bharat CLIMATE FORUM

Council for International Economic Understanding | Dalberg

The Credit Summit

Spring, 2025

Green Financing: Risks, Challenges & Opportunities

Summit Report | May 2025

Foreword

It is a privilege to contribute to the Credit Summit 2025, convened at a time when India is deepening its commitment to sustainable growth. As we move towards our ambitious goal of achieving net-zero emissions by 2070 and aspire to become a $30 trillion economy by 2047, green finance must play a central role in shaping our development journey.

India's path to sustainability must reflect its own context, shaped by our demographic scale, economic priorities, and environmental vulnerabilities. We cannot simply replicate solutions designed for other economies. Instead, we must define a model that advances our national goals while addressing the realities on the ground.

Our commitments under the Nationally Determined Contributions reflect a bold but achievable ambition. The target of 50 % cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030, is now within reach, thanks to the remarkable progress made over the past decade. However, to meet this target and secure our energy future, we must take a broader view of green finance. Alongside energy transition, we must prioritise energy efficiency across sectors and invest meaningfully in climate adaptation. Each of these areas requires tailored financial solutions that go beyond conventional models.

Energy efficiency, especially among small enterprises, presents a significant opportunity. Whether through rooftop solar or the adoption of cleaner, more efficient production processes, such investments can be made commercially viable with the right financial instruments, including smart guarantee products. Adaptation financing, meanwhile, will require a greater share of concessional and blended capital, given the limited commercial returns in this area.

In this context, the role of Non-Banking Financial Companies (NBFCs) becomes particularly important. Their deep regional presence, operational flexibility, and proximity to underserved segments allow them to bridge financing gaps in areas where traditional banking may fall short. From financing green MSMEs to supporting distributed renewable energy and sustainable agriculture, NBFCs are well positioned to lead India's green credit revolution. However, they need access to more affordable capital, better risk-sharing mechanisms, and an enabling regulatory environment to scale their impact.

As we pursue this transition, we must also safeguard our energy security. No country has developed without expanding energy access. Our challenge lies in doing so responsibly—by increasing access to affordable, clean, and reliable energy for all citizens and industries. This includes addressing the affordability of energy delivered to households and businesses, ensuring that sustainability does not come at the cost of competitiveness.

A coordinated, whole-of-nation approach is essential to ensure that our green finance strategy remains focused, inclusive, and future-ready. Our regulatory frameworks, financial products, and institutional capabilities must evolve in step with this vision.

I commend the organisers and participants of the Credit Summit for facilitating this vital dialogue. Together, we can shape India's green finance ecosystem in a way that is practical, forward-looking, and uniquely suited to our national priorities. By staying committed to Indian approaches and solutions, we can chart a course that strengthens our economy while preserving our environment for generations to come.

Ajay Seth,
Finance Secretary, Government of India

Executive Summary

India's ambition to achieve net-zero emissions by 2070 and to become a $30 trillion economy by 2047 will require significant transformation of its financial system. As the country seeks to align growth with sustainability, green finance is gaining prominence as a key enabler of resilient and inclusive development. Against this backdrop, the Credit Summit 2025, held on 17 April 2025 at the ITC Maurya in New Delhi, served as a platform for dialogue among policymakers, regulators, NBFCs, investors, and climate finance experts. The Summit aimed to explore practical pathways for expanding climate-aligned finance across India's credit ecosystem.

The discussions paid particular attention to the role of Non-Banking Financial Companies (NBFCs) in advancing India's green transition. With their flexible operating models, regional networks, and focus on underserved segments, NBFCs are well placed to support climate-linked investments in sectors such as decentralised energy, electric mobility, and adaptation infrastructure.

However, their growing exposure to physical and transition-related climate risks presents new challenges. Participants noted the need to equip NBFCs with tools and support to manage these risks while continuing to expand their contributions to sustainable finance.

Over the course of the day, the Summit featured an inaugural session by Shri Ajay Seth, Finance Secretary, Government of India, six panel discussions, two fireside chats, and a valedictory session by Shri M.Rajeshwar Rao, Deputy Governor, Reserve Bank of India with contributions from more than 40 speakers. These sessions reflected a diverse mix of perspectives, including those of senior public officials, financial sector leaders, and practitioners from the climate and development space. Topics included the integration of climate considerations into credit risk assessments, the role of blended finance, and the potential of capital markets to mobilise larger volumes of green capital. The event also explored the design and deployment of financial instruments such as guarantees, results-based finance, and sustainability-linked lending.

Speakers emphasised the importance of adapting green finance strategies to India's development context. Several noted that climate finance must be inclusive in design and delivery. Examples shared included NBFCs supporting smallholder farmers through solar irrigation finance, expanding access to decentralised renewable energy, and enabling electric mobility solutions for microenterprises. These illustrations highlighted the potential of NBFCs to reach parts of the economy that remain underserved by conventional banking institutions.

Another area of discussion focused on how capital markets could complement this effort. Participants noted the growing interest in green bonds and sustainability-linked instruments, while also acknowledging the challenges associated with risk perception, limited standardisation, and access to credit enhancements. Strengthening transparency, regulatory guidance, and product credibility were seen as important steps to unlock broader investor participation.

The need to better integrate climate risk into financial decision-making also featured prominently. Some NBFCs shared early experiences of repayment stress among borrowers affected by extreme weather, particularly in the agriculture and MSME sectors. There was broad recognition that advancing tools such as climate-adjusted credit models, high-resolution risk data, and stress-testing frameworks would help build institutional capacity for long-term risk management.

The Summit concluded with a shared understanding that India's green finance journey will need to be shaped by local realities and institutional strengths. While global capital and frameworks can offer lessons, there was consensus that the path forward will require domestically grounded solutions, supported by collaboration across financial institutions, regulators, and development partners. Strengthening the role of NBFCs within this broader effort may be instrumental in expanding access to climate finance in a way that is both inclusive and commercially viable.


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PANEL DISCUSSION


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April 17, 2025
Ajit Pai
Gagan Sidhu


Spring 2025
April 17, 2025


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Context and rationale

India's transition to a green and resilient economy demands a financial architecture that can steer capital toward sustainability while addressing the needs of underserved sectors. Green finance is not just an environmental necessity; it is a strategic lever to reshape India's growth model into one that is both resilient and equitable. To deliver on these ambitions, the country must enable financial institutions to direct capital toward innovative solutions in decarbonisation and climate adaptation.

Non-Banking Financial Companies (NBFCs) are uniquely positioned to support this transformation. With their ability to serve credit-constrained sectors such as MSMEs, agriculture, and decentralised clean energy, NBFCs have a critical role in bridging the financing gap for climate-aligned investments. Their operational flexibility, deep regional networks, and ability to serve New-to-Credit borrowers provide them with an edge over traditional financial institutions in driving financial inclusion and sustainable development.

At the same time, NBFCs face increasing exposure to climate risks. Many of the sectors they serve are vulnerable to physical risks such as extreme weather events, as well as transition risks arising from policy shifts and evolving investor expectations. These risks, if unaddressed, could lead to increased credit defaults and compromise the stability of their portfolios.

Despite these challenges, the climate transition presents a significant opportunity. The growing demand for solar-powered irrigation, electric mobility, climate-resilient agriculture, and decentralised energy systems is creating new markets for climate finance. NBFCs are well placed to develop innovative credit structures, support early-stage climate ventures, and partner with banks and development finance institutions to mobilise blended capital.

Realising this opportunity will require systemic reforms. These include establishing a clear green finance taxonomy, improving access to climate risk data, building institutional capacity for climate-aligned lending, and ensuring a flow of affordable, long-term capital. Policymakers and regulators must also provide targeted support through risk-sharing mechanisms and tailored regulatory frameworks that enable NBFCs to take informed climate-related risks.

The Credit Summit 2025 was convened in response to these priorities. It provided a platform for NBFCs, policymakers, regulators, investors, and innovators to come together and shape a shared agenda for scaling green and climate-resilient finance. Key discussions focused on the evolving role of NBFCs in green sectors, integrating climate considerations into credit risk frameworks, unlocking capital through blended finance and sustainability-linked instruments, and building a supportive ecosystem for innovation in climate finance.

Through collective dialogue and coordinated action, the Summit aimed to position NBFCs at the forefront of India's green transition. By enabling them to deliver tailored, climate-smart credit solutions, India can unlock new pathways to sustainable growth that are both commercially viable and socially inclusive.

Forum Agenda

0930 – 1000 hrs REGISTRATION

1000 – 1045 hrs

INAUGURAL SESSION

Opening the Summit with an overview of its goals, significance, and the role of NBFCs in advancing green finance in India.

SHRI AJAY SETH, *Secretary, Department of Economic Affairs, Ministry of Finance, Government of India (Chief Guest)*

MEENAKSHI LEKHI, *Former Union Minister of State for External Affairs & Culture (Welcome Address)*

1045 – 1115 hrs

FIRE SIDE CHAT: INDIA & CHANGING GLOBAL GREEN ORDER

Focus areas: Decoding India's evolving role in the global green finance landscape, exploring how policy shifts, international climate commitments, and financial reforms are shaping new opportunities

RAJNEESH KUMAR, *Former Chairman, State Bank of India*

JAYANT SINHA, *Former Union Minister of State, Ministry of Finance and Ministry of Civil Aviation (online)*

MODERATOR: JAGJEET SAREEN, *Partner, Global Climate Change, Dalberg Advisors*

1115 – 1200 hrs

GREEN FINANCING – NEW WORLD OF OPPORTUNITIES

An exploration of emerging financial mechanisms and investment strategies that enable NBFCs and financial institutions to unlock green finance opportunities across sectors like clean energy, Agri-tech, and sustainable infrastructure

UMESH REVANKAR, *Executive Vice Chairman, Shriram Finance Ltd*

R. BALAJI, *MD & CEO, PTC India Financial Services Ltd.*

LABANYA PRAKASH JENA, *Sustainable Finance Consultant, IEEFA*

TUSHAR THAKKAR, *Partner, The Blended Finance Company*

MODERATOR: DHRUBA PURKAYASTHA, *Director CEEW*

1200 –1245 hrs

INTEGRATING CLIMATE IN CREDIT RISK

A deep dive into how climate risks—both physical and transitional—are impacting lending portfolios, and what financial institutions can do to incorporate climate resilience into their credit risk frameworks.

ARINDAM DAS, *CEO - Consumer Credit & MSME Loans, DMI Finance*

PANKAJ MURPANI, *Chief Business Officer-SME-Cholamandam Finance Ltd*

ANKIT JAIN, *Co-Founder & CEO at StepChange*

SHINCHIRO IMAHORI, *Deputy Chief Representative, JBIC New Delhi*

MODERATOR: VIVEK SEN, *India Director, Climate Policy Initiative (CPI)*

1245 – 1315 hrs

FIRESIDE CHAT: THE 21ST CENTURY GREEN REVOLUTION-OPPORTUNITIES AND CHALLENGES IN FINANCING

Discussion on the government's medium and long-term approach to green energy, the broader policy perspective beyond EVs, the potential for green energy financing to receive priority sectors status, and the role of fiscal incentives in accelerating adoption and investment.

SHAMIKA RAVI, *Member, PM-Economic Advisory Council*

RAMAN AGGARWAL, *Area Chair NBFCs & Banks, CIEU*

MODERATOR: JAGJEET SAREEN, *Partner, Global Climate Change, Dalberg Advisors*

1315 – 1400 hrs

LUNCH BREAK

1400 – 1440 hrs

GREEN SPACES: ALIGNING THE REGULATORY & POLICY WORLDS

A discussion on the intersection of policy and finance, exploring how regulatory frameworks and government initiatives can create an enabling environment for scaling green finance in India.

NEHA KHANNA, *Associate Director, Climate Policy Initiative*

PROF. CHARAN SINGH, *Former Chairman, Punjab & Sind Bank and CEO, EGROW Foundation*

S. RAMANN, *Deputy CAG & Former CMD, SIDBI*

RAJASREE RAY, *AS & Economic Advisor, MOEF&CC (UNFCCC and GCF focal point of GoI)*

MODERATOR: NEHA KUMAR, *South Asia Head, Climate Bonds Initiative*

1440 – 1520 hrs

UNLOCKING CAPITAL MARKETS TO POWER GREEN FINANCING

A session examining how capital markets can drive green finance, with a focus on sustainable bonds, ESG funds, and institutional investment in climate-aligned projects.

NILESH SHAH, *MD, Kotak Mutual Fund (online)*

AJIT PAI, *Strategy Lead Partner, EY*

NITIN GUPTA, *Co-founder, Attero*

MODERATOR: GAGAN SIDHU, *Director, CEEW – Centre for Energy Finance*

1530 – 1600 hrs

BUILDING THE APPETITE

A session focused on de-risking green finance investments, discussing innovative models like blended finance, credit guarantees, and concessional capital to scale up climate finance.

SANJEEV KAUSHIK, *Principal Financial Sector Specialist, ADB (online)*

LAURENT GONNET, *Lead Financial Sector Specialist, World Bank*

R.K. SINGH, *CGM & Head of Green Financing, SIDBI*

MODERATOR: KULJIT SINGH POPLI, *Former Chairman, IREDA*

1600 – 1615 hrs	TEA BREAK

1615 –1650 hrs

GREEN FINANCING - THE ROLE OF A NEW GREEN FINANCIAL INSTITUTION

A discussion that explores how a new green financial Institution can help unlock large scale funding for the climate transition

LABANYA PRAKASH JENA, *Sustainable Finance Consultant, IEEFA*

LAURENT GONNET, *Lead Financial Sector Specialist, World Bank*

VENU MOTHKOOR, *Senior Specialist, Development Economics, NITI Aayog*

HARSH SINGHAL, *Partner & Co-founder, ProsperETE*

JAGJEET SAREEN, *Partner, Global Climate Change, Dalberg Advisors*

MODERATOR: DHRUBA PURKAYASTHA, *Director CEEW*

1650 – 1720 hrs

VALEDICTORY SESSION

A closing session summarising key takeaways, reaffirming commitments from industry leaders and policymakers, and outlining the way forward for green finance in India.

M. RAJESHWAR RAO, *Deputy Governor, RBI*

1720-1730 hrs

VOTE OF THANKS

RAMAN AGGARWAL, *Area Chair, NBFCs & Banks, CIEU*

JAGJEET SAREEN, *Partner, Global Climate Change, Dalberg Advisors*

DR ASHWANI MAHAJAN, *Board member, CIEU & National Co-Convenor of Swadeshi Jagran Manch*

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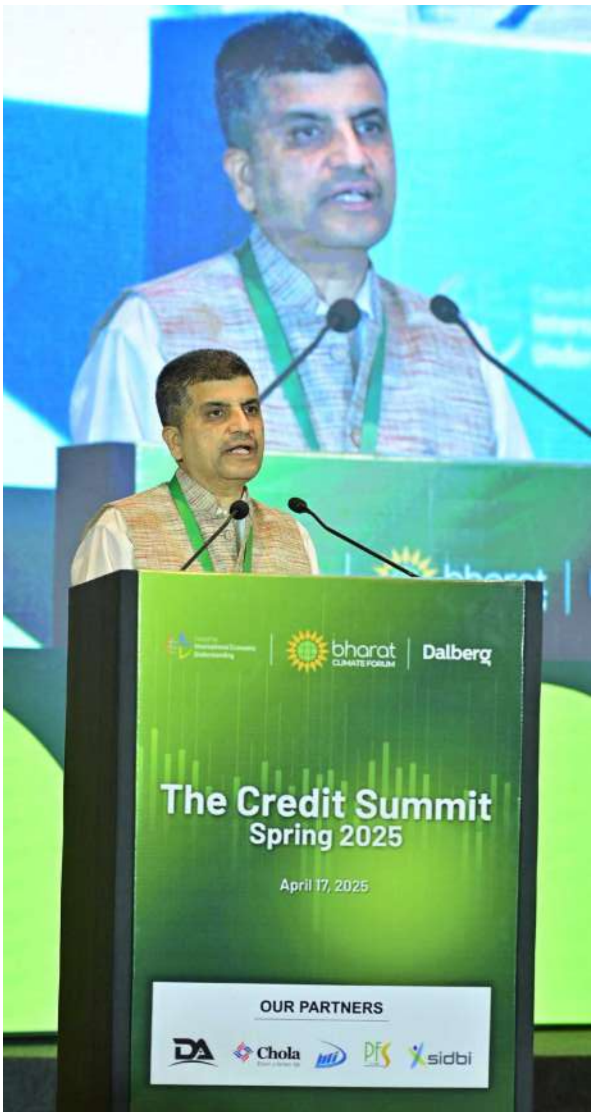
Area chair, Banks
and NBFC at CIEU

Inauguration and Welcome Address

The Credit Summit began with a powerful inaugural address by Shri Ajay Seth, Finance Secretary of India and a welcome address by Mrs. Meenakshi Lekhi, Minister of State for External Affairs and Culture. Their visionary remarks set the tone for the Summit's focus on advancing innovation, expanding access to credit, and promoting sustainable finance and green investment opportunities.



Inaugural Address by Shri Ajay Seth

Shri Ajay Seth, Finance Secretary of India, began his remarks by expressing gratitude for the opportunity to address the gathering on the critical topic of green financing, emphasising the importance of finding an "Indian way" forward amid global uncertainties and varying international commitments to the green cause.

He stressed that India's approach to green development must be based on its own goals, responsibilities, and circumstances, rather than simply adopting solutions proposed or practiced elsewhere. Referring to India's Nationally Determined Contributions (NDCs), he highlighted the country's ambitious commitment to achieving 500 gigawatts of non-fossil fuel electricity generation within the next few years. This goal has become increasingly attainable, given the remarkable progress from 220 gigawatts today, a figure that seemed almost unreachable five to seven years ago.

Mr. Seth emphasised that India's developmental model must differ from the path taken by advanced economies, which contributed significantly to climate change while growing their economies. Despite being the second-largest country by population, India's per capita emissions are less than half the global average and far lower than those of developed countries. Nevertheless, climate change impacts India significantly, making it essential for the country to pursue development that is sustainable and energy efficient.

He underscored the dual focus of India's green journey: energy transition through greener energy generation and improvements in energy efficiency. Particularly, Seth pointed out that energy efficiency investments, especially for small industries and MSMEs, such as rooftop solar installations or adopting efficient production processes, will play a crucial role in India's future.

Recognising the inevitability of some degree of global warming, he stressed the urgent need for adaptation investments alongside mitigation efforts. Adaptation projects, he noted, will largely require concessional and blended finance models since commercial capital alone may not sufficiently flow into such areas.

In discussing green financing needs, Mr. Seth clarified that energy transition alone is not enough; a comprehensive approach covering energy generation, energy efficiency, and adaptation is required. Each of these areas has its own financial dynamics, and mechanisms must be developed accordingly. For instance, smart guarantee products can make energy efficiency projects commercially viable.

He highlighted the critical importance of ensuring energy security, noting that no country has become developed without increasing its energy consumption. India's task is to consume more responsibly and efficiently, ensuring that clean energy becomes a greater share of the energy mix. He described the three core aspects of energy security:

- **Availability:** India has achieved remarkable improvements over the past decade, with power shortages largely becoming a thing of the past.
- **Access:** Efforts have ensured electrification of villages and households.
- **Affordability:** A major challenge remains, as delivered electricity costs, factoring transmission and distribution, are often high for consumers and industries, impacting competitiveness.

Regarding the financing landscape, Mr. Seth pointed out that credit growth in India typically aligns with nominal GDP growth, but specific sectors like green finance and MSMEs require higher credit growth rates. He explained that, rather than focusing solely on carbon emissions, regulations must encourage energy efficiency to drive sustainable industrial practices. Highlighting the realities of India's power generation, he observed that although almost 50% of installed capacity is green, the contribution of green electricity is just about 11%, demonstrating the challenge of scaling renewable use.

Mr. Seth concluding remarks reaffirmed the need for coherence in India's green finance strategy through a whole-of-nation approach. He urged collective clarity on national goals, responsibilities, and policy direction, emphasising that India's climate transition must be anchored in domestic realities. The path forward, he stated, lies in developing and deploying Indian approaches and Indian solutions.

Welcome address by Mrs. Meenakshi Lekhi

Mrs. Meenakshi Lekhi, Convenor for the Bharat Climate Forum Governing cum organising team, opened her address by acknowledging the importance of transitioning to green energy, emphasising that it aligns with India's interests given the environmental impact of fossil fuels and their limited availability. However, she pointed out that the world faces two key challenges: the difficulty in mobilising sufficient financing from the countries historically responsible for climate change, and the divergent approaches to green financing within India.

She highlighted two perspectives on financing. One perspective sees international green funds seeking higher returns being directed into the Indian market. The other concerns India's own financial ecosystem, where banks and Non-Banking Financial Companies (NBFCs) must bridge the last-mile credit gap for consumers and small producers. She emphasised the crucial role of NBFCs in reaching smaller borrowers who often lack formal access to capital, particularly for projects like solar pumps under PM Kusum Yojana and rooftop solar initiatives in remote areas.

Mrs. Lekhi presented the stark contrast in lending volumes, noting that while NBFCs collectively fund around ₹40 lakh crore compared to banks' ₹170 lakh crore, NBFCs provide three times more financing to MSMEs than banks do. This, she stated, makes strengthening NBFCs essential for advancing financial inclusion and fulfilling the Prime Minister's vision of "Shrestha Bharat" focused on Antyodaya — reaching the last person in the queue.

She flagged two major challenges NBFCs face: securing sufficient financing themselves, and managing credit risks when lending to vulnerable communities exposed to climate risks like floods, droughts, and cyclones. Such events jeopardise the viability of green investments at the last mile, raising concerns about the security of capital deployed for solar pumps, off-grid solutions, and windmills.

Further, she questioned the effectiveness of simply channelling foreign funds into India. Mrs. Lekhi urged that India must ensure external capital benefits the country's growth rather than just serving investors' returns. She cautioned against inadvertently supporting foreign economies, particularly noting that 90% of solar panels are

imported from China, and stressed the importance of building domestic manufacturing capacity in solar technology and alternative battery technologies.

She stressed the need to fund projects that promote indigenous production, innovation, and capacity building, including alternatives in battery storage beyond lithium, acknowledging India's current limited refining capabilities. She discussed the significance of developing Indian solutions and prioritising investments in technologies that reduce dependence on external supply chains.

Mrs. Lekhi also reflected on India's past infrastructure challenges, particularly recalling the electricity shortages Delhi experienced in 2015 due to outdated transformer and grid infrastructure. She highlighted the importance of continuous investment in transmission capacity to support a green energy transition.

Additionally, she raised a technical question about the energy grid system, asking if India should reconsider aspects of DC (Direct Current) versus AC (Alternating Current) systems, given global trends and potential energy savings during transmission. She also suggested that studies be conducted to assess the economic and technical viability of transitions in this space.

Turning back to the role of NBFCs, she emphasised their potential to fund MSMEs and SMEs involved in original equipment manufacturing, biofuels, waste-to-energy initiatives, and broader green technologies. She called for investments in waste management to generate clean energy, produce organic fertilizers, and reduce healthcare and urban sanitation costs.

Mrs. Lekhi concluded by underlining that while India is making serious progress on green transitions, the work remains incomplete. She stressed the need for collective action, expert guidance, and innovative financial models to fund India's green initiatives sustainably. Citing a recent project in Assam where cooperative banks funded solar transitions for self-help groups, she demonstrated how such localised solutions could serve as models for broader implementation.

She ended by encouraging collaboration, innovation, and a strong focus on Indian-origin solutions to ensure that India's green transition benefits its people and builds a resilient, sustainable economy.

FIRESIDE CHAT

India and the Changing Global Green Order

The fireside chat on '**India & the Changing Global Green Order'** brought together two leading voices in finance and policy: **Rajneesh Kumar**, former Chairman of State Bank of India, and **Jayant Sinha**, former Union Minister of State for Finance and Civil Aviation and former Chairperson of the Parliamentary Standing Committee on Finance. The discussion was moderated by **Jagjeet Sareen**, Partner – Global Climate Change at Dalberg Advisors, and Area Chair at the CIEU Climate Initiative.

The dialogue delved into India's evolving position in the global green finance ecosystem, examining how international commitments, policy reforms, and financial innovations are shaping new opportunities for the country. From the need for large-scale private capital to the challenges of risk pricing and institutional innovation, the conversation underscored the urgency of aligning policy, capital, and institutional capabilities to mobilise green investments at scale.

Context for fireside chat

India's net-zero ambitions and $30 trillion economic vision require unprecedented investment in green infrastructure, much of which must come from private and foreign capital. Although national policies like GST reforms, production-linked incentives, and voluntary carbon markets have laid a strong foundation, serious bottlenecks remain at the state level. Challenges around land access, labor regulations, and complex approval processes continue to hinder investor confidence and delay capital deployment. With advanced technologies like energy storage, industrial decarbonization, and next-gen nuclear energy already commercially viable, India now faces a window of opportunity to lead the global clean energy transition. At the same time, increasing climate risks such as heatwaves and floods demand stronger adaptation finance, which currently lacks adequate returns to attract private investment. This makes it imperative for the public sector to deploy concessional finance, insurance mechanisms, and resilience funding to safeguard infrastructure and vulnerable populations.

Insights from the fireside chat

India's green transition must align with its broader economic aspirations, including the goal of becoming a $30 trillion economy. Achieving this will require trillions of dollars in investment across energy, transport, and industrial systems; not only to meet climate goals but also to remain globally competitive. India must match or exceed technological capabilities seen in China and the U.S., where green technologies are advancing rapidly. The focus must shift beyond resilience to cost-effective, scalable innovation that enhances India's positioning in global markets.

The private sector will drive the bulk of these investments, as the public sector has already laid a supportive policy foundation through instruments like GST, production-linked incentives, and carbon markets. Foreign capital will be essential to close the financing gap, but for it to flow, India must address procedural frictions at the state level, including land, labor, and regulatory constraints. This decentralised deregulation is key to unlocking FDI and enabling smoother private sector execution. Technologically, India is well-positioned with a suite of ready-to-deploy innovations—from iron-air batteries and industrial decarbonization to advanced nuclear energy—making the country ripe for large-scale green industrial transformation.

To mobilise capital at the scale required, India must create a dedicated green financial institution. Such an entity would blend concessional and commercial capital and act as a hub for innovative instruments, including currency hedging mechanisms (described as the "Brahmastra"), credit guarantees, climate insurance, and structured equity solutions. India cannot mobilise the estimated $1.5 trillion in annual climate investments without financial institutions that are specifically designed to support the unique needs of the green finance ecosystem. Both domestic and multilateral institutions have a central role in building this blended finance architecture.

Equally urgent is the need for adaptation and resilience finance. International institutions like the World Bank and British International Investment are beginning to prioritise adaptation, recognising the inevitability of rising temperatures and climate extremes. However, viable private-sector returns in this space remain limited, requiring concessional capital to support areas like high-efficiency cooling, resilient infrastructure, and green buildings. India also faces acute risks to its physical infrastructure, as seen in the Teesta-II hydro project's collapse due to glacial melt. India needs a robust, multi-layered insurance system that brings together insurers, reinsurers, and government support as a backstop to effectively manage climate risks and build resilience across sectors.

At the institutional level, India must also reimagine how its banking ecosystem delivers green capital. Co-lending between banks and NBFCs offers a powerful model that combines banks' access to low-cost deposits with NBFCs' operational efficiency and last-mile reach. For this to work, standardised processes and seamless digital systems are essential. Moreover, banks cannot bear the responsibility of pushing green finance alone; government-led incentivization—via subsidies, differential lending norms, or priority sector frameworks is crucial. Lastly, foreign capital must remain a welcome and well-regulated part of India's financing landscape, particularly given the country's lower household savings rate relative to peers like China. India has already demonstrated strong oversight through the RBI and ECB guidelines, laying a sound foundation for deeper financial globalization in the green space.

The speakers also debated the feasibility of differential lending rates for green versus fossil fuel projects. The former Chairman of SBI noted that while the idea is conceptually appealing, implementing such a model would require strong policy support, as banks cannot absorb the associated costs without government-backed incentives.

PANEL DISCUSSION

Green Financing – New World of Opportunities

Moderator & Panellists

The panel discussion on '**Green Financing – New World of Opportunities**' brought together four leading voices in sustainable finance: **Umesh Revankar**, Executive Vice Chairman, Shriram Finance Ltd.; **R. Balaji**, MD & CEO, PTC India Financial Services Ltd.; **Labanya Prakash Jena**, Sustainable Finance Consultant, IEEFA; and **Tushar Thakkar**, Partner, The Blended Finance Company. The session was moderated by **Dhruba Purkayastha,** Director, CEEW. It explored emerging financial mechanisms and investment strategies that can enable NBFCs and financial institutions to unlock green finance opportunities across sectors such as clean energy, agritech, and sustainable infrastructure.

Context and rationale

India's pursuit of net-zero emissions by 2070 calls for a major financial transformation to enable sustainable infrastructure, clean technology, and climate-resilient sectors. Financing needs across these areas are capital-intensive and heavily debt-reliant, with NBFCs expected to play a central role given their agility, regional penetration, and proximity to underserved markets. However, the current ecosystem faces significant limitations in mobilising adequate green capital. Many financial institutions struggle with high costs, inadequate flow of funds, and unclear frameworks to identify viable green opportunities. The lack of a robust taxonomy, limited investor confidence, and weak intermediation mechanisms further restrict financing capacity. With institutional capital underutilised and risks of greenwashing increasing, there is a pressing need to establish clearer classifications, strengthen risk-sharing instruments, and design credible green financial products that can accelerate domestic capital deployment.

Potential opportunities and challenges

NBFCs stand at the forefront of India's green financing journey, with growing demand across clean mobility, renewable energy, agritech, and industrial transition. The panel highlighted multiple opportunities:

- Mandated public transport electrification creates clear lending opportunities for EV fleets and charging infrastructure.
- Blended finance and guarantees can reduce risk perception for new technologies and attract commercial lenders.
- Capital markets can be tapped through structured green products using domestic taxonomy to attract institutional investors.
- Access to concessional capital from DFIs is available but often comes with stringent compliance without delivering cost benefits.

Despite the promise, several challenges persist:

- High cost of green loans compared to conventional credit continues to limit consumer uptake and adoption.
- First-of-a-kind projects remain underfinanced due to limited precedent and lack of lender familiarity.
- Commercial mandates of NBFCs are often misaligned with the broader societal returns expected from green investments.
- Weak direct consumer incentives such as tax breaks or subsidies reduce the attractiveness of green products.

Key insights from panel discussion

The panel emphasised that achieving a green transition requires a fundamental rethinking of how financial institutions perceive and price opportunity and risk. As sectors like clean energy, transportation, and industry begin to decarbonise, capital requirements will increase, and financial strategies must evolve to meet those demands. The conversation underscored that success depends not only on more capital but also on the ability to structure and deploy it effectively through fit-for-purpose instruments and frameworks.

Participants acknowledged that the green premium remains a real issue, with many green financial products priced higher than conventional alternatives. Even with ESG-focused funds and green-labelled capital available globally, lenders noted that tangible benefits in terms of pricing are often absent unless backed by strong policy incentives or risk-sharing structures. This creates a tension between commercial expectations and the broader sustainability outcomes that green finance aims to support.

One of the key concerns raised was the lack of data and experience in financing early-stage or first-of-a-kind projects. This absence of precedent results in hesitation among lenders and investors, who require more assurance and clarity before participating. The panel called for concessional capital, guarantee mechanisms, and dedicated de-risking platforms to help bridge this early gap, enabling promising technologies and business models to mature and demonstrate viability.

The discussion concluded with a shared call for a more enabling environment that supports financial innovation and institutional confidence. Panelists agreed that NBFCs alone cannot carry the burden of green transition. A coordinated approach involving policy stability, regulatory clarity, and stronger public-private partnerships is essential to reduce risk, improve capital efficiency, and ultimately accelerate India's path toward a low-carbon economy.

PANEL DISCUSSION

Integrating Climate in Credit Risk

Moderator & Panellists

The panel discussion on "**Integrating Climate in Credit Risk**" featured **Arindam Das**, CEO - Consumer Credit & MSME Loans at DMI Finance; **Pankaj Murpani**, Chief Business Officer-SME at Cholamandalam Finance Ltd; **Ankit Jain**, Co-Founder & CEO of StepChange; and **Shinichiro Imahori**, Deputy Chief Representative at JBIC New Delhi. The session was moderated by **Vivek Sen**, India Director at the Climate Policy Initiative (CPI).

Context and rationale

Climate risk is increasingly material to credit decisions, as lenders are now witnessing direct impacts on borrower cash flows and creditworthiness. Physical risks such as extreme heat, floods, and rainfall events are disrupting business operations, particularly for MSMEs and retail borrowers, resulting in delayed repayments and reduced collections. Transition risks are also surfacing as financial institutions reassess exposure to sectors likely to face policy or market shifts. Institutions like JBIC have embedded net-zero portfolio targets and ESG frameworks, while NBFCs are beginning to acknowledge the need to integrate geographic climate vulnerabilities into credit assessments. Although awareness is growing, the industry remains at an early stage of translating climate risk into actionable credit strategies.

Potential opportunities and challenges

There are emerging opportunities for financial institutions to embed climate considerations into credit decisions and lending operations.

- Lenders are beginning to explore the use of climate-linked data and stress testing to inform credit assessments across product types and regions.

- Institutions like DMI Finance have transitioned to fully digital disbursements, reducing operational emissions and creating paperless, virtual customer journeys.
- Financing strategies are being refined to support green assets, including EVs, solar equipment, and sustainable infrastructure, in alignment with government incentives and growing consumer demand.
- Climate analytics platforms such as StepChange are enabling lenders to understand emissions exposure, evaluate financed emissions, and improve sustainability-aligned decision-making.
- Collaborations with regulators and data providers are helping build forward-looking models that integrate asset vulnerability, meteorological data, and loss history.
- Developing centralised, high-resolution climate data infrastructure is a key opportunity. Granular weather, asset, and loss data can enable climate-adjusted credit models, with regulators like RBI playing a crucial role.

However, several challenges are preventing mainstream adoption of climate-aligned credit risk frameworks.

- Most NBFCs do not yet have access to granular, decision-grade data required to adjust probability of default or loss given default calculations.
- Risk models continue to rely on traditional customer- and product-level parameters without systematically incorporating climate exposure or geographic risk.
- Fragmented data ownership and limited access to meteorological data hinder the ability to forecast region-specific risks and integrate them into credit strategies.
- Internal limitations, such as lack of technical capacity and appropriate digital

infrastructure, slow the pace of innovation in smaller or traditional NBFCs.

- Financial institutions remain uncertain about how to translate climate risk insights into actionable lending policies, particularly in retail and MSME segments with short-duration products.

Key insights from panel discussion

Speakers acknowledged that the frequency and intensity of climate-related disruptions are increasingly affecting small business operations, especially in northern and central India. These include temporary closures during extreme heat and unseasonal rains, which directly reduce customer income and ability to repay. Lenders are starting to experience disruptions in collections and customer outreach in such regions, prompting questions on how these factors can be modeled into lending strategies. Panelists emphasised that such events, though previously considered one-off disruptions, are now regular enough to merit integration into portfolio-level risk discussions and even board-level strategies.

The discussion highlighted that most NBFCs currently use intuitive or experience-based assessments when accounting for climate-linked risks. Formal integration into risk models is still evolving, with institutions like Cholamandalam Finance experimenting with climate stress testing and adjusting lending criteria based on ESG alignment of borrowers. However, many admitted that while certain early-stage efforts are underway, full model adaptation remains a work in progress. Participants called out the need for scientific and data-driven tools that can offer product-specific and location-specific insights into climate risks.

Participants also discussed the gap between data availability and its applicability in credit risk modelling. Platforms like StepChange shared how over 650 million tons of emissions have been analysed using real lending portfolios, demonstrating that India's climate exposure is largely outside the listed sector. A significant share lies within informal segments financed by NBFCs, such as agriculture, transportation, and microenterprises. This increases the urgency for lenders in these sectors to adopt risk models that can account for physical disruptions, since these borrowers lack the buffers that larger corporates typically have. There is an urgent need for centralized, high-resolution, decision-grade climate data infrastructure, particularly via RBI or public platforms. The data infrastructure should have asset level, meteorological and historical loss/damage data, thus allowing for comprehensive climate credit modelling. Panelists also pointed out that climate risk has long-term consequences, and lending strategies must evolve to account for lead-lag effects. Decisions made today will shape risk exposure well into the next decade.

Finally, the panel underscored the importance of collaborative action. Regulatory support and public-private data partnerships were seen as key enablers to scaling climate-resilient lending. Panelists recommended integrating climate disclosures into standard lending processes and emphasised the importance of preparing models and policies today to avoid disproportionate impacts in the future. While not all solutions are currently available, the sector must begin laying the groundwork for integrating climate into financial decision-making across asset classes and borrower segments.

FIRESIDE CHAT

The 21st Century Green Revolution: Opportunities and Challenges in Financing

The fireside chat titled "**The 21st Century Green Revolution: Opportunities and Challenges in Financing**" featured **Shamika Ravi**, Member of the Prime Minister's Economic Advisory Council and Governing Board Member at CIEU. She was in discussion with **Jagjeet Sareen**, Partner – Global Climate Change at Dalberg Advisors, and **Raman Aggarwal**, Area Chair – NBFCs & Banks at CIEU.

The discussion focused on the government's long-term green growth strategy, the scope of green finance beyond electric vehicles, the potential of priority sector status, and the role of regulatory and fiscal tools in accelerating green investments. The speakers explored how policy, capital, and institutional reform can drive India's transition towards a sustainable economy.

Context for fireside chat

India continues to prioritise strong economic growth. At the same time, it is embedding climate action into its development agenda. The speakers highlighted that India cannot follow the carbon-intensive paths taken by industrialised nations. Instead, the country must pursue inclusive, green growth that reflects its scale, ambition and constraints. They noted that innovation is emerging from the ground up, with states leading efforts to value natural assets and create localised green finance mechanisms. This shift demands that policy move from high-level targets to precise, district-level execution.

Insights from the fireside chat

India does not see growth and sustainability as competing goals. Growth remains non-negotiable, especially in the context of recent poverty reduction and development gains. However, the country has committed to pursuing a green transition that aligns with its own reality rather than copying the models of the past. This transition requires clear policy choices that reduce conflict between short-term economic targets and long-term environmental responsibility. It also requires accepting trade-offs and addressing them through integrated planning and implementation.

To fund this transition, India cannot rely solely on foreign capital. While global pledges have helped shape the narrative, much of the innovation is taking place at the state and district level. States like Madhya Pradesh are experimenting with valuing green assets such as forest cover and biodiversity. These efforts help build financial instruments that reflect local priorities and create the basis for green GDP frameworks. By collecting and using granular data, policymakers can build trust and precision into climate-related decision-making, unlocking domestic savings for long-term goals.

NBFCs have taken the lead in financing electric vehicles, rooftop solar systems, and other decentralised assets. They lend where traditional banks hesitate and design flexible financing products suited to first-time borrowers and informal income groups. However, they face systemic disadvantages due to regulations that do not reflect their distinct risk profiles. The discussion called for a renewed push to differentiate NBFCs from banks in the regulatory framework, especially in light of their role in financing new and unfamiliar asset classes. There was strong support for a dedicated refinance institution to focus on high-risk, high-impact green lending.

India must reframe its industrial policy to strengthen its position in cleantech manufacturing. Rather than depending on tariffs, which often invite retaliation and create market uncertainty, the country should prioritise input-linked support. Reducing the cost of electricity, capital, and skilled labour will help domestic firms compete globally and move up the value chain. These incentives also promote better quality, innovation, and productivity. As major economies quietly adopt subsidies and non-tariff measures to shield their industries, India must respond with a clear, coordinated policy that supports manufacturing, builds resilience, and reduces reliance on imports.

The conversation also underscored the urgency of climate adaptation, particularly in India's rapidly urbanising regions. Although census figures put the urban population at around 40 percent, satellite data suggests the true figure may be as high as 70 percent. Many of these urbanising areas lack formal infrastructure, planning frameworks, and governance systems. To build resilience, policymakers must focus on city-level investments that address flooding, extreme heat, and other climate risks. This includes strengthening transport, water, housing, and waste systems, along with institutional capacity. Appointing Chief Resilience Officers, as seen in cities like Surat, offers a practical way to embed climate response into everyday governance and planning.

PANEL DISCUSSION

Green Spaces: Aligning the Regulatory & Policy Worlds

Moderator & Panellists

The panel discussion titled '**Green Spaces: Aligning the Regulatory & Policy Worlds**' featured **Neha Khanna**, Associate Director, Climate Policy Initiative; **Prof. Charan Singh**, Former Chairman, Punjab & Sind Bank and CEO, EGROW Foundation; **S. Ramann**, Deputy CAG and Former CMD, SIDBI; and **Rajasree Ray**, Additional Secretary and Financial Advisor, Ministry of Environment, Forest and Climate Change (UNFCCC and GCF focal point of Government of India). The session was moderated by **Neha Kumar**, South Asia Head, Climate Bonds Initiative.

Context and rationale

India's transition to a green economy must balance high growth ambitions with deep decarbonisation goals. As the country works toward achieving its dual objectives of becoming a Viksit Bharat by 2047 and reaching net-zero emissions by 2070, aligning financial markets, public policy, and regulatory frameworks becomes essential. Climate-related financial risks, both physical and transitional, are no longer abstract threats. These risks are already beginning to manifest as business and portfolio-level challenges. The discussion highlighted the importance of embedding climate resilience into national planning processes, strengthening data systems, and ensuring robust governance to channel capital effectively toward sustainable development pathways.

Potential opportunities and challenges

India's financial and regulatory systems are gradually evolving to support green finance at scale. The discussion brought forward the following key opportunities:

- Capital markets present an avenue for NBFCs and financial institutions to diversify their risks while mobilising long-term capital for climate-focused investments.
- The national adaptation plan, currently under development, is generating district-level data on climate hazards. This will help financial institutions carry out more informed and risk-aware lending.
- A climate-resilient project pipeline is being conceptualised, similar to the national infrastructure pipeline, which can attract both domestic and international capital into key sectors.
- Government-managed schemes such as CAMPA hold underutilised funds that could be redirected towards climate-aligned projects, especially at the state level.
- Emerging tools such as carbon intensity ratings are enabling investments in companies that are not yet fully green but are moving in that direction, thereby expanding access to transition finance.

At the same time, panellists flagged several pressing challenges:

- Financial institutions face constraints in accessing high-quality, asset-level data on local climate risks. This limits their ability to evaluate exposure accurately and design suitable financing structures.
- Smaller NBFCs, primary agricultural cooperatives, and rural banks continue to operate with limited internal capacity to assess and lend to climate or transition-aligned projects.
- Implementation challenges and low fund utilisation reduce the effectiveness of public schemes that are intended to support climate action.
- Transition finance remains poorly defined. Current credit and ESG frameworks are unable to assess companies based on the trajectory of their decarbonisation efforts. This results in limited capital access for firms that are in the process of transitioning.
- Weak monitoring mechanisms and a lack of institutional ownership at state levels hinder accountability and reduce the effectiveness of climate finance deployment.

Key insights from panel discussion

India's aspirations for economic transformation and environmental sustainability are not mutually exclusive. The panel emphasised that productivity and climate resilience must go hand-in-hand. There is a growing recognition that green is not a peripheral concern but a core productivity driver. Speakers reinforced the need for active alignment between growth strategies and climate imperatives, noting that this transition will not happen automatically. It requires deliberate, system-level reforms and collaborative actions across government, markets, and institutions.

The discussion highlighted the strategic role of NBFCs in India's financial ecosystem. These entities serve sectors that are underserved by traditional banks, such as MSMEs and agriculture, which are also highly vulnerable to climate impacts. Panellists noted that physical climate risks are already translating into financial risks for NBFC portfolios. As these risks become more visible, it is essential for governance norms to evolve. Suggestions included introducing climate monitoring committees within the governance structures of financial institutions and improving data-sharing mechanisms across banks and NBFCs.

Attention was drawn to India's national adaptation plan, which is being developed with a whole-of-government and whole-of-society approach. The plan will include detailed vulnerability assessments by sector and geography, along with an implementation roadmap, a resource mobilisation strategy, and a pipeline of investable projects. By providing publicly accessible data on climate hazards and district-level vulnerabilities, the plan is expected to serve as a critical tool for domestic financial institutions to design adaptation-aligned financial products and reduce risk exposure.

The panel emphasised the critical role of institutions like the Comptroller and Auditor General (CAG) in ensuring transparency and accountability in climate finance. To verify the deployment and impact of public funds, the CAG is leveraging advanced technologies such as artificial intelligence and drone-based monitoring, particularly in programmes like afforestation. These innovations enable more precise validation of environmental claims and strengthen the credibility of sovereign green bond reporting. Panellists also underscored the importance of fostering shared knowledge systems between the public and private sectors. Building institutional capacity, especially for smaller financial entities, is essential to support the long-term integrity and effectiveness of climate finance

PANEL DISCUSSION

Unlocking Capital Markets to Power Green Financing

Moderator & Panellists

The session titled **Unlocking Capital Markets to Power Green Financing** focused on how capital markets can drive green finance, with a spotlight on sustainable bonds, ESG funds, and institutional investment in climate-aligned projects. The discussion featured **Nilesh Shah**, Managing Director, Kotak Mutual Fund; **Ajit Pai**, Strategy Lead Partner, EY; and **Nitin Gupta**, Co-founder, Attero; and was moderated by **Gagan Sidhu**, Director, Centre for Energy Finance at CEEW.

Context and rationale

The capital markets hold significant potential to support green finance by mobilising large-scale investments for climate mitigation, adaptation, and circular economy initiatives. While green bonds and ESG funds are growing rapidly, India's bond market remains relatively illiquid compared to global standards. Addressing gaps in market depth, enabling the aggregation of smaller projects through pooled structures, and designing interoperable climate finance taxonomies aligned with global norms can unlock broader capital flows, reduce financing costs, and accelerate the green transition.

Potential opportunities and challenges

Capital markets in India present significant opportunities to drive green finance.

- One way is to create instruments of pooling, where multiple projects are

aggregated together, and a fund issues the bond rather than individual projects.

- Credit enhancement mechanisms, supported by government or private sector funds, can de-risk projects and make green bonds more attractive to investors.
- The emergence of sustainable investment mandates could push large institutional investors to allocate a portion of their portfolios to green assets, creating more demand for green bonds and sustainable finance instruments.
- Initiatives such as extended producer responsibility (EPR) regulations have created predictable revenue streams for recyclers, enabling them to access debt capital markets.
- Equity capital markets have demonstrated strong investor interest in green companies, with investors willing to pay a premium for businesses aligned with the energy transition narrative.

However, several challenges must be addressed to scale up capital market participation in green finance.

- The bond market does not have enough depth for buying and selling infrastructure bonds, and fund managers avoid high asset liability mismatch risks.
- Internationally, regulators and governments provide risk capital for green projects, which is largely absent in India.
- Asset managers prefer investments with predictable cash flows and are cautious about projects carrying execution or contractual risks
- Many non-green companies do not internalise the full environmental and social costs of their operations, creating an uneven playing field for green companies seeking to raise capital.

Key insights from panel discussion

The panellists discussed how capital markets could better support adaptation finance, noting that while mitigation projects often attract financing, adaptation efforts remain underfunded due to their smaller project sizes and higher risk perception. Pooling of smaller projects and credit enhancement mechanisms were identified as critical solutions to make adaptation projects more attractive to investors.

Buy-side challenges were highlighted, with a clear mismatch between the short-term nature of domestic fund inflows and the long-term financing needs of green infrastructure projects. Lack of liquidity in the bond markets, particularly for infrastructure bonds, remains a key barrier, pushing mutual funds to focus on short-term investments and securitised assets with predictable cash flows.

Institutional investors are increasingly pushing companies to integrate ESG and circularity into their operations. While international investors are leading this trend, domestic investors are also beginning to demand genuine action on ESG goals, driving some behavioural change across companies. However, the depth and scale of scrutiny vary, with ESG-themed funds more proactive than generalist funds.

Finally, the panel discussed the need for innovative financing instruments beyond plain equity and debt. In the recycling and circularity sector, mechanisms like EPR obligations have created new cash flows that help green companies raise debt. The panellists agreed that while the domestic market has the creative capability to design hybrid instruments, greater risk capital support from the government would significantly accelerate green financing efforts.

PANEL DISCUSSION

Building the Appetite

Moderator & Panellists

The session titled '**Building the Appetite'** focused on de-risking green finance investments through innovative models such as blended finance, credit guarantees, and concessional capital. The speakers included **Sanjeev Kaushik**, Principal Financial Sector Specialist, Asian Development Bank (online); **Laurent Gonnet**, Lead Financial Sector Specialist, World Bank; and **R.K. Singh**, Chief General Manager and Head of Green Financing, SIDBI. The session was moderated by **Kuljit Singh Popli**, Former Chairman, IREDA.

Context and rationale

Scaling climate finance is essential to meeting global net zero targets. Although global investments in climate finance have risen to $ 2.1 trillion, most funding remains concentrated in China, Europe, and the United States, with developing economies lagging behind. De-risking mechanisms such as blended finance, concessional capital, and credit guarantees are critical to expanding private sector participation in climate investments across emerging markets. India has made notable progress, but unlocking its full potential requires innovative financial structures, strong institutional anchors, and enhanced regulatory frameworks.

Potential opportunities and challenges

Mobilising private capital at scale through innovative risk-sharing structures presents significant opportunities.

- Establishing sovereign-anchored facilities, blended with concessional finance, can lower the cost of capital and attract private investors to sustainable infrastructure projects
- Expanding the use of partial credit guarantees and credit enhancement mechanisms can boost long-term financing, particularly for green projects and MSMEs.
- Developing blended finance capacity within banks, DFIs, and NBFCs can optimise the use of concessional funds alongside commercial capital.
- Creating specialised platforms and trust funds, with collaboration between multilaterals and domestic DFIs, can accelerate deployment into emerging sectors such as decentralised renewables and bioenergy.
- Building structured frameworks for venture capital and private equity models with public-private risk-sharing can unlock early-stage equity for cleantech and climate start-ups.

However, significant challenges remain.

- Lack of uniform collateral frameworks and slow digitisation impede the ease of using diverse asset types for credit security
- Fragmentation of credit information systems creates inefficiencies and risks in lending decisions across banking and non-banking sectors.
- Delays in insolvency proceedings increase lenders' exposure to non-performing assets, undermining risk appetite for new green sectors.
- Gaps in operational knowledge and the absence of standardised approaches to blended finance constrain market readiness.
- Dependence on policy and regulatory reforms for frameworks such as the National Financial Information Registry (NFIR) and broader co-lending guidelines adds uncertainty to scaling up financing efforts.

Key insights from panel discussion

The discussion opened with an overview of the remarkable growth in global climate finance and the urgent need to ensure that developing economies do not fall behind. Speakers highlighted that while countries like China have taken the lead, financing gaps in Africa, South

Asia, and other emerging regions threaten the achievement of global net zero ambitions. The panel emphasised that targeted de-risking models are essential to drive green investments where they are needed most.

A range of innovative financing mechanisms were explored, including sovereign-anchored facilities blended with concessional funds, partial credit guarantees, and co-lending models. Examples such as ADB's programme with IIFCL and the proposed $ 200 million trust fund supported by GCF were discussed as practical ways to lower risk perceptions among private investors. Participants stressed that collaboration between multilaterals, DFIs, and sovereign institutions was key to scaling these models efficiently.

Panelists drew attention to critical gaps in India's credit infrastructure, particularly the need for unified collateral frameworks, improved interoperability between credit bureaus and account aggregators, and a faster insolvency process. They discussed the importance of addressing asymmetries in information across the financial sector to create a more transparent, efficient, and resilient green finance ecosystem. Regulatory developments such as the proposed NFIR were identified as positive steps, but speakers underlined the urgency of implementation.

SIDBI's experience with building focused green verticals was presented as a strong example of bottom-up capacity building. The discussion showcased SIDBI's missions across renewable energy, EV ecosystem development, circular economy, and climate adaptation, supported by risk-sharing facilities and interest subvention schemes. Participants agreed that targeted, mission-driven approaches, coupled with risk mitigants, could substantially scale green finance among MSMEs and even micro-entrepreneurs, thus ensuring a broad-based green transition.

PANEL DISCUSSION

Green Financing The role of a New Green Financial Institute

Moderator & Panellists

The panel discussion on **Green Financing – The Role of a New Green Financial Institution** explored how a new green financial institution can help unlock large-scale funding for India's climate transition. The session brought together **Labanya Prakash Jena**, Sustainable Finance Consultant, IEEFA; **Laurent Gonnet**, Lead Financial Sector Specialist, World Bank; **Venu Mothkoor**, Senior Specialist, Development Economics, NITI Aayog; **Harsh Singhal**, Partner and Co-founder, ProsperETE; and **Jagjeet Sareen**, Partner, Global Climate Change, Dalberg Advisors. The discussion was moderated by **Dhruba Purkayastha**, Director, CEEW, and examined the need, opportunities, and challenges associated with establishing a dedicated green financial institution to accelerate sustainable economic development.

Context and rationale

India's ambitious developmental and net-zero goals by 2070 require sectoral transitions at an unprecedented scale, with estimated investment needs ranging between $ 10–18 trillion. Current annual climate finance flows stand around $ 50 billion, far short of the required $ 300 billion per annum.

Potential opportunities and challenges

A new green financial institution offers several opportunities to accelerate India's climate transition:

- It can address market failures by incubating high-risk, early-stage projects that traditional financial institutions overlook.
- It can mobilise global concessional capital to bridge the current climate finance gap and reduce the cost of finance for green sectors
- It can drive innovation by creating new underwriting models suited to emerging climate sectors beyond traditional energy domains.
- It can build critical risk-sharing and co-lending frameworks to bring in private financiers and domestic institutional investors.
- It can enable green industrialisation by supporting cleantech manufacturing, thus boosting the supply chain for solar, hydrogen, EVs, and battery storage.

However, the initiative also presents several challenges that must be addressed:

- Integrating a new institution within India's existing DFI ecosystem requires careful articulation of its mandate and governance to avoid duplication.
- Building a pipeline of viable, bankable projects remains a constraint despite the availability of finance.
- Raising low-cost international capital faces structural barriers, including currency hedging costs and regulatory limitations.
- Ensuring risk appetite without jeopardising the credit quality and sustainability of the institution will demand strong risk management frameworks.
- Creating visible private sector demand for green finance is critical to justify the scale and scope of a new institution.

Key insights from panel discussion

Panelists emphasised that India's developmental ambitions and net-zero commitments require a radical scale-up of green finance that existing institutions are not structurally equipped to deliver. Current institutions have limited risk appetite and governance constraints, which restrict their ability to offer the concessional and flexible financing needed for new technologies and climate solutions. The discussion underlined that an agile new institution focused solely on green finance could address these gaps, especially by incubating frontier projects and creating pathways for private sector participation.

Participants highlighted that creating a green financial institution must focus on form following function. Rather than duplicating the mandate of existing institutions, the new institution should prioritise high-risk sectors, provide risk-bearing capital, and build co-financing mechanisms with banks, NBFCs, and private investors. It should also address the structural shortage of growth-stage capital for climate entrepreneurs and emerging sectors.

The panel discussed how simply having available finance does not automatically create projects. Government interventions, such as demand creation through incentives, tax breaks, and industrial policy measures, are necessary to make sectors investable. The proposed institution must be designed to complement these efforts by supporting project incubation, creating new markets, and unlocking pipeline development.

Finally, participants agreed that finance can lead the real economy transition if deployed strategically. By providing patient capital, enabling securitisation of green loans, and pioneering financial innovations, the institution could not only support early projects but also build secondary markets and strengthen India's green financial ecosystem.

Valedictory address by Deputy Governor of RBI, Shri M. Rajeshwar Rao

You Tube Video link

PDF link

Shri M. Rajeshwar Rao, Deputy Governor, Reserve Bank of India, began by thanking the organisers and referred to the importance of ongoing discussions around green and sustainable finance. He mentioned that a national taxonomy is being developed to clarify which activities qualify as green or sustainable. This taxonomy is expected to support alignment across government, regulators, and financial institutions. Until its formal release, the RBI refers to the Sovereign Green Bonds framework, which was also used in framing the April 2023 guidelines for Green Deposits.

A coordinated regulatory approach was described as necessary for addressing climate-related financial risks. The Deputy Governor referred to India's net-zero target for 2070 and noted that this would require all stakeholders to adjust their actions. Alongside this, he pointed to the value of assurance and verification systems, which could support transparency and help mitigate concerns such as greenwashing.

He referred to the importance of climate-related disclosures in enabling financial institutions to assess risk and make informed decisions. These disclosures rely on

information provided by borrowers. The RBI's draft disclosure framework, published in February 2024, includes guidance across four areas: governance, strategy, risk management, and metrics. The guidelines are currently being reviewed based on public comments.
In discussing climate risk modelling, he observed that both scientific and financial expertise are required. Climate scientists and financial modellers typically have distinct skill sets, and closer collaboration may help improve risk assessment. The RBI has introduced the Climate Risk Information System (RB-CRIS) to provide standardised data related to physical and transition risks, and to support a more consistent approach to carbon emissions data.

He noted that climate change may influence credit risk through increased operational costs, asset losses, or other disruptions affecting borrowers. He also mentioned that emerging green technologies could present additional uncertainties. These factors may require careful risk management by regulators, while recognising that credit allocation is often shaped by market factors.

Two main categories of challenges in green finance were outlined. Structural challenges include high capital costs, long project timelines, and limited technical knowledge. Financing-related considerations involve factors such as availability of domestic enablers and global capital flows. He noted that adaptation-related projects can be more difficult to finance than mitigation projects due to a lack of clear revenue expectations.

To help address these barriers, he referred to blended finance as one possible method for supporting investment. He noted that India's diverse geography may require context-specific approaches. Financial instruments such as guarantees, sustainability-linked loans, and climate-resilient bonds were presented as tools that could potentially support the growth of green finance.

Greater collaboration between development financial institutions, multilateral organisations, and climate funds was also suggested. He noted the possible value of adjustments in the structure and role of multilateral development banks, including increased support for developing economies. The inclusion of sustainable finance and climate risk in the RBI's regulatory sandbox was mentioned as a way to facilitate experimentation with new approaches.

In discussing international frameworks, he remarked that uniform requirements may not reflect the differing capacities of countries. A more flexible approach could be more appropriate in some contexts. He also noted that shifts to green economic models may result in disruptions, including labour displacement and changes to land use, which would need to be managed carefully.

Attention was drawn to the need for technical expertise within financial institutions. The RBI is supporting this by organising capacity-building programmes that feature international speakers and cover areas such as risk management, stress testing, and climate transition planning.

In closing, he reflected on India's dual role as both vulnerable to climate risks and positioned to make a significant contribution to the global green transition. He acknowledged that while efforts have begun, additional work is needed to enhance technical skills, strengthen risk frameworks, and ensure consistency across regulatory approaches.

CONCLUSION

Building India's Green Finance Future

The Credit Summit 2025 underscored a pivotal truth: India's green transition cannot succeed without a robust, inclusive and climate-aligned financial ecosystem. NBFCs are at the heart of this transformation.

Throughout the Summit, a wide range of stakeholders including regulators, financial institutions, policymakers and climate experts came together to explore actionable strategies that align financial decision-making with climate imperatives. Discussions spanned topics such as climate risk integration, credit innovation, regulatory coherence and capital market participation. Collectively, these conversations reaffirmed the urgency and opportunity of embedding sustainability into India's credit infrastructure.

Three key priorities emerged from the dialogue:

- **Empowering NBFCs as green finance catalysts:** With their ability to serve underserved markets, NBFCs are uniquely positioned to expand access to green credit, from electric mobility and decentralised renewables to sustainable agriculture and MSME adaptation. However, to unlock their full potential, NBFCs require better access to concessional capital, blended finance instruments, and enabling regulations that reflect their business models.
- **Integrating climate risk into financial architecture:** As physical and transition risks intensify, mainstreaming climate risk into credit assessments, portfolio stress testing and prudential norms is no longer optional. Investments in high-resolution climate data, modelling tools and sector-specific risk frameworks will be essential for future-proofing financial institutions.
- **Mobilising capital at scale through innovation and collaboration:** The green transition demands trillions in investment. To meet this need, stakeholders must foster financial innovation through tools such as guarantees, results-based finance, sustainability-linked loans and green bonds. Equally important is the creation of dedicated green financial institutions that can blend public and private capital, de-risk early-stage ventures, and channel funds into high-impact, climate-smart sectors.

Looking ahead, the path is clear: a coordinated, whole-of-ecosystem approach is necessary to accelerate India's green finance agenda. This includes strengthening institutional capacity, enhancing regulatory clarity and deepening partnerships with development finance institutions, investors and the private sector.

The Credit Summit has laid a strong foundation. It is now imperative to carry this momentum forward through pilots that demonstrate scalable solutions, policies that reward innovation and inclusion, and investments that reflect both climate urgency and developmental equity.

In doing so, India can lead by example, crafting a green financial architecture that is resilient, inclusive and distinctly suited to its national priorities. A future where finance serves not just profit, but people and the planet.

ANNEX

About Organisers

CIEU

CIEU is committed to fostering comprehensive research, facilitating dialogues, and curating innovative ideas that address the needs of diverse communities. In today's era of rapidly evolving progressive economies, emerging markets are seeking pathways from economies of scale to economies of scope. With a team of accomplished professionals and industry experts, CIEU identifies and cultivates opportunities to support policymakers in reconstructing economies centred on true equity and citizen empowerment. CIEU provides actionable solutions that serve as blueprints for global economies.

Dalberg Advisors

Dalberg Advisors is a strategic advisory firm combining the best of private sector strategy skills and rigorous analytical capabilities with deep knowledge and networks across emerging and frontier markets. We work collaboratively across the public, private and philanthropic sectors to fuel inclusive growth and help clients achieve their goals.

Bharat Climate Forum

The Bharat Climate Forum is a national platform dedicated to unifying stakeholders from policy, industry, finance, and research to accelerate cleantech manufacturing in India. It was launched on 10th January 2025. The forum aims to position India as a global leader in cleantech manufacturing, fostering self-reliance (Atmanirbharta) as the cornerstone of its journey toward a Net-Zero and Viksit Bharat

Knowledge Partners

Climate Policy Initiative (CPI)

The Climate Policy Initiative (CPI) is an independent, non-profit research and advisory organization specialising in climate finance and policy. Established in 2009, CPI's mission is to support governments, businesses, and financial institutions in driving economic growth while addressing climate change.

Council on Energy, Environment and Water (CEEW)

The Council on Energy, Environment and Water (CEEW) is a leading not-for-profit policy research institution based in New Delhi, India. Established in 2010, CEEW focuses on addressing pressing global challenges through data-driven research, integrated analysis, and strategic outreach.

Climate Bonds Initiative

The Climate Bonds Initiative (CBI) is an international not-for-profit organization dedicated to mobilising global capital for climate action. Founded in 2009, CBI aims to develop a large and liquid market for Green and Climate Bonds, which helps reduce the cost of capital for climate projects and improve access to lower-cost debt in emerging markets.

Details of team members involved

Ashwani Mahajan

Dr. Ashwani Mahajan is a member of the Board of Governors at the Council for Inclusive Economic Understanding (CIEU), a prominent New Delhi-based think tank dedicated to fostering research and policy dialogue on inclusive economic growth. In this role, he contributes his expertise to shaping strategies that promote citizen empowerment and equitable development in India.

A highly respected economist, Dr. Mahajan is the National Co-Convener of the Swadeshi Jagran Manch (SJM) and a former Professor of Economics at PGDAV College, University of Delhi. With over four decades of teaching and research experience, he has guided numerous scholars and played a significant role in academic and policy circles.

Dr. Mahajan has authored or co-authored more than a dozen books, such as the widely used Datt & Sundaram's Indian Economy, and published over 400 articles in leading newspapers and journals. As Chief Editor of the Journal of Contemporary Indian Polity and Economy, he has been a key voice in debates on land acquisition, FDI, e-commerce, and trade policy. He is frequently featured in media for his advocacy of inclusive economic policies that prioritize employment generation and the welfare of the most disadvantaged.

Raman Aggarwal

Raman Aggarwal was instrumental in conceptualising, structuring, and organising the Credit Summit 2025. A leading figure in India's non-banking financial company (NBFC) sector, he currently serves as Director of the Finance Industry Development Council (FIDC), the representative body for asset and loan financing NBFCs in India. With over 30 years of experience in the sector, he has represented the industry in various capacities for more than two decades, including as Chairman and Co-Chairman of FIDC. Aggarwal has been deeply engaged in policy advocacy, regularly interacting with the Reserve Bank of India (RBI) and the Government of India on key regulatory and industry matters, including pre-budget consultations and policy meetings.

Under his leadership, FIDC has become the recognized face of the NBFC sector, engaging with policymakers to address challenges and promote sector growth. Recently, Aggarwal has advocated for dedicated funding support for NBFCs to enhance lending to MSMEs and has highlighted key sectoral trends, such as increased overseas borrowing by NBFCs due to changes in RBI regulations. He mentioned that FIDC has applied for an SRO licence from the RBI, aiming to strengthen governance and compliance within the NBFC industry.

Aggarwal's expertise is widely acknowledged; he has been a member of several advisory groups to the Ministry of Finance, RBI, and other industry bodies, and is a frequent speaker at national and international finance forums. His educational background includes a Master's in Urban Planning from the School of Planning & Architecture, New Delhi, and a Bachelor's in Civil Engineering from Thapar Institute of Engineering and Technology, Patiala.

Jagjeet Sareen

Jagjeet Sareen is a Partner based in New Delhi and co-leads the global climate practice at Dalberg. He helps guide clients on adapting to a progressive, future ready climate regulatory framework. He is helping public and private sector clients on climate change adaptation, climate finance, and decarbonization issues.

In a career of close to two decades years, his focus has been on green infrastructure, clean energy investment, and climate finance, working across organizations such as the World Bank, the Asian Development Bank, the Green Climate Fund, the United Nations Climate Change Secretariat, Ernst & Young, and TERI. He specializes in financing analyses in the climate space. He has worked with public and private players to unlock financing sources and instruments. In his experience, Jagjeet has also worked closely with senior officials and bureaucrats across the centre and state governments.

Prior to Dalberg, Jagjeet was a Senior Policy Officer in Climate Change Global Practice at the World Bank Group Headquarters in Washington, DC. Until July 2022, he served as the Assistant Director-General of the International Solar Alliance (ISA). On secondment from the World Bank Group, Jagjeet has helped build ISA from a political idea to a well-recognized multilateral organization with more than 100 member countries. He has mobilized 100 million dollars from member countries and global foundations to implement solar energy projects across developing countries. At the World Bank, Jagjeet helped negotiate Climate Investment Funds (CIFs), a ten-billion-dollar fund, from a sunset clause to its recapitalization, successfully repositioning it in global climate negotiations. At the Green Climate Fund (GCF), he led the design of crucial strategy and operational policies for the Fund, particularly its business model framework.

He was pivotal in conceptualizing and designing the GCF and negotiating the associated geopolitical processes. He also facilitated UNFCCC Climate Finance negotiations as a staff of the UNFCCC secretariat. Jagjeet has a Masters degree in Sustainability Management from the Indian Institute of Forest Management and a BSc in Agricultural Economics from Punjab Agriculture University in India.

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