



UN-convened Net-Zero
Asset Owner Alliance

Code Red!

Call for Urgent Action on Emerging Markets Transition Investment (EMTI)

Discussion paper for policymakers, regulators,
investors and other capital market participants

September 2022



Context

According to the Intergovernmental Panel on Climate Change (IPCC), global carbon emissions must peak by 2025 and reduce by 43% by 2030 to have a better than 50% chance of keeping the average rise in global temperatures below 1.5°C by 2100[1]. Global emissions, however, are still rising. In the past year, there has even been a resurgence in the use of fossil fuels including coal. This means that the “Code Red” issued by the IPCC in 2021[2], is now turning **bright red**.

The success or failure of global efforts to reduce greenhouse gas (GHG) emissions will depend on Emerging and Developing Economies (EMDEs). EMDEs accounted for 65% of global emissions in 2019 and 93% of the increase in carbon emissions in the past decade[3]. That trend is likely to continue as EMDEs are expected to account for 98% of global population growth in the next decade[4], and over 90% of the increase in middle class households[5]. For the EMDEs, moving forward on climate transition will create huge opportunities. Those include better public health through reduced pollution and creating jobs of the future in renewable energy, electric vehicles, green buildings, and sustainable agriculture and manufacturing. Those job opportunities will accelerate as carbon pricing and border adjustments make low emission economies more competitive and, therefore, more attractive for investment.

Meeting the urgent climate challenge and seizing the opportunities will take massive investment. EMDEs must transform their economies and energy systems to lower carbon emissions and net zero pathways, while ensuring that energy is secure and accessible to their citizens, many of whom are still in poverty. To achieve global net-zero targets by 2050, the International Energy Agency (IEA) projects that capital spending on clean energy in EMDEs (ex. China) must increase **over sixfold** from under USD150 billion per year in 2020 to over USD1 trillion per year by 2030[6].

Where will those trillions be found? Most green/sustainable finance and investment is currently in Europe, North America or North Asia. EMDEs (ex. China) only account for 7% of green and sustainable bonds issued in 2021[7]. Multilateral development support is also uneven[i]. Long term private sector investment in EMDE transition presents a potentially huge opportunity for private sector investors. Scaling up long term investment in EMDEs requires conducive policy and certainty to enable a reliable risk assessment and actions by multiple stakeholders, including the MDBs, DFIs and other sources of concessional capital and technical assistance, to underpin acceptable investment risk and returns outcomes.

This paper discusses themes and actions that are needed from multiple stakeholders to enable and stimulate a multifold increase in emerging market climate transition investment[ii]. The report focuses on short- and medium-term actions, not to diminish the importance of long-term solutions including new technologies, but because the climate imperative requires near-term progress. Many of the proposed actions will also pave the way for long-term solutions to be deployed and scaled post 2030.

About the Emerging Markets Transition Investment (EMTI) project

The Emerging Markets Transition Investment (EMTI) project was organised to identify practical, near-term solutions to accelerate investment towards the net-zero transition of EMDEs. The project is supported by the Net Zero Asset Owner Alliance (NZAOA), the Sustainable Development Investment Partnership (SDIP), and the EU-ASEAN Business Council (EU-ABC).

The EMTI project was launched with a public webinar on 11 April 2022 ([link here](#)). This was followed by an invitation-only roundtable on 10 June 2022 which was attended by 31 participants across the transition investment ecosystem, including issuers, regulators, financial institutions (asset owners, asset managers, banks), rating agencies, and non-governmental organisations (NGOs). Conducted under Chatham House Rules, the Roundtable sought to unpack three questions:

- Issuers' perspective: How can we motivate companies in EMDEs to accelerate and amplify the development of their decarbonisation initiatives and investment plans?
- Investors' perspective: How can we enhance the perceived risk/return profile of transition investments in EMDEs?
- How can we improve the enabling environment for labeled bonds in EMDEs?

A working group reviewed the insights from the roundtable discussion and put forward a summary that contained the highlights of the discussion as well as key themes for near-term action (18-24 months). The summary can be found in Appendix 4.

Building on the roundtable and further research this paper seeks to encourage discussion and collaboration on critical, yet practical, near term actions that can close the widening gap between current emissions and what is needed to achieve the goals of the Paris Agreement of staying well below 2°C warming.

Acknowledgements

The three organisations that are collaborating on the EMTI project wish to acknowledge and thank their members and the other individuals and outside organisations who contributed time and ideas in the June 10 Roundtable and in the subsequent research, writing and commenting that led to this paper. The NZAOA wishes especially to acknowledge the contribution of Prudential, in particular Donald Kanak, Chairman of Prudential Insurance Growth Markets and Liza Jansen, Head of Responsible Investment for leading the NZAOA's subtrack on Financing the Transition in Emerging Markets, of which the EMTI is a key component. SDIP expresses special thanks to Nikki Kemp, Director of SDIP's ASEAN Hub, and Justin Baldauf, who contributed greatly to organizing the Roundtable and preparing summary of findings (Appendix 4). The EU-ABC expressly acknowledges the contributions of its members, in particular Prudential and HSBC, as well as Executive Director Chris Humphrey and Advocacy Director Liyana Othman. All three organisations wish to acknowledge the research and analytical support provided by Climate Smart Ventures (CSV), which was instrumental in supplementing and validating the views shared in the roundtable and supporting the content of the paper.

All three organizations would like to express their thanks to Sean Kidney, CEO of the Climate Bonds Initiative for his comments and role as moderator of the Roundtable, Elke Pfeiffer (NZAOA) for her guidance and support of the entire EMTI project, as well as Casey Ho and Paul Lynch (Prudential), Ed Wells, Charles Butcher and Pritya Pravina (HSBC), and Nazmeera Moola (Ninety One) for their review and comments on drafts of the discussion paper at various stages.

[1] The Multilateral Investment Guarantee Agency (MIGA) reports that in 2020, less than half of the total climate mitigation finance extended by MDBs had been allocated for low- and middle- income economies. https://www.miga.org/sites/default/files/2021-08/2020-Joint-MDB-report-on-climate-finance_Report_final-web.pdf

[ii] The need for large investments in climate resilience finance is recognized as well, but this report is mainly focused on climate mitigation finance. Some of the measures that are proposed, however, will be supportive of enhanced investment in resilience.

Summary and list of recommendations

The pace and success of climate transition of EMDEs will determine the success or failure of global climate change efforts. Massively larger capital flows are needed from developed countries to EMDEs. This will only occur if leaders of public, private and multilateral institutions put in place new policies and practices. Taken together, these twelve recommendations can drive the change needed to drive financial systems to meet the needs of EMDEs to achieve a just transition on the scale and pace required.

THEME 1

Expand institutional investors' awareness of the opportunity and urgent need for Emerging Market Transition Investment

- 1.a. Ensure all work on regional and national taxonomies urgently addresses transition investing, and sets a path with climate and social goals that are appropriate for EMDEs
- 1.b. Develop additional financial metrics that eliminate unintended negative impacts on transition investing, or that encourage it
- 1.c. Designate differentiated capital treatment to manage financial climate-related risks and guide responsible transition lending and investment to support EMDEs' real economies

THEME 2

Increase the supply of green/transition investments from companies

- 2.a. Require all public companies and state-owned companies to disclose Scope 1 and 2 metrics within 2 years, and require large companies in key sectors to develop and disclose transition plans
- 2.b. Provide subsidies and incentives and reduce "friction cost" of green/transition bond issuance

THEME 3

MDBs and DFIs modernise their strategies to the scale and urgency required

- 3.a. Share project performance, credit and emissions data
- 3.b. MDBs/DFIs adopt "originate, bundle and distribute" model
- 3.c. Support creation of "National Transition Investment Facilities" (NTIFs) in EMDEs
- 3.c. MDBs and DFIs should redouble efforts to develop and deploy de-risking tools to crowd in private sector capital at scale to manage currency, political, and operational risks

THEME 4

Create national enabling environments (key policies)

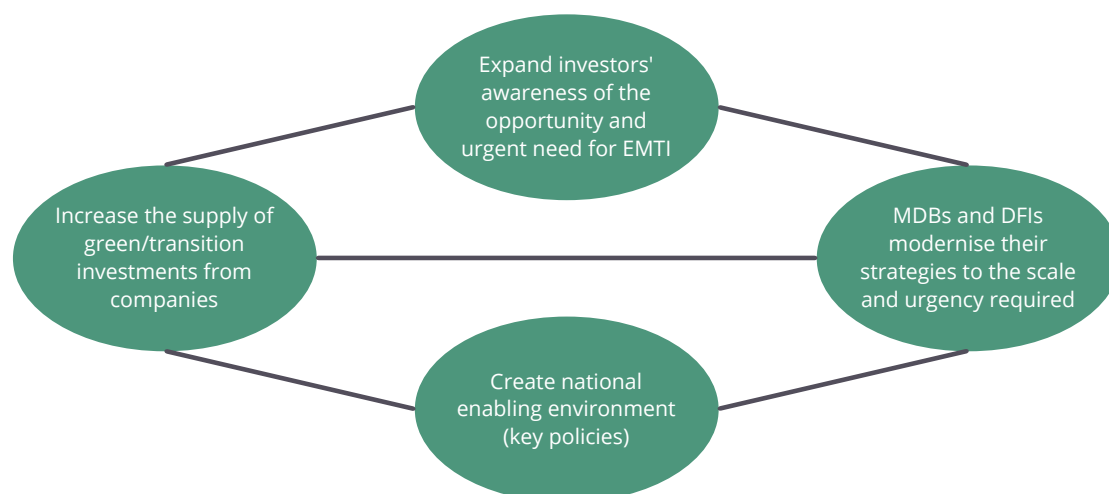
- 4.a. Deliver clear sector decarbonisation transition pathways for high emission sectors, starting with energy, utilities, manufacturing and transport
- 4.b. Establish national carbon price regimes with clear timetables for implementation and escalation so that businesses have time and incentive to develop, finance and execute just transition plans
- 4.c. Build upon the momentum of green and social bonds by incorporating sustainable finance principles into mainstream financial regulations and markets

Discussion

Scaling up Emerging Markets Transition Investment (hereafter “EMTI”) requires an urgent increase in awareness among public and private financial institutions of EMTI as an essential element of responsible investment strategies. Critical actions are also required by policymakers, regulators, stock exchanges, rating agencies, standard setters, as well as multilateral development banks (MDBs) and development finance institutions (DFIs)[iii].

Required actions can be well understood under four themes:

1. Expand institutional investors' awareness of the opportunity and urgent need for Emerging Market Transition Investment
2. Increase the supply of green/transition investments from companies
3. MDBs and DFIs modernise their strategies to the scale and urgency required
4. Create national enabling environments (key policies)



For the purpose of this paper, we define transition investments broadly as capital provided to economic agents to achieve a reduction in carbon emissions. This could also include investments in new green infrastructure, technologies and other climate solutions.

We are also cognizant of the fact that many of the recommendations cited in this paper are not fully implemented in developed countries either. Even though progress in some developed countries is lagging, it is in the interest of EMDEs to start addressing the challenges to accelerate the transition.

Theme 1: Expand institutional investors' awareness of the opportunity and urgent need for Emerging Market Transition Investment

There has been a dramatic increase in environmental, social, and governance (ESG) investment and Sustainable Funds, but most of the world's ESG assets are in Europe, North America or North Asia[iv]. The biggest issue for institutional investors, however, is a lack of awareness that investing in the EM transition can be accomplished within appropriate risk/return parameters. It is important to make EMTI a “virtuous” asset class, meaning that responsible investors will explore and expand their investments in the category and believe that their stakeholders will look favourably upon them for doing so.

[iii] The subject of scaling finance for ESG in EMs is receiving attention from several leading authorities. For recent example, see Principles for Responsible Investment, “Closing the Funding Gap: the Case for ESG incorporation and investing with sustainability outcomes in Emerging Markets” (2022); at <https://www.unpri.org/sustainable-development-goals/closing-the-funding-gap-the-case-for-esg-incorporation-and-sustainability-outcomes-in-emerging-markets/9430.article>

[iv] Most large European and North American institutional asset owners and managers are content to invest close to home or in each other's markets and few have mandates or the expertise to invest knowledgeably in projects or companies in EMDEs. For those that have sustainable investment mandates to invest in emerging markets, there is limited consciousness of the importance of transition investments, for example investing in sectors that are currently high emitters to support their transition to low emissions or net zero. There are Transition Bond Standards and also efforts to encourage explicit transition plans, but so far those have not penetrated EMDEs.

Recommendation 1.a.

Ensure all work on regional and national taxonomies urgently addresses transition investing, and sets a path with climate and social goals that are appropriate for EMDEs

Good EMDE taxonomies must support transition. Sound taxonomies and transition pathways at the country, sectoral, and corporate levels are important to create credibility for any labeled bond issuance and address issues of greenwashing. Taxonomies should support issuers to establish broad and long-term decarbonisation targets in line with limiting global temperature increases ideally to 1.5°C and, at the very least, to well below 2°C. Issuers may also be expected to have their plans assessed by investors and lenders (who will have their own strategies and plans for transition) and subjected to independent review, assurance, verification, etc. In EMDE markets where the Nationally Determined Contributions (NDCs) may not be aligned to 1.5°C or 2°C, or where the market for third-party assurance has yet to be built up, these requirements may prevent EMDE companies from participating, even though the Paris Agreement contains principles of ‘common but differentiated responsibilities’. To address that issue, progress is needed on standards and tools to incorporate ‘differentiated responsibilities’, and develop differentiated pathways for EMDEs[v]. This will allow EMDEs to set and begin transitioning toward net zero targets appropriate to their circumstances, and in some cases later than 2050. Under the current expectations, many EMDE companies face challenges in beginning their transitions. While they delay, emissions continue. A solution is needed.

Furthermore, transition investments (especially those issued by “brown” companies) have yet to be successfully incorporated into some taxonomies now being developed, leaving investors and issuers uncertain if particular transition investments qualify[vi]. This needs to be rectified. Appropriate transition investments from “brown” companies can have enormous positive benefits for emissions reduction.

Examples of taxonomies and standards that recognise transition efforts[vii]and different stages of economic development

- **Bank Negara Malaysia (BNM) Climate Change and Principle-based Taxonomy[8]:** Establishes criteria for activities under “watchlist”, “transitioning” and “climate supporting” (similar to red/amber/green) based on the disclosed information at the activity- or entity- level. The taxonomy can be improved by providing stakeholders a comprehensive list of transition-eligible activities with suggested measurable targets.
- **ASEAN Taxonomy for Sustainable Finance[9]:** The Association of Southeast Asian Nations (ASEAN) Taxonomy’s ‘Foundation Framework’ provides red/amber/green classification of activities and reflects the different stages of economic development of ASEAN member states through introducing a “stacked approach” for the thresholds. The new ‘Plus Standard’ under development can further assess economic activities with granular criteria and thresholds, particularly those essential to transition efforts.
- **Monetary Authority of Singapore (MAS) Green Finance Industry Taskforce (GFIT)[10]:** Provides red/amber/green activity-level criteria and thresholds for the energy, building and transport sectors. Notably, decommissioning fossil fuel-based plants is an amber activity. Other markets can look to GFIT’s paper as an example of providing detailed definitions and considering practical energy transition needs as it provides a comprehensive list of activities with granular details on subsectors and thresholds to ensure measurable progress.

[v] It would be helpful if widely used standards and tools such as the One Earth Climate Model (OECM) and the Science Based Targets initiative (SBTi) incorporate pathways for EMDEs.

[vi] The Ministry of Economy, Trade and Industry (METI) of Japan recognises that the definition of transition activities differs geographically, depending on the country’s/region’s industrial structure and/or the role it plays in the overall global value chain. There is a need for international principles that are inclusive and flexible which are applicable to the circumstances of countries/regions without excluding specific sectors/industries or technologies. This view should be embraced by standard setters in defining transition investments and activities, especially for EMDEs with nascent decarbonisation efforts. See: <https://www.meti.go.jp/press/2019/03/20200331002/20200331002-2.pdf>

[vii] A recent article of AXA Investment Managers published in March 2022 highlights the need for taxonomies such as the EU Taxonomy to reflect the vital funding of the transition process for carbon-intensive businesses. There is a need for “clear and tight conditions” when classifying transitional activities which includes stringent disclosure requirements on nuclear and gas operations. This is based on the recent inclusion of nuclear and gas as intermediate energy sources to smoothen the path to net-zero and reduce reliance on more carbon-intensive sources. See: <https://www.axa-im.com/news-and-experts-insights/investment-institute/sustainability/environmental/eu-taxonomy-six-key-questions-new-flagship-climate-rules>

- **Climate Bonds Initiative (CBI) Transition Standards:** A discussion paper released on September 2021^[11] defines a “credibly transitioning company” as one that (among other things) adheres to Paris Agreement aligned common sectoral decarbonisation pathways and has plans that address Scope 1, 2 and 3 emissions. The recommended interim transition category and a nuanced brown-to-green spectrum both provide a more inclusive framework for identifying activities/assets that can eventually be ‘green’-aligned via common sectoral pathways within a time-limited window and material decarbonisation. EMDE-specific sectoral pathways will take considerable time to be developed and agreed. EMDE companies struggle with disclosing Scope 1 and 2 emissions, and adding Scope 3 puts this beyond the current reach of most EMDE companies.
- **Sustainable Markets Initiative Asset Managers and Asset Owners (SMI AM/AO) Taskforce^[viii]:** Drafted a “Transition Investment Category” framework for investors to identify high emitting assets with high transition potential. The framework provides a 5-step decision tree to identify various types of transition assets (see Appendix 3).

Recommendation 1.b.

Develop additional financial metrics that eliminate unintended negative impacts on transition investing, or that encourage it

It is important that ESG investing metrics and disclosure regimes are robust, channel funds to decarbonise the real economy, and do not create perverse incentives that could undermine the transition. Investing in an EMDE with high emissions intensity in order to finance emissions reductions is a high priority, but such investment is likely to raise the reported “weighted average carbon intensity” (WACI) of the investor’s portfolio in the short term. A “safe” strategy for carbon conscious investors would be to shun the investment or divest altogether from the EMDE. That would make the portfolio “green” but leave the real economy of the EMDE “brown”, and place the climate goals at risk^[ix].

Additional financial metrics are needed that eliminate unintended negative impacts on transition investing, or ideally encourage it. For example, a green-adjusted WACI that reflects the carbon footprint of only the green/transition activities that are funded, not the legacy brown assets^[12]. Companies and financial institutions should engage with bodies that are setting standards for reporting and disclosures to encourage a robust and dynamic set of metrics that consider the positive effect of transition investment, not just the short-term impact on carbon in portfolios^[x]. Decarbonisation of economies should be the priority, not just decarbonisation of portfolios.

Recommendation 1.c.

Designate differentiated capital treatment to manage financial climate-related risks and guide responsible transition lending and investment to support EMDEs’ real economies.

Global and national regulators have recognised the financial risks that climate change poses to financial institutions and the financial system. Various initiatives are underway among financial regulators, banks and insurers to assess and manage climate-related risks. The Climate Model is not yet fully developed and may still require some time to gather the necessary data to get to the quality level required to consider capital requirements, or to incentivise investment. International coordination and cooperation will be essential to achieve quality and avoid regulatory arbitrage, but regulators may wish to start considering requiring banks and other financial institutions to attach a specific transition risk capital charge to loans

^[viii] For a suite of resources by the SMI taskforce, please see: <https://www.sustainable-markets.org/news/asset-manager-asset-owner-task-force-launch-a-suite-of-resources/>

^[ix] This dilemma is recognised in the NZAOA’s Target Setting Protocol Second Edition: – “It is important to note that investing to foster climate solutions in hard-to-abate sectors may result in increased portfolio emissions through the allocation of capital to carbon intensive industries. As climate solutions are deployed by the investee, emissions should reduce during the investment holding period, but this is likely to cover a multi-year period as the industrial solutions required are lengthy to implement. Should the investor decide to retain these investments, the net increase in portfolio emissions may persist beyond 2025. This illustrates that investment in certain climate solutions may have a positive decarbonisation impact on the planet but slow the rate of investors’ portfolio decarbonisation.”

^[x] Examples of these organizations include the Partnership for Carbon Accounting Financials (PCAF), the International Financial Reporting Standards (IFRS) Foundation, and the Global Reporting Initiative (GRI)

to companies in key sectors that have not developed credible transition plans. This will better reflect transition risk in banks' risk management. Over time, reflecting risk in capital management should result in better terms and pricing for loans to companies that have credible transition plans versus those that do not.

Similarly, insurance regulators could consider requiring insurance companies, pension funds and other long-term institutional investors to apply differentiated risk or solvency weightings to their bond investment portfolios, favouring the issuers with credible transition plans. The result of these revaluations will encourage banks and insurers to make loans or invest in bonds of companies that are seeking transition, i.e., limiting climate-related financial risks and increasing demand for transition investment[xi].

The chance to get lower cost debt will encourage companies in the major emitting sectors to develop and implement their transition plans. Implementing transition plans will in turn require new capital expenditures that need to be financed, which will lead companies to seek green loans and to issue green bonds. Therefore, both demand and supply will be positively affected which will lead to a more orderly transition and limit the financial risks. Other actions to increase supply of green investments are addressed in the next section[xii].

Examples of discussions on differentiated capital charges for green investments

- **UK Treasury[13]:** Launched a consultation in April 2022 proposing a new, UK-specific version of Solvency II to relax the permitted risk margin and thereby increase investment in green infrastructure projects. As of this date, the discussion of this proposal has not concluded.
- **ECB[14]:** Exploring a range of tools including systemic risk buffers, concentration thresholds, concentration charges, sectoral requirements (i.e., higher risk weights or minimum loss given default to be required on exposures to high physical and/or transition risk). Applying differentiated capital charges to loans and bond holdings will provide incentives to banks to make loans to companies and projects supporting transition.

Theme 2: Increase the supply of green/transition investments from companies

A consistent lament from large global investors that are already looking for green investments in EMDEs is that there is not enough supply of investible green or other labeled bonds. There are several reasons cited for the shortage of green investments, such as a shortage of investible projects, extra costs of certification vs. conventional loans or bonds, and widely perceived lack of advantage to the borrower in terms of funding costs[xiii].

Asset owners and asset managers assessing investments in EMDEs also cite lack of data on companies' emissions or lack of transition plans as a barrier to transition investment. That barrier could be addressed if EMDE governments require large public and state-owned companies to disclose their Scope 1 and 2 GHG emissions and transition plans.

GHG disclosures are important because as companies disclose GHG emissions, they will be evaluated and engaged by their shareholders, regulators and other stakeholders. If companies decide to accelerate their transition, either in response to investors' engagement or internal strategic decisions, they will need to finance it and thus will develop capital expenditure plans[xiv], which will drive issuance of green or transition bonds, thus increasing their supply.

[xi] International coordination between regulators will be needed to prevent regulatory arbitrage, where banks or insurance companies may favour investment in markets in which capital costs do not accurately reflect transition risks.

[xii] This will also have to be supported by clear and stable policies such as predictable renewable energy tariffs (see Theme Four: Create national enabling environment).

[xiii] Platforms exist for expanding the supply of investible transition assets and should be further supported. For example, see FAST-Infra Platform, an infrastructure data platform with centralized tools, attached to a project finance loan exchange, for supporting sustainable infrastructure as an asset class: <https://www.climatepolicyinitiative.org/fast-infra-sustainable-infrastructure-label/>

[xiv] Empirical research shows that companies engaged by investors on environmental matters increased their capex and R&D expenditures more than peers and also reduce their GHG emissions intensity. See "Private Shareholder Engagement on Material ESG Issues" Rob Bauer, Jeroen Derwall, Colin Tissen; July 2022, pp.3-4,17. Electronic copy available at <https://ssrn.com/abstract=4171496>

Recommendation 2.a.

Require all public companies and state-owned companies to disclose Scope 1 and 2 metrics within 2 years, and require large companies in key sectors to develop and disclose transition plans

A few ASEAN markets are moving towards mandatory or “comply or explain” GHG disclosure for publicly traded companies (See Appendix 1). There appears to be no ASEAN market that currently requires, or is considering requiring, public companies to disclose a board-approved transition plan including decarbonisation targets and allocating responsibility for their achievement. Such changes are needed urgently to set a minimum and transparent basis for disclosure.

To support this, EMDE-appropriate standards and tools for making and evaluating transition plans are needed. Climate Action 100+ has developed a Net Zero Company Benchmark assessment tool that evaluates company performance against indicators (e.g., net-zero ambitions, short to long term GHG reduction targets, decarbonisation strategy, etc.) to provide greater insight for investors on companies’ transition business models. UK HM Treasury also launched the UK Transition Plan Taskforce to develop a “gold standard for climate transition plans” to support UK rules that will require large companies and certain financial sector firms to publish a transition plan from 2023. These initiatives are mainly focusing on developed markets and have requirements that are difficult for EMDEs without Paris-aligned or 2060/2070 Net Zero targets to meet. EMDE transition plan guidelines will also need to consider “brown to green” transitions and investments in accelerated and responsible retirement of fossil fuel power assets.

Example of guidelines that consider EMDE transition needs

- **Climate Action 100+ Investor Guide for Engaging Asia[15]:** The Climate Action 100+ Investor Guide launched its Net Zero Company Benchmark for Asian companies in July 2022. This was designed to help investors approach, engage, and understand a company’s current stage of transition. This includes a 5-stage pathway suggesting practical actions that target companies may take or investors may encourage.
- **Council for Inclusive Capitalism Just Energy Transition (JET) Framework[16]:** The JET Framework focuses on guiding principles for company action to ensure that the net-zero transition benefits workers, communities, and consumers as well. Published in December 2021, the JET report acts as a guidebook and a proof-of-concept, with case studies per JET pillar (i.e., universal net-zero energy, workforce evolution, community resilience, and collaboration & transparency) detailing actual company examples that include EMDE contexts.
- **Principles for Financing a Just and Urgent Energy Transition (JUET)[17]:** The World Economic Forum – the Sustainable Development Investment Partnership (SDIP), the Platform for Shaping the Future of Energy, Materials and Infrastructure, and the Civil Society Community – launched the JUET Principles; eight principles designed to guide investment and financing decisions and facilitate collaboration among stakeholders across the energy transition ecosystem, including governments, businesses, financial institutions, philanthropies, and groups representing labour, civil society, and the environment.

Recommendation 2.b.

Provide subsidies and incentives and reduce “friction cost” of green/transition bond issuance

A recent Asian Development Bank (ADB) study pointed out that labeled green bond yields are 24–36 basis points lower than unlabeled green bonds with similar characteristics[18]. Despite this, some issuers do not believe the cost, time, and effort spent in issuing labeled bonds is justified by the promised “greenium” or improvements in commercial terms (e.g., lower yield or borrowing costs). There is also a perception that various labeled bond standards have made certification processes more complex, making bond issuance more challenging and costly.

Regulators and second party opinion providers/certifiers can examine ways of streamlining certification processes, while governments and international financial institutions can explore providing support/advice on navigating sustainable and transition frameworks to encourage issuers to use labeled bonds. Green bond issuance grants and subsidies such as those in Malaysia and Singapore (see insert below) can be replicated in other markets and applied to transition bonds as well. Tax regulators and finance authorities should consider targeted tax rebates or credits for companies that raise sustainable finance based on credible transition plans, or for investors that invest in those bonds[xv].

Example schemes in ASEAN that reduce cost of green bond issuance

- **The Monetary Authority of Singapore (MAS) Sustainable Bond Grant Scheme:** Launched in 2017, this encourages the issuance of green, social and sustainability bonds in Singapore by helping issuers to cover additional costs associated with external reviews. It is open to first-time and repeat issuers until May 31, 2023, and covers up to USD100,000.
- **The Securities Commission Malaysia Green Bond Grant:** Implemented in July 2017, this assists issuers of green Sustainable and Responsible Investment Sukuk, partially covering the costs of offering the bond such as the cost of external review. Eligible issuances can claim 90% of the costs of independent review up to a maximum of USD77,536 per bond issuance.

Theme 3: MDBs and DFIs modernise their strategies to to the scale and urgency required

MDBs and DFIs play a critical role in EMDE finance and broader economic development assistance. Many of the business practices and basic business models of MDBs and DFIs were developed in the 1950s-70s. To meet the urgency and scale of the 21st century climate crisis, they need to evolve and step up their capability. This is critical if they are to succeed in mobilising trillions of dollars of private capital, which is the stated objective of many leading MDBs and DFIs.

Four specific recommendations could dramatically expand the contribution of MDBs and DFIs to scaling up EMTI. The shareholders of MDBs and DFIs, which are national governments, should support these recommendations to help achieve the goals of the Paris Agreement[xvi].

Recommendation 3.a.

Share project performance, credit and emissions data

MDBs and DFIs are often pioneers in lending and investing towards emerging market national development. However, their performance data on these investments (e.g., default rates) are usually kept confidential. Yet one of the most important barriers to EMTI is lack of data on previous or existing infrastructure investments. To encourage further private sector participation, there need to be mechanisms to share MDB and DFI data to help private sector investors assess risk.[xvii]

MDBs in some cases will need to seek agreement of sovereigns and other counterparties to revise practices related to disclosure and creditor protection. It would seem reasonable for sovereigns that wish to have their countries participate in expanded and preferential capital flows to agree to terms that would enable the sharing of data, with protections such as using anonymised data or asking users of the data to sign non-disclosure agreements.

[xv] Examples include tax credits, cash rebates to subsidize interest payments, and tax-exempt bonds. These have been employed in the U.S. and Brazil. See: <https://www.climatebonds.net/policy/policy-areas/tax-incentives>.

[xvi] For additional background and consistent recommendations on the roles of the MDBs and DFIs, see additional work of the Net Zero Asset Owner Alliance at <https://www.unepfi.org/publications/scaling-blended-finance/>.

[xvii] The DFI Transparency Initiative (<https://www.publishwhatyoufund.org/projects/dfi-transparency-initiative/>) ranks DFI transparency. Engaging with organisations like these may improve MDB/DFI transparency and increase data sharing.

Example MDB/DFI project database

- **Global Emerging Markets Risk Database Consortium of MDBs and DFIs (GEMs)[19]:** One of the world's largest credit risk databases for the emerging markets operations of MDBs and DFIs. It pools data on credit defaults on the loans extended by consortium members, the migrations of their clients' credit rating and the recoveries on defaulted projects. GEMs can be tapped to provide public access in order to enable private sector investors and sovereigns make better informed decisions.

Recommendation 3.b.

MDBs/DFIs adopt “originate, bundle and distribute” model

In recent years, most MDBs have adopted or announced plans and strategies to “crowd in” private sector capital because their financial resources alone are a small fraction of the trillions of dollars of investment required to finance EMDEs' need for climate transition and to achieve other Sustainable Development Goals (SDGs).

The basic business model of the MDBs and DFIs is to lend and hold loans on their balance sheets, a common banking practice from the 1950s-70s when the MDBs/DFIs were established and expanded their operations. The “loan and hold” model, however, does not crowd-in but rather competes with the private sector lenders and investors. The MDBs and DFIs could play a far larger role in the climate solution if they can deploy a strategy to originate loans, but rather than hold them to maturity, bundle the loans into appropriate pools in which the private sector can invest[xviii]. Vast experience has been accumulated in the private sector over the last 30 years and some MDBs have already deployed this strategy on a limited basis (see insert on the International Finance Corporation's (IFC's) Managed Co-Lending Portfolio Program (MCPP)) and other examples.

Not only would a “loan, bundle and distribute” model also known as “originate and distribute” allow MDBs to mobilise much more investment than they can do on their own, but it would also eliminate one of the main barriers to attracting developed market investment in EMDEs — distance and cost of local due diligence. Transition investments in EMDEs tend to be projects financed by project loans and direct investments. Even the largest global institutional investors cannot afford to have local teams conduct due diligence on the ground in multiple EMDEs, especially in smaller and frontier markets. Investing in a portfolio of loans from a well-established MDB/DFI, however, would address the need for due diligence information, provide assurance of compliance with environmental and social standards and would provide the added benefit of portfolio risk diversification compared to investing in single loans or projects. Another big advantage to this approach of distributing (or securitising) pooled loans is that it would facilitate the application of external or internal credit ratings. Being able to assign credit ratings to loan pools or specific securities issued by pooled vehicles would vastly expand the potential for investment among insurers, pension funds, and mutual funds.

From the MDBs' perspective, each time a pool of loans is syndicated and distributed, the MDB receives cash back to make new loans, thereby expanding its own lending capacity for new projects, and increasing the MDB's ability to support EMDE transition[xix]. Finally, an “originate and distribute” model will allow the MDBs to scale up the use of blended finance (see Recommendation 3.d. below). Accelerated use of blended finance to enhance returns or improve the credit ratings will attract new pools of fiduciary capital, which have thus far not participated in EMTI, and reduce the cost of funds for borrowers[xx].

[xviii] The Investor Leadership Network and Sustainable Markets Initiative (<https://investorleadershipnetwork.org/wp-content/uploads/Blended-Finance-Recommendations-for-Policymakers.pdf>) outline key recommendations for policymakers on Blended Finance, MDB Optimization and Private Capital Mobilization. Additionally, the Net Zero Asset Owner Alliance has published recommendations on scaling blended finance (<https://www.unepfi.org/publications/scaling-blended-finance/>) and the global campaign Publish What You Fund advocates for the disclosure of timely, accessible and comparable information on aid by aid agencies and organisations (<https://www.publishwhatyoufund.org/>). Incorporating the action points from these organisations through more MDB-led initiatives and programs may help spur private sector participation and scale EMDE transition investments.

[xix] For example, the G20 Leaders have endorsed the “MDB Action Plan to Optimize Balance Sheets” at the 2015 November Antalya meeting. The report calls on MDBs to use their capital more efficiently, including exploring syndications, etc.

[xx] For additional background and consistent recommendations on the roles of the MDBs and DFIs, see additional work of the Net Zero Asset Owner Alliance: <https://www.unepfi.org/publications/scaling-blended-finance/>

Examples of MDBs engaging in “originate, bundle and distribute”

- **IFC’s Managed Co-Lending Portfolio Program (MCP)**[20]: MCP is IFC’s syndications platform for institutional investors. It allows institutional investors to invest alongside IFC on commercial terms in globally diversified loan portfolios that mimics IFC’s own portfolio.
- **ADB’s A/B Loan Product**: This allows private sector participants to enjoy the ADB’s benefits of preferred creditor status and immunities (mitigating transfer and convertibility risk) and its relationships with member countries, among other benefits.
- **African Development (AfDB) Bank Room2Run transaction**[21]: In 2019, AfDB synthetically securitised and transferred the mezzanine credit risk on a USD 1 billion reference portfolio. The reference portfolio contained approximately 50 seasoned loans from AfDB’s non-sovereign lending book across the continent, and consisted of 50% project finance and 50% loans to financial institutions, including to DFIs.
- **The ILX Fund**[22]: An EMDE-focused private credit fund that invests in private sector loans arranged by MDBs. The fund contains a portfolio of loans that finance EMDE projects delivering SDG-targeted impact and also includes green and transition investments. Institutional investors then participate in the fund to effectively co-invest in syndicated loans originated and structured by MDBs.

Recommendation 3.c.

Support creation of “National Transition Investment Facilities” (NTIFs) in EMDEs

“National Transition Investment Facilities” (NTIFs)[23] can help to address the fragmented landscape of EMDE transition investment and several of the investor needs/challenges mentioned earlier[xxi]. NTIFs are special purpose companies/vehicles created with the cooperation of MDBs, national governments and other institutions to pool funds (including concessionary finance and private capital) at scale for accelerated transition. In some countries, sovereign wealth funds and/or state-owned infrastructure vehicles could invest in NTIFs to align national interests with sustainable economic outcomes.

NTIFs have several potential advantages compared to the current (fragmented) model:

- Serve as counterparty for concessionary finance from donor countries tied to clear climate objectives (NDCs) and safeguards to help deliver a just transition.
- Concentrate blended finance at scale to support multiple transition initiatives vs. (a less ambitious) project/pilot approach.
- Achieve lower risk due to diversification by pooling projects vs. project-by-project approach.
- Build technical expertise on monitoring, reporting and verification vs. fragmenting skills across multiple agencies and institutions.
- Serve as a national platform to mobilise and integrate carbon revenue under Article 6 of the Paris Agreement.
- Issue debt in local *and* international capital markets to attract private sector investment *and* develop domestic capital markets.
- Coordinate with other agencies and the private sector to develop a robust national jobs vision including for renewable energy, ecosystems for electric vehicles, etc. and provide investment for implementation of just transition strategies
- NTIF investment decisions should be made on transparent criteria aligned with NDCs and thus reduce the political risk of projects falling in or out of favour on a change of government.

[xxi] GFANZ’s draft “Private Sector Statement on the Potential for Country Platforms to Mobilize Capital for Net-Zero Transition in Emerging Markets and Developing Economies” endorses a similar idea

Examples of NTIFs

- **Energy Transition Mechanism[24]:** A scalable public-private partnership at the national level that can be used to acquire and then retire a significant portion of the country's coal-fired power plants in an orderly and just way – and well before their useful life – once sufficient clean power capacity has been built to meet energy needs and plans to enable a just transition for workers and consumers have been implemented. ADB is currently working to pilot the ETM in Indonesia with the Government of Indonesia.
- **Just Energy Transition Partnership[25]:** Launched by the governments of South Africa, France, the EU, UK, US and Germany to support South Africa's de-carbonisation and the transitioning of its economy towards renewable energy sources in line with its NDCs. Discussions are expanding to other markets including Indonesia, India, Senegal and Vietnam.
- **The Indonesia Infrastructure Guarantee Fund:** Set up by the Indonesian Government, the fund's mandate is to provide guarantees for infrastructure Public-Private Partnership Projects in Indonesia to support increasing demand for infrastructure.

Recommendation 3.d.

MDBs and DFIs should redouble efforts to develop and deploy de-risking tools to crowd in private sector capital at scale to manage currency, political, and operational risks

As EMDE capital markets tend to be underdeveloped, most EMDE renewable and climate investments raise funding in hard currency[26]. Hard currency debt is often cheaper, provides longer tenors, and provides fixed rate options. Specialized transition loans and labeled bonds denominated in hard currency are likely to attract developed market investors. Often, capital equipment for infrastructure or machinery is imported and therefore foreign currency denominated. These and other factors create a currency mismatch between revenues, which are typically in local currency, and key payables such as debt payments, fuel, and maintenance costs, which are typically in foreign currency.

While this currency mismatch is a well-known and a persistent issue, there needs to be a much larger focused effort on increasing capacity for hedging and other solutions to achieve the required multifold increase cross-border investment.

Tools to address project risk on the operational and technical aspects are also important for investors in green/transition bonds to have confidence in the project's financial and environmental performance. These tools are useful at the project level but would be more scalable and impactful to crowd in private sector investment at the portfolio level for the types of bundled pools and NTIFs mentioned in recommendations 3.b and 3.c.

An additional benefit of using de-risking tools in combination with NTIFs would be to allow the NTIF to issue local bonds or sukuk to stimulate the development of domestic capital markets. This would have the added benefit of reducing the EMDE's reliance on foreign currency loans and avoiding the risk of currency mismatch mentioned above.

Examples of MDB/DFI risk mitigation schemes available to private investors

- **The Currency Exchange (TCX) Fund:** Offers solutions for hedging currency risk that contribute to sustainable development in EMDEs via cross-currency swaps and forward contracts[27].
- **The Global Innovation Lab for Climate Finance Long-Term Foreign Exchange Risk Management[28]:** An instrument that aims at mitigating currency risk, involving IFC and TCX. TCX provides long-term fixed- and inflation- linked cross currency swaps and interest rate swaps to mitigate foreign currency risk, while IFC provides direct local currency loans and cross currency swaps in case of client default to mitigate credit risk.
- **The Credit Guarantee & Investment Facility (CGIF):** Established in 2010 by ADB and the ASEAN+3 region (including China, Korea, and Japan) to promote financial stability and to boost long-term investments in this region. CGIF provides guarantees to local currency bonds issued by corporations in this region allowing local currency bonds with longer maturities.
- **Indonesia Infrastructure Finance (IIF)[29]:** Established in 2009 by the Ministry of Finance of the Republic of Indonesia along with World Bank, ADB, and other multilateral institutions. Shareholders include ADB, the IFC, Sumitomo Mitsui Banking Corporation (SMBC), KfW Development Bank, and Sarana Multi Infrastruktur (SMI). IIF's products and services span project finance facilities, technical assistance, and risk mitigation centered on facilitating private investment toward Indonesia's infrastructure sector.

Theme 4: Create national enabling environments (key policies)

Themes 1 through 3 and related recommendations above will only be effective to accelerate transition investment if there is an enabling environment in each host country. That requires policies and regulations that are aligned with the country's NDCs. Critically, EMDEs must create plans ("pathways") for key sectors, especially those with high emissions, and then set policies and regulations that will create incentives for companies to take action and stimulate the finance and investment to support those actions. **The national enabling environment must not only make transition possible, but it must also make it more attractive than "business as usual" (BAU).**

Recommendation 4.a.

Deliver clear sector decarbonisation transition pathways for high emission sectors, starting with energy, utilities, manufacturing and transport

The majority of markets that have successfully kickstarted renewable energy (RE) investments have provided clarity on returns (e.g., feed-in-tariffs (FIT), feed-in premium (FIP) system, grants and subsidies) as part of power supply agreements (PSAs).

As RE technology and markets matured, feed-in-tariffs and feed-in premiums were phased out to encourage price competition, and developers competed through biddings and auctions. At this stage, additional initiatives would be helpful to support RE demand. These include requiring a minimum percentage of national generating capacity to be sourced from RE, minimum RE offtake for electricity retailers, must/priority dispatch for RE sources connected to the grid, etc.

Governments can further enhance the operating environment through direct and indirect means. Direct means include announcing a moratorium on new fossil-fuel power projects, stricter pollution standards, carbon taxes, tax breaks, economic zones for RE projects, etc. Indirect means include upgrading the grid network (to absorb growing intermittency issues due to more RE projects and allowing efficient transmission of RE, particularly in areas with high concentration of RE projects), strengthening centralized transmission infrastructure, etc.

Recommendation 4.b.

Establish national carbon price regimes with clear timetables for implementation and escalation so that businesses have time and incentive to develop, finance and execute just transition plans

Carbon pricing remains one of the most direct, efficient and immediate ways to achieve emissions reductions and instigate transition progress at a national level. There has been modest progress in some ASEAN markets but more remains to be done (see Appendix 2)[xxii]. IMF has proposed an international carbon price floor to be phased in by 2030 of USD25 per ton of carbon for low-income countries, USD50 for middle-income countries and USD75 for high-income countries[30]. There need to be options to recognise and address, through pricing system design, socio-economic issues that could arise with the introduction of carbon pricing (e.g., the Canadian model).

Recommendation 4.c.

Build upon the momentum of green and social bonds by incorporating sustainable finance principles into mainstream financial regulations and markets

With rising demand from investors, issuance of green, sustainable and transition bonds reached USD710 billion in 2021[31], more than doubling that of 2019. In spite of this growth, green and sustainability linked bonds represented less than 3% of global long-term fixed income issuance[32]. Furthermore, green and sustainable bond issuance in EMDEs (ex. China) was only USD51 billion, falling far short of IEA's clean energy investment need estimate of USD1 trillion annually by 2030. To achieve the required speed and scale of transition investments, green and sustainable finance **principles must move from an adjunct market to the mainstream of banking and capital markets and their regulation**. Sustainable finance/investment must become "the cake", not just "the icing".

This line of thought is already well established in some aspects of financial regulation. Recognising the potential for climate risk to threaten the stability of the financial system and individual financial institutions, national financial regulators from securities, banking and insurance are collaborating within and across sectors to require financial institutions to incorporate climate risk into their management[xxiii].

In addressing this need for the EMDEs, we are cognizant of the fact that mainstreaming sustainable financial principles into financial regulation is lagging in developed countries. Even though progress in some developed countries is lagging, it is in the interest of EMDEs to promote regulations that incentivise issuers, banks and investors to include green/sustainable finance practices and principles into their core lending and investment activities, not just a small percentage. Examples include the recommendations above (2.a) for stock exchanges and capital market regulators to require publicly traded and large state-owned companies to disclose carbon emissions and to develop board approved transition plans. Also, recommendation 1.c above for regulators of banks and insurers to begin steps to consider the case for capital or solvency risk charges to be adjusted on loans to or investments in companies based on the availability and quality of their climate transition plans. Mainstream green/sustainable principles into the whole financial system will reduce borrowing costs for companies with credible transition plans and actions relative to inaction or BAU.

[xxii] The IMF notes that more and more countries are pricing carbon, but emissions are still too cheap. See: <https://content.govdelivery.com/accounts/USIMF/bulletins/3246d1b>
[xxiii] Including ECB, NGFS, IOSCO, IAIS

Appendix 1: ASEAN Exchanges Sustainability Reporting (SR) Requirements

Component	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
SR Regulatory Authority	Financial Services Authority of Indonesia (OJK)	Bursa Malaysia	Securities and Exchange Commission (Philippines)	Singapore Exchange Regulation (SGX RegCo)	Securities and Exchange Commission (Thailand)	State Securities Commission
Rule Coverage (Entities required to comply with the SR rule)	All Publicly Listed Companies, Issuer, Financial Services Institution	All Main and ACE Market publicly listed companies (PLCs)	All listed companies	All Mainboard and Catalyst listed companies	All listed companies	All listed companies
SR Standards and Frameworks <i>(Sustainability reporting standards/frameworks that are required to satisfy the sustainability reporting requirements, if any)</i>	<u>Mandatory:</u> <ul style="list-style-type: none"> OJK SR Guidance for Listed Companies. Including description of Sustainability Performance and Governance, Sustainable Development of Products/Services Responsibility <u>Recommended:</u> <ul style="list-style-type: none"> Internationally recognised sustainability reporting standards and frameworks 	<u>Mandatory:</u> <ul style="list-style-type: none"> Disclose a narrative statement of the management of material economic, environmental and social (EES) risks and opportunities Information about governance structure, the scope of the statement and the management of material EES risks and opportunities <u>Recommended:</u> <ul style="list-style-type: none"> Internationally recognised sustainability reporting standards and frameworks 	<u>Mandatory:</u> <ul style="list-style-type: none"> Comply or explain components <u>Recommended:</u> <ul style="list-style-type: none"> Internationally recognised sustainability reporting standards and frameworks 	<u>Mandatory:</u> <ul style="list-style-type: none"> TCFD Comply or explain components <u>Recommended:</u> <ul style="list-style-type: none"> Internationally recognised sustainability reporting standards and frameworks 	<u>Mandatory:</u> <ul style="list-style-type: none"> Describe corporate sustainability policy and goals ESG metrics <u>Recommended:</u> <ul style="list-style-type: none"> Stock Exchange of Thailand (SET) Corporate Sustainability Guide for Listed Companies Internationally recognised sustainability reporting standards and frameworks 	<u>Mandatory:</u> <ul style="list-style-type: none"> Environmental disclosure: GHG emissions, energy use, water use, waste generation Social disclosure: Policies related to employees Governance disclosure: Rights of Shareholders, Role of Stakeholders, Responsibilities of Board <u>Recommended:</u> <ul style="list-style-type: none"> Internationally recognised sustainability reporting standards and frameworks
GHG Emissions Disclosure Requirements	Mandatory disclosure of "amount and intensity of emission produced by type"	Proposal for mandatory disclosure of Scopes 1, and 2 and parts of Scope 3	Mandatory disclosure for Scope 1 and 2, and ozone-depleting substances	Mandatory disclosure of Scopes 1, 2, and 3 emissions "Comply or explain" TCFD reporting	Mandatory disclosure of "information on GHG emission according to the international standards or equivalent"	Mandatory disclosure of "total direct and indirect GHG emissions"
Transition Plan Disclosure Requirements	Disclose efforts and achievements made in emission reduction	Disclose narrative on material sustainability matters and how these are managed	Disclose initiatives undertaken to manage and reduce GHG emissions	Disclose sustainability policies, practices, and performance	Disclose environmental policy and direction of GHG emissions management	Disclose measures and initiatives to reduce GHG emissions

Suggested Near Term Actions/Improvements	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Mandate and specify the disclosure of Scope 1, 2, and 3 emissions, similar to Singapore's initiative		✓			✓	✓
SR Regulatory Authority to work with a government organisation tasked with verifying and measuring GHG emissions of entities, similar to Thailand's SEC and the Thailand GHG Management Organisation	✓	✓	✓			✓
Incorporate a prescribed reporting framework (e.g., TCFD) and recommended KPIs (e.g., tCO2e mitigated) as part of mandatory ESG reporting requirements for local SR guides	✓	✓	✓		✓	✓
Work with the Sustainable Stock Exchanges (SSE) Initiative to create an ASEAN-friendly/EMDE-specific transition framework based on best practices as part of voluntary disclosures of listed companies	✓	✓	✓		✓	✓
Work with MDBs/DFIs on mapping & gap analyses for sustainability reporting guidelines in the local market to track international/ regional guidelines	✓	✓	✓		✓	✓
Provide guidelines on reporting about transition plans and commitments as part of sustainability strategies, ideally aligned with NDCs and/or sectoral decarbonisation approaches	✓	✓	✓	✓	✓	✓
Launch a Transition Plan Taskforce to collaborate with global initiatives such as the Climate Action 100+, to incorporate the concept of "transitions" within the context of SR in key industry sectors	✓	✓	✓	✓	✓	✓

Adapted from ASEAN. 34th ASEAN Exchanges CEOs Meeting. March 2022. https://api2.sgx.com/sites/default/files/2022-03/AEx%20SR%20table_final.pdf

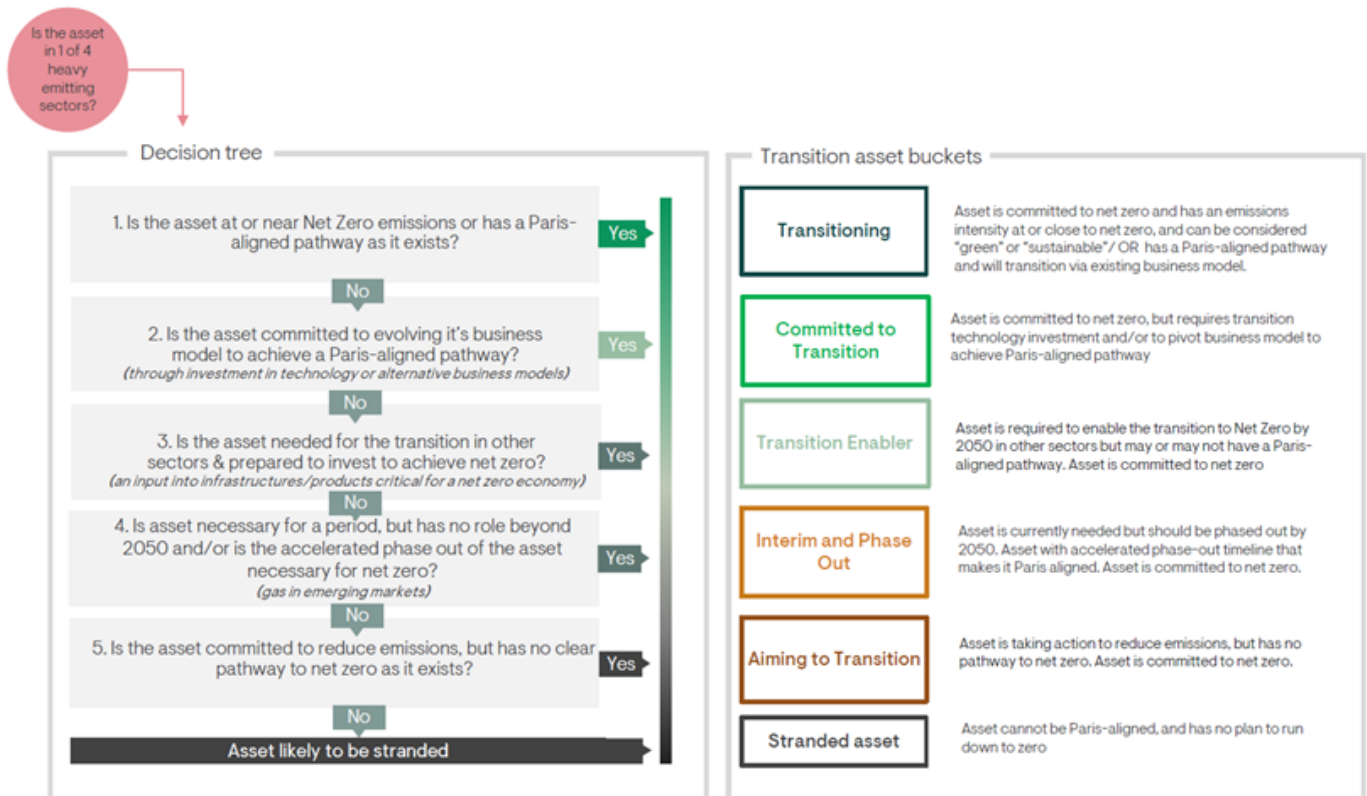
Appendix 2: Examples carbon pricing mechanisms and target levels[33],[34]

Market	Is there a carbon price in legislation or regulation?	Price (per tCO ₂ e)	Scope
Singapore	Yes, carbon tax in place since Feb 2019	<ul style="list-style-type: none"> • 2019-2023: SGD 5 (USD 3.7) • 2024-2025: SGD 25 (USD 18) • 2026-2027: SGD 45 (USD 33) • 2030: SGD 50–80 (USD 37–59) 	Manufacturing, Power, Waste, and Water[35]
Malaysia	Minister of Environment and Water announced plans for a carbon trading platform to be implemented in late 2022, starting with VCM and later a domestic ETS	State-funded thinktank proposed carbon tax RM 35 (USD 7.9) in 2020, rising to RM 150 (USD 34) by 2028-2030[36]	Carbon tax: Electricity, Transport, and Oil & Gas ETS: Power and Industry
Indonesia	Carbon tax announced but delayed[37] ETS (hybrid cap-trade-tax system) under consideration Voluntary intensity-based ETS pilot took place in Apr-Aug 2021	Carbon tax: IDR 30 (USD 2.1)	Carbon tax: Coal-fired power plants ETS: Power and Industry Pilot voluntary ETS: Power
Thailand	Plans to pilot ETS in Eastern Economic Corridor in 2022	N.A.	Industrial
Vietnam	Voluntary ETS under development. Plan to pilot national crediting mechanism (NCM) in 2023, pilot ETS in 2025 and fully operationalize ETS in 2028	N.A.	Steel, Cement, and Thermal Power
Philippines	ETS (cap-and-trade system) and carbon tax under consideration[38]	N.A.	ETS: Industrial and Commercial
China	Yes, National ETS in place since 2021	Average 2021 secondary market price: CNY 46.6 (USD 7.2)	Power (including combined heat and power and captive power plants in other sectors), to expand to other sectors over time
EU	Yes, EU ETS in place since 2015	Average 2021 auction price: EUR 52.9 (USD 62.6) Average 2021 secondary market price: EUR 54.8 (USD 64.8)	Power, Manufacturing Industry, Aviation[xxiv] Transport and Buildings under consideration

[xxiv] Within European Economic Area (EEA) and on routes from the EEA to Switzerland and the UK

Appendix 3: Sustainable Markets Initiative (SMI) Methodology to define transition assets

Decision Tree on transition assets due to be published in an upcoming paper. Developed by Sustainable Markets Initiative Asset Manager/Asset Owner Transition Workgroup led by Ninety One, Macquarie, State Street and Morgan Stanley.



Appendix 4: EMTI Roundtable 1 Readout Summary

Many global investors are open to increased participation in sustainable/climate positive investments in EMDEs, especially green and labelled bonds, but highlighted lack of supply as a key gap in the market. This unmet demand creates an opportunity to accelerate EMDE transition investment, assuming **EMDE governments and companies can develop transition plans faster, and issue bonds to finance those plans.**

Today, a number of key barriers/gaps are impeding progress vis-à-vis transition investing in EMDEs. These include:

- Lack of comprehensive transition plans (by corporates)
- The labelled bond markets in EMDEs are immature: the certification process takes significant time and effort; labelled bonds lack a “greenium”; and “ticket sizes” are often too small (i.e., below minimum benchmarks of large, global institutional investors)
- The enabling environment (e.g., regulation, disclosures, taxonomies) is not fully developed
- De-risking solutions (e.g., currency swaps, guarantees) are inadequate or too expensive
- MDBs/DFIs are not fully capitalising on the opportunity to “crowd in” private capital

A number of opportunities have been identified to address these and other market barriers:

- Make "EMDE Transition Investment" a virtuous and more accessible asset class
- Develop the enabling environment for transition investing
- Encourage MDB/DFIs to prioritise mobilisation and enablement (vs project lending)
- Develop risk mitigation tools to help mobilise private capital

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