DESIGNING EFFECTIVE SUSTAINABLE FINANCE TAXONOMIES

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Abstract. *Sustainable finance taxonomies have emerged as crucial frameworks for directing financial flows towards activities aligned with environmental and social sustainability. These taxonomies serve as classification systems that define criteria for identifying sustainable investments, helping investors, regulators, and issuers assess the degree to which financial assets meet sustainability goals. This article synthesizes insights from the BIS report 'A Taxonomy of Sustainable Finance Taxonomies' and provides a condensed academic-style analysis across six pages. It evaluates the core dimensions of existing taxonomies, identifies key shortcomings, and proposes a set of guiding principles for their improvement. Emphasis is placed on the transition taxonomy model, verification methods, and impact reporting to support climate transition and market transparency. The study concludes with policy actions necessary to enhance credibility, comparability, and efficiency of sustainable finance frameworks worldwide.*

1. Introduction

Sustainable finance taxonomies are emerging as vital tools to address global sustainability challenges. By providing standardized criteria to classify economic activities based on their environmental or social impact, taxonomies enable investors to identify assets aligned with long-term sustainability goals. They help mitigate the risk of greenwashing and ensure that capital is deployed in a manner consistent with policy objectives such as the Paris Agreement and the Sustainable Development Goals (SDGs). A well-designed taxonomy sends a clear signal to the market about which investments genuinely support sustainability outcomes.

To facilitate the transition toward a more sustainable economy, taxonomies in sustainable finance have become indispensable. Despite their growing use, insufficient attention has been paid to the effective design of these taxonomies. This discussion addresses key questions surrounding what a sustainable finance taxonomy is, what role it serves, and which design dimensions matter most. A taxonomy in this context refers to a set of criteria used to assess whether and to what extent a financial asset contributes to specified sustainability objectives. It aims to offer investors and stakeholders a structured way to evaluate assets by identifying and signaling their potential sustainability benefits. These taxonomies are rooted in predefined sustainability goals, which should align with broader policy frameworks such as the Paris Agreement.

A well-structured taxonomy helps steer capital toward investments that fulfill environmental or social targets, including greenhouse gas reductions or improved social outcomes. Governments and private actors alike have recognized this function, as seen in the proliferation of green bonds, social bonds, and ESG-focused funds. By providing clarity and consistency, taxonomies enhance investor confidence and support decision-making processes. Their primary function is to convey reliable non-financial signals that can help market actors distinguish truly sustainable investments from those that merely appear to be so. In doing so, they also act as a

safeguard against "greenwashing"—where claims of sustainability are misleading or unsupported by actual impact.

However, it is important to note that taxonomies are not intended to replace traditional risk management tools. They are not designed to assess broader financial or climate-related risks that may arise from systemic interactions across portfolios or economic sectors. While taxonomies classify individual assets based on specific sustainability criteria, managing exposure to environmental risks requires more comprehensive tools such as stress testing and scenario analysis. These tools account for the interdependencies and financial consequences that taxonomies, by design, are not equipped to capture. Thus, taxonomies serve as one piece of a broader framework needed to align financial systems with sustainability imperatives.

Table 1. Key Elements of a Sustainable Finance Taxonomy

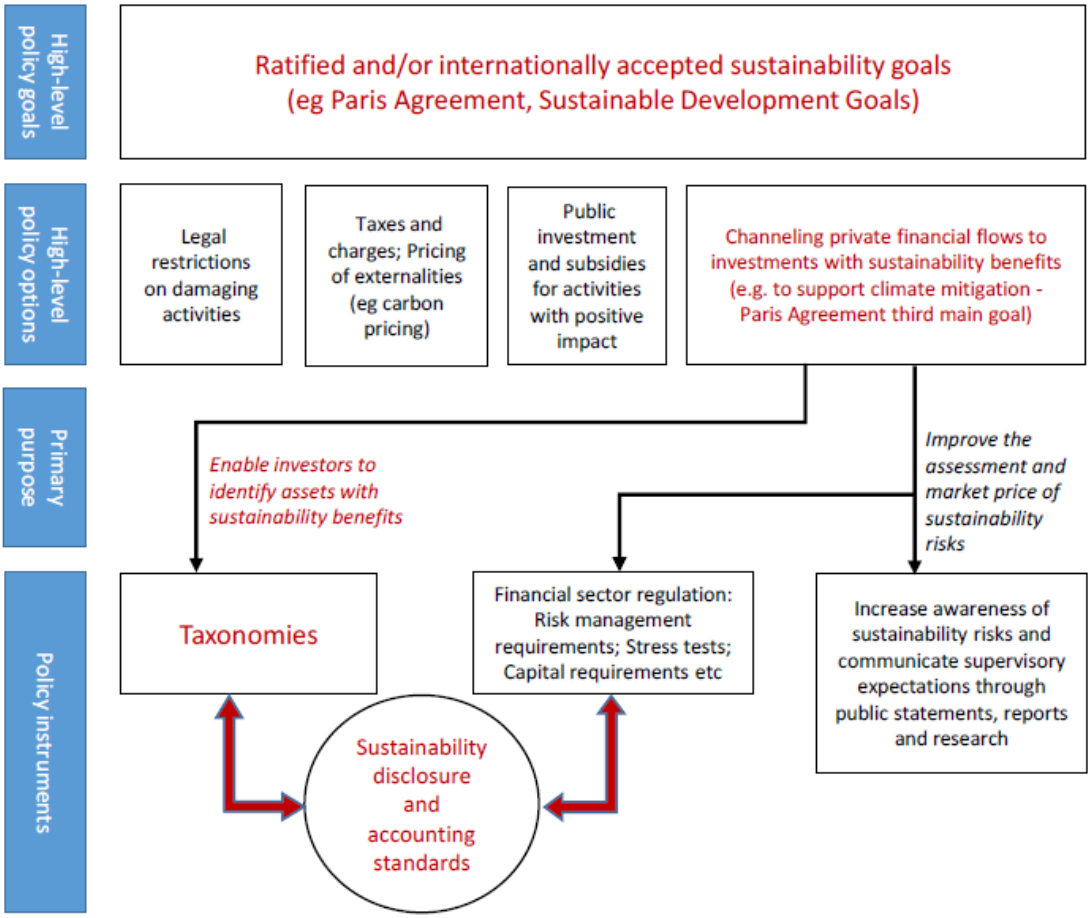
Element	Description
Objective	Defines the high-level sustainability goal such as climate mitigation or biodiversity protection.
Scope	Specifies sectors or types of activities included (green, transition, enabling).
Target	Clarifies whether the taxonomy applies to activities, assets, or entities.
Output	Information provided to stakeholders including granularity, metrics, and verification.

2. Comparative Review of Existing Taxonomies

Three major taxonomies are compared in terms of their objectives, scope, target metrics, and output formats: the European Union (EU) taxonomy, the Chinese taxonomy, and the Climate Bonds Initiative (CBI) taxonomy. Each taxonomy exhibits varying degrees of alignment with the Paris Agreement, granularity of data, and inclusion of transition-related activities. The EU taxonomy is the most comprehensive, embedding high-level objectives and the Do No Significant Harm (DNSH) principle. The Chinese taxonomy has broader environmental categories but lacks transparency on transition strategies. The CBI focuses on climate mitigation but does not employ formal industrial classification systems.

Table 2. Comparative Features of Major Taxonomies

Feature	EU Taxonomy	China Taxonomy	CBI Taxonomy
Objective Alignment	Aligned with net-zero targets	Broad but unclear alignment	Aligned with 2°C target
Transition Activities	Included	Excluded	Covered in a separate framework
Verification	Requires legislative guidance	Voluntary external review	Uses Certification Scheme
Granularity	Binary	Binary	Traffic light and 5 categories



3. Principles for Effective Taxonomy Design

To rectify the inconsistencies and limitations of current taxonomies, five guiding principles are proposed. First, a taxonomy must be clearly aligned with high-level policy objectives such as national net-zero targets or international climate commitments. Second, each taxonomy should focus on a single objective to avoid dilution of its signaling value. Third, outcome-based metrics such as carbon intensity reductions should serve as the primary evaluation tools. Fourth, wherever feasible, metrics should be entity-based to avoid greenwashing at the corporate level. Fifth, taxonomies should exhibit sufficient granularity, allowing for nuanced categorization of sustainability performance.

An effective sustainable finance taxonomy must align closely with high-level policy goals to help investors direct capital toward initiatives that support national development agendas. These objectives might include climate resilience, natural resource conservation, or sustainable urban development. Integrating taxonomies with existing regulatory frameworks enhances consistency and implementation. By using science-based methods, abstract sustainability commitments—such as those outlined in the Paris Agreement or the SDGs—can be converted into concrete, measurable targets like emissions reductions or biodiversity protection. While taxonomies like the EU's and the CBI's incorporate such alignment explicitly, others, such as China's, lack this clarity, potentially reducing their impact.

Taxonomies often encompass multiple environmental objectives ranging from emissions mitigation to ecosystem protection. These goals can be either independent or co-dependent, as seen in the EU taxonomy, which includes the "Do No Significant Harm" (DNSH) principle to prevent

contradictions between goals. However, this co-dependence can introduce complexity and rigidity. For example, excluding fossil-based transitional technologies due to harm to other objectives might hinder progress in developing countries that depend on such industries. China's taxonomy does not formally adopt DNSH, allowing greater flexibility but possibly at the expense of environmental safeguards.

The complexity inherent in multi-objective, co-dependent taxonomies raises challenges for implementation, especially in developing economies with limited institutional capacity. The high cost of compliance and supervision, as well as the difficulty in measuring certain goals like biodiversity, may discourage voluntary participation. A more pragmatic approach for these contexts could be to focus taxonomies on one sustainability objective at a time, leveraging locally applicable technologies and regulations. The "one-label-for-one-objective" model, as seen in the CBI's GHG-focused taxonomy, offers a simpler and potentially more effective pathway for countries at earlier stages of sustainability transition.

4. Transition Taxonomies and Implementation Challenges

Transition taxonomies are crucial for guiding capital toward emissions-intensive sectors that are on a pathway to decarbonization. These taxonomies differ from traditional green taxonomies by including activities that are not yet low-carbon but are expected to reduce emissions over time. A transition taxonomy should define interim targets, such as annual carbon intensity reductions, and establish criteria for monitoring progress. Challenges include defining industry-specific benchmarks, ensuring data availability, and preventing regulatory arbitrage. Taxonomies must be forward-looking and incorporate Scope 1, 2, and 3 greenhouse gas emissions to prevent emissions leakage.

Transition taxonomies play a vital role in defining and standardizing which economic activities contribute meaningfully to climate goals, particularly the reduction of greenhouse gas emissions in line with the Paris Agreement. A granular example of such a taxonomy is the temperature rating system developed by the Climate Disclosure Project (CDP) in collaboration with the World Wide Fund for Nature (WWF). This framework evaluates the "greenness" of investment funds by assessing the emissions reduction targets of the companies within those funds. Since corporate targets differ in scope, units, and timelines, the CDP methodology simplifies them into a single, comparable temperature metric, offering an intuitive benchmark for understanding how corporate ambition aligns with global climate scenarios projected by the IPCC.

The CDP temperature rating process translates company emissions targets into annual reduction rates, which are then mapped against scientific climate scenarios to estimate their corresponding global temperature rise by 2100. Companies with multiple targets have those aggregated into a single corporate temperature score, provided those targets meet quality thresholds. At the fund level, these corporate scores are weighted according to the proportion of financed emissions in the fund portfolio. For firms lacking disclosed targets, a default score of 3.2°C is applied, reflecting a business-as-usual scenario. This approach enables investors to conduct meaningful cross-company and cross-portfolio comparisons, enhancing transparency in climate-related financial risk and supporting more informed capital allocation decisions.

Despite its utility, the effectiveness of the CDP transition taxonomy is constrained by limited corporate disclosure, particularly around Scope 3 emissions, which involve indirect impacts along the value chain. Most companies still do not report ambitious or detailed emissions targets, undermining the precision of fund-level assessments. To improve the integrity of such

taxonomies, it is essential to strengthen reporting standards and require the disclosure of interim targets and comprehensive emissions data. Enhanced transparency would significantly aid in aligning financial portfolios with the Paris temperature goals and in mitigating the systemic risks associated with inadequate climate transition planning.

5. Data, Verification, and Reporting Standards

The credibility of taxonomies depends heavily on data transparency and verification. Effective reporting standards must require disclosure of both use of proceeds and environmental impacts. Reporting should occur annually, be project-specific, and include standardized metrics such as CO2-equivalent emissions avoided. Verification should be conducted by accredited third-party organizations to prevent greenwashing and ensure consistency. Regulatory frameworks modeled after credit rating agencies can enhance oversight and public trust in verification systems.

Table 3. Green Bond Reporting Practices

Practice	Current Status	Recommended Improvement
Use of Proceeds	Reported by most issuers	Granular, project-level detail
Impact Reporting	Voluntary for most standards	Mandatory and standardized metrics
Verification	Non-standardized	Third-party certified, regulator approved

6. Policy Recommendations and Conclusion

To improve the effectiveness of sustainable finance taxonomies, several policy actions are recommended. First, taxonomies should be developed with a single, clearly defined sustainability objective. Second, transition taxonomies should be encouraged to include high-emitting sectors in line with national climate targets. Third, mandatory reporting on environmental impact should be institutionalized for green bond markets. Fourth, certification and verification should be standardized and supervised by regulatory authorities. A globally coordinated effort to harmonize taxonomies will support interoperability and facilitate cross-border sustainable investment. In conclusion, taxonomies are powerful instruments that, if properly designed, can substantially increase the integrity and scale of sustainable finance.

REFERENCES

1. Bank for International Settlements. (2021). *A taxonomy of sustainable finance taxonomies* (BIS Papers No. 118). https://www.bis.org/publ/bppdf/bispap118.htm
2. Climate Bonds Initiative. (2021). *Climate Bonds Taxonomy*. https://www.climatebonds.net/standard/taxonomy
3. Climate Disclosure Project (CDP) & World Wide Fund for Nature (WWF). (2020). *Temperature ratings methodology: Translating corporate climate targets into implied temperature outcomes*. https://www.cdp.net/en/investor/temperature-ratings
4. European Commission. (2020). *Regulation (EU) 2020/852 of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment (EU Taxonomy Regulation)*. Official Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852

5. Intergovernmental Panel on Climate Change (IPCC). (2018). *Special Report: Global Warming of 1.5°C*. https://www.ipcc.ch/sr15/
6. United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. https://sdgs.un.org/2030agenda
7. United Nations Framework Convention on Climate Change (UNFCCC). (2015). *The Paris Agreement*. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement