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INTERNATIONAL AND COMPARATIVE LAW RESEARCH CENTER

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DEVELOPING A TRANSITION FINANCE ROADMAP FOR BRICS

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Acknowledgment and Disclaimer

This report is authored by a group of sustainable finance specialists and policy advisors organized by the Hong Kong-based Green Development Institute (GDI), Net Zero Asia Limited (NZA), and the International and Comparative Law Research Center (ICLRC).

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Executive Summary

The sustainable finance landscape can be broadly divided into "pure green finance" and "transition finance." Transition finance is highly important, particularly to BRICS countries, in addressing the financing gap for their climate agenda and achieving their sustainable development goals, largely because many BRICS economies are dominated by hard-to-abate sectors.

For BRICS, it is essential to build upon global and regional frameworks to create a robust, region-specific transition finance roadmap that aligns with its diverse economic and industrial landscapes. In 2022, the G20 Sustainable Finance Working Group (SFWG) published the G20 Transition Finance Framework outlining the high-level principles across five pillars to guide global transition finance. Building on this, in 2024, the G20 further developed principles for credible transition plans for financial institutions and corporations.

For BRICS, the BRICS Transition Finance Framework, introduced in the 2024 BRICS Business Council annual report 2023/24, provides a foundational approach to mobilizing capital for energy and other low-carbon transition activities within the bloc, tailored to BRICS unique economic contexts. While this framework establishes shared principles including energy transition and the concept of transition finance, further development is needed to create a detailed roadmap for operationalizing these principles, in alignment with the proposals from the G20, BRICS Business Council, and other global initiatives that support the implementation of transition finance.

This roadmap needs to consider the climate goals under the Paris Agreement as well as sectoral priorities, technical feasibility of transition pathways, financial market development levels, and the institutional and capacity constraints facing BRICS members.

Our analysis shows that BRICS are facing several key challenges in developing transition finance. These challenges include, among others, the underdevelopment of national transition plans and sectoral pathways, the absence of applicable and interoperable transition taxonomies and benchmarks, the underdevelopment of transition finance instruments, a lack of capacity to develop corporate transition plans, a lack of fiscal and carbon market instruments to incentivize transition finance, and a shortage of third-party service providers for transition finance. Some of these challenges are general to all markets, while others are BRICS-specific.

Based on our analysis of the status quo, challenges to, and emerging good practices on transition finance, this report proposes a roadmap, with 13 specific actions, for developing transition finance in the BRICS economies.

The key actions proposed are:

1) Formulate comprehensive **national transition plans** that outline sector-specific emission reduction targets, financing strategies, and policy measures to provide a clear direction for financial institutions and businesses in supporting the low-carbon transition.

2) Establish detailed **technical transition pathways for industries** with high emissions to clarify the necessary technological shifts, investment needs, and policy support required for their decarbonization.

3) Develop a **guideline for BRICS transition finance taxonomy** as the baseline/reference for national taxonomies in member countries, to facilitate harmonization and to gain international market recognition.

4) Develop a BRICS **corporate transition plan template** to enable low-cost adoption by companies in member countries and to enhance transparency.

5) Facilitate the adoption of a **disclosure framework** based on the International Sustainability Standards Board (ISSB) standards to improve the consistency and comparability of corporate climate-related financial disclosures.

6) Expand the range and standardization of **transition finance instruments** to encourage more private sector funding to participate in supporting decarbonization.

7) Establish a **BRICS Just Transition Fund for Transition Finance**, which could be hosted by the New Development Bank (NDB), to help crowd in private sector financing.

8) Establish a **Transition Guarantee Facility** under the NDB to provide financial guarantees for loans supporting the adoption of green technologies in BRICS countries, thereby reducing investor risk and accelerating decarbonization.

9) Develop a strategy to **enhance the openness and credibility of the voluntary carbon markets in BRICS** through the adoption of the Core Carbon Principles developed by the Integrity Council for Voluntary Carbon Markets (ICVCM).

10) Develop options to **promote the use of local currencies** for green and transition finance, with the aim of reducing financing costs.

11) Develop an **international green technology platform**, hosted by an organization such as the United Nations Conference on Trade and Development (UNCTAD) with BRICS support, to disseminate technology information, facilitate adoption, and connect stakeholders for project financing.

12) Foster an **ecosystem for transition finance services** by standardizing certification frameworks, including key stakeholders such as verification service providers and incubators.

13) Enhance capacity building efforts among BRICS by formalizing a cooperation mechanism with the Capacity-building Alliance of Sustainable Investment (CASI) to **promote training and technical assistance**.

Unlocking these opportunities through closer collaboration could position BRICS as a leader in financing climate-aligned transitions, while helping to improve access to finance, reduce costs, develop interoperable market standards, facilitate cross-border investment, and avoid duplication of capacity-building efforts.

Chapter 1. Stocktake of global transition finance policy framework development and adoption

1.1 Concept and framework of transition finance

Transition finance is a type of financing mechanism developed to facilitate the decarbonization of high-emitting industries and support the whole-economy shift towards achieving a net-zero emission model. The concept of transition finance has emerged in recent years as a new frontier within the broader sustainable finance umbrella, propelled by a growing emphasis on delivering an orderly and timely net-zero transition for all sectors.

While green finance has experienced decades of strong growth with products and services available in multiple countries, instruments such as green loans and green bonds can only earmark the use of proceeds to finance activities that are already considered "green." Transition finance instruments complement this financing mechanism toolkit by supporting the climate mitigation agenda and assisting entities that are in transition but have not yet qualified against the eligibility criteria of existing green activity standards. This new form of financial services — transition finance — provides particular incremental support to sectors commonly categorized as "hard-to-abate" due to their high emission intensity in operation and production, such as fossil fuels, steel, cement, petrochemical, buildings, shipping, aviation, chemicals and agriculture.

The successful and orderly transition of hard-to-abate sectors is critical for shaping the global decarbonization pathway since they represent a much more significant portion of the global economy and national economic profiles than green industries such as renewables and electric vehicles. Failure to ensure a steady transition of these sectors risks delays in achieving climate targets and raises exposure to socio-economic risks such as supply chain disruption, unemployment, energy shortage, and inflation. However, the financing demand for these sectors has not been met by the traditional green finance system, and global financial market participants have now shifted focus to the design and implementation of transition finance to bridge this gap.

Multiple regulatory bodies and market initiatives have provided definitions and interpretations of the core concept of transition finance since 2020. The most recent internationally agreed high-level definition can be found in the G20 Transition Finance Framework published by the G20 Sustainable Finance Working Group (SFWG) in 2022. The G20 defines transition finance as "financial services supporting the whole-economy transition, in the context of the Sustainable Development Goals (SDGs), towards lower and

net-zero emissions and climate resilience, in a way aligned with the goals of the Paris Agreement."

The G20 Transition Finance Framework published lays the foundation for developing an ecosystem for transition finance by highlighting the importance of five pillars that are interrelated to each other:

- **Pillar 1 – Identification of transitional activities and investments**: definitions should be developed to help market participants identify transition activities cost-effectively and address "transition-washing" risks. The identification standards should apply to companies, projects, financial products, and portfolios, while reflecting market dynamics and ensuring international compatibility.
- **Pillar 2 – Reporting of information on transition activities and investments**: disclosure requirements should be put in place for companies to report corporate transition plans, featuring credible, science-based interim and long-term goals with timelines, and climate data. For designated-use instruments, the specific use of funds should also be disclosed, while non-designated-use instruments should disclose Key Performance Indicators (KPI) tied to supported transition activities.
- **Pillar 3 – Developing transition-related finance instruments**: a broader range of innovative financial products, including debt instruments, private equity funds, blended financing, risk mitigation tools, and asset-backed securities are needed in the transition finance toolbox. These instruments should be accompanied by transparent, scientifically grounded transition plans and include incentive mechanisms to encourage entities to meet emissions reduction targets.
- **Pillar 4 – Designing policy measures**: incentives are needed to enhance the financing viability of transition activities, via policy instruments such as preferential financing, guarantees, tax incentives, and encourage multilateral financial institutions to support developing countries in designing these mechanisms.
- **Pillar 5 – Just transition:** governments and financial institutions should take measures to ensure that companies assess and disclose the social impacts of their transition plans, and to mitigate these effects.

In 2024, under the Brazilian Presidency, the G20 SFWG developed high-level principles for credible, robust and just transition plans for financial institutions and corporations, to be used on a voluntary basis.[1] Companies can adopt these principles to demonstrate their understanding on how their transition activities may impact different stakeholders and consider

[1] 2024 G20 Sustainable Finance Report. Available at: https://g20sfwg.org/wp-content/uploads/2024/10/2024-G20-Sustainable-Finance-Report.pdf

emerging frameworks and resources to mitigate negative impacts and maximize opportunities for positive social impacts.

While the G20 SFWG continues to establish foundational global approach to transition finance, several other international and regional initiatives have since contributed to the development of more tailored transition finance guidelines. These frameworks play a constructive role in bridging the gap between global principles and practical implementation by either addressing transition finance within specific economic blocs or providing detailed guidance for corporate and financial market participants.

The BRICS Transition Finance Framework, included in the BRICS Business Council's 2024 annual report, provides a high-level foundation for transition finance within BRICS economies.[2] In broad terms, it defines transition finance as finance raised from public, private, and alternative sources to implement net-zero transition in line with the Paris Agreement, including the decarbonization of entities or economic activities that are emissions intensive. The framework outlines key principles and broad considerations for mobilizing capital toward transition activities, reflecting the bloc's shared commitment to facilitating low-carbon development while accounting for the distinct economic contexts and industrial structures of its member states. While it establishes a common understanding of transition finance, it leaves room for further elaboration on implementation strategies, financial instruments, and sector-specific pathways. Building upon this foundation, a more detailed roadmap can help translate these principles into actionable mechanisms that align with BRICS countries' transition priorities and financial market structures.

The OECD Guidance on Transition Finance (2022) also provides an overarching framework for common elements of transition finance, including concept, emerging good practices, challenges, with a focus on the assessment of the credibility of corporate transition plans.[3] It provides criteria for evaluating corporate transition strategies, emphasizing alignment with science-based pathways and enhancing transparency in reporting. In doing so, the approach of the Organisation for Economic Co-operation and Development (OECD) emphasizes the need to distinguish between high-integrity transition plans and potential greenwashing, setting a global benchmark for transition finance credibility. It also highlights the

[2] BRICS Business Council. Annual Report (2024). Available at: https://bricsbusinesscouncil.co.in/pdf/BRICS_Annual_Report24.pdf

[3] OECD. OECD Guidance on Transition Finance (2022). Available at: https://www.oecd.org/en/publications/oecd-guidance-on-transition-finance_7c68a1ee-en.html

need for stronger action of policy makers to bolster domestic environment for such transformative investment.[4]

At the regional level, the ASEAN Transition Finance Guidance offers a structured framework specifically designed for Southeast Asian financial markets, placing a strong emphasis on capital market integration.[5] First released in 2023 and updated in 2024, the guidance provides financial institutions, corporates, and regulators with a methodology to assess the eligibility of transition finance projects. It includes sector-specific pathways aligned with of the Association of Southeast Asian Nations (ASEAN), such as energy transition, sustainable manufacturing, and low-carbon infrastructure development. The 2024 update refines the guidance by incorporating clearer benchmarks for corporate transition plans and strengthening mechanisms for financial institutions to evaluate the credibility of transition finance instruments.

These frameworks collectively highlight the growing recognition of transition finance as a critical tool for facilitating global and regional low-carbon transitions. They also underscore the varying approaches to transition finance across jurisdictions, and their implementation depends on region-specific financial market structures, regulatory environments, and industrial transition challenges.

1.2 Global progress in implementation of transition finance

Countries and regions have taken different approaches to translating the G20 Transition Finance Framework (TFF) principles into practice, considering their unique economic, regulatory, and market conditions. The pace and maturity of transition finance vary, with some countries implementing transition finance strategies at a more advanced stage, while others are still in the early phases of development or consideration. Countries with more mature transition finance markets benefit from established frameworks, clearer guidelines, and an experienced investor base, leading to more efficient capital deployment. However, countries at earlier stages face greater challenges in developing robust mechanisms while balancing the need for flexibility and innovation.

First, across all regions that have operationalized transition finance, a key foundation is the establishment of clear criteria for defining transition activities. For example, the European Union (EU) refers to the EU taxonomy for sustainable activities, which includes some transitional

[4] Ibid

[5] Asian Capital Markets Forum, ASEAN transition finance guidance (2024). Available at: https://www.theacmf.org/images/downloads/pdf/20241014%201142%20ACMF%20ATFG%20Version%202%20vFinal.pdf

activities alongside those that are already low-carbon activities. Activities must fall into categories listed in the taxonomy and meet the technical screening criteria to be classified as taxonomy-aligned, ensuring environmental integrity and technological advancement within the sector. Russia's taxonomy, drawing on elements of the EU model but still differing on some aspects, takes a more flexible approach in energy sector criteria. China also adopts a taxonomy approach, leveraging its years of experience in developing green activity taxonomies, and Brazil is designing its own sustainable taxonomy and will adopt it on a mandatory basis in 2026. The People's Bank of China has announced the upcoming transition taxonomy for four industries, while municipal governments have developed over 10 regional taxonomies aimed at creating an environment that incentivizes capital support for corporate decarbonization. The ASEAN taxonomy, along with taxonomies from Thailand, Indonesia, the Philippines, and Singapore, adopts a "traffic light system" that categorizes activities into three tiers based on climate agenda compliance: green, amber (transitional), and red (non-compliant). This system describes the outcome metrics for identifying activities and can be integrated with both principle-based and taxonomy-based approaches, serving as a key tool in the identification process.

Principle-based taxonomies, such as those adopted by the Philippines, Malaysia, ASEAN, and Indonesia, classify activities using broad guidelines, providing a flexible solution. While easier to deploy, the principle-based method requires detailed guidance and often involves third-party verification to safeguard the credibility of assessment results, which may increase transaction costs. However, for achieving specific targets, taxonomy-based approaches with clearly defined quantitative and qualitative thresholds are easier to implement in markets that are new to such mechanisms.

In addition to regulatory initiatives, the private sector has shown interest in developing internal transition finance taxonomies, as demonstrated by institutions such as the Bank of China, Standard Chartered Bank, and DBS and Investors for Climate in Brazil.[6] Internal taxonomies serve as foundational documents that financial institutions can use to develop specialized products and services, ensuring consistency across multiple markets while clearly communicating how transition financial instruments contribute to the institution's net-zero ambitions.

Several key characteristics in developing transition finance taxonomies can be identified based on current practices. First, while the goal of decarbonization is universal, the emphasis on specific industries varies significantly across countries. These sectoral priorities reflect not only each

[6] Investors for the climate. Transition Taxonomy for Highways (2024). Available at: https://esg.nintgroup.com/ipc-taxonomia-de-transicao-para-rodovias-2024

country's industrial structure but also the urgency of decarbonizing certain sectors based on their contributions to national emissions. Second, compared to green taxonomies, transition taxonomies must clarify the criteria for financing transition activities within region-specific contexts to align with Paris Agreement temperature goal pathways and justify their necessity, while, at the same time, they should be designed to allow inter-operability and comparison with similar taxonomies of other countries or regions. Current practices include demonstrating the urgency of decarbonization through climate science and socio-economic modeling to identify priority sectors and technologies. Other approaches involve setting emission reduction targets for eligible activities and making the transition label conditional upon meeting these criteria. Third, taxonomies need to incorporate measures to manage carbon lock-in. Sunsetting arrangements, which set predefined timeframes for activities to meet green criteria, or periodic criterion revisions, are among the mechanisms that the governments use to encourage continuous improvements in environmental performance.

Second, a prominent trend is the increasing emphasis on robust and transparent disclosure of corporate transition plans. Regulators and financial institutions are requiring entities raising funds through transition finance instruments to present a corporate transition plan before a transaction. The UK's government-led Transition Plan Taskforce defines transition planning as a strategic process that firms must undertake to respond to and contribute to the transition toward a low greenhouse gas emission, climate-resilient economy, which can then be articulated through an internal transition plan and disclosed to various market participants.

The required contents of transition plans under emerging global initiatives are based on the G20 TFF recommendations, providing a structured framework that outlines the interconnections between key components. A credible corporate transition plan is forward-looking and typically includes:

1) Science-based long-term net-zero targets aligned with the Paris Agreement goal and/or national climate goals, and time-bound targets aligned with the corporate net-zero pathway
2) Strategy and action plan to achieve targets
3) Financial planning pertaining to future net-zero operation pathways, including CAPEX expenditure plans
4) Internal governance structures that oversee implementation progress
5) Corporate arrangements to ensure a just transition for key stakeholders.

Additionally, disclosure on impact measurement metrics, methodologies used in setting quantitative targets, and current emission inventories is

required to substantiate science-based decision-making. The transition plan is also expected to be an integral part of a company's business strategy rather than a standalone initiative. Sustainable disclosure frameworks developed by regulatory bodies such as the European Financial Reporting Advisory Group (EFRAG) and international standard-setting organizations such as the International Sustainability Standards Board (ISSB) are beginning to require transition plans to be disclosed within integrated reporting.

Several initiatives focused on standards and framework development exist to guide the creation and disclosure of corporate transition plans. As these guidelines evolve, transition plans are increasingly becoming the basis for fundraisers and financial institutions to structure financing activities. For example, regulatory instructions from the European Commission, OECD, the ASEAN Capital Markets Forum, and the UK Transition Plan Taskforce provide guidance on the importance of transition plans and direct fundraisers to use them to demonstrate credible transition pathways. Private sector initiatives, including the Climate Bonds Initiative (CBI), the Assessing Low-carbon Transition (ACT) initiative, and the Science-Based Targets Initiative (SBTi), have released guidelines on key elements for developing transition plans, with some offering assessment criteria for financiers.

However, despite the availability of extensive guidelines, target-setting and transition plan design remain technically challenging. Many corporations, especially small and medium enterprises and those in developing markets, may lack the expertise or financial capacity to develop transition plans effectively. To address this challenge, emerging practices include the use of simplified or digital tools during a transitional period and enhancing the role of financiers in supporting their clients. For example, the government of Huzhou city in China has released a template for corporate transition plans in the form of tick-box questions corresponding to key elements of the G20 TFF principles. Financial institutions in the region are encouraged to use this standardized template to collect information from fundraisers and assess their eligibility for transition finance.

Third, innovative financial instruments have been developed to meet the diverse needs of transition sectors. Financial products and services labeled as transition finance under these frameworks have gained traction in multiple markets, showing positive momentum, although they remain in the early stages in terms of overall scale.

New product structures, such as sustainability-linked facilities, have been introduced to meet the demand for more diverse and flexible financing options. Sustainability-linked finance incentivizes corporate improvements in sustainability metrics, including emission reductions, by linking key financial levers — such as interest rates — to the achievement of pre-set

targets. The KPIs used in these instruments should align with corporate transition targets and reflect sectoral decarbonization priorities. Unlike the use-of-proceeds model in green finance products, sustainability-linked instruments allow proceeds to be used for general corporate purposes. These linked structures are commonly applied to loan and bond instruments and have been utilized by both private and public sector issuers.

Additionally, transition bonds — a new category of themed bonds — have been introduced to finance corporate transitions by directing the use of proceeds solely to transitional activities. While structurally similar to green bonds, transition bonds impose additional requirements to assess issuers' decarbonization commitments. The growth of these new product types is further supported by issuance guidelines from credible market associations such as the International Capital Market Association (ICMA) and the Loan Syndications and Trading Association (LSTA), as well as financial regulations promoting the standardization of issuance.

Currently, transition finance is primarily extended through debt instruments, including loans and bonds. However, a broader range of financing tools will be essential to support the complex, multi-faceted nature of systemic transformation across industries. These include equity investments, structured financing, and blended finance models. For example, blended finance mechanisms — combining concessional financing from public or philanthropic sources with private capital — help mitigate risks associated with early-stage transition projects and attract private investment by enhancing project bankability. Additionally, some transition-focused equity funds are being established with methodologies for screening and monitoring corporate transition commitments and progress.

1.3 Tools and methodologies

An increasing number of tools, frameworks, and methodologies have been developed by international organizations, NGOs, industry platforms, and regulators to support the growing field of transition finance. These tools aim to provide clarity, consistency, and a common language to guide the implementation of transition finance, facilitating greater market confidence and alignment with global decarbonization objectives. Below is a stock-take of some of the most notable initiatives and tools in this space:

- **Financed emission accounting: Partnership for Carbon Accounting Financials (PCAF)**

The PCAF provides methodologies for financial institutions to measure and disclose the carbon emissions associated with their lending and investment portfolios. This tool is a vital foundation for transition finance, as it enables financial institutions to assess the carbon intensity of their financial products and develop data-driven net-zero strategies. It also ensures that capital

allocated to transition projects contributes positively to decarbonization goals.

- **Decarbonization target setting: Science Based Targets Initiative (SBTi)**

The SBTi is a global NGO platform that helps companies set science-based emission reduction targets aligned with climate science and the Paris Agreement. The SBTi has become a widely recognized certification program for corporate emission reduction targets. It establishes methodologies for companies to set short-term emission reduction goals, long-term net-zero targets, and value-chain emission reduction targets. Using carbon budgets based on global temperature scenarios (limiting temperature rise to below 1.5°C or well below 2°C), SBTi allocates allowable emissions for different industries, helping determine the appropriate emission reductions by companies to support global climate goals. By ensuring that corporate targets are rooted in credible science, SBTi enhances the reliability of transition finance by enabling investors to assess whether companies are on a credible decarbonization trajectory.

- **Decarbonization target setting: Carbon Reduction and Transition Toolbox (CRTT)**

The CRTT, developed by the Beijing-based Institute of Finance and Sustainability (IFS) in collaboration with industry associations and research institutions, provides sector-specific methodologies to assess the scientific validity and ambition of corporate transition targets. The CRTT integrates historical emissions data, low-carbon transition pathways, and cost analyses to evaluate whether corporate decarbonization plans align with national and sectoral transition goals. The framework has been applied to the steel industry, where it offers quantitative models to assess emission reduction pathways and estimate decarbonization costs, supporting financial institutions and investors in identifying credible transition strategies.

- **Transition planning tool: UK Transition Plan Taskforce (TPT)[7]**

The TPT, launched by HM Treasury, provides a detailed disclosure framework and implementation guidance to help corporates and financial institutions develop credible and consistent transition plans. The framework defines core elements that should be included in transition plans, such as governance, strategy, and implementation measures. It also incorporates sector-specific guidance aligned with global climate scenarios. Additionally, the TPT offers a sector-neutral online sandbox tool, allowing companies to benchmark their transition plans against best practices and regulatory expectations. This tool

[7] The EU's Omnibus Simplification Package proposed scaling back corporate sustainability reporting and due diligence requirements. The proposed changes are under review and may influence corporate climate disclosure trends beyond the EU.

enables financial institutions to assess the credibility of corporate transition plans and ensure alignment with the UK's net-zero commitments.

- **Financial product and service development: Glasgow Financial Alliance for Net Zero (GFANZ)**

The GFANZ is a global coalition of financial institutions committed to achieving net-zero emissions by 2050. The GFANZ has developed multiple tools and frameworks to enable financial institutions to deploy transition finance in a scalable and credible manner. These include the GFANZ Financial Institution Net-Zero Transition Plans, which introduce a framework for transition finance and outline core elements for credible net-zero transition plans. The Managed Phaseout of High-Emitting Assets provides a methodology to support financial institutions in responsibly financing high-emitting assets with clear commitments around their retirement. Other guidance reports cover areas such as index investing, sectoral pathways, and portfolio management and measurement.

- **Entity-level disclosure on transition activities: International Sustainability Standards Board (ISSB)**

The ISSB, under the IFRS Foundation, has released two disclosure standards that are expected to become the most widely used international sustainability disclosure standards. One of these, the IFRS S2 Climate-related Disclosures, outlines structured disclosure requirements related to transition plans, climate-related risks, and opportunities. These disclosures provide investors with standardized, comparable data to assess the credibility of transition strategies and measure progress over time. The standard instructs entities to report:

1) Quantitative and qualitative information on transition pathways, including anticipated emissions reductions and investments in decarbonization

2) Scenario analysis using frameworks such as those from the Network for Greening the Financial System (NGFS) or the International Energy Agency (IEA) to evaluate climate risks

3) Key metrics and targets, such as financed emissions for financial institutions and sector-specific decarbonization targets for corporates.

- **Transition Arc**

The Transition Arc is a tool developed by the Climate Arc, as a public good to assess corporate transition plans. The data model allows for full transparency and traceability, linking company disclosure to analyzed outputs. The selected transition metrics are consistent with existing climate transition frameworks, including the International Sustainability Standards Board (ISSB) and Transition Plan Taskforce (TPT). It can be used by

companies to prioritize green solutions and attract investment, by financial institutions to direct flows of capital to support corporate transitions, by civil society to advocate for greater and more specific corporate accountability and governments and regulators to develop policy and accountability mechanisms.[8]

1.4 Challenges to application of the transition finance frameworks globally

Despite the increasing adoption of transition finance initiatives and frameworks, transition finance remains at its nascent stage globally. As of now, in most markets that have developed transition finance tools, the size of transition financing represents a tiny fraction of the total size of the green finance market.[9] Our analysis shows that the following gaps and bottlenecks have hindered the development of transition finance in all markets, including developed and emerging markets:

First, the underdevelopment of national transition plans and sectoral pathways. Clear national decarbonization strategies and sectoral pathways are vital to sending policy signals for corporates and financial institutions to align their short- and long-term business strategies accordingly, thereby creating demand for transition finance. However, many countries have not yet released short-term and medium-term targets or action-oriented national climate strategies. Others lack sectoral policies that reflect sectors' respective emission reduction contributions and suitable technological pathways within a country's context. This makes it difficult for corporates to identify activities and entities aligned with the national net-zero strategy. In financial markets where transition financial instruments are now utilized, market participants are often concerned that the choice of KPIs and the emission reduction targets set by corporates may not be consistent with national strategies. This has become a key reason why many financiers are reluctant to engage in transition finance at this stage, as the validity of these transactions could be denied by national authorities in the future.

Second, the lack of market and policy incentives for transition activities. In many countries, market prices are not yet in a position to drive the allocation of resources —especially financial resources — towards low-carbon activities, and carbon-intensive activities are not paying for their negative externalities. Specifically, carbon markets or carbon taxes are only

[8] Climate Arc. Introducing Transition Arc. Available at: https://climatearc.org/news/introducing-transitionarc

[9] No statistics exists for this analysis. Estimation and extrapolation can be done by taking the make-up of transition finance debt instrument in the broader sustainable debt capital market. According to the International Capital Market Association (ICMA) in "Transition Finance in the Debt Capital Market" released in 2024. As of January 2024, sustainable bonds utilized for hard-to-abate sector financing represent 2% of the total outstanding of green and sustainable bonds.

in place in a small number of countries and cover only 24% of total global GHG emissions.[10] Furthermore, in many countries where carbon markets do exist, carbon prices are too low relative to their externalities. The average price of global compliance carbon markets and carbon taxes is around 35 USD per ton of CO2e, with 40 out of the total 72 mechanisms falling below this number.[11] On the other hand, the average price of voluntary carbon credits has hit consecutive record lows, currently at 6.5 USD per credit, representing one ton of CO2e. In some countries, governments have adopted green industrial policies to stimulate the growth of sectors such as renewables and electric vehicles. However, in the case of transition finance, most national authorities have not introduced measures to provide incentives or disincentives to reduce or increase funding or transaction costs according to transition targets, leaving fundraisers and financiers wondering why they should pursue transition finance if it is more expensive due to additional requirements — such as producing and disclosing transition plans, obtaining second-party opinions on the credibility of targets, and tracking performance against KPIs.

Third, the absence of operational benchmarks for evaluating corporate transition plans. In most markets, the mere existence of principle-based frameworks is not sufficient to guide companies in identifying transition activities and developing transition plans, nor to guide second-party opinion providers or third-party verifiers in evaluating the credibility of such plans. In the absence of transition taxonomies (for selecting technical pathways), standardized templates (for drafting transition plans), and benchmarking tools (e.g., for setting GHG reduction targets and estimating investment costs), some large companies opt to use a principle-based approach. However, the costs are exceptionally high, as it often involves hiring service providers and consultants to effectively communicate technical alignment.

There are some tools and benchmarks currently available in the market, which tend to face two major problems. First, most of these tools are not universally applicable, as they assume 2050 carbon neutrality as the end target for all companies and sectors without considering that many developing countries have announced net-zero timelines for 2055, 2060, 2065, or 2070. These tools also fail to account for country-specific differences in technology availability and the financial viability of implementing various technical pathways. Second, there is a proliferation of these tools and benchmarks, and the lack of harmonization creates excessive costs for users. For example, a global bank may need to purchase

[10] World Bank. 2024 State and Trends of Carbon Pricing Report (2024). Available at: http://hdl.handle.net/10986/41544

[11] World Bank. State and Trends of Carbon Pricing Dashboard. Available at: https://carbonpricingdashboard.worldbank.org/compliance/price

multiple different tools to evaluate corporate transition plans from different countries and sectors.

Fourth, the lack of practical guidance to incorporate "just transition" elements into transition finance deals. While global frameworks emphasize the importance of social considerations in decarbonization, they often lack operational guidance on how to integrate these considerations into specific transition finance deals. Guidelines such as GFANZ and ISSB disclosure requirements call for financial institutions to integrate just transition principles but offer limited operational guidance on structuring financing solutions that balance climate goals with economic and social considerations. The just transition component of transition plans is recognized as a key pillar of G20 SFWG outputs, including the G20 TFF and a set of voluntary high-level principle on just transition, which nevertheless lacks action-oriented guidance for practitioners. Specifically, no guidance has been developed on what should be included in the mandatory assessment of a transition plan's social impact, the menu of mitigation measures for social implications, the selection of social KPIs to be linked to financing terms, and how to assess the credibility of social performance targets. Without clear guidance on how to incorporate "just transition" elements in transition financing, fundraisers and financiers will again face the risk of "just-transition washing."

Chapter 2. Net-zero transition in BRICS countries — progress and challenges

2.1 Decarbonization progress of BRICS members

BRICS countries occupy a critical position in the global decarbonization agenda, with the potential to significantly influence the success of global climate mitigation efforts. Internally, BRICS members are vulnerable to material physical risks and hazards caused by climate change, as well as risks from paradigm shifts in international policy and technology advancements, which could lead to high socio-economic costs from inaction.

With the shared necessity of decarbonization across BRICS, all BRICS members have signed the Paris Agreement, committing to combat climate change and limit the rise in global average temperatures to well below 2°C above pre-industrial levels. Except for Iran, which has yet to ratify its signature to the Paris Agreement, all other BRICS countries have submitted their Nationally Determined Contributions (NDCs) to the United Nations. BRICS high-level meetings have produced joint statements reinforcing the members' positions and collaborative approaches to achieving these targets, including agreements on trade, technology exchange, and expertise sharing.

Within BRICS, countries exhibit diverse decarbonization pathways based on their economic priorities and sectoral structures. The following analysis summarizes their decarbonization targets and key points in their proposed pathways.

- **Brazil**: Brazil has committed to reducing emissions by 59% to 67% by 2030 and achieving net-zero by 2050. Land use change and forestry dominates its emissions profile (49%), followed by agriculture (21%), transport (8%), waste (7%), industry (5%), energy (4%), and oil and gas (4%). The country has released a strategic climate plan outlining an economy-wide implementation strategy, including a national adaptation plan to mitigate climate risks, particularly those affecting agriculture. Brazil's climate policy includes a target to eliminate deforestation by 2030, restore degraded pastures, and expand renewable energy capacity. The nation's biofuel industry is rapidly developing, supporting the transition of the transportation sector toward bioethanol. However, Brazil still faces significant reliance on traditional energy sources, as it possesses abundant oil reserves, and continues to power industrial development with oil and gas.
- **Russia**: Russia has pledged carbon neutrality by 2060, with a focus on reducing emissions from energy (44%), fugitive emission from energy production (27%), manufacturing and construction (14%), and transport (13%). The country's climate strategy includes enhancing

energy efficiency, developing nuclear and renewable energy sources, and increasing the carbon absorption capacity of forests. However, challenges persist due to Russia's heavy dependence on fossil fuel exports, and continued investments in oil, gas, and coal. Renewable energy development in the Arctic region has been prioritized, but industrial emissions reduction remains a key challenge due to the country's economic structure.

- **India**: India has committed to reducing emissions intensity by 45% from 2005 levels by 2030 and reaching net-zero by 2070. The country's emissions profile is dominated by energy (36%), agriculture (22%), manufacturing and construction (17%), and transport (9%). India's climate policies focus on expanding renewable energy, with a target of 500 GW of non-fossil fuel capacity by 2030. Key strategies include promoting energy efficiency across industries and enhancing carbon sinks through afforestation. Solar and wind energy deployment has accelerated, supported by policy incentives and international financing. However, coal remains the dominant energy source, making up 75% pf electricity produced in 2023 and presenting challenges to the transition.[12] India also recognizes the importance of natural carbon sinks and plans to expand afforestation and wetland conservation efforts.

- **China**: China aims to peak carbon emissions before 2030 and reach carbon neutrality before 2060. Emissions are primarily from energy (49%), manufacturing and construction (22%), industry (10%), and transport (8%). By 2030, it targets a 65% reduction in CO_2 emissions per unit of GDP from 2005 levels, and a 25% share of non-fossil fuels in primary energy consumption. Strategic actions include enhancing renewable energy infrastructure, reforming the electricity system to favor green energy, and implementing the "1+N" policy framework, which provides overarching guidance and sector-specific plans to achieve these goals. As of 2023, coal remains the dominant source in China's electricity generation, accounting for approximately 60% of the total, followed by hydropower and wind power.[13] The country leads in global renewable energy deployment, with solar and wind capacity exceeding one thousand gigawatts, and has become the world's largest producer and consumer of electric vehicles. Urban low-carbon transition efforts include widespread adoption of electric vehicles and green building standards.

- **South Africa**: South Africa has set a target to reduce emissions by 32% by 2030, with a long-term goal of achieving net-zero by 2050. The

[12] Our World in Data (data sourced from Energy Institute). Energy Institute - Statistical Review of World Energy. Available at: https://ourworldindata.org/energy/country/india

[13] Our World in Data (data sourced from Energy Institute). Energy Institute - Statistical Review of World Energy. Available at: https://ourworldindata.org/energy/country/china

country's emissions come primarily from energy (52%), manufacturing and construction (9%), transport (9%), and waste (5%). The government has released an energy system strategy that includes increasing renewable energy capacity and decommissioning aging coal-fired power plants. South Africa has adopted a Just Energy Transition framework (JEFT) to balance decarbonization with economic development, particularly in coal-reliant communities. The country has also introduced a carbon tax and climate policy reforms to stimulate emissions reduction, while adaptation strategies focus on water security and climate resilience in agriculture.

- **Expanded Members**: The newly expanded BRICS members — Iran, the UAE, Egypt, Ethiopia, Indonesia — are at different stages of decarbonization. Oil-exporting countries such as the UAE are diversifying into renewables and hydrogen, while Egypt and Ethiopia emphasize transitioning their energy production to hydro and solar power. Across BRICS, decarbonization pathways vary based on energy resource endowments and economic structures, with collective efforts focusing on clean energy investment and climate resilience.

2.2 Challenges to BRICS economies' decarbonization

While most BRICS members have committed to the goals of the Paris Agreement and submitted their NDCs, their implementation faces many challenges. Compared with OECD countries, the carbon intensity of BRICS economies is generally higher, and they are less equipped with the necessary financing, technologies, and technical capacity to introduce the policies and incentives needed for the transition. This section discusses several key challenges facing BRICS countries in their net-zero journey.

1. Heavy reliance on resource extraction and carbon-intensive manufacturing

Many BRICS countries remain heavily dependent on carbon-intensive sectors such as fossil fuel extraction, coal-based power generation, mining, heavy industry, and resource-driven manufacturing, most of which belong to hard-to-abate sectors. This reliance is shaped by historical industrialization patterns, energy security considerations, and the availability of natural resources for export. This economic structure poses significant challenges to decarbonization efforts: 1) the countries' reliance on fiscal revenue and job creation in these traditional sectors implies strong political resistance to policies and technology deployment that could reduce production and employment, particularly if fiscal capacity is insufficient to provide compensation for winding down these industries; 2) existing infrastructure in resource extraction industries (such as oil fields, coal plants, and oil refineries) have long lifespans, and investments in these sectors

have created a "carbon lock-in" effect. For example, the coal fleet in China and a few other BRICS countries is less than 15 years old, and shutting it down would entail very high costs and significant risks (e.g., loan defaults) to the financial system.

Table 2-1. Examples of hard-to-abate sectors in BRICS

Country	**Example hard-to-abate sector**	**Challenges**
Brazil	Agriculture and land use change, iron, steel & cement production, oil & gas extraction	High methane emissions from cattle, deforestation, relies on coal and energy-intensive blast furnaces
Russia	Oil & gas, metals & mining, chemical & fertilizer	Dependence on fossil fuel exports, energy-intensive industrial processes that rely on fossil fuels
India	Coal-based power generation, cement & construction materials, transport	High reliance on coal in power, growing energy demand and industrial production
China	Coal-based power generation, cement manufacturing, steel production, petrochemicals and chemicals	Large amount of coal fleet supporting grid stability, large industrial base, complex supply chains
South Africa	Coal mining, platinum and gold mining, petrochemicals and chemicals	Reliance on coal for power generation, limited availability of low-carbon production alternatives
UAE	Oil and gas production and refining, aluminum and steel, cement & construction	Economic reliance on oil and gas, growing electricity demand
Iran	Oil and gas production and refining, petrochemicals and chemicals	Heavy reliance on fossil fuel exports, limited access to global clean technology due to sanctions
Egypt	Oil and natural gas extraction, cement manufacturing, petrochemicals and fertilizers	Reliance on fossil fuels, emission intensive industrial process
Ethiopia	Textile and leather, agriculture and deforestation	Deforestation for farming, limited clean production method

Indonesia	Coal mining and power generation, palm oil and deforestation	Reliance on thermal coal export, deforestation and biodiversity loss

2. Lack of policy coordination on national net-zero pathways

Another major challenge faced by emerging markets and developing economies (EMDEs), including BRICS countries, in advancing climate policy is the lack of a coordinated approach across government agencies and policy domains. Effective climate action requires alignment between fiscal measures, regulatory frameworks, and industrial strategies to ensure that policies reinforce rather than contradict each other. However, many EMDEs continue to implement fragmented policies, such as setting emissions reduction targets without complementary sectoral pathways. Key areas requiring coordination include: energy policy, which should align electricity grid decarbonization with the electrification of transport and industry; financial policy, which should ensure that sustainable finance initiatives are supported by the initiation and incubation of bankable green projects; carbon pricing mechanisms, which require joint efforts between financial regulators and environmental/climate agencies to ensure price signals are generated based on sufficient liquidity and financial market participation.

The lack of coordination is not merely an administrative challenge but creates systemic uncertainty that weakens the effectiveness of climate policies. Without a clear national decarbonization strategy that aligns sectoral policies with emissions targets, firms struggle to make long-term investment decisions due to fears of abrupt regulatory changes. Similarly, inconsistent policy signals deter both domestic and foreign investors, as uncertainty about the government's climate commitments increases the perceived risks associated with long-term investments in clean energy and low-carbon infrastructure. Countries that fail to demonstrate a coherent and stable policy framework risk missing out on climate finance and development assistance from international institutions.

3. Lack of financing for green and transition activities

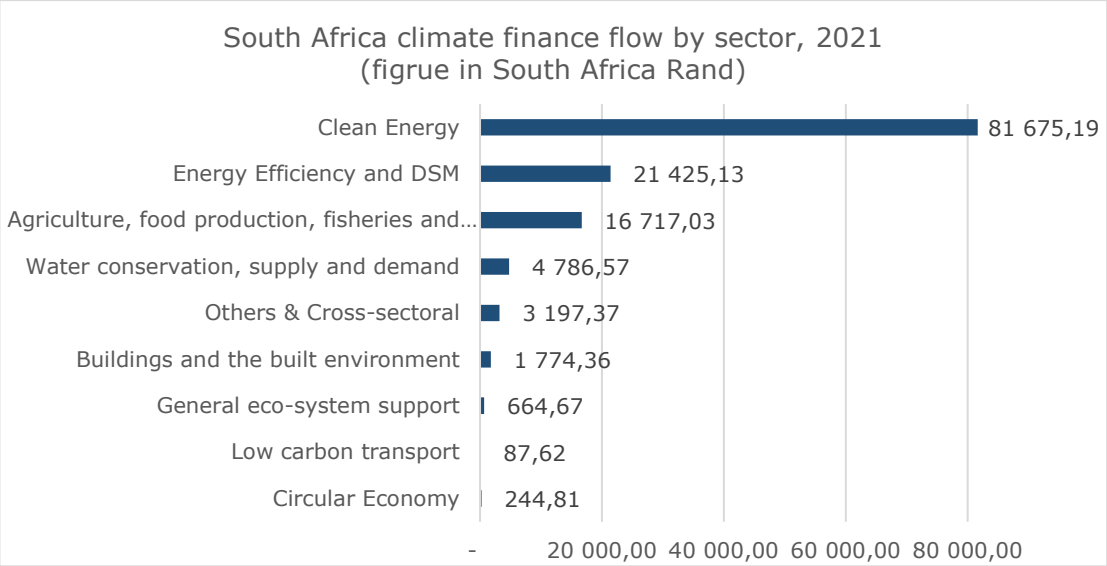
The transition to a net-zero economy in BRICS and other emerging markets requires substantial investment, and current financial flows to climate transition activities remain far from sufficient. By 2022, climate finance to EMDEs excluding China stood at USD 244 billion, growing from USD 147 billion in 2018 but falling short of the estimated demand of over USD 2 trillion per year.[14]

[14] Climate Policy Initiative. Global Landscape of Climate Finance 2024: Insights for COP29. Available at: https://www.climatepolicyinitiative.org/wp-content/uploads/2024/10/Global-Landscape-of-Climate-Finance-2024.pdf

Beyond the overall climate financing gap, demand for transition finance is even less met, as the bulk of mitigation financing — representing 89% of total climate finance flows — goes to the energy and transport sectors, which together account for 86% of the total mitigation financing.[15] Hard-to-abate sectors such as chemicals, steel, cement, mining, agriculture, and buildings receive much less of the financing needed to decarbonize.

Take South Africa as an example. Achieving its NDC target by 2030 would require annual investments of South Africa RAND 535 billion, yet based on financing flows in 2021, a gap of around 400 billion rand exists. Unmet financing demand is particularly pronounced in sectors currently responsible for the most emissions, such as manufacturing, construction, and transport. Current climate financing to these sectors amounts to less than one-third of financing to clean energy. Public financing, although representing only 14% of total tracked climate investments, is also concentrated in clean energy and agriculture, forestry, fisheries, and land use, which together account for 79% of the total.

Chart 2-1. South Africa climate finance flow



Data source: Climate Policy Initiative. The South African Climate Finance Landscape 2023. Available at: https://www.climatepolicyinitiative.org/publication/the-south-african-climate-finance-landscape-2023/

** DSM stands for demand-side management*

[15] Ibid

4. Lack of access to green technologies

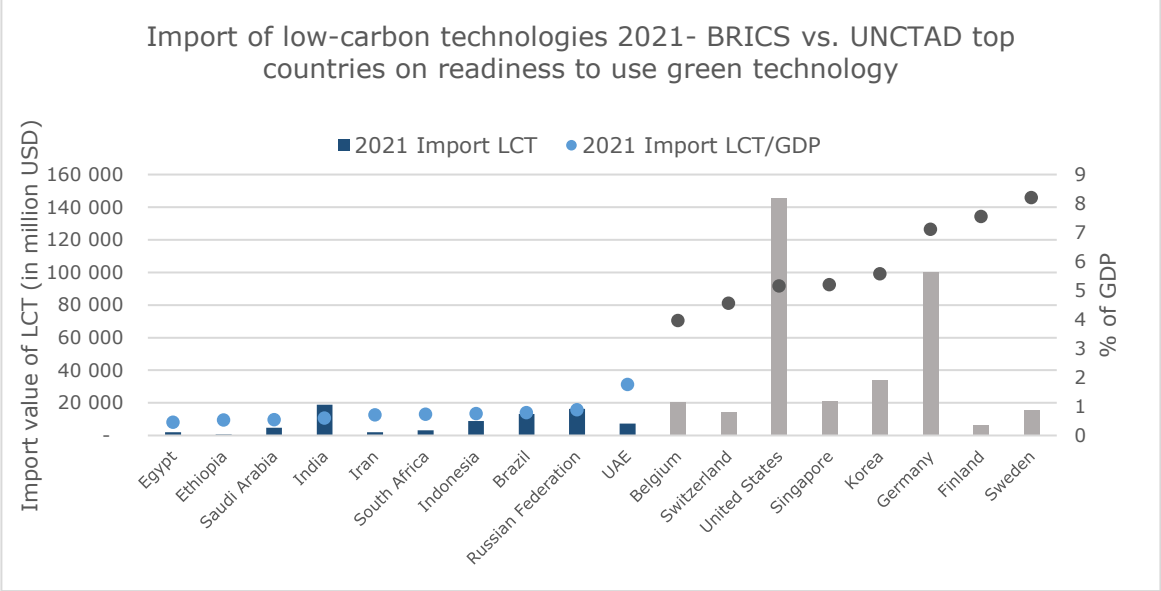
Developing countries, as latecomers in the net-zero journey, have the potential to pursue a more sustainable course of development in a cost-effective manner, given the maturing technology options, while also creating positive social transitions through new job creation. The pace and pathway of decarbonization for each nation are significantly shaped by the availability of affordable and deployable green technologies.

Technologies that can drive economy-wide decarbonization include pure green technologies such as solar PV, biofuels, biogas and biomass, wind energy, green hydrogen, energy storage, energy efficiency, smart grids, and electric vehicles (EVs), as well as cross-cutting smart industrial technologies such as artificial intelligence, the Internet of Things (IoT), robotics, and drone technologies. These technologies are predominantly innovated and supplied by high-income economies, although emerging economies are also notable in the UNCTAD ranking of countries indicating readiness towards the use, adoption and adaption of frontier technologies, with Russia (31), China (35), Brazil (40), India (46) and South Africa (56). It is also evidenced by the concentration of top suppliers in the global value chain and the fact that 70% of patents for these technologies are held by China and the US. For this reason, we consider China as a net supplier of green technologies and will not include China as subject of discussion for this section.[16]

EMDEs excluding China are not well-positioned to access available green technologies. Limited access is evident in the lower import volume of green technologies in BRICS countries (excluding China) compared to advanced economies, and the gap becomes even more pronounced when measured relative to GDP. The UNCTAD offers a framework for assessing a country's readiness to use, adopt, and adapt these technologies. According to the UNCTAD study, BRICS countries rank far behind advanced economies in readiness, suggesting a weaker foundational capacity to take full advantage of opportunities made possible by existing green technologies.

[16] UN Trade and Development. Technology and Innovation Report 2023. Available at: https://unctad.org/publication/technology-and-innovation-report-2023

Chart 2-2. Comparison of import value of low-carbon technologies



Data source: International Monetary Fund. Trade in Low Carbon Technology Products. Available at: [Mitigation | Climate Change Indicators Dashboard (imf.org)]

** LCT is abbreviation for low-carbon technology.*

Such challenges can be alleviated by strengthening collaboration on technology sharing, capacity-building, and policy support. Measures such as establishing dissemination platforms for green or low-carbon technologies, easing trade restrictions, supporting regional innovation hubs, fostering South-South cooperation, and assessing suitable technologies can enhance access to green or low-carbon technologies, enabling BRICS and other developing economies to accelerate their green transition. Although several initiatives, including those led by the United Nations, have been established to undertake these functions, overall cooperation remains limited.[17]

It should also be recognized that technology adoption must align with industrial policies that enhance domestic manufacturing, workforce capabilities, and supply chain resilience. Some BRICS economies already possess strong technical expertise but face hurdles in securing patient, long-term capital for implementation, while others still require greater access to cutting-edge green technologies. For economies that fit in the former, a common challenge is ensuring that green or low-carbon technology adoption contributes to long-term industrial development.

[17] Several international entities, including the World Bank and other organizations, have developed initiatives to facilitate the dissemination of green technologies in developing economies, including WIPO GREEN established by World Intellectual Property Organization (WIPO) in 2013, Green Industry Initiative launched by the United Nations Industrial Development Organization (UNIDO) and more.

5. Social challenges

Ensuring a just transition presents a significant challenge for BRICS economies, where heavy reliance on carbon-intensive industries is closely tied to employment, regional economic stability, and social welfare. G20 SFWG recognizes the importance of socially just transition and encourages transition finance participants to include impact assessment or mitigation measure in key components of transactions or financing, such as in corporate transition planning. Many BRICS countries have substantial workforces in sectors that may face structural decline due to decarbonization policies. If the transition away from these sectors is not well-managed, it could create challenges for social safety nets and result in fiscal stress from financing large-scale labor settlement or transition programs. Additionally, the prevalence of informal employment in sectors complicates the implementation of reskilling and job placement strategies.

Some practices are emerging in advanced economies that BRICS countries can refer to and adapt to their local context. In a long-term transition loan provided by the Scottish National Investment Bank (SNIB) and the Scotland Just Transition Fund to the energy service company Aurora, the loan agreement includes an adjustable interest rate linked to the speed of the agreed transition. It also incorporates just transition KPIs, such as the number of permanent employees in just transition roles, the number of apprentices and interns engaged in these roles, and total revenue generated from renewables activities compared to oil and gas.[18] Funds integrating capital channels to safeguard a just transition are also emerging, such as the EU Social Climate Fund, which provides financial support to vulnerable households and micro-enterprises facing increased cost challenges due to the impact of the EU Emissions Trading System.[19]

Without careful planning, decarbonization efforts could exacerbate unemployment and social inequality, potentially leading to resistance from industry stakeholders and affected communities. As outlined in G20 SFWG outputs, a successful transition strategy must be employment-sensitive, ensuring that new green industries generate sufficient and inclusive job opportunities. This requires policy frameworks that integrate worker reskilling programs, social protection mechanisms, and long-term industrial strategies that align economic growth with sustainability goals.

[18] Boston Consulting Group. Financing the "Just" in Just Transition (2024). Available at: https://web-assets-pdf.bcg.com/prod/framework-for-financing-just-in-just-transition.pdf

[19] Institute for Human Rights and Business and the Just Transition Finance Lab. White Paper: Leveraging the Spectrum of Finance For Just Transitions (2024). Available at: https://www.ihrb.org/resources/white-paper-leveraging-the-spectrumof-finance-for-just-transitions

Chapter 3. Challenges and opportunities of transition finance development in BRICS

Several challenges to transition finance development, which are common to both developed and developing countries, were analyzed in Chapter 1. In this chapter, we examine several BRICS-specific challenges in their attempts to develop transition finance. These issues may include underdeveloped financial markets, the absence of coherent transition taxonomies, a lack of capacity for transition planning, a shortage of service providers, and insufficient policy incentives. We will then explore several opportunities for BRICS countries to collaborate in overcoming these challenges. Based on these discussions, Chapter 4 will present a more holistic approach to developing a roadmap for transition finance in BRICS countries.

3.1 Challenges faced by BRICS in developing a transition finance market

Transition finance is crucial for enabling BRICS economies to shift from carbon-intensive industries to more sustainable economic models. However, several structural and institutional barriers hinder the effective mobilization and allocation of transition finance. While BRICS nations have issued joint statements and cooperation frameworks on climate, including the 2022 BRICS High-level Meeting on Climate Change Joint Statement and the 2024 BRICS Climate and Sustainable Development Cooperation Framework, there remains a lack of fully aligned policies and mechanisms to drive a cohesive transition finance market. This section looks at five of these BRICS-specific challenges that reflect the development stages of BRICS member countries and the capacity constraints in these economies.

1. Underdeveloped financial markets and bank-dominated systems

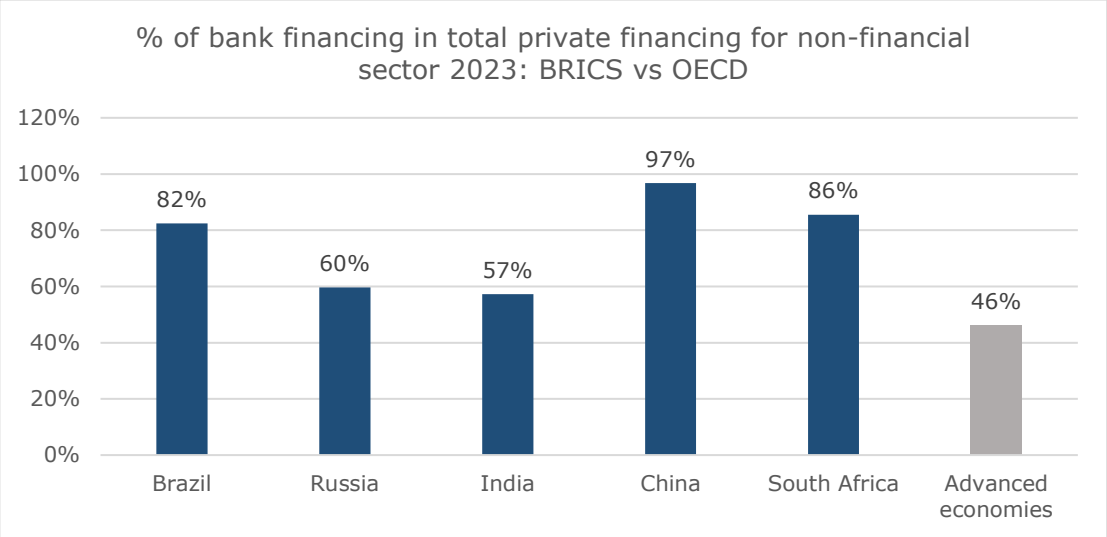
The financial landscapes in BRICS countries may limit the availability of diversified funding sources for transition finance, as financial systems are primarily bank-dominated, with commercial banks serving as the main funding channel for corporate and infrastructure investments, while capital markets (including equity and debt capital markets) remain relatively underdeveloped.

In a financial system dominated by banks, a significant challenge for transition finance is the mismatch between banks' risk appetite and term structure, on the one hand, and the transition finance needs, on the other. Hard-to-abate sectors such as heavy manufacturing, mining, and oil & gas require large-scale equity investment (that can tolerate risks) as well as long-term investments to support corporate transition toward net zero.

However, due to the nature of banks and their mandate to limit duration mismatches, banks are unable to provide risk capital and can only offer short-to medium-term loan facilities. Without sufficient provision of equity financing, the resulting higher leverage ratios tend to drive up the funding costs for debt financing.

To address these structural issues, BRICS countries should explore options to develop equity funding instruments and guarantee facilities to support transition finance, leveraging the capacity of the New Development Bank and its lower funding costs.

Chart 3-1. Selected BRICS countries' bank contribution to all economy credit



Data source: BIS statistics. Credit to the non-financial sector. Available at: [Credit to the non-financial sector - overview | BIS Data Portal]

2. Absence of applicable and interoperable transition taxonomies and benchmarks

A well-defined, operational, and science-based transition taxonomy is essential for directing capital toward eligible transition activities while preventing greenwashing. BRICS, similar to many other EMDEs, face challenges in using existing frameworks developed in advanced economies to guide local transitions. For instance, while the EU Taxonomy excludes natural gas as a transition fuel, BRICS countries as well as many other EMDEs view it as a crucial bridge to lower-carbon energy. The Just Energy Transition Report, based on the outcomes of the BRICS Energy Platform Research and signed by the Ministries of Energy in the BRICS countries in 2024, reflects the official stance of the group and agrees that transition fuels, including, but not limited to, natural gas, hybrid fuels (including biofuels), and other low-carbon fuels may be used in order to ensure a just transition

without compromising energy security and access to energy.[20] Similarly, SBTi, which offers benchmarks for evaluating the credibility of transition plans, emphasizes rapid coal phase-out, which is impractical for countries where coal is a primary energy source due to affordability and energy security concerns.

Currently, BRICS members have not formed their own consensus on how to develop transition taxonomies. While green taxonomies are operational in Russia, China, and Indonesia, and India has announced that it is in the process of developing one, none of these taxonomies address transitional activities or establish clear criteria for identifying transitional entities or activities. Apart from China's announcement to establish a transition taxonomy with regional piloting experience and Russia's classification of projects that corresponds to approaches to transition finance,[21] other BRICS members have not yet formally announced a plan to develop transition taxonomies or expanded existing sustainable finance taxonomies to include transitional activities. Without coordination, by the time all BRICS members have published their transition taxonomies, it is likely that they will look very different in terms of descriptions of technical pathways, technical screening criteria, verification requirements, and the contents of the no-significant-harm principles. If these taxonomies are developed in isolation, they could contribute to the segmentation of transition finance markets among BRICS and increase the costs of cross-border capital flows. For example, if a Brazilian sustainable project, which aligns with Brazil's transition taxonomy, is not recognized by China's transition taxonomy, the Brazilian fundraiser would not be able to access the Chinese bond market for issuing a transition bond.

In designing and developing taxonomies and benchmarks/tools to steer financing for a net-zero transition within BRICS, it is crucial to consider interoperability from the outset. Each BRICS country can still have its own taxonomy for purely domestic transactions, but for transition projects seeking cross-border financing among BRICS countries, it would be ideal for these projects to align with a "common taxonomy" agreed upon by all members. BRICS countries can learn from the work of the IPSF Common Ground Taxonomy, which is recognized by China, the EU, and Singapore and has been used to facilitate cross-border green fundraising.

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[20] Research for reference on natural gas's role as a transitional fuel include:

a. BRICS Energy Platform Research. https://rosenergo.gov.ru/upload/press-center/BRICS-JET-Report-2024.pdf?ysclid=m88zebam6d982141332

b. ASEAN Taxonomy for Sustainable Finance. https://asean.org/book/asean-taxonomy-for-sustainable-finance-version-3/

[21] Decree of the Government of the Russian Federation No. 1587, dated September 21, 2021. Available at: https://base.garant.ru/402839344/?ysclid=m8eocwo22i649597495#friends

3. Capacity constraints in corporate and financial institutions

The development of transition finance demands significant investment in capacity among regulators, financial institutions, and corporates. As transition finance is a relatively new concept for most BRICS members, many of these capacities are not yet in place. Specifically, BRICS members face at least three types of capacity constraints:

At the corporate level, most companies lack the expertise to develop credible transition plans with clear emission reduction targets, timelines, and financing strategies. Small and medium enterprises (SMEs), which form the backbone of BRICS economies, face even greater challenges due to limited access to expertise and financing for transition planning. Often, companies focus on short-term operational improvements rather than adopting long-term decarbonization strategies. This makes it difficult for banks and investors to assess the credibility of transition financing requests, resulting in higher perceived risks and lower capital allocation.

At the financial institution (FI) level, most FIs in BRICS countries have not developed transition finance frameworks to guide business operations. In addition, even if a procedure for initiating a transition finance deal is put in place, most banks lack the capacity and technical expertise to evaluate fundraisers' proposals for alignment with taxonomy criteria and to assess the credibility and feasibility of their transition plans. Drawing on the experience of more mature markets,[22] additional guidelines and process frameworks will be required to effectively manage these tasks, as they involve steps beyond traditional business processes.

Table 3-1. Examples of technical consideration of financiers to evaluate for transition plan

	Transition pathways and scope	**Credibility and feasibility of pathways**
Topics that financial institutions need to understand about transition activities	• What is the temperature alignment, level of overshoot, and likelihood? • To what extent does the pathway rely on removals and carbon capture?	• Has the pathway been validated by the scientific community for credibility around temperature alignment?

[22] For example, Barclays Bank PLC in the United Kingdom has created a detailed framework covering over 110 transition activities across 11 high-emitting and hard-to-abate sectors. The framework provides guidance on assessing companies as "aligned" or "aligning" with net-zero goals and addresses the managed phaseout of carbon-intensive assets.

	• What are the assumptions on investment needed to achieve the pathway?	• Has the pathway been evaluated by industry and other key stakeholders (e.g., regulators) to assess the commercial feasibility?

Source: GFANZ. Guidance on use of Sectoral Pathways for Financial Institutions (2022). Available at: https://assets.bbhub.io/company/sites/63/2022/06/GFANZ_Guidance-on-Use-of-Sectoral-Pathways-for-Financial-Institutions_June2022.pdf

At the regulatory level, the absence of mandatory and standardized frameworks for GHG accounting and disclosure in many BRICS economies limits the availability of high-quality emissions and transition data, which are essential for developing credible transition plans and evaluating progress on decarbonization. Additionally, without consistent reporting standards, banks and investors face high due diligence costs in their assessments, which discourages the deployment of capital for transition finance.

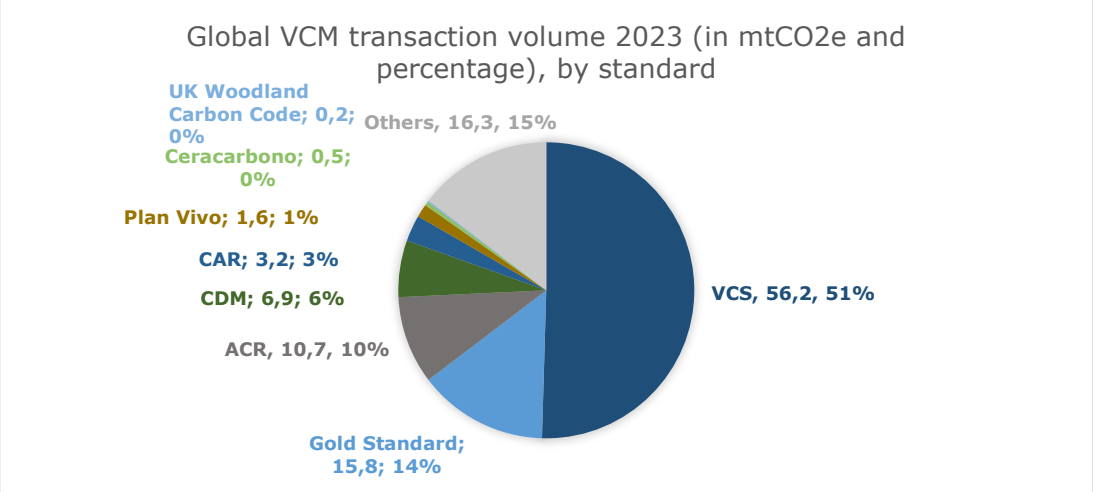
4. Lack of fiscal and carbon market instruments to incentivize transition finance

Fiscal incentives and carbon pricing mechanisms are important instruments for crowding in private sector investment to support transition activities. However, relative to OECD countries, BRICS economies generally have more limited fiscal capacity to stimulate their desired industries and economic activities using "green industrial policies" via fiscal subsidies, preferential lending facilities, guarantees, and direct government investment. In the area of transition finance, very few BRICS governments have provided explicit subsidies, low-cost public funding, or de-risking facilities for specific transition activities. Although incentives have been released by the governments of Brazil, China, and South Africa, other BRICS governments have not utilized these facilities to scale up transition activities necessary for economy-wide decarbonization.

Carbon markets play a role in facilitating the decarbonization of high-emission industries and supporting the broader transition to a low-carbon economy. BRICS members' carbon markets are less developed compared to some OECD countries, especially the EU. The same is true in the voluntary carbon markets (VCMs), where U.S.- and EU-based standards (including Verra and Gold Standard) account for about 80% of global carbon credit trading, while VCM trading in BRICS national markets accounts for probably

less than 15% of the global total.[23] Most VCMs in EMDEs were launched only recently, and their standards, registries, trading platforms, and verification and validation mechanisms are less mature and receive limited recognition from international investors.

Chart 3-2. Global voluntary carbon market transaction volume by standard



Data source: Ecosystem Marketplace. State of the Voluntary Carbon Market 2024. Available at: [2024 State of the Voluntary Carbon Market (SOVCM) - Ecosystem Marketplace]

Table 3-2. BRICS voluntary carbon market at a glance

Carbon credit market place	**Year launched**	**Trading volume 2024 (mtCO2e)**	**Standard of credit tradable**
Russian – Russian National Commodity Exchange	2022	Not publicly available	Climate project methodologies by Institute of Global Climate and Ecology
China – China Certified Emission Reduction (CCER)	2024	19.59	CCER methodologies
South Africa – JSE Ventures Voluntary Carbon Market	2024	0.01 (first trade, February 2025)	Wide range of standards as accepted in US-based Xpansiv exchange
South Africa – South African Carbon Offsets Programme	2019	Not publicly available	CDM, VCS, GS

[23] Estimate by author based on transaction data from ecosystem marketplace and public information.

Indonesia – IDX Carbon	2023	0.41	SPE-GRK methodologies (standards)

Source: based on public information

5. Shortage of third-party service providers for transition finance

A well-functioning transition finance ecosystem relies on a robust network of third-party service providers to ensure data integrity and establish market confidence. These institutions also play a vital role in educating the market on the implementation of standards and guidelines and serve as a communication bridge between regulators and market participants. However, many BRICS economies face a shortage of such service providers. In particular, the lack of the following service providers has hindered the development of the transition finance market:

1) Carbon accounting and verification firms: Accurate accounting and auditing of emissions inventories form the foundation of transition planning and the development of sustainability-linked transition finance instruments. Domestic service providers in this area are important for ensuring data accuracy, as international service providers are typically expensive in EMDE contexts.

2) Second-party opinion providers for transition plans: Many financial institutions require independent validation of corporate transition plans when structuring sustainability-linked products. While this type of service provider is still in the early development stage in mature markets, the near absence of such providers in BRICS markets means financial institutions might struggle to obtain credible assessments of transition finance transactions and face a greater risk of "transition washing."

3) Specialized technical and financial advisory firms: Many BRICS companies interested in transition lack the internal expertise to design bankable transition projects, a task that requires a unique combination of skills and knowledge in technical pathways, corporate finance, engineering, carbon accounting, ESG assessment, and human resource management. The absence of specialized transition-related investment advisory services hinders project structuring and limits the pipeline of high-quality transition finance opportunities.

3.2 Opportunities for BRICS to collaborate on transition finance

Despite the many challenges highlighted above, BRICS economies have already taken an important first step in shaping transition finance through the BRICS Transition Finance Framework. However, to fully realize the potential of transition finance, BRICS economies must build upon this foundation by leveraging their market scale, strengthening intra-BRICS cooperation, and utilizing existing pilot experiences. Given that transition finance remains an emerging concept globally, with no universally accepted standards, benchmarks, or tools, BRICS has the opportunity to further refine its approach and develop best practices in transition finance suited to diverse its economic conditions, industrial structures, and development pathways. Unlocking these opportunities via closer collaboration could position BRICS as a leader in financing climate-aligned transitions, while also helping improve access to financing, reduce costs, develop interoperable market standards, facilitate cross-border investments, and avoid duplication of efforts in capacity building.

The scale of transition financing required across BRICS economies presents a major investment opportunity, given that BRICS countries, when combined, represent about 48% of the world's total carbon emissions, 33% higher than that of OECD countries.[24] This implies that the largest market for transition finance will be in the BRICS countries, if they opt to develop interconnected markets by creating comparable and interoperable standards, benchmarks, and tools, developing coordination mechanisms on access to green technologies, and facilitating green trade. The huge size and potential interconnectivity of the transition finance market in BRICS could bring several key benefits to all member countries. First, BRICS countries can take advantage of fundraising opportunities in other member countries, which could imply greater access to cheaper financing. Second, the unit cost of developing frameworks, standards, benchmarks, templates, tools, databases, and training programs can be substantially reduced, as many of these could be jointly developed within BRICS or be based on one set of BRICS baselines. Third, in negotiating with OECD countries on climate finance and sustainability-related policies (such as CBAM, disclosure requirements, and methodologies for carbon footprint measurement), the Global South could have a unified voice and gain stronger bargaining

[24] Country emission data sourced from climate watch database. All country emission data are from year 2021. Note that this emission data include emission from land use change and forestry.

power.[25] Fourth, by giving a mandate to the New Development Bank (NDB) to focus on scaling up an interconnected transition finance market in BRICS, a number of special financing vehicles could be developed to meet the significant demand from member countries for equity financing, de-risking facilities, demonstration projects, and capacity building.

Specifically, BRICS can explore opportunities to collaborate in the following areas:

- **Financing green and transition activities with BRICS local currencies.** An example of this opportunity is that China now offers significantly lower funding costs for green finance compared with the USD market. In the past year, foreign entities have raised about RMB 100 billion from Chinese Panda bonds, some of which are deployed to green and sustainable projects. Brazil's recently launched Eco Invest program is another initiative that seeks to leverage local capital markets for green investments, offering new financing tools to mobilize resources domestically.
- **Enhancing access to affordable green technologies.** A closer South-to-South collaboration on technologies could help increase access for other BRICS countries to much more affordable green technologies. For instance, over the past decade, economies in China, Brazil, India has emerged as the world's largest and most efficient producer of solar panels, wind turbines, battery storage, and making significant advances in electric vehicles, hydrogen and biofuels. Such cooperation would not only improve energy security but also position BRICS as architects of a new, equitable climate technology ecosystem that bypass traditional North-South dependency patterns.
- **Expanding free trade and investment arrangements for green industrial goods and services.** Existing BRICS trade partnerships provide an opportunity to facilitate cross-border trade and foreign direct investment (FDI) for green production in areas such as renewable energy equipment, electric vehicles, energy efficiency technologies, and sustainable agriculture goods. The expansion of preferential trade and FDI arrangements for green goods and services could help BRICS economies increase their green trade and production, accelerate their low-carbon transitions, and jointly gain market share in OECD countries by enhancing cost competitiveness. The expansion of free trade and

[25] An interesting initiative taken by Huzhou municipality in China is that it organizes a large number of export companies to negotiate with licensed European verifiers to achieve a substantial price cut for verification of carbon foot prints for the export products. Imagine if many BRICS export countries join hands in a similar negotiation with CBAM-related service providers, they can gain greater bargaining power given the sheer size of their markets.

investment arrangements for green industrial goods and services has identified this as a key focus of its BRICS Presidency in 2025.

- **Giving a mandate to the New Development Bank (NDB) to promote transition finance in BRICS.** The NDB, as a multi-developmental financial institution set up by BRICS, will need to plan for the net-zero transition of its own portfolio and has the potential to play a catalytic role in transition finance by offering concessional loans, equity investment tools, de-risking facilities, and structured transactions for transition projects. The NDB could also lead in developing a BRICS-wide framework for transition finance taxonomies, setting eligibility criteria for transition projects, and promoting the adoption of disclosure requirements.

- **Knowledge sharing on green and transition finance.** Within BRICS, some countries have already made progress in developing transition finance frameworks and financial instruments, and their lessons can be shared with the broader bloc as reference starting points. Examples include South Africa's Just Energy Transition Financing scheme as valuable experience for integrating social and economic considerations into transition finance. Valuable experience in developing domestic green finance markets can also be drawn from China and Brazil, with regard to, respectively, achieving fast scaling up of market activities by building a conducive policy environment enabled by cross-department collaboration, and issuing sovereign sustainable bond frameworks to finance public budgets supporting NDCs and sustainable development. Russian's taxonomy also reflects approaches to transition finance.[26] By sharing lessons and best practices from these initiatives, BRICS countries can avoid costly mistakes and accelerate their pace of developing a robust transition finance framework.

- **Exploring potential for harmonization of transition finance standards within BRICS.** Given the absence of a universal transition taxonomy, BRICS economies have the chance to lead the development of transition finance standards tailored to emerging markets, creating a first-mover advantage. Developing a coordinated transition finance framework offers economic merit in reducing market fragmentation and enhancing cross-border investments. For companies operating in multiple BRICS markets, this would entail lower compliance costs while providing clarity on transition finance eligibility. Establishing a unified transition finance approach would strengthen BRICS' bargaining power in global sustainability discussions, including green and transition finance discussions.

[26] Decree of the Government of the Russian Federation No. 1587, dated September 21, 2021. Available at: https://base.garant.ru/402839344/?ysclid=m8eocwo22i649597495#friends

- **Fostering the Creation of Country Platforms in BRICS Countries to Expand Sectoral Transition.** BRICS countries can strengthen their transition finance efforts by establishing Country Platforms that align public and private capital with sectoral decarbonization priorities. Such platforms serve as coordination mechanisms to attract investment, de-risk green projects, and accelerate low-carbon industrial development. Within BRICS, experiences can be drawn from Brazil's Climate and Ecological Transformation Platform, China's municipal level pilot platforms, and South Africa's Just Energy Transition Partnership (JETP).
- By working collectively to expand and operationalize transition finance frameworks, BRICS can position itself as a leader in financing climate-aligned transitions while ensuring that solutions remain relevant to its member states' development priorities.

Chapter 4. Developing a BRICS action plan for transition finance

In this chapter, we propose that BRICS countries take the following 13 actions to address the challenges they face, including those of global nature and those specific to BRICS, in implementing a framework for transition finance, taking into account the G20 Transition Finance Framework and the BRICS Transition Finance Framework. These actions can be formalized into an Action Plan adopted by BRICS. Once implemented, these actions could lay the foundation for an ecosystem of transition finance that is aligned with international best practices but also takes into account developing countries' local contexts, including capacity-, resource-, and infrastructure-related constraints. Our proposed actions are:

Action 1: Develop national transition plans

While a majority of BRICS countries have made NDC commitments as part of the Paris Agreement implementation process, some developing countries do not yet have plans with sufficient operational details at the national level for a whole-of-economy transition towards net zero. Such national transition plan provides the necessary basis for key sectors, especially those carbon-intensive industries, to develop their transition plans. These, in turn, are needed by financial institutions to assess the credibility of company-level transition plans, in order to avoid "transition-washing."

The development of a national transition plan — often referred to as national decarbonization strategy — should involve at least the following key elements: 1) an analytical framework and a set of energy/climate/economic models (examples include IAM, EPS, LEAP, CGE models) to quantify the effects of various technologies and policies on carbon emissions; 2) specific targets for greenhouse gas emission reductions, including target year for achieving net zero; 3) decarbonization strategies in key sectors such as energy, transportation, manufacturing, building, and agriculture, which should include broad descriptions of technical pathways for these sectors. Ensure that these technical pathways are consistent with the national targets for carbon peaking and carbon neutrality; 4) a package of policies and regulations (including, for example, a carbon tax, ETS mechanism, subsidies, financial penalties, green finance policies, and sectoral regulations mandating the adoption of green technologies and practices) that would incentivize or require the adoption of green and low-carbon technologies and reshape the behaviors of economic agents including companies and consumers to become more aligned with a net-zero economy; 5) a governance framework that includes the division of labor and coordination mechanisms among stakeholders including government agencies, regulators, companies, financial institutions, NGOs, and

consumers; arrangements to assess and monitor progress towards decarbonization goals; plans to engage with stakeholders on policy consultation, awareness raising and capacity building; 6) a financial framework, which includes not only government funding but also green finance mechanisms to mobilize private sector investment for green and low-carbon projects.

Action 2: Develop technical transition pathways for hard-to-abate sectors

The technical core of any company's transition plan is the technical pathways it should employ to decarbonize. While there are numerous industrial studies and recommendations from international organizations (such as IEA) and service providers (such as S&P Global Ratings) that have published technical pathways for hard-to-abate sectors such as fossil fuels, steel, cement, and petrochemical industries, there are not one-size-fits all solutions for all countries, as the most suitable technical pathways for each country should depend on the 1) availability of technologies to this country (including the supply chains that support the technologies' operation); 2) cost-effectiveness of such technologies in this country; and 3) capacity of the country to utilize and operate such technologies.

It is clear that due difference in circumstances, while some technical pathways may present the best option for one country, it may not be the ideal options — either technically or economically — for another country. For example, China, India, Russia, and the US's steel sector net-zero pathway differs due to factors, including the stock of existing infrastructure for various technologies, future demand for steel production, scrap steel availability, and access to high-grade iron ore. As a result, China's steel pathway focuses on replacing traditional Blast Furnace to Basic Oxygen Furnace (BF-BOF) with green steel products while expanding new electric arc furnaces. India's pathways, considering growing domestic demand, focuses more on integrating clean technology to the sector's development and avoiding further investment in BF-BOF. Russia is investing in transition finance for steel production by adopting green hydrogen technologies to reduce emissions. The US's steel sector already runs heavily on scrap steel recycling and should focus on electrifying the sector with renewable energy.[27]

Therefore, it is necessary for each BRICS country to develop its domestic guidelines on technical pathways for key carbon-intensive sectors, taking into account its local contexts. A working group consisting of BRICS and international experts could be formed for knowledge sharing purposes and for assisting countries in need. The Sustainable Development Network

[27] Climate Action Tracker, Decarbonising the iron and steel sector: China, India and the US.

established by the BRICS Business Council in 2024 may be considered for this purpose.[28] This group can compile and disseminate the existing documents on technical pathways from major economies and relevant international organizations, and conduct some comparative studies to show pros and cons of different technical pathways in different country contexts.

Action 3: Develop guidelines for BRICS transition taxonomy development and effective usage

Over the past few years, China, the EU, Singapore, and other ASEAN countries have developed some versions of transition finance taxonomy to help their financial institutions to identify and label transition activities and transition investments. However, the approaches they take differ widely from each other — the EU describes transition activities in its Sustainable Finance Taxonomy with some safeguard measures; more than 10 Chinese regional governments developed more extensive lists of transition activities (amounting to a few hundred items) which specify short-term and medium term decarbonization targets; Singapore employs a "traffic light system" for evaluating the eligibility of transition activities that requires additional analytical work by users.

While there is a broad agreement that transition taxonomy should be the main pillar for the transition finance ecosystem to help prevent "transition washing", and that harmonizing definition internationally is crucial for cross-border transactions, there is not yet a universally accepted approach to developing and using such a taxonomy. The BRICS Transition Finance Framework acknowledges this need and provides a starting point by calling for a common transition taxonomy that considers country-specific circumstances. It also highlights the importance of a system of metrics to set climate goals and measure progress, referencing indicators such as absolute GHG emissions reductions, carbon intensity, and financed emissions. However, these provisions remain at a high level, leaving significant gaps in defining how such a taxonomy should be structured, implemented, and integrated into financial decision-making.

Given the carbon intensive nature of BRICS economies, and these countries have a very high demand for transition finance, we believe that they should collaborate and develop operational guidelines for the transition taxonomy development and effective usage of such taxonomies. These guidelines should be more specific in addressing key operational challenges faced by taxonomy developers and users in developing countries, compared with the high-level principles presented by the G20 Transition Finance Framework.

[28] BRICS Business Council. Annual Report (2024). Available at: https://bbf2a463-6e2c-4484-b1b1-b55a3678d857.selstorage.ru/BRICS_ar_2024.pdf

In particular, the BRICS guidelines for transition taxonomy should attempt to address several key challenges, such as:

- **Defining the coverage of sectors.** Currently, there are no major disputes on transition pathways for heavy manufacturing sectors, mining, and agriculture, but it is intensely debated whether oil and coal-related sectors should be included in transition finance at all. Some argue that activities in most of these sectors should be phased out completely rather than for them to improve operational efficiency, while others argue that these industries will exist in the coming decades and thus any investments leading towards low-emission operations of them should qualify as transition. The BRICS guideline could attempt to reach some broad consensus on this issue, by possibly (initially) focusing on a small set of technical pathways in sub-sectors of these energy industries that could enable significant carbon reduction over short- and medium-term, and could credibly avoid carbon lock-in risks in the longer term.
- **Developing technical screening criteria for qualified technical pathways.** Taxonomy developers need to clarify technical screening criteria for the technical pathways presented in the taxonomy, but it may take a very long time to develop global consensus on these criteria. One possible reference is the Multi-Jurisdiction Common Ground Taxonomy (MCGT) work, which is co-chaired by China and the EU and involves Singapore. It has adopted the method that if two out of the three jurisdictions agree on technical screening criteria, it would be used in the MCGT.
- **Clarifying the relationship between transition plan and transition taxonomy.** Transition taxonomy is only one element of the transition finance ecosystem and taxonomy alone is not sufficient to prevent "transition washing" risks. Another key requirement, i.e., availability of a credible transition plan of the fundraiser, has to be put in place by financial institutions when evaluating transition finance applications from clients. The experience from China's transition finance pilot cities is that submitting transition plans is now a mandatory requirement for companies seeking labeled "transition finance." Extending transition finance to companies without a credible transition plan, even if all projects proposed are from the taxonomy, risks becoming assistance to projects that decarbonize in the short run but reinforce its carbon intensive operation in the longer run. BRICS taxonomy guidelines should also clarify the relationship between taxonomy and transition plan.
- **Role of second-party opinion and third-party verification.** In actual implementation of transition finance, due to the many technical

requirements for labelling "credible" transition activities that financial institutions are not familiar with, second-party opinions and/or third-party verifications are often required by regulators or by banks' internal transition finance framework. These external evaluation requirements may arise in cases such as sustainability disclosure that include reporting for carbon emission (especially for Scope 3 emissions), alignment of certain activities or transition pathways with transition taxonomy, and alignment of company's transition targets with science-based criteria. However, in most developing countries, there is a lack of qualified Second Party Opinions (SPOs) and verifiers who are experienced in providing such services. In addition, many BRICS countries have not yet developed or published official database for emission factors and methodologies for science-based benchmarks for evaluating credibility of transition plans that are aligned with both the Paris Agreement and national carbon neutrality targets. It may be necessary for BRICS transition taxonomy guideline to provide a roadmap for clarifying the roles of third-party services providers and ways to enhance their capacity.

On many of these issues, if no agreement can be reached immediately within BRICS, a phased approach can be taken to reach consensus on easier topics and leave the more difficult one for next phases.

Action 4: Develop a BRICS template for company transition plan

Recent experiences from BRICS countries in developing transition finance suggest that, while many carbon-intensive companies are interested in seeking transition finance, most of them are not equipped with the knowledge and expertise for developing a credible transition plan required by financial institutions. In addition, according the G20 Transition Finance Framework and other global principles/guidelines, a credible transition plan involves a set of complex requirements for the fundraiser to determine science-based targets for decarbonization for the short, medium and long term; to decide on cost effective technical pathways; to measure carbon emissions and monitor carbon reductions; and to put in place governance mechanisms to ensure the delivery of the announced targets.

To substantially reduce the costs of and increase the accessibility of knowledge related to developing a transition plan, we propose that a working group be set up to develop a BRICS transition plan template, which should be made public and could be used by companies in BRICS on a voluntary basis. The Sustainable Development Network established by the BRICS Business Council in 2024 may be considered for this purpose.[29]

[29] Ibid

This template can be modelled after the transition plan template developed by Huzhou municipality, the most successful Chinese green finance pilot city. As of February 2025, this template has been used by over 200 companies in Huzhou, and assisted them in successful applications for transition loans from banks.

Such as Transition Finance Template will show the structure of the transition plan document and will guide companies in filling in all necessary contents. The template will include sections on information such as the company's basic information and carbon emissions (scope 1, 2 and, if possible, 3); short-term, medium-term, and long-term targets for emission reductions; technical pathways for decarbonization; financing plans; governance arrangement; social impact assessment and remedial measures; and commitment from management. Operating as a questionnaire, this template can be used by governments, regulators, or financial institutions to assist companies in seeking transition finance, and to provide training to specialists who help companies in developing their transition plans.

Box 1: Transition Plan Template Issued by Huzhou Municipality, China

In 2023, Huzhou Municipality, China's most successful green finance pilot city, issued the "Template for Transition Plan for Companies Seeking Transition Finance." The outline of this template, which is a seven-page document, includes:

Enterprise Overview

Introduce the basic information, business scope, operating conditions, and industry status of the financing entity, including aspects such as the enterprise's development history, organizational structure, and financial situation, enabling readers to have a comprehensive understanding of the enterprise.

Transition Targets

Define the short-term, medium-term, and long-term goals of the enterprise in aspects such as green and low-carbon transformation, including carbon emission reduction targets, energy utilization efficiency improvement targets, etc. The goal setting should meet domestic and international net-zero commitments, advanced industry standards, and regional requirements.

Technical Pathways

Formulate specific paths and measures to achieve the transformation goals, covering the selection of technical pathways, the planning and implementation steps of transformation projects, etc., such as what kind of low-carbon technologies to adopt, which equipment upgrades and renovations to carry out, etc.

Financing Scheme

Analyze the scale of capital demand, the use of funds during the enterprise's transition process, as well as the planned financing methods and channels, such as applying for transition loans, issuing transition bonds, etc., to provide financial support for the transformation activities.

Safeguard Measures

Elaborate on the safeguard means adopted by the enterprise to ensure the smooth implementation of the transition plan from aspects such as organizational structure, personnel allocation, management systems, and technical support, ensuring the orderly progress of the transformation work.

Just Transition

Evaluate the impact of the transition on stakeholders such as employees, communities, and the supply chain, and propose measures and plans to ensure social fairness, employment stability, etc., to avoid negative social impacts brought about by the transformation.

Information Disclosure

Determine the content, methods, and frequency of the enterprise's transition information disclosure, ensuring the transparency of the transformation process, which is convenient for supervision by regulatory authorities, financial institutions, and the public.

Commitment and Responsibilities

The enterprise makes a commitment to the implementation of the transformation plan, clarifying the responsibilities and obligations of the enterprise and relevant responsible persons during the transformation process, ensuring the seriousness and effectiveness of the transformation work.

Source: Huzhou Municipality. Available at: http://custom.huzhou.gov.cn/DFS/file/2023/07/19/20230719211028331jlx928.pdf?iid=567061

Action 5: Facilitate the adoption of disclosure framework based on ISSB standards

As a key pillar of the transition finance framework, disclosure of carbon-related information is fundamental to ensuring the credibility of transition planning, progress monitoring, and allocation of government incentives for companies using transition finance instruments. The S1 and S2 standards issued by the International Sustainability Standards Board (ISSB) have already provided detailed requirements for implementing climate-related disclosure. However, the implementation of ISSB disclosure requirements in

developing countries can be challenging due to limited resources, infrastructure, and expertise.

Below are several options for BRICS countries, or developing countries in general, to effectively implement ISSB disclosure requirements:

- Raising awareness: governments, regulators, and industry bodies should organize workshops, seminars, and training programs to educate businesses, auditors, and investors about the ISSB standards and their importance;
- Building capacity: work with international organizations and capacity building platforms (such as Capacity-building Alliance of Sustainable Investment) to organize training programs for professionals (e.g., accountants, auditors, and sustainability experts) to build expertise in sustainability reporting and ISSB requirements;
- Adopting a phased implementation strategy: begin with voluntary adoption for large companies and financial institutions, followed by mandatory compliance on listed companies over time; develop a simplified framework for small and medium-sized enterprises (SMEs);
- Develop digital technologies: develop digital platforms for sustainability reporting to streamline data collection, verification, and dissemination, especially for SMEs and supply chains; use advanced technologies such as blockchain for transparent data tracking and AI for data analysis to reduce reporting costs and improve accuracy.

Action 6: Develop a toolbox for transition finance instruments

Transition finance requires a suite of financial products to meet diverse demands from the real economy. These instruments should include debt instruments (such as transition loans/bonds, sustainability-linked loans and bonds, transition-related securitization instruments), equity instruments (e.g., equity funds specialized in transition finance), and risk mitigation tools (such as partial or full guarantee facilities and insurance products).

Based on global experiences in recent years, the low-hanging fruits are transition-related debt instruments. BRICS countries should reference the relatively mature frameworks such as those introduced by ICMA on transition bonds and sustainability-linked instruments, as well as those introduced by major banks for transition finance operations. In addition, the stock exchanges across BRICS countries could consider collaboration in standardizing green, sustainability-linked or transition-related instruments to facilitate cross-listing and trading of such instruments.

For transition-related debt products, we recommend banks and bond markets in BRICS countries to adopt a structured approach that includes at least the following steps: 1) adopt a formal approach to identifying and labelling qualified transition activities, including via the use of a transition taxonomy and introducing requirements for disclosure of transition plan, credible decarbonization targets, and governance arrangements; 2) choose KPIs and Sustainable Performance Targets (SPTs)[30] that are relevant, core, and material to the fundraiser's business model and sustainability objectives, and incorporate these KPIs in the terms of the financing transactions, which could include mechanisms such as coupon step-ups if targets are not achieved; 3) require fundraisers to commit to regular reporting on performance against KPIs and SPT, and appoint external verifiers to assess performance against SPTs.

Box 2. Standard Chartered Bank's Transition Finance Framework

Developing a structured approach to transition finance requires clear qualification criteria, key performance indicators (KPIs) aligned with borrowers' business models, and robust borrower requirements to ensure credible and measurable progress. Standard Chartered Bank's Transition Finance Framework offers a structured model for operationalizing these principles, providing an illustrative case study of how financial institutions can design and implement transition finance tools effectively.

Standard Chartered adopts a science-based approach to defining transition finance, aligning with the IEA Net Zero Energy (NZE) 2050 scenario and incorporating guidance from industry taxonomies such as the EU Sustainable Finance Taxonomy and the Singapore-Asia Taxonomy for Sustainable Finance. The bank's framework explicitly labels transition finance activities that:

- Align with a 1.5°C decarbonization trajectory, ensuring that financed projects contribute to climate goals.
- Avoid carbon lock-in by financing activities that do not hinder the development of low-carbon alternatives.
- Meet environmental and social safeguards, including labor standards, human rights, and community impact considerations.

To ensure transparency and accountability, Standard Chartered employs a Transition Finance Sub-Committee that evaluates whether assets or entities meet the framework's criteria before labelling them as

[30] Sustainability Performance Targets (SPTs) are specific, measurable objectives set by organizations to achieve improvements in their environmental, social, and governance (ESG) performance. These targets are often tied to key performance indicators (KPIs) and play a critical role in sustainability-linked financial instruments such as loans and bonds.

"Transition." This governance structure ensures that financed activities remain aligned with evolving climate science and industry best practices.

Selecting Relevant KPIs for Borrowers

A key element of transition finance is ensuring that borrowers demonstrate measurable progress toward decarbonization. Standard Chartered's approach incorporates borrower-specific KPIs that align with sectoral transition pathways. Examples include:

- Emission Intensity Reductions — Borrowers must set time-bound targets to reduce Scope 1, 2, and (where applicable) Scope 3 emissions, demonstrating alignment with the NZE 2050 scenario.
- Capital Allocation to Low-Carbon Investments — Borrowers are expected to allocate an increasing share of capital expenditures to clean technologies, such as electrification, hydrogen adoption, and carbon capture utilization and storage (CCUS).
- Operational Adjustments — Companies in energy-intensive sectors must implement efficiency improvements, adopt renewable energy, or shift toward sustainable feedstocks.

Setting Borrower Requirements for Transition Finance Eligibility

To qualify for transition finance under Standard Chartered's framework, borrowers must meet minimum eligibility requirements, which serve as safeguards to ensure meaningful transition efforts. These include:

- Development of a Credible Climate Transition Strategy — Borrowers must present a detailed transition plan outlining their pathway to net zero, backed by science-based targets.
- Disclosure and Reporting Commitments — Borrowers must disclose emissions data, with a preference for alignment with international reporting frameworks such as TCFD (Task Force on Climate-related Financial Disclosures).
- Alignment with Environmental and Social Risk Frameworks — Borrowers must comply with Standard Chartered's Environmental and Social Risk Management Framework, ensuring responsible corporate practices.

Standard Chartered also mandates annual external verification of borrower progress, ensuring compliance with transition finance commitments and preventing greenwashing.

Source: SCB's Transition Finance Framework 2024

Similar approaches should be adopted by financial institutions offering equity financing and risk mitigation products that are specifically for the

purpose of supporting labelled transition activities. The next few sections will outline specific recommendations on introducing BRICS focused equity instruments (e.g., transition fund) and risk mitigation instruments (guarantee facility).

Action 7: Launch a Just Transition Fund hosted by the NDB

The current transition finance landscape is dominated by instruments such as transition loans/bonds or sustainability-linked loans/bonds, while many transitioning firms, are inadequately capitalized and their first priority in fund raising is to seek equity injection. Against this backdrop, setting up an equity transition fund will help close a major gap in the toolbox of the transition finance instruments.

We propose that BRICS countries consider establishing a Just Transition Fund to provide equity funding for demonstration firms and projects in the transition finance area, with a goal of developing best practices that are applicable to BRICS context in key sectors such as energy, transportation, heavy manufacturing, building and agriculture. This Fund, of initial size of USD 2-3 billion, can be initiated by the New Development Bank and co-managed with a specialized asset management company.

This fund will make equity investment in transition companies in selected hard-to-abate sectors — such as fossil fuels, steel, cement, petrochemical, mining, shipping, aviation, and agriculture — with portfolio companies in key BRICS countries. For example, its portfolio could include one investment in a Chinese steel company, one investment in a Russian energy firm, one investment in an agri-food company in Brazil, one mining company in South Africa, and one data center operator in India. Each of these investments could potentially become a showcase on how new shareholders can help structure a transition plan for a carbon-intensive company and put together a financing package and execution plan that enable its decarbonization.

In addition to providing a new financial instrument for transition finance, the Just Transition Fund should also explore an effective approach to considering social equity issues in the design of transactions of transition finance. For example, for each investment made by the Fund, a social impact assessment should be required as part of its due diligence process, with a focus on the implications of the transition plan for employment, community, and supply chain resilience. If the assessment concludes that the significant negative impacts are likely as a result of implementing the transition plan, then the Fund should require the fundraiser (investee company) to put in place remedy measures such as retraining and reskilling programs for employees who could be made redundant, or an early retirement program

for those close to retirement ages, to mitigate the labor impact of the transition.

A key enhancement to this proposal is the active participation of BRICS sovereign wealth funds (SWFs). Given their large assets under management (AUM) and long-term investment horizon, SWFs could play a pivotal role by co-investing alongside the NDB, providing anchor capital, or setting up parallel investment vehicles to further scale equity support for transition firms. Additionally, SWFs could facilitate risk-sharing mechanisms for transition investments, thereby enhancing private-sector confidence and mobilizing additional capital. Their participation could also support the guarantee facility discussed in Action 8, as suggested under Brazil's 2025 BRICS Presidency priorities.

Action 8: Establish a guarantee facility for decarbonization projects

One important reason for the reluctance of financial institutions in supporting transition projects is that the many new green or low-carbon technologies and their business models are not tested in terms of their commercial viability. However, the success of such projects could have significant positive externality to the entire industry, as others will follow suit and thus entail larger-scale adoption of low-carbon technologies, which will further reduce unit costs and increase affordability.

It is therefore necessary to consider an incentive mechanism to encourage the use of new low-carbon technologies for decarbonization. One of such incentives could be a guarantee facility for companies that have a credible decarbonization plans and opt to use low-carbon technologies. We propose that BRICS consider setting up a "Transition Guarantee Facility," which could be hosted by the NDB. A reference to this operation is Multilateral Investment Guarantee Agency (MIGA) run by the World Bank Group, which provided political guarantee for project loans to low-income countries. The BRICS transition guarantee facility can be designed to provide full or partial guaranteed to commercial loans that support projects that deliver significant climate benefits, adopt new green or low-carbon technologies, and are located in BRICS countries. The financing of this facility can be carved out of the NDB's existing capital, with an initial contribution of USD 1 billion. Based on the experience of MIGA, a one billion dollar guarantee facility could support a loan portfolio of about USD 20 billion; and effective operation of this facility (by charging reasonable guarantee fees or insurance premiums for its services) could ensure that it is reasonably profitable while supporting the climate objective.

The active involvement of national development banks and SWFs is recommended to consider to enhance its effectiveness and operational reach.

National development banks could act as key implementing partners, leveraging their local market expertise and existing relationships with domestic financial institutions, thereby increasing accessibility for project developers. Sovereign wealth funds, on the other hand, could provide additional capital backing and facilitate risk-sharing arrangements, further strengthening the guarantee framework.

Action 9: Enhance the role of the voluntary carbon markets (VCMs)

The VCMs can potentially serve as an important incentive and fundraising mechanism for decarbonization projects and thereby contribute to the development of transition finance. For example, through trading of carbon credits, projects that can credibly and effectively reduce GHG emissions can receive an enhancement to their investment yields, thus attracting capital from private investors. Also, the future cash flows from selling carbon credits can be used as collaterals for project companies to raise debt financing. In addition, some companies (e.g., steel, cement, petrochemical firms) seeking transition finance are required to incorporate the purchase of carbon credits as part of their efforts to offset the residual of their carbon emissions in order to achieve net-zero targets.

However, the development of the VMCs in BRICS countries remain at nascent stage and face many challenges. The key challenges include: 1) a lack of clear policy signals from governments and international organizations regarding the role of carbon credit as a key tool for achieving global climate goals, especially as a tool to facilitate green/sustainable finance; 2) the VCMs are developing rapidly without sufficient consideration for interoperability of standards and market connectivity across jurisdictions; 3) many VCMs are not linked to compliance emission control regimes and thus lack an initial impetus for growth; 4) ambiguity of policies regarding cross-border transactions of carbon credits poses a significant barrier to unlocking the VCMs' potential; 5) the high costs associated with the development, verification, validation, and registration of carbon credits represent a significant barrier for project development.

It is proposed that Asian Infrastructure Investment Bank (AIIB) creates a working group, with the assistance of the Integrity Council for Voluntary Carbon Markets (ICVCM), assists Asia developing countries to help enhance the quality and inter-connectedness of their VCMs. Non-Asian BRICS countries can also consider joining this mechanism to develop specific options to address the above-mentioned challenges and to enhance the quality, scale, interoperability, and interconnectivity of VCMs. Options to be explored include measures on clarification of VCM's role in decarbonization, enhancing capacity building, developing operational rules for implementing

Article 6, establishing cross-border transaction monitoring systems, harmonization of standards, and establishment of regional cooperation mechanisms.

Action 10: Explore local currency usage for green and transition finance

For many BRICS countries, using local or BRICS currencies for cross-border sustainable investment transactions (including for pure green activities and for transition activities) makes economic sense, as it could help reduce funding costs and increase funding availability. For example, issuing Panda green bonds or sustainability-linked bonds in China's Panda bond market could help reduce financing costs compared with USD financing even after considering the Foreign exchange hedging costs, if cross-currency swaps are properly used (see Box 3).

Respective BRICS authorities can further enhance such cross-border issuances by encouraging major credit guarantee firms to provide credit enhancements on the bond issuance. For example, China Bond Insurance Co., Ltd has been providing such credit enhance/guarantees to foreign bond issuers in China. The respective governments can consider waiving guarantee fees as an incentive to encourage such transition finance activities. There is also secondary market trading for such credit guarantees as well, providing a transparent pricing discovery and a choice to investors for such exposure. Again, BRICS authorities can designate banks as market makers on such credit enhance instruments.

There are other options that BRICS authorities can take to enhance collaboration of local currency usage for green and transition finance for overseas investment projects and for trade finance. For example, BRICS central banks can encourage activation of currency swap arrangements for green finance transactions; the Chinese central bank can consider allowing banks from other BRICS countries to utilize its decarbonization facility 1) to extend RMB loans to support green or transition projects in their home countries, and/or 2) to provide trade credit for international trade of "green goods," which is equivalent to an interest subsidy by the Chinese central bank for overseas sustainable lending; BRICS member countries can encourage local currency purchase of carbon credits from other member countries.

Box 3: RMB/CNH Bond Markets for BRICS Issuers

Local currency bond and local currency derivatives markets within BRICS are already very large in size and deep in liquidity, providing ample space to both issuers and investors. Take the example of the RMB bond market in China. Its size has already grown to USD 24.5 trillion by the end of January 2025, the second largest bond market in the world, behind the US. With the benchmark government bonds often trade with a bid-offer spread of just 0.1-0.2 bps in yield, the liquidity of the Chinese bond market already exceeds the liquidity of the bond markets in most developed countries. The RMB FX and interest rates derivatives market is also highly sophisticated. It permits both issuers and investors tailored made liability solutions and investment exposure, on both interest rate and currencies.

Compared to the developed markets, issuance in local bond markets could provide BRICS issuers with cheaper funding from a cross-currency swap basis due to unique supply and demand imbalances affecting the respective bond and swap markets. For example, often due to the strong demand in the offshore CNH bonds by real money investors vs the often-elevated FX/CNH cross currency swaps because of FX hedging demands in a strong USD environment, issuers can often achieve substantial saving by issuing the bonds in CNH and swapping the liability to another currency, including BRICS currencies. Similar opportunities exist for the onshore China Panda bond market especially if the bond proceeds are permitted to be remitted outside of China. To support such activities, BRICS authorities can designate banks as the market makers on such cross-currency swaps between the BRICS currency pairs.

Source: Provided by specialists from Standard Chartered Bank

Action 11: Enhance developing countries' accessibility to green and low-carbon technologies

The lack of affordable green and low-carbon technologies is a key bottleneck for BRICS countries, and developing economies in general, to accelerate their pace of decarbonization. One of the reasons behind this lack of accessibility is information asymmetry — most developing countries are not aware of the existence of many green technologies suitable for their adoption, as well as lack of capacity to implement these technologies in their countries. An international green tech platform to effectively disseminate information of available green technologies to the Global South could generate great benefits.

We recommend the creation of such a green tech platform, which can be hosted by an international organization such as UNCTAD or the United Nations Industrial Development Organization (UNIDO), with the support from BRICS. This platform will collect and host information of green technologies from major economies that have the R&D capacities, and disseminate programs for potential users from developing countries (including via conferences, competitions, roadshows, training events, websites, databases, and social media). It should also actively engage with investors, private equity/venture capital firms, project consultants, and service providers such as those on legal, accounting and IPs. By building an ecosystem of service providers, this platform and its partners could help many users in developing countries (e.g., corporates and governments) to design decarbonization projects, sourcing the right and affordable technologies, and facilitating the financing of the adoption of such technologies.

Action 12: Develop an ecosystem for service providers

Given the technical complexity of many key elements of transition finance deals, regulators, financial institutions, and corporates have to rely on many third-party services that would help ensure the quality, credibility and transparency of these transactions. The most important service providers that are needed to assist firms and financial institutions to structure transition finance deals include: 1) consultants with specialty in decarbonization strategies and technical pathways, who can guide/assist companies in developing their transition plans; 2) GHG accounting specialists, who can perform or assist companies to perform carbon accounting exercise; 3) second-party opinion providers and verifiers, who can provide validation, verification, and certification of impact assessments and other green credentials for projects, companies, and assets; 4) specialists who can help companies to conduct and improve disclosure of climate related information, especially those required by financial institutions based on ISSB standards.

In many developing countries, these services are not yet available or remain at their nascent stage of development. Therefore, incubating such service providers is essential for the healthy development of the transition finance market. From the government's perspective, following actions can be taken to:

- Establish standardized frameworks for certification and verification to ensure consistency and credibility;

- Offer grants and subsidies to users (e.g., borrowers of transition and sustainability-linked loans/bonds) to cover their costs on second-party opinion, verification and certification services;
- Create specialized incubators or accelerators focused on transition finance services;
- Develop or subsidize training programs on carbon accounting, transition planning, ESG disclosure, and verification services;
- Provide access to publicly available database (e.g., emission factor database) and digital tools for carbon accounting, data management, and ESG reporting.

Action 13: Enhance capacity building efforts on transition finance

For transition finance to expand to a meaningful scale, it is not just a simple task of developing a few financial instruments. It is about developing an ecosystem that involves developing standards, disclosure requirements, capability of identifying transition pathways and designing transition plans, carbon accounting systems, and structuring financial transactions that support the implementation of transition plans. Each of these elements of the transition finance ecosystem is technically complex and requires significant efforts of coordination among different players including governments, regulators, financial firms, corporates, and service providers.

In many of these areas, some experiences and expertise have been gained by early movers, and there is no reason to reinvent the wheels for BRICS. For example, the Capacity-building Alliance of Sustainable Investment (CASI) — a global capacity building platform with a special focus on the need of EMDEs — was launched at COP 28 in 2023, and has since trained over 5000 specialists from more than 50 jurisdictions, mainly from the global south.[31] CASI is now a network of 67 organizations specialized in developing and utilizing sustainable finance knowledge, and has developed four learning programs, including Sustainability Forums, monthly seminars, on-line learning programs, and technical assistance services. Among the 10+ topics on which they offer training programs, transition finance is now a key and growing area of content offering. We recommend that BRICS form a strategic partnership with CASI to further develop transition finance related contents and to distribute these contents to financial institutions and other users in BRICS countries. A BRICS-CASI Center can be created and hosted within the NDB to serve as the liaison for collaboration between BRICS financial community and CASI.

[31] For details about CASI, see www.casi.net

Concluding Remarks

This report reviews the recent progress of transition finance globally and in BRICS countries, identified the global challenges and BRICS-specific challenges to scaling up the transition finance market, and proposed 13 actions for BRICS to implement a framework for transition finance, such as the G20 Transition Finance Framework and the BRICS Transition Finance Framework via adapting the EMDEs' local contexts and strengthening cooperation in the Global South. The following table summarizes the proposed 13 actions, the issues and challenges they intend to address, and the options for potential implementation agencies that can be considered by BRICS.

Table 5-1. Summary of proposed action plans

Proposed Actions	**Issues Addressed**	**Potential Implementing Bodies**
Action 1: Develop national transition plans	Underdevelopment of national transition plans	National authorities, assisted by knowledge exchange and capacity building platforms
Action 2: Develop technical transition pathways for hard-to-abate sectors	Underdevelopment of technical pathways applicable to BRICS	Ministries and research bodies in BRICS countries
Action 3: Develop guidelines for BRICS transition taxonomy development and effective usage	Lack of interoperable transition taxonomies	Working group created by BRICS, namely the Sustainable Development Network established in 2024 by BRICS Business Council (SDN)
Action 4: Develop a BRICS template for company transition plan	Lack of capacity to develop corporate transition plans	NGOs and research organizations commissioned by a working group, namely the SDN
Action 5: Facilitate the adoption of disclosure framework based on ISSB standards	Lack of GHG disclosure rules and implementation guidelines	National authorities, assisted by capacity building platforms, and the SDN

Action 6: Develop a tool box for transition finance instruments	Underdevelopment of transition finance instruments	National central banks and financial regulators, assisted by NDB and capacity building platforms
Action 7: Launch a Just Transition Fund hosted by NDB	Lack of equity investment tools for transition finance and absence of demonstration projects	NDB
Action 8: Establish a guarantee facility for decarbonization projects	Lack of derisking facilities for transition activities	NDB
Action 9: Enhance the role of the Voluntary Carbon Markets (VCMs)	Lack of quality standards and interconnected VCMs	AIIB-led VCM working group, assisted by ICVCM, and the SDN
Action 10: Explore local currency usage for green and transition finance	Underutilization of local currencies in green and transition finance for BRICS	Selected banks from China and BRICS
Action 11: Enhance developing countries' accessibility to green technologies	Lack of access to affordable green technologies	Creating a green tech service platform hosted by UNCTAD or UNIDO
Action 12: Develop an ecosystem for service providers	Lack of domestic services providers specialized on GHG accounting, verification, transition planning, etc.	National regulators, with assistance from international industrial associations
Action 13: Enhance capacity building efforts on transition finance	Lack of capacity to design and implement transition finance frameworks and products	CASI and other capacity building platforms

It is worth noting that the implementation of most of the proposals will benefit hugely from a high-level endorsement from BRICS leadership, as they require coordination among BRICS country authorities, devotion of public resources from member countries and the NDB, as well as the mobilization of key private sector players in these countries. A BRICS high-level decision to create a working group on transition finance may be a starting point for implementation of a roadmap like the one proposed in this report. Voluntary adoption of some of these ideas is possible, of course, and can be funded and organized by the business sector and NGOs.