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ABSTRACT

Sustainable finance emerged as a key issue to tackle climate change at the 2021 United Nations Climate Change Conference and is spurring a global transition to net zero. A peculiar feature of the race to net zero is that it cannot be achieved unless all countries can meet their targets, and any positive step towards it will benefit all countries. The drive to achieve carbon neutrality and net-zero emissions needs to be targeted through a range of fiscal, monetary, and regulatory policy actions on a national and collective basis by the G20. The 2022 Sustainable Finance Roadmap highlights the importance of taking action to ensure a just, orderly, affordable, and balanced transition to a carbon-neutral economy that systemically reduces its dependence on fossil fuel-backed growth. India is a central emerging market player in achieving sustainable growth, and its G20 presidency in 2023 is key to unlocking sustainable policies in developing countries that are growing faster than advanced economies but face several issues in attracting private finance. Countries will need to balance climate and energy policy with monetary and fiscal policies to ensure sustainable growth by supporting public-private partnerships, and efforts by the central bank, international financial institutions, and multilateral development banks. Harmonising taxonomies and the use of green bonds and green labels can help attract private climate finance to support government programs and efforts.

INTRODUCTION

Sustainable finance emerged as a key issue at the 2021 United Nations Climate Change Conference (COP26) held in Glasgow, Scotland. The United Nations Framework Convention on Climate Change and commitments made under the Paris Agreement have already stressed the importance of mobilising public and private funds to counter climate change risks and threats.[1] The drive to achieve carbon neutrality and net-zero emissions needs to be targeted through a range of fiscal, monetary, and regulatory policy actions on a national and collective basis by the G20. Indeed, the G20 finance track recognises the mobilisation of sustainable and green finance as a top priority to tackle climate change's macroeconomic and fiscal impact. The 2022 Sustainable Finance Roadmap[2] highlights the importance of taking action to ensure a just, orderly, affordable, and balanced transition to a carbon-neutral economy that systemically reduces its dependence on fossil fuel-backed growth. However, particular emphasis is needed for emerging markets that remain reliant on fossil fuels through government subsidies and face a burgeoning import bill. On a granular level, firms, especially small and medium enterprises (SMEs), need affordable options to make this transition through public finance, with assistance from multilateral development banks (MDBs) and international financial institutions (IFIs). The G20, therefore, aims to incentivise private finance to help reduce the cost of low-emission technology and promote an economy-wide green transition.

This report discusses the role of the G20's Sustainable Finance Working Group (SFWG), and the need to attract public and private finance for sustainable growth. It also assesses the role of IFIs and MDBs in mobilising finance for an economic transition, presents ways to simplify information-sharing for private finance and the instruments that can be used to support the green and net-zero transition. Finally, it underlines some of the key questions that can drive India's priorities on sustainable finance during its G20 presidency in 2023.

THE SUSTAINABLE FINANCE WORKING GROUP

The SFWG was created as the Green Finance Study Group under the Chinese presidency in 2016 to determine the market and institutional barriers to developing climate finance, and to promote private sector participation in climate funding.[3] Its role and scope evolved over the next two years, with a greater focus on green and sustainable finance in the geopolitical scene. It earned its present name and status during the Italian presidency in 2021, reaffirming the role of sustainable development. The SFWG was tasked with creating the G20 Sustainable Finance Roadmap to determine public and private sustainable investment, along with aligning the objectives of MDBs and IFIs with the Paris Agreement mandate.[4] The roadmap also provides key actionable objectives that G20 members and international organisations can follow to scale up sustainable finance to meet the 2030 Agenda for Sustainable Development (the Sustainable Development Goals, or SDGs). Notably, the UN Development Programme has been designated as the official secretariat for the SFWG to support and coordinate research and collaborative effort among the G20 members. It has also endorsed the roadmap developed to strengthen all stakeholders' alignment for sustainable development financing.

The roadmap has five focus areas[5]:

1. Market development and approaches to align investments to sustainability goals
    - Develop greater comparability, interoperability, and coordination in approaches to sustainable financial markets across countries and international organisations
    - Follow good governance and transparency practices
    - Alignment approaches developed by individual countries to be science or evidence-based
    - Scale up climate-related financial and capital market instruments

2. Consistent, comparable, and decision-useful information on sustainability risks, opportunities, and impacts
    - Integrate sustainability considerations into financial decisions by investors and other financial industry stakeholders
    - Efficient allocation of resources based on quality data assessment
    - Enable access to high-quality and timely information through shared digital platforms to understand financial risks
    - Promote climate disclosures and public oversight

3. Assessment and management of climate and other sustainability risks
    - Develop risk definitions, tools, and methodologies to understand, assess, and manage climate-related risks
    - Follow the example set by the IMF in incorporating relevant climate risk analysis in its surveillance activity
    - Strengthen the understanding of sustainability-related risks and their macroeconomic implications on income, employment, growth, income, and distribution

4. Role of IFIs, public finance, and incentives
    - Drive, motivate and unlock country-level climate-related plans
    - Mobilise private finance to facilitate an economy-wide transition
    - Address market externalities and use market-based and public policy tools to incentivise private capital, including an emissions trading

system and fiscal measures to phase out fossil fuel subsidies

- Use the MDBs to derisk climate finance and crowd-in private funding
- Build capacity for the greening of financial systems through demonstrations
- Assist countries in developing their national strategies and help them achieve their SDG and climate goals
- Incentivise reduction in greenhouse emissions, and promote green transitions
- Provide targeted support for the poorest and most vulnerable countries to make sustainable climate-related decisions

5. Cross-cutting issues
    - Use digital technologies to improve the efficiency of the financial system and mobilise sustainable finance
    - Promote the reporting of real-time data to assist financial actors in their decisions
    - Use big data analysis to process large amounts of data to create sustainability performance metrics for various projects
    - Employ circular economy strategies to enable a transition to a green economy
    - Explore ways to reduce the negative impact of climate transition on local communities and SMEs

TRANSITIONING TO NET ZERO

Article 4 of the Paris Agreement commits parties to achieve "a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gasses in the second half of this century", referring to trends of "net zero" emissions and carbon neutrality.[6] A net-zero future requires balancing the amount of greenhouse gases in the atmosphere. Since all sectors of the economy and society depend on carbon emissions, a gross zero-emission future does not seem realistic. Global leaders and businesses have now agreed upon a framework to achieve this balance.

To reach net zero by 2050, global carbon emissions must decline by 45 percent by 2030 compared to 2010 levels. This will require significant effort on a global scale. There is some momentum already, with 136 countries now making net-zero pledges, up from 96 at the end of 2019. Several large emitters are officially planning for a net-zero future—India plans to achieve net-zero emissions by 2070, and China has already pledged carbon neutrality by 2060. Although there have been positive efforts towards the goal, governments alone will not be able to cater to this tectonic transition. Private businesses must play a significant role in aiding the public effort to achieve a net-zero future.

Private Finance

Approximately US$50 trillion in incremental investments is required by 2050 to transition the global economy to net-zero emissions and avert a climate catastrophe. The investment will be required to implement existing technologies, and deploy, validate, and expand critical breakthrough technologies, such as energy-efficiency solutions and hydrogen-based fuels, in the next decade.

To add to the existing dire situation, the Russia-Ukraine conflict has created energy security concerns. About one-fourth of Europe's energy comes from natural gas imported directly from Russia. Gazprom, Russia's state-owned gas producer, has artificially tightened gas supply to exert pressure on European countries amidst its invasion of Ukraine.[7] However, perhaps this shortage comes at an opportune time to transition away from the reliance on fossil fuels, and towards renewable sources of energy and green infrastructure. The US has already announced a ban on imports of Russian oil.[8] However, this energy transition had started even before the war. In some G20 countries, the electricity produced from renewables is already cheaper than that produced from gas-powered plants. In the EU, the new REPowerEU plan aims to use electric heat pumps to displace the demand for natural gas.[9]

Perhaps the Russian invasion has started the end of the fossil fuel era and can hasten the energy transition necessary to mitigate the impact of climate change. The energy transition will need to be supported by large-scale investments, but individual stakeholder action will not be sufficient, resulting in investment gaps. Thus, to tackle this crisis, public and private stakeholders must combine their capacity for sustainable finance. Businesses need to find innovative solutions for new ways of working, keeping sustainability at the core. The global financial community is rising to the challenge by enabling ecosystems for public-private partnerships. This aspect has garnered attention at most major global forums. The G20's SFWG will be key to developing robust, sustainable financial architecture to support the global net-zero ambition.

International Financial Architecture

International financial architecture, such as IFIs and MDBs, will also be crucial in supporting the global transition to net zero. Broadly, MDBs help achieve development goals in developing countries as outlined by the Paris Agreement, which they committed to helping their clients achieve during the UN 2019 Climate Action Summit, and the 2030 Agenda. More specifically, MDBs can potentially encourage the transition to lower greenhouse gas emissions and establish climate-resilient development paths via their financial flows, policy advice, and technical support. They can offer secure, countercyclical, and long-term lending at affordable rates to countries that struggle to access such financing in private debt markets. MDBs committed US$61.6 billion to climate finance in 2019, US$41.5 billion (67 percent) of which went to low and middle-income counties. MDBs also support the transition to net zero by working to develop new innovative finance instruments and frameworks to expand the resources available for climate mitigation and adaptation. These innovative tools can also encourage private-sector investment by constructing favourable business environments in terms of regulation. These institutions have also narrowed the financing gap for adaptation actions by offering blended financial instruments that combine traditional resources with novel ones. In 2017-2018, MDBs were the largest providers of blended finance, providing 70 percent of the total amount mobilised.[10] Additionally, through guarantees, credit enhancement, and political risk insurance, MDBs can alleviate some of the perceived and real financial risks associated with development investments. Overall, they support private sector investment by discovering new sustainable investment opportunities and expanding the current stock of bankable projects.

In addition to working with the private financial sector, MDBs currently work to develop metrics and methods to assess finance flows aligned with the Paris Agreement using a six-block building block approach. The six blocks include: (1) alignment with mitigation goals; (2) adaptation and climate-resilient operations; (3) accelerated contribution to the transition through climate finance; (4) strategy, engagement, and policy development; (5) reporting; and (6) align internal activities.

To achieve the goals of the Paris Agreement and the SDGs, MDBs must increase the speed and scale of their work in supporting the transition to net zero (encouraging private investment and developing methods and metrics). MDBs can work to play an even more constructive role in the development of a financing climate transition framework for developing countries to aid the most vulnerable sections of the population with this transition. More specifically, they should increase the ambition of their climate financing actions, scale up their derisking facilities for private sector finance crowding, and enhance their in-country support.[11] Finally, MDB boards must engage with the recommendations of the Capital Adequacy Framework review. The review recommendations could help IFIs identify hundreds of billions of dollars of potential further financing, much of which could be used to support the transition to net zero.

Simplifying global standards for private investors

- **Taxonomies:** Climate change poses a risk for financial institutions and individual investors. As a result, climate risks are not generally factored into financial decisions. There have been efforts to consolidate climate risk into mainstream financial risk valuation.[12] The key to unlocking climate finance is to enable investors, especially private investors, to understand to what extent an investment can support sustainability goals and provide the information investors may need in their decision-making process. The Bank of International Settlements recommends five key principles to design effective taxonomies to attract sustainable private investment under the G20.[13] These include the need to align the taxonomy with high-level targets and interim goals, and to use measurable goals and link them to knowledge performance indicators and the objectives of the Paris Agreement.

  Taxonomies developed according to these guidelines are certain to facilitate the participation of different firms across markets and countries, providing clarity and transparency to the sustainability goals. For example, the goal of carbon emission reduction is inherently linked to the Paris Agreement. Therefore, any private finance in related projects has been able to identify the non-financial benefits of such investments due to proper signalling mechanisms developed as relevant taxonomies. Environmental, social, and governance (ESG) products and green bonds have thus emerged in the past decade to finance the climate transition.[14]

- **Benchmarks:** Benchmarking is a tool used to appropriately price financial assets to enable their cross-border trading and create market confidence.[15] In the case of climate financing, benchmarks play an important signalling role for private players. However, their harmonisation is required across countries and jurisdictions to ensure the tradability, accuracy, and integrity of related financial assets. The European Union (EU) has set sustainable finance benchmarks that identify the carbon footprint of assets to assist private investors interested in sustainable investment products.[16] These are the EU low-carbon climate transition benchmark that sets the decarbonisation trajectory for all existing benchmarks and the EU-Paris-aligned positive carbon impact benchmark that sets the target to reduce carbon emissions by 1.5 degrees compared to pre-industrial levels as per the Paris Agreement.[17] Another related benchmark is one that targets ESG disclosures in all investments. Amid renewed interest at the COP26, the G20 has called for the adoption of the positive carbon benchmark that requires decoupling growth from carbon emissions.

- **Labels:** Labels are used to provide quality assurance to financial instruments in sustainable asset management. The EU has developed labels for sustainable investments covering ESG disclosures that internalise the risks associated with climate change and green bonds that directly target a green transition.[18] France and Luxembourg support green labels,[a] while France, Germany, Austria, Luxembourg, and Belgium have created ESG labels.[b,19]

  The EU's effort to create labels for sustainable financing shows great progress under the Sustainable Finance Roadmap developed by the SFWG to support private finance in the transition towards a carbon neutral, circular and sustainable economy.[20]

Instruments to support green and net-zero transition

Various financial instruments can be used to support the green transition and assist in achieving the net-zero target. In addition, several non-financial instruments can also be used to supplement this transition and enhance the effectiveness of the relevant financial tools.

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[a] The green labels are: Nordic Swan Ecolabel (Nordic countries), and Greenfin Label (France).

[b] The ESG labels are: SRI Label (France), FNG-Siegel (Germany, Austria, and Switzerland), LuxFLAG ESG (Luxembourg), LuxFLAG Environment (Luxembourg), LuxFLAG Climate Finance (Luxembourg), Umweltzeichen (Austria), and Towards Sustainability (Belgium).

- **Phase-out grey subsidies:** This refers to subsidies on fossil fuels such as coal, oil, and gas. According to an ODI report, in 2019 alone, the G20 members, excluding Saudi Arabia, contributed at least US$152 billion to grey subsidies, with almost 40 percent of this directed at the production and consumption of oil.[21] Some G20 countries have reduced their grey subsidies as a proportion of GDP but others have increased it, and no country has declared a plan to phase out grey subsidies entirely.[22] At COP26, nearly 200 countries pledged to speed up their phasing-out of grey subsidies and reduce their use of coal, but these plans are not in line with climate targets.[23] This comes following a 2020 reaffirmation by the G20 countries of their commitment to "rationalise and phase out inefficient fossil-fuel subsidies that encourage wasteful consumption over the medium term".[24] In combination, public finance institutions in the UK and the Royal Bank of Scotland annually provided £1.3 billion (US$ 1.5 billion) of financing to oil, gas, and coal domestically and abroad between 2014 and 2016.[25] However, the UK has committed to entirely phasing out coal-fired power by 2025 and has introduced taxation tools, including a carbon price support and climate change levy, to put a price on carbon.

- **Create innovative governance instruments:** As the imperative to address climate change becomes increasingly urgent, there is a growing need for access to finance in countries and businesses. The Global Innovation Lab for Climate Finance works to identify and develop innovative instruments to steer the private financing of climate mitigation and adaptation in developing countries.[26] While private investors are already sending some money into the low-carbon economy, significantly more finance is needed, particularly in developing countries. The instruments that this institute supports can unlock billions of dollars for energy efficiency, renewable energy, sustainable transport, climate-smart agriculture and more while improving financial returns. The institute was founded in 2014 by the UK, US, and Germany through a partnership with a variety of major development finance institutions, key private sector actors, and climate finance donor governments, including France, Japan, the Netherlands, Denmark, and Norway. In 2015, the Indian, US, and UK governments launched the India chapter.[27] In addition to this institute, many other public and private banks have launched innovative climate finance products. For example, the European

Investment Bank (EIB) offers grants or other funding sources that can be combined with EIB loans for investment in new sectors or to facilitate the development of large-scale climate projects. Between 2010 and 2014, EIB lent over €90 billion (US$91.91 billion) for climate action.[28]

- **Pilot private green finance projects:** The Global Landscape of Climate Finance 2021 report published by the Climate Policy Initiative measured that total (public and private) climate finance has significantly increased over the past decade, beginning at US$346 billion in 2011/2012, and reaching US$632 billion by 2019/2020. However, to meet global climate objectives, climate financing needs to increase by 590 percent to US$4.35 trillion by 2030. Private financing comes from commercial financial institutions, funds, households, individuals, and corporations.[29] In the US, initiatives such as 1t.org and the New York Declaration on Forests are catalysing corporate efforts to reach greater environmental efficiency. Additionally, the United Nations Convention to Combat Desertification uses US public money to raise private finance to provide neutral land reclamation and wetland mitigation.[30] In 2019, the UK government published their Green Finance Strategy, highlighting two main lines of effort, one of which was “mobilising private finance at scale to support clean and resilient growth”.[31] However, moving forward, institutional investors will require a better understanding of the risks and opportunities that green finance projects offer and the environmental risks they face and create. This can be achieved through capacity-building for best practices for green finance risks and opportunities. It would also be advantageous to improve and expand access to asset-based securities like mortgages.[32]

- **Disseminate timely information using digital technology:** Digital technology innovation has the potential to play a crucial role in increasing the effectiveness and efficiency of national efforts to combat climate change globally. The United Nations Climate Technology Centre and Network supports developing countries’ climate change responses through innovative technologies to achieve the aims of the Paris Agreement.[33] One important role that digital technology can play is disseminating timely information. Accurate, timely information can be essential in provoking a response or action toward combatting climate change. Effective information should raise awareness, sway people to feel personally involved, and motivate them to act. This can also take place on a larger scale for corporations and countries.[34]

- **Role of central banks:** Globally, there is increasing recognition that central banks can set expectations and rules that can effectively manage the systemic financial risks that may arise from climate change. Additionally, there have been debates about the potential role of financial regulators in actively promoting green finance and reducing unsustainable economic activities. As of 2020, 55 percent of central banks reported that they are monitoring climate-related risks, while only 6 percent have mandatory disclosure of climate-related risks. Central banks can work to incorporate climate change by adding a 'green-supporting factor' or 'dirty-penalising factor' to their capital and liquidity requirements. This would mean that if financial institutions are exposed to climate-related physical, transitional or liability risks, they will be required to hold more reserves. Central banks also have an important role to play in facilitating a low-carbon transition. For example, they can introduce green finance taxonomies, classifying activities as 'green' or 'grey'. Financial institutions can then use these taxonomies to make investment and lending decisions that are more informed. Central banks can also work to green their balance sheets by purchasing equities or green bonds when purchasing assets to stimulate the economy.[35]

- **Promote public-private partnerships:** Public-private partnerships (PPPs) between a government agency and the private sector can be used to deliver goods or services to the public.[36] An increasing number of PPP projects globally are being designed to decrease carbon footprints and account for the impact of climate change on the lives of communities and the world. The World Bank has a PPP Group that recently combined forces with the African Development Bank, Australia's Department of Foreign Affairs and Trade, and Australian Aid to create a PPP and environmental and social handbook.[37] Additionally, the German International Climate Initiative has a PPP, Programme for Climate Protection, that supports private sector technology transfers and has already promoted 15 projects on four continents. These projects were primarily in the energy efficiency and renewable energy field.[38] India has been looking to develop and include PPP in the fight for sustainable development since June 2008 when the National Action Plan on Climate Change was announced. PPPs can be effective in building sustainable infrastructure in cities that works to both diminish the causes of climate change and protect citizens from the impacts.[39]

- **Green bonds:** Green bonds are created to finance projects that positively impact the environment or climate. Most green bonds issues are asset-linked bonds or green 'use of proceeds' bonds, meaning the proceeds of these bonds are earmarked for green projects, but are backed by the issuer's balance sheet. Additional green bond varieties include the green use of proceeds from revenue bonds, green securitised bonds, or project green bonds. The first green bond was issued in 2007 and had an AAA-rated issuance from both the EIB and the World Bank. Since this initial issuance, the market for green bonds started to explode, and hit the cumulative mark of US$100 billion during the COP23 in 2017. In 2020, the green bond market hit USD$1 trillion, originating from 67 countries.[40] In March 2022, India announced that it would issue sovereign greens bonds worth at least INR 24,000 crore (approximately US$3.3 billion) as it continues the shift to a low-carbon economy.[41]

- **Best practices:** Developing best practices based on policies taken across countries is an effective tool to incentivise countries to prioritise and promote a green transition and sustainable finance. According to the United Nations, best green production and consumption practices involve "doing more and better with less".[42] Additionally, it is vital to separate economic growth from environmental degradation, promote sustainable everyday lifestyles, and increase resource efficiency. For example, if every person switched to using energy-efficient lightbulbs, the world could save a total of US$120 billion annually.[43] Best practices of green production and consumption can also substantially contribute to poverty alleviation and the global transition to green and low-carbon economies.[44] For example, ensuring access to affordable, reliable, sustainable, and modern energy for all (SDG-7) can reduce energy poverty and greatly improve environmental impacts. Today, 20 percent to 40 percent of urban dwellers do not have reliable access to electricity, forcing them to use traditional biomass, which has adverse health and environmental consequences. Effective housing interventions that improve the availability and affordability of reliable and clean energy are essential to combat poverty and achieve net-zero emissions.[45]

Another best practice is switching to a low emissions economy, which results in lower levels of greenhouse gas emissions compared to today's highly carbon-intensive economy. The European Commission has set a goal to achieve a low carbon economy by 2050. To achieve this goal and drive a low emission economy, shifting the global energy matrix towards renewable energy technologies is imperative. For instance, in Brazil, the federal RenovaBio programme mandates that biofuel producers purchase carbon credits, as a result of which, the environmental performance will have an impact on their economic evaluation. It is also important to take industry-specific actions. For instance, sustainable processes for producing fabric and yarn that require less water and energy resources must be identified and utilised in the fashion industry.[46]

CONCLUSION

Sustainable finance is an important issue in tackling climate change and spurring an economy-wide transition to net zero. The peculiar feature of the race to net zero is that it cannot be achieved unless all countries are able to meet their targets, and any positive step towards it will benefit all states. Given that India is a central emerging market player in achieving sustainable growth, its G20 presidency in 2023 is key to unlocking carbon-neutral and sustainable policies in developing countries that are growing faster than advanced economies. The UK can also offer ways to collaborate with India on these issues, especially around achieving net-zero targets.

The G20 members will need to answer some key questions pertaining to issues for India and other emerging markets over the next few years, starting with during India's presidency. These include:

- Given that advanced economies are tightening monetary policies due to increased spending during the COVID-19 pandemic, the resultant rise in interest rates will lead to an outflow of investment from emerging economies. In this present macroeconomic environment, emerging markets will find it challenging to attract international private finance. How can emerging market economies attract more climate finance to facilitate an economy-wide transition? Who will finance this transition? What are the fiscal implications? How will the G20 manage the social and transition risks associated with the energy transition?
- Emerging economies attract only a small share of global climate finance. How can they tackle the inequality in access to finance? Can they use a signalling device?
- Carbon pricing is a G7 and G20 issue. Under the Italian presidency, the G20 agreed communique language recognising the importance of carbon pricing as one solution to help achieve shared climate goals. This language was reiterated in the Indonesian Finance Track communique. Emerging markets remain concerned with reducing coal and fossil fuel consumption. Further consideration could be given to the centrality of pricing carbon to deliver our climate targets and Paris goals. How can the G20 make progress on this issue? Can it be expanded to be more inclusive of emerging economies?
- The lack of reliable data in emerging economies is a pervasive issue that affects the transition to carbon-neutral growth. Coupled with sluggishness in private finance, emerging markets need to build a stable climate information architecture that harmonises the use of climate taxonomies and increases the use of green labels to signal the environmental impact of green investments. How will emerging economies tackle the lack of information on climate investment?
- Emerging economies, unlike advanced economies, remain reliant on agriculture and land use, which also contribute to climate change. The transition to zero emissions or a carbon-neutral economy will require the decarbonisation or greening of land-use patterns and other industries, including steel, to be addressed. Can India develop a roadmap for emerging market economies on how to finance this transition?
- Climate change focuses on the shift to renewable energy sources while reducing the dependence on fossil fuel-based energy. India and

Brazil are large users of biofuels. Can the G20 platform be used to harmonise standards and increase the production of biofuels across the largest economies of the world?

- Sustainability entails a shift in industrial production and consumption, but it must also focus on creating a sustainable lifestyle. India is already running a smart cities project that is focused on green buildings, clean energy and transport, clean environment, and water. Can countries build sustainable cities and personal habits?
- The differences in climate taxonomies, standards, and regulations have delinked foreign investors from the demand for climate finance in emerging economies. What is the scope for their international harmonisation to spur growth in climate finance in the emerging market economies?

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