*Challenges and Opportunities in Scaling up Green Finance**

M. Rajeshwar Rao

A very good morning to all the distinguished dignitaries and participants at this BFSI Insight Summit being organised by the Business Standard. I am very happy to be amidst you today *albeit* virtually. In recent times, this event has become a well-regarded platform for debate and deliberation on contemporary issues in finance and has generated useful insights from the wisdom of distinguished speakers who have graced the previous summits.

As we look back over the past decade and a half, what is really striking is the fact that the financial sector has been buffeted by several financial storms which it has bravely weathered. After each episode, the endeavour had been to ensure that the institutions emerge stronger and more resilient, so as to support the continuing narrative of recovery and growth. The episodes of crisis of late have become more frequent with lesser breathing space afforded to the institutions to recover, recoup and be future ready. The evolving situation demands that both the regulators and the regulated entities remain ever ready and well equipped to face the emerging challenges, be it the growth of fintech, digitalisation of financial services, customer service or the challenges of cybersecurity in the financial services sector. But the key risk which I would like to discuss today is the impact of climate change and what it can mean for the financial services industry. In a way I am revisiting a topic on which I spoke about a year back[1] - climate risk and green finance. While this issue may still be the new kid on the block as far as the deliberations in such financial gatherings are concerned, it is fast becoming a key issue which is being discussed globally and the urgency of the situation is more apparent to one and all.

The recent Conference of Parties (COP-27) Summit in Egypt and the United Nations Environment Programme's 'Emissions Gap Report 2022 - The Closing Window' released in October 2022[2] have once again brought to fore global attention on the measures required and the need for urgent action. The hierarchy of actions and the agencies responsible for the same is getting crystallised while there is a greater degree of agreement on the manner in which to proceed further starting from taking effective steps for reducing carbon emissions, to fostering sustainable patterns of production and consumption and transitioning to a sustainable lifestyle in a cleaner and greener earth. It is also clear that there is no room for differences on the issue and only our collective efforts can address the challenge of climate change.

Having said that, the question that emerges is what would be the role of different institutions in achieving these objectives? While the overarching policy approach would be guided by sovereign efforts and coordinated by decision-making bodies such as the COP, the financial world needs to ask the obvious question to itself - how can we help? As custodians of financial stability, central banks and policymakers would also be required to evaluate and examine the instruments or strategies they should leverage or focus upon to meet sustainability goals without compromising on their existing policy mandates. These are some of the dilemmas that I would like to highlight today in my remarks.

Given its wide ranging economic and financial implications, climate-related financial risks are already

* Remarks delivered virtually by Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India on December 22, 2022 at the Business Standard BFSI Insight Summit at Mumbai. The inputs provided by Sunil Nair, Brij Raj and Pradeep Kumar are gratefully acknowledged.

[1] https://rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1127

[2] The report can be accessed at https://www.unep.org/resources/emissions-gap-report-2022

engaging the attention of international standard setting bodies, central banks, and supervisors globally with the focus on the need to promote the transition to a sustainable global economy. The Reserve Bank too had come out with a Discussion Paper[3] on Climate Risk and Sustainable Finance earlier this year. Besides, RBI had also undertaken a Survey on Climate Risk and Sustainable Finance among leading scheduled commercial banks. There is a general consensus that banks and financial institutions will play a key role in financing the transition to a low-carbon economy and supporting the national climate commitments.

While no entity is immune from climate risks, we in India are particularly vulnerable to the climate change related physical risks[4] and hence there is a need to be more alive to the urgency of action[5] given our long coastline, high share of fossil fuels in energy systems, and relatively high dependence of rural livelihoods on agriculture. Climate trends and events have a direct bearing on the economy and resultantly have an impact on the financial institutions and the financial system. According to a report[6], the transformation of the global economy needed to achieve net-zero emissions by 2050 would be universal and significant, requiring $9.2 trillion in annual average spending on physical assets, which is $3.5 trillion more than what is being spent today. In the case of India, the Council on Energy, Environment and Water[7] has already estimated that a total investment of US$ 10.1 trillion would be needed to meet our net zero commitments by 2070. This underscores the urgency of efforts for transitioning to a low carbon economy. Ensuring access to adequate transtition finance and supporting technology would be critical in this process.

Going forward, there are two key aspects which banks would need to focus on - first, relying on their time-tested expertise in financial intermediation by acting as an effective conduit for channelising finance to carbon efficient sectors and industries in alignment with national policies and goals; and second, improving the management of financial risks in their books which may originate from climate change. Such risks range from the direct physical risks emanating from adverse climate-related events to loss of reputation and legal risks. Obviously, the strategies for mitigating these risks would have to be encompassed by sound public policy objectives and all stakeholders would need to play their role in helping the country traverse and transform into a climate-resilient economy.

Challenges for Financial Intermediaries and Banks

Estimating the timing, frequency and severity of climate-related events is a challenging proposition given the uncertainties involved in the process. While significant progress has been achieved globally on developing scenarios and forward-looking approaches for modelling climate risks, the requirement of past data and the unpredictable nature of climate change makes estimation of climate events and their financial impact a challenging endeavour. Nonetheless, there is no alternative but to continue working on this path of self-discovery and slowly gaining momentum as we cannot afford to be inactive anymore.

The work at a global level which is being co-ordinated by the Financial Stability Board (FSB) and endorsed by the G-20, rests on four building blocks needed for addressing Climate-Related Financial Risks. These four building blocks, *viz.*, Disclosures,

[3] Reserve Bank of India - Press Releases (rbi.org.in)

[4] Physical Risks are economic costs and financial losses resulting from the increasing severity and frequency of: extreme climate change-related weather events (or extreme weather events) such as heatwaves, landslides, floods, wildfires and storms (*i.e.* acute physical risks); longer-term gradual shifts of the climate such as changes in precipitation, extreme weather variability, ocean acidification, and rising sea levels and average temperatures (*i.e.* chronic physical risks or chronic risks); and indirect effects of climate change such as loss of ecosystem services (*e.g.* desertification, water shortage, degradation of soil quality or marine ecology). (https://www.bis.org/bcbs/publ/d517.pdf)

[5] The Global Climate Risk Index 2021 Report can be accessed at https://www.germanwatch.org/en/19777

[6] https://www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-transition-what-it-would-cost-what-it-could-bring

[7] https://www.ceew.in/cef/solutions-factory/publications/investment-sizing-india-s-2070-net-zero-target

Data, Vulnerabilities Analysis and Regulatory and Supervisory Practices and Tools which to my mind are pre-requisites for a resilient financial system when augmented by informed decision making. Let me discuss a bit further on these aspects.

An appropriate and adequate disclosure framework must have three key attributes - first, it should have inter-temporal consistency, second, it should be comparable and the third and most important is that it should be useful for decision making. Climate-related disclosures by firms, that largely contain these attributes, would help policymakers in understanding the enormity of the task ahead in terms of the transition funding requirements. Further, this would help banks understand the level of carbon intensity in the business ventures in case they are to fund them so that they are able to differentiate and appropriately price in such risks.

Internationally, a significant body of work has been done on disclosures. The FSB's Task Force on Climate-related Financial Disclosures (TCFD) and the International Sustainability Standards Board (ISSB) under the IFRS Foundation have been leading this work along with other standard setting bodies. In March 2022, the ISSB published Exposure Drafts on its first two proposed standards. The first sets out general sustainability-related disclosure requirements while the other specifies climate-related disclosure requirements. Given the global nature of funding markets and cross-border flows of capital, the idea is to agree upon a common global baseline disclosure requirement which is interoperable among jurisdictions for comparability and consistency. The Reserve Bank, as a part of standard setting bodies has also been contributing and learning from global discussions and experiences. In our recently published Discussion Paper on Climate Risk and Sustainable Finance we have elaborated on how climate-related disclosure is an important source of information for different stakeholders (*e.g.*, customers, depositors, investors, and regulators) of REs to understand relevant risks faced by them and their approach to addressing such issues.

For the corporates, beginning from the current financial year FY 2022-23, SEBI has mandated Business Responsibility and Sustainability Reporting (BRSR) for the top 1000 listed companies (by market capitalisation) in India. The disclosures under the BRSR framework would incentivise green financing and help banks and financial institutions in estimating their climate-related exposure to these listed companies.

While consistent and comparable disclosures, the **first building block,** would enable financial institutions make firm level risk assessments, the **second building block**, data, is required for making macro level assessment of risks. Like any financial risk, reliable and comprehensive data on climate risk related exposures would aid in making sound policy interventions and undertaking climate scenario analysis and stress testing for the assessment of risks from climate events. This however is, easier said than done. While global efforts are underway to create data repositories and provide guidance on collection of data for better comparability; availability of high quality, granular and sufficient data remains a challenge as of now. Availability of granular data also remains crucial for modelling the forward-looking nature of climate events and developing metrics for monitoring climate-related financial risks.

The third building block, vulnerabilities analysis, is again a macro level exercise to understand the financial stability risks arising out of climate events and their impact on financial systems. It is focused on analysis and stress testing using various scenarios to help in better assessment of potential pressure points in the financial system and in understanding interlinkages between financial sector and real sector. While the development of climate scenario analysis, stress testing scenarios and analytical tools are still

in their infancy, the need for integrating them with regular monitoring exercises and overall financial risk assessment has been well recognised. One particular challenge in modelling climate-related risks is the long time horizon which has to be considered. The climate events may often span across decades, if not centuries, and this may make the data collection exercise quite difficult and the outcomes more uncertain.

The fourth and final building block consists of initiatives which are being undertaken or planned by the regulators and supervisors to facilitate transition. In a way, this is a culmination of the work taken up under the three building blocks discussed above. The regulators may need to fine tune the existing prudential policies to integrate the climate risks into the regulatory frameworks. At the same time, from a supervisory perspective, the expectations may have to be set and communicated to all regulated entities regarding climate-related risks, encompassing organisational strategy, governance, risk management and assurance functions. The global efforts undertaken so far seem to suggest that integrating climate-related risks and capturing them by fine tuning existing prudential frameworks may be possible.

The Basel Committee on Banking Supervision (BCBS) has published Principles for the Effective Management and Supervision of Climate-related Financial Risks in June 2022. In October 2022, the Financial Stability Board (FSB) published its Final Report on Supervisory and Regulatory Approaches to Climate-related Risks. Earlier in March 2022, the NGFS published a 'Statement on Nature-related Financial Risks', which acknowledges that failure to account for, mitigate, and adapt to nature-related risks could have significant macroeconomic implications and become a source of financial stability risk. While guidance has been made available, regulated entities may need time, resources, and capacity to integrate climate-related considerations into their decision-making frameworks and customer facing business lines.

Private Sector Initiatives

In the private sector, decarbonisation and digitalisation are emerging as megatrends that could compel sectors and corporates to undertake structural changes and fundamentally alter their traditional business models. It is heartening to note that some of the leading Indian companies in the hard to abate sectors like steel and cement[8], for example, are working on an ambitious decarbonisation agenda aimed at reducing the carbon footprint in their production process.

Banks and financial institutions may have to to step up their engagement with their corporate customers on ensuring sustainability-focused financing and other support services to help them transition towards a low-carbon economy while reducing their own carbon footprint. The financial sector can channel resources towards green projects / businesses by offering suitable and customised products to businesses.

Over the past three years, the Sustainability-Linked Bonds and Sustainability Linked Loans (SLBs and SLLs) market has been a fast-growing segment globally in the sustainable finance market[9]. India too, has seen the introduction of sustainable finance instruments such as sustainability-linked loans. Liberalised External Commercial Borrowings (ECB) norms have also enabled Indian companies to raise offshore finance through green bonds, social bonds, sustainable bonds, and sustainability-linked bonds. In line with global trends, the issuance of sustainable debt has risen sharply in India during Calendar Year 2021 taking it to the 2nd place among emerging economies in cumulative Green Bond

[8] The steel and cement sectors are energy and emission intensive. They are also hard-to-abate, meaning that decarbonisation of these sectors requires deep systemic changes in the way these materials are produced, used, and recycled.

[9] https://www.linklaters.com/en/about-us/news-and-deals/news/2022/july/global-sustainable-bond-market-raises-442-billion

Issuances[10]. Mechanisms such as blended finance[11] and risk-sharing facilities are also being utilised to finance climate and sustainability-related projects.

The above initiatives from the financial sector in India and across the globe make one believe that the private sector is very much alive to the challenges ahead of us.

Public Sector Initiatives in India

To move the needle towards net zero, we must progressively decarbonise all sectors of the economy, including the hard-to-abate ones. This means that we would need to incentivise banks to provide support in terms of transition finance for businesses and sectors that are not so green, to adopt cleaner technologies, increase energy efficiency and become greener over time. Green finance can play a crucial role in making India's economy resilient to climate change impacts. During the COP26 Summit in November 2021, the Hon'ble Prime Minister had announced that by the year 2070, India will achieve the target of net-zero. This would necessitate creating an enabling ecosystem for financing India's transition to a green economy.

In India, both the Government and Reserve Bank of India have been participating in the global discussions on climate risks and have already taken quite a few initiatives in this regard. The Government, in the Union Budget for 2022-23 announced that climate action would be a key priority and proposed that as a part of its overall market borrowings in 2022-23, Sovereign Green Bonds (SGBs) will be issued for mobilising resources for green infrastructure. The proceeds will be deployed in public sector projects which will help in reducing the carbon intensity of the economy. This is by no means a small step. Over time, the SGBs would provide a pricing reference for the private sector entities in India for their INR denominated borrowing for ESG linked debt. Thus, the issuance of SGBs would help in creating an ecosystem which fosters a greater flow of capital into green projects and entities undertaking such projects.

Recognising the need for concerted efforts in the area, the Reserve Bank has concomitantly set up a Sustainable Finance Group (SFG) within its Department of Regulation in May 2021 to lead the regulatory initiatives in area of climate risk and sustainable finance in the Indian context. As I mentioned previously, RBI had already released a Discussion Paper on Climate Risk and Sustainable Finance in July 2022 covering a gamut of issues on the RBI's website for comments of stakeholders. It is heartening to mention that we have received comments from a large number of regulated entities and other stakeholders. These are being carefully examined before we frame any regulatory guidance on climate risk and sustainable finance.

Along with the Discussion Paper, we had also released the results of a survey undertaken to assess the approach, level of preparedness and progress made by leading scheduled commercial banks in India for managing climate-related financial risk. The survey, which covered 12 public sector banks, 16 private sector banks and 6 foreign banks, provided useful insights and the feedback from this exercise will help in shaping our regulatory and supervisory approach.

Another notable feature for our financial ecosystem is that while rest of the world is still grappling in developing new instruments to funnel funding to green and sustainable companies and projects, we already have a well-accepted incentive-based instrument in the form of Priority Sector

[10] Source: Emerging Markets Green Bonds Report 2021, June 2022 published by the IFC. The report can be accessed at https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/resources/emerging+market+green+bonds+report+2021

[11] Blended finance involves the use of concessional and catalytic capital to draw in private capital for financing projects with sustainable outcomes as also assist with technology transfer and institutional support, to reduce risk and enhance bankability.

Lending (PSL) norms to encourage lending to such projects. Over the years, we have been taking various policy measures to promote and support green finance initiatives through this route. For example, renewable energy projects have been included as a part of Priority Sector Lending (PSL). In 2012, Reserve Bank included loans sanctioned by banks directly to individuals for setting up off-grid solar and other off-grid renewable energy solutions for households and in 2015, the PSL criteria was expanded to bank loans up to a limit of ₹15 crore to borrowers for purposes like solar / bio-mass based power generators, windmills, micro-hydel plants and for non-conventional energy based public utilities, *viz.*, street lighting systems, and remote village electrification. In 2020, this limit for bank loans was doubled to ₹30 crore. It is heartening to note that in recent years, leading banks in India have also begun stepping up their exposure to the renewable energy sector.

Enablers for Scaling up Green Finance in India

Banks and financial institutions have always been the backbone of India's economic growth and as the country pivots to sustainable growth, they will have to take a lead and accelerate green lending. To support this acceleration, a number of structural changes may be needed in the traditional lending approach, including evaluation and certification of the green credentials of projects. In order to give focused attention to scaling up green finance, banks and financial institutions would have to invest in human resources and capacity building efforts as well as integrate environmental and social risk considerations into their corporate credit appraisal mechanisms.

A formal definition of green finance along with a taxonomy[12] is the need of hour as it would enable more precise tracking of finance flows to green sectors in India, which in turn, would help design effective policy, regulations and institutional mechanisms directed towards increasing both public and private investments. A taxonomy would also help banks and financial institutions in better assessing the climate risk in their loan portfolio, scaling up green and sustainable finance and mitigating the risk of greenwashing.

Another key challenge in scaling up green finance is the availability of a robust ecosystem for third party verification / assurance and impact assessment and the green credentials of businesses and projects. This would also address potential greenwashing concerns and ensure unhindered flow of capital and funding to the entities.

The challenge regarding the availability of data and disclosures would also need to be addressed quickly. In this context, the disclosure standards prescribed by SEBI for top 1000 listed entities by market capitalisation is a welcome step. I am confident that the listed entities would not only adhere to the mandatory disclosures but would also not hesitate to follow those which are additional and voluntary in nature.

Green finance must be scaled up rapidly to meet India's climate targets under the updated Nationally Determined Contribution communicated to the United Nations Framework Convention on Climate Change (UNFCCC) in August 2022. The enhanced ambition requires mobilisation of green finance at a much faster pace. For example, green infrastructure investment trusts could help scale up green finance as also deepen the local bond market. But in the end, all these ideas need a clear intent from all stakeholders in order for it to be implemented and sustained.

Concluding Remarks

To sum up, climate change may result in physical and transition risks that could have implications

[12] A taxonomy is a classification system, establishing a list of environmentally sustainable economic activities. It plays an important role in helping an economy scale up sustainable investment and provides all stakeholders with appropriate definitions for the economic activities which can be considered environmentally sustainable.

for the physical safety and financial soundness of individual regulated entities as well as for the stability of financial system. Thus, there is a need for regulated entities to develop and implement comprehensive frameworks for understanding and assessing the potential impact of climate-related financial risks in their business strategy and operations.

We need to be conscious that climate risk is the biggest challenge confronting us and addressing it decisively is our joint responsibility. Financial sector has a key role to play as it is the sector which finances businesses and can influence their activities. Banks would have their role cut out in handholding the businesses and arranging for the transition finance required by the firms as they try to shift their strategies to make them more sustainable and planet friendly. The central banks can play a significant role in shaping the response of financial sector to the challenges posed by risks emerging from the climate change through appropriate guidance and regulations.

The Indian economy is at a stage where we need to grow rapidly but the challenge before us is to think of ways to incorporate climate risk and ESG-related considerations into commercial lending and investment decisions while simultaneously balancing the needs of credit expansion, economic growth, and social development. Collective engagement would help build on our early progress and go a long way in addressing the challenges of climate change.

Let me conclude now and leave you with these points to ponder as you continue with your deliberations during the course of the ensuing discussions at this event.

Thank you for inviting me to share my thoughts at this summit and thanks for a patient hearing.