinidad and Tobago has acknowledged the importance of climate risk but may not have the necessary tools or data to quantitatively assess its impact on financial stability.
   - Limited stress testing: Climate-related scenarios may not be adequately integrated into stress tests conducted by the Central Bank, limiting its ability to identify and mitigate potential vulnerabilities.

5. *Inadequate Support for Green Finance*:

  - Lack of incentives: There may be insufficient incentives to encourage green investments and the development of green financial products.
  - Limited access to green financing: Small and medium-sized enterprises (SMEs) may face challenges in accessing green financing due to limited availability and high costs.

Key Gaps under The Securities Act, 2012

The Securities Act, 2012 of Trinidad and Tobago was primarily designed to protect investors from unfair practices and to promote fair and efficient securities markets. However, it does not specifically address Green Finance or Environmental, Social, and Governance (ESG) considerations.

In response to the growing importance of sustainable finance, the Trinidad and Tobago Securities and Exchange Commission (TTSEC) has recognized the need for enhanced ESG disclosures. The TTSEC has indicated that ESG disclosures can be incorporated into corporate law and stock exchange listing rules. They have also highlighted the importance of making these disclosures accessible to all investors in a timely and free manner. (Trinidad and Tobago Securities and Exchange Commission 2021)

Despite these acknowledgments, the absence of explicit provisions within the Securities Act, 2012, suggests a regulatory gap concerning Green Finance and ESG matters. Addressing this gap may require legislative amendments or the introduction of specific guidelines to ensure that ESG factors are systematically integrated into the securities regulatory framework of Trinidad and Tobago.

6. Recommendations for Framework in Trinidad & Tobago

The consensus is that Green Bond issues will usually follow normal protocols for Security registration. The main challenges lie in ensuring that the proceeds are used appropriately according to international best practices such as the Green Bond Principles. Certification of bond issues from the CBI also appears to be a common practice within the global system. Consequently, the following recommendations for a prospective Green Finance securities framework are as follows:

Short-Term

1. **Congruity with existing framework:** Green Finance securities should be registered under the existing regulatory framework.
2. **Public Awareness and Capacity Building**
    - **Training Programs:** The TTSEC should provide education and training for market participants on green finance, covering issuance processes, reporting, and certification.
    - **Investor Awareness Campaigns:** The TTSEC should also promote awareness among investors regarding the benefits of green finance to drive demand for sustainable products.
3. **Climate Scenarios in Stress Testing:** The TTSEC should add climate scenarios within its current stress testing regimen.

Medium to Long-Term (Requires Legislation and/or Legislative Amendments)

1. **Establish a Green Bond Standard for Trinidad and Tobago**
    - **Define Eligible Projects:** Develop a list of sectors eligible for green financing, such as renewable energy, sustainable agriculture, waste management, clean transportation, and energy efficiency. This list can align with international frameworks, like the EU Taxonomy and Green Bond Principles by the ICMA.
    - **Local Relevance:** This should be an inclusion of adaptation finance for sectors particularly vulnerable to climate change, such as coastal resilience and water conservation, given the island's geographical vulnerabilities.
2. **Mandatory Use of Proceeds and Reporting Requirements**
    - **Use of Proceeds:** There should be a requirement that 100% of the proceeds from the issue (whether equity or bond) be allocated to environmentally sustainable activities. There should also be an allowance for partial allocation to projects that build capacity for the green transition (e.g., upskilling in clean energy sectors).
    - **Annual Reporting:** Issuers should provide detailed reports on how proceeds are used, including environmental impact assessments. These reports would promote transparency and prevent greenwashing risks.

3. **Certification and Third-Party Verification**
    - **Independent Reviews:** There should be a mandate that green bonds be certified by independent third-party verifiers, as seen in the EU and China's frameworks. Verifiers should confirm compliance with TTSEC's green finance criteria.
    - **Verification Oversight:** There should be the establishment of a registry of approved verifiers under the TTSEC and/or collaborate with international bodies such as the Climate Bonds Initiative (CBI) for certifications.
4. **Develop Incentives to Encourage Issuance**
    - **Tax Incentives and Subsidies:** Discussions should be had with the Government regarding the offer of tax breaks or subsidies to companies issuing certified green bonds or investing in sustainable projects.
    - **Fast-Track Approval Process:** The TTSEC should create a "green channel" for faster bond registration, modelled after China's expedited process for green finance products.
5. **Establish Market Infrastructure and Supervision**
    - **Green Bond Listing Requirements:** Discussions should be had with the Trinidad and Tobago Stock Exchange for a partnership to create a special segment for green bonds, like Euronext Green Bonds or Shenzhen's Green Bond Exchange. This will promote visibility and attract green investors.
    - **Ongoing Monitoring:** There should be a requirement for periodic impact assessments from issuers to ensure compliance throughout the bond's lifetime. TTSEC should retain the authority to delist or sanction non-compliant issuers.
6. **Align with Regional and International Frameworks**
    - **Caribbean Regional Cooperation:** There is the opportunity to collaborate with other Caribbean countries to harmonize green finance standards, fostering a regional sustainable finance ecosystem.
    - **Global Standards:** There should be alignment of TTSEC's framework with internationally recognized guidelines such as the Green Bond Principles (GBP), the EU Green Bond Standard (GBS), and the UN Sustainable Development Goals (SDGs) to enhance market credibility and facilitate cross-border investments.
7. **Monitoring and Mitigation of Greenwashing Risks**
    - **Green Bond Disclosure Annex:** There should be the inclusion of a dedicated section in prospectuses with detailed ESG disclosures, similar to the EU's planned approach. This will ensure transparency and reassure investors.
    - **Supervision and Enforcement:** The TTSEC should be empowered to impose penalties or revoke green bond designations in cases of non-compliance or greenwashing.

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APPENDICES

Appendix 1: SFDR Disclosure Requirements

The Sustainable Finance Disclosure Regulation (SFDR) imposes significant disclosure obligations on financial market participants (FMPs) and financial advisors. The disclosure requirements are categorized into two levels:

Level 1: Entity-Level Disclosures

These disclosures relate to the FMP's overall approach to sustainability risks and their integration into investment decision-making processes. FMPs must disclose information on:

- **Sustainability Risk Policies:**
    - How sustainability risks are identified, assessed, and managed.
    - The impact of sustainability risks on the FMP's investment decisions and risk profile.
    - The FMP's due diligence policies for sustainability risks.
- **Remuneration Policies:**
    - How remuneration policies align with the integration of sustainability risks.
- **Adverse Impact Indicators:**
    - The principal adverse impacts of investment decisions on sustainability factors, such as climate change, social issues, and human rights.

Level 2: Product-Level Disclosures

These disclosures relate to specific financial products and their sustainability characteristics. FMPs must disclose information on:

- **Product Sustainability Objectives:**
    - Whether the product has a sustainable investment objective.
    - If so, the specific environmental or social characteristics promoted by the product.
- **Principal Adverse Impact Indicators:**
    - The principal adverse impacts of the product on sustainability factors.
- **Sustainability-Related Information:**
    - Information on how sustainability factors are integrated into the investment process.
    - Information on the product's exposure to sustainability risks.
    - Information on the product's alignment with the EU Taxonomy.

Additional Considerations:

- **SFDR Level 2 RTS:** The Commission Delegated Regulation 2022/1288 provides detailed technical standards for product-level disclosures, including specific templates and data points.
- **SFDR Level 2 RTS Amendments:** The Commission Delegated Regulation 2023/363 introduced further amendments to the RTS, particularly regarding disclosures related to fossil gas and nuclear activities.
- **Periodic Reporting:** FMPs must report on their sustainability-related disclosures on an annual basis.
- **Pre-Contractual Disclosures:** FMPs must provide relevant sustainability-related information to investors before entering into a contract.

Please note: The specific disclosure requirements can be complex and vary depending on the type of financial product and the FMP's business model. It is essential to consult the SFDR and its implementing and delegated acts for detailed information.

By understanding and complying with the SFDR's disclosure requirements, FMPs can enhance transparency, promote sustainable investing, and contribute to a more sustainable financial system.[9]

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[9] **For further information, please refer to the following resources:**

- European Union Official Journal: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R2088
- European Securities and Markets Authority (ESMA): https://www.esma.europa.eu/
- National Competent Authorities (NCAs) in EU Member States

Appendix 2: Green Finance Regulatory Frameworks

1. European Union (EU): Comprehensive Green Finance Regulation

EU Green Deal and Taxonomy Regulation: The European Union (EU) has taken a global leadership role in green finance through its **Green Deal**, which aims to make Europe climate-neutral by 2050. Central to the EU's green finance strategy is the **EU Taxonomy Regulation**.

- **EU Taxonomy:** A classification system that defines which economic activities are considered environmentally sustainable. It provides six environmental objectives, such as climate change mitigation, climate adaptation, and biodiversity conservation. For an activity to qualify as "green," it must:
    - Substantially contribute to at least one of the environmental objectives.
    - Do no significant harm to any other objective.
    - Meet minimum social safeguards.
- **Sustainable Finance Disclosure Regulation (SFDR):** The SFDR mandates financial market participants to disclose how sustainability risks are integrated into their investment processes and the sustainability impacts of their financial products.
- **Green Bond Standard (GBS):** This is a voluntary standard that ensures transparency in the issuance of green bonds. The GBS aligns with the EU taxonomy to ensure funds raised are allocated to genuinely sustainable projects.

Registration and Disclosure Processes: In the European Union, Green Bonds are registered and issued under the framework established by the European Green Bond Regulation (EuGB), which provides a voluntary standard for environmentally sustainable bonds. Here's an overview of the registration process:

- **Prospectus and Market Compliance:** Green Bonds must be issued under the EU's Prospectus Regulation if they are to be marketed publicly on a regulated market. Issuers typically need to publish a prospectus containing relevant financial and ESG (environmental, social, and governance) disclosures.
- **Use of Proceeds and Compliance with Taxonomy:** To register a bond as a European Green Bond, issuers must ensure that the bond's proceeds align with the EU Taxonomy Regulation, which defines environmentally sustainable economic activities. Up to 15% of the proceeds may be allocated to activities not yet covered by the Taxonomy.
- **Mandatory Documentation:** Issuers must prepare several documents, including:
    - A Green Bond factsheet pre-issuance, outlining the environmental objectives and use of proceeds.
    - Annual allocation reports to track how proceeds are being used.
    - Impact reports post-allocation to measure the environmental impact of funded activities.
- **External Reviewers:** Independent third-party reviewers registered with the European Securities and Markets Authority (ESMA) must verify compliance with the EuGB requirements. These reviewers assess the factsheets and post-issuance reports to ensure transparency and alignment with environmental goals.

- **National Supervision:** While ESMA oversees the registration of external reviewers, national regulators supervise the bond issuers to ensure compliance with both the EuGB and Prospectus Regulation. These regulators can impose sanctions, suspend issuances, or restrict non-compliant bonds from being marketed.

This framework ensures transparency and mitigates greenwashing risks, fostering investor trust in sustainable finance initiatives across the EU. The regulation will officially come into force in December 2024, with transitional measures extending until 2026

Impact and Adoption: These frameworks have encouraged European financial institutions to offer green loans and bonds, while many large firms are shifting their capital to sustainable activities to align with the taxonomy.

2. United States: Market-Driven Green Finance with Emerging Regulation

Current Regulatory Landscape: The United States has a market-driven approach to green finance, but federal regulators, such as the Securities and Exchange Commission (SEC), are increasingly focusing on environmental and sustainability disclosures. Several initiatives are emerging under the Biden administration to foster green investments.

- **Climate Risk Disclosure Rules (SEC):** The SEC has proposed climate-related financial disclosure rules that require public companies to report on their carbon emissions and climate risks, enhancing transparency for investors interested in sustainable investments.
- **Green Bonds Market:** While there is no federally mandated green bond standard, the U.S. green bond market has grown substantially. Issuers often rely on the Green Bond Principles (GBP), a voluntary framework developed by the International Capital Market Association (ICMA), to ensure transparency and accountability.
- **State-Level Initiatives:** Several U.S. states, such as California and New York, have implemented specific green finance programs. For example, California has introduced Green Bank programs and green loan guarantees to encourage investments in renewable energy and climate resilience projects.

Registration and Disclosure Processes: In the United States, the issuance and registration of green bonds typically follow federal securities laws and regulations under the oversight of the Securities and Exchange Commission (SEC). Green bonds, like other securities, must be registered with the U.S. Securities and Exchange Commission (SEC) under the **Securities Act of 1933**. However, the process is not centralized solely through the SEC; much of it depends on the type of bond and the entity issuing it. The market is driven by self-regulation and third-party certifications rather than mandatory federal standards.

For green municipal bonds, which are a key component of the U.S. market, state and local governments issue these bonds to fund environmentally beneficial projects such as water infrastructure, energy efficiency, or public transit. Issuers may voluntarily follow recognized frameworks like the International Capital Market Association's (ICMA) Green Bond Principles or seek certification through the Climate Bonds Initiative (CBI) to enhance transparency and attract environmentally conscious investors. Green bonds issued by U.S. municipalities may be exempt from SEC registration requirements, provided they meet the conditions outlined in the

Securities Act. However, corporate issuers must adhere to the full registration process to offer these bonds in public markets.

Municipal green bond issuers typically provide disclosure documents, which detail how the proceeds will be allocated toward eligible green projects. These disclosures are filed with the Municipal Securities Rulemaking Board (MSRB) through its Electronic Municipal Market Access (EMMA) platform, satisfying public transparency requirements. Additionally, independent third-party reviews are often commissioned to validate the "green" designation, helping prevent greenwashing concerns and boosting investor confidence.

The registration process involves filing disclosure documents with the SEC to ensure transparency and compliance with federal securities laws. Here are the key steps involved:

- **Filing Forms**: Issuers need to submit a registration statement, typically using forms like **Form S-1** (for initial public offerings) or **Form S-3** (used for seasoned issuers for more simplified registration). For large, frequent issuers, **shelf registration** under Rule 415 may be utilized, allowing securities (including green bonds) to be registered and offered as market conditions permit over a three-year period.

- **Disclosure Requirements**: The issuer must provide detailed information about the business, financial statements, and the specific nature of the green bond offering. The registration statement should also describe how the proceeds will be used for environmentally sustainable projects to align with the green bond label.

- **Compliance Review**: The SEC's Division of Corporation Finance reviews the registration to ensure all disclosure requirements are met. If the green bonds are linked to environmental goals, some issuers voluntarily follow frameworks like the **Green Bond Principles (GBP)**, though these guidelines are not mandatory under SEC rules.

- **EDGAR Submission**: Once registered, the offering documents become public via the SEC's **EDGAR** database, enhancing transparency for potential investors.

While corporate and other types of green bonds (such as treasury-issued ones) are subject to broader SEC disclosure rules, the market itself is still primarily governed by voluntary guidelines rather than binding regulations. This framework reflects the need for flexibility while aligning with the growing demand for sustainable finance instruments in the U.S. capital markets. These steps reflect the standard process for all registered securities, ensuring that green bonds are marketed transparently and in compliance with investor protection standards enforced by the SEC

Challenges and Opportunities: While the U.S. green finance market is large, the lack of a national taxonomy creates challenges for standardization. However, the growing demand for green bonds and sustainable investment products signals a shift toward stronger federal regulation in the near future.

3. China: State-Led Green Finance Framework

China has established a **state-driven green finance framework** to support its commitment to achieve carbon neutrality by 2060. The framework involves strict regulations, green credit policies, and government-backed incentives.

- **Green Finance Guidelines:** The **People's Bank of China (PBOC)** introduced guidelines for banks to issue green loans. Banks must allocate a portion of their lending to green projects, such as renewable energy, energy efficiency, and pollution control.
- **Green Bond Market:** China's green bond market is one of the largest in the world. The **Green Bond Catalogue** sets out specific projects that qualify for green financing. Notably, China's initial framework allowed the financing of "clean coal," which drew criticism. However, recent revisions align China's green bond guidelines more closely with international standards.
- **Pilot Green Finance Zones:** China has established **pilot green finance zones** in provinces such as Zhejiang and Guangdong to test innovative green financial products and promote investment in sustainable infrastructure.

Registration Process: In China, the registration and regulation of green bonds follow a multi-agency framework, with different regulatory bodies overseeing specific categories of issuers. The key players include:

- **People's Bank of China (PBoC):** Responsible for regulating green bonds issued by financial institutions, focusing on environmental finance policies.
- **National Development and Reform Commission (NDRC):** Oversees non-listed corporates and large infrastructure projects, issuing guidelines for enterprises that are not publicly listed.
- **China Securities Regulatory Commission (CSRC):** Regulates green bonds issued by listed non-financial companies. CSRC's guidelines emphasize transparency, requiring detailed environmental disclosures both at the issuance stage and throughout the bond's life cycle. Issuers must also commit to using proceeds strictly for environmentally beneficial projects, prohibiting high-emission industries from participation.

Moreover, the Shanghai and Shenzhen stock exchanges have introduced pilot programs that apply to green bonds listed on these platforms. The registration process emphasizes third-party certification and transparent use-of-proceeds tracking, aligning with China's broader policy goals for sustainable development and net-zero targets by 2060.

The registration process for green bonds under CSRC follows these key steps:

- **Eligibility of Projects**: Funds raised must be allocated exclusively to green projects, such as clean energy, energy-saving initiatives, or environmental protection technologies, as listed in the "Green Bond Endorsed Project Catalogue" developed by Chinese regulators. This catalogue provides clarity on what qualifies as green investments, aligning domestic and international standards.
- **Approval Process**: CSRC provides a streamlined approval process with a "green channel" to fast-track green bond applications. This facilitates quicker access to capital for green initiatives and ensures smoother issuance procedures.
- **Compliance and Monitoring**: Issuers are required to disclose how the proceeds are used to prevent misallocation of funds. CSRC monitors the allocation to ensure strict adherence to the approved projects and may impose penalties for misuse or non-compliance.

- **Multi-agency Coordination**: The green bond market in China involves collaboration between CSRC, the PBoC, and the NDRC. This ensures that both listed companies and financial institutions adhere to consistent guidelines while accessing the green bond market.

Impact and Influence: China's state-led model has rapidly increased green finance flows, but concerns about greenwashing persist. Efforts are underway to align China's framework with international taxonomies to enhance global integration.

4. Japan: Market Incentives and Disclosure Requirements

Japan has adopted a combination of voluntary guidelines and financial incentives to promote green finance, focusing primarily on the corporate bond market.

- **Green Bond Guidelines (2020):** Issued by the Ministry of the Environment, these guidelines align with the ICMA's Green Bond Principles, providing issuers with recommendations on structuring green bonds and ensuring transparency.
- **TCFD Adoption:** Japan has been a strong advocate of the **Task Force on Climate-related Financial Disclosures (TCFD)** framework. The government encourages companies to voluntarily adopt TCFD-aligned disclosures, particularly in sectors such as finance and manufacturing.
- **Subsidies and Tax Incentives:** The Japanese government provides subsidies for companies issuing green bonds and has introduced tax incentives to encourage investments in green projects.

Registration and Disclosure Processes: In Japan, green bonds follow a structured regulatory process guided by the Ministry of the Environment and the Financial Services Agency (FSA). To issue green bonds, entities must adhere to both local Green Bond Guidelines and international frameworks such as the International Capital Market Association (ICMA) Green Bond Principles.

Key Steps in the Registration Process:

- **Alignment with Green Bond Guidelines:** Issuers are required to comply with Japan's Green Bond Guidelines, which focus on transparency, proper management of proceeds, and external review to validate the green credentials of projects. These guidelines are designed to align with international best practices.
- **External Verification:** Issuers must secure independent reviews or certifications to confirm that the bond meets environmental objectives. Verification from accredited third-party agencies is emphasized to build investor confidence and credibility.
- **Approval and Registration:** Bonds intended to qualify for government support or special programs need to be registered with the Ministry of the Environment's Green Finance Portal. This registration allows issuers to access subsidies and ensures compliance with the guidelines.
- **Ongoing Reporting Requirements:** Issuers must report annually on the allocation of proceeds and the environmental impact of the funded projects. Transparency is a priority,

with some bonds even using security token technology to enhance real-time reporting and tracking.

These processes collectively ensure that green bonds in Japan meet both domestic and international standards, supporting investor trust and the development of sustainable finance initiatives.

Challenges: Although Japan's green finance market is growing, voluntary guidelines have limitations in ensuring robust disclosures. However, increasing investor demand for sustainable products is driving companies to align with global frameworks.

5. Singapore: Regional Green Finance Hub in Asia

Singapore has positioned itself as a **green finance hub** in Asia, offering incentives and frameworks to promote sustainable investment.

- **Green Finance Action Plan (2019):** The Monetary Authority of Singapore (MAS) launched this action plan to develop the country's green finance capabilities. Key elements include:
    - **Grant schemes** to defray the cost of issuing green and sustainability-linked bonds.
    - **Capacity-building programs** to develop expertise in green finance.
- **Green and Sustainability-Linked Loan Grant Scheme:** This scheme encourages banks to offer green loans by subsidizing costs associated with external reviews and certifications.
- **Disclosure Requirements:** MAS encourages financial institutions to adopt TCFD-aligned disclosures and integrate ESG factors into risk management practices.

Registration and Disclosure Processes: Under the Singapore Green Bond Framework, the registration/issuance process involves several key steps aimed at ensuring transparency and alignment with global green finance standards:

- **Pre-Issuance Requirements:** Issuers must develop a detailed framework aligned with the Green Bond Principles and Climate Bonds Standard. A lead arranging bank—approved by the Monetary Authority of Singapore (MAS)—is responsible for verifying the bond's eligibility based on these criteria. This ensures that the funds raised will be allocated to eligible green projects, such as renewable energy, clean transportation, and sustainable water management.
- **Approval and Compliance:** The issuer must engage external reviewers or auditors to assess whether the bond's framework and project allocations align with the environmental goals stated. At least half of the external review work must be carried out by Singapore-based service providers, which reinforces the local nexus requirement for eligibility under the scheme.
- **Post-Issuance Reporting:** Within three months of issuance, the issuer or lead arranging bank must submit documentation to the MAS, including reports on fund allocation and environmental impact, ensuring ongoing compliance and transparency. This reporting

typically includes impact metrics and use-of-proceeds audits, which are essential to maintain investor confidence.

- **Incentives and Grant Support:** Issuers may apply for support under the MAS's Sustainable Bond Grant Scheme. Bonds with a minimum size of SGD 200 million, or smaller tranches under a broader debt issuance program, may be eligible. The grant reimburses up to 100% of qualifying issuance expenses, capped at SGD 100,000, enhancing the financial feasibility for smaller issuers while promoting the development of Singapore's green bond market.

Opportunities and Growth: Singapore's strategic focus on green finance has attracted investments from regional and global markets, positioning the city-state as a leader in sustainable finance.

6. Canada: Transition Finance and Green Bonds

Canada's green finance framework focuses on **transition finance**, which aims to support industries in transitioning to low-carbon operations.

- **Sustainable Finance Action Plan (2019):** This framework outlines measures to encourage investments in clean energy, sustainable infrastructure, and climate-resilient projects.
- **Transition Bonds:** Canadian financial institutions are developing **transition bonds** to finance decarbonization efforts in heavy industries, such as mining and energy.
- **Green Bond Market:** Canada has introduced government-backed green bonds to fund clean energy and public transportation projects. Canadian pension funds have also committed to sustainable investment strategies.

Registration and Disclosure Processes: In Canada, the registration and issuance of green bonds follow federal and provincial securities regulations, typically facilitated through the Canadian Securities Administrators (CSA), which is summarized below as an overview of the process:

- **Regulatory Framework**: Issuers of green bonds must comply with the same securities rules that govern conventional bonds, including disclosure requirements under the National Instruments (such as NI 41-101 and NI 31-103). These rules ensure that issuers provide sufficient information about the bond's terms, risks, and use of proceeds to investors.
- **Use of Green Bond Principles**: Most issuers align with international frameworks such as the Green Bond Principles (GBP), which provide guidelines on project eligibility, management of proceeds, and reporting. These principles are voluntary but play a critical role in gaining investor trust and credibility in the Canadian market.
- **Registration Process**:
    1. Issuers submit filings with the relevant securities commissions in the province(s) where they intend to raise funds. The process often involves preparing a prospectus or an offering memorandum detailing the bond's purpose and structure.

2. For smaller offerings or niche issuers, exemptions from a full prospectus may apply, such as through the offering memorandum exemption under NI 45-106.

- **Third-Party Verification**: Although not legally required, many issuers opt for external certifications or second-party opinions to validate the environmental benefits of their green projects. These certifications often come from organizations like the Climate Bonds Initiative or Sustainalytics to enhance the transparency and credibility of the issuance.
- **Ongoing Reporting and Disclosure**: Green bond issuers are expected to report at least annually on the allocation of proceeds and the environmental impact of the projects financed. This is critical for maintaining investor confidence and ensuring accountability.
- **Stock Exchange Listings**: Some green bonds may be listed on stock exchanges, such as the Toronto Stock Exchange (TSX), to attract institutional investors. The TSX has specific guidelines and programs to support sustainable finance, including green bonds.

To issue a green bond, the government or corporate issuer are required to adhere the following key steps:

- **Use of Proceeds:** Issuers must clearly define the types of projects the funds will support, ensuring they meet the environmental objectives outlined in the framework.
- **Project Selection & Evaluation:** Issuers need to establish a transparent process for selecting eligible projects and evaluating their environmental impact. Often, third-party verifiers like Sustainalytics confirm the alignment with green principles.
- **Proceeds Management:** Funds are tracked through dedicated sub-portfolios to ensure they are used for their intended purposes.
- **Reporting:** Issuers publish annual reports detailing the allocation of bond proceeds and the environmental impact of funded projects, providing transparency and accountability to investors.

Canada's green bond framework reflects evolving market practices, including eligibility for nuclear energy expenditures, to support the country's goal of achieving net-zero emissions by 2050.

Challenges: While Canada has made progress, debates around the financing of oil and gas projects have raised questions about the credibility of its green finance framework.