

Green Finance In India: Growth, Opportunities, And Challenges

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ABSTRACT

The evolution of green finance in India and throughout the world is the focus of this article. Both the level of public knowledge and the availability of finance for environmentally friendly projects have been evaluated using data from a variety of sources. Results show that public awareness and funding options in India have improved, but that more cooperation among stakeholders and a decrease in asymmetric information could lead to more environmentally friendly and sustainable long-term economic growth.

KEYWORDS: *Green Finance, Sustainability, Public policy, Green lending, Green bonds, Borrowing costs, Information asymmetry.*

1. INTRODUCTION

To attain the objective of a low-carbon economy, green growth considers economic and environmental harmony. Green finance, in its most basic definition, is a kind of sustainable finance that is tailored to the needs of ecologically conscious and climate-responsive initiatives. Green building, energy-efficient transportation that reduces emissions of greenhouse gases, and waste management that incorporates recycling, energy conversion, and efficient disposal are all examples of environmentally sustainable projects.

According to the disclosure requirement Green Debt Securities, sustainable water and waste management, adaptation to climate change, protection of biodiversity and sustainable land use (including agriculture and forestry) are all examples of projects deemed to be sustainable. New financial mechanisms like green bonds and carbon market instruments like carbon taxes arose to address the financial needs of these environmentally good projects. Furthermore, new financial institutions like green funds and banks also gained prominence. Green finance is the collective term for these cutting-edge financial instruments.

"Green finance" refers to a new trend that merges the concepts of "finance" and "business" with

an emphasis on sustainable practices. The core of green finance, which attempts to mitigate the adverse environmental impacts of rapid economic growth, is the backing of companies and operations that might endanger the environment in the now and the future. Environmental degradation, pollution, and contamination are major health risks to the general population as well as barriers to long-term economic growth. We must take the lead in diverting capital away from polluting conventional businesses and toward more eco-friendly ones if we are serious about promoting ecologically sustainable enterprises. Most nations have established goals and strategies including corporations, governments, and central banks to attain these aims of economic development.

2. Green Finance and Public Policy in India

Green financing has been a priority in India as early as 2007. Climate change and Global Warming were discussed in "Corporate Social Responsibility, Sustainable Development and Non-financial Reporting Role of Banks" Reserve Bank of India notice in December 2007. With the view to outline the overall policy framework for reducing the effects of climate change, the National Action Plan on Climate Change (NAPCC) was created in 2008. Within the Ministry of Finance of India, the Climate Change Finance Unit

(CCFU) was set up in 2011 with the goal of coordinating green financing efforts among the numerous organizations in the country. The introduction of the sustainability disclosure criteria was the biggest strategic initiative since 2012. Nevertheless, SEBI periodically updated it since 2012 when it mandated that the top 100 listed businesses by market capitalization at BSE and NSE post annual corporate responsibility reports.

There have been several fiscal and financial incentives in India. In the majority of Indian states, the government subsidizes rooftop solar panel installations by 30% for institutional, residential, and social sectors. Some states that fall under the special category are eligible for subsidies of up to 70% of the installation cost. These states include Uttarakhand, Sikkim, Himachal Pradesh, Jammu & Kashmir, and Lakshadweep as of May 2019. On top of that, if the recipients' annual production surpasses 1100–1500 kWh, they may sell the extra electricity at a rate established by the government and earn an incentive of around 2 rupees per unit of generation (the exact amount varies by state). Phases one and two of the Indian government's scheme to accelerate the production and Hybrid and electric car distribution began in 2015 and 2019, respectively. to lower the initial cost of buying all automobiles, enhance the financial flow, and construct the necessary infrastructure to the manufacturing and sales of the green cars, these things have been done. In order to

compensate for the high upfront funding needed to purchase an electric vehicle, the State Bank of India has launched a "green car loans" scheme through which the bank has reduced the interest rates by 20 basis points and also extended the payback period as against a traditional auto loan. For the sake of producing renewable energy modules at a high efficiency, a Production Linked Incentive Scheme has also been introduced by the government.

The Reserve Bank of India has made a number of policy interventions to promote and support green financing projects. It included the small renewable energy sector to its Priority Industry Lending Scheme in 2015. Businesses involved in the renewable energy sector can borrow up to 30 crore rupees under this scheme and individuals can borrow up to 10 lakh rupees for investment in renewable energy. The Indian government fixed the target for renewable energy generation to 450 GW by the year 2030 in September 2019.

3. Green finance in India: what we've accomplished and what we still need to do for the country

Advances in heightened public awareness

To put it simply, traditional sources of information on people's knowledge of green finance and sustainable development are severely lacking. But if you want to see how people in various places are using Google at different times, you should check out Google Trends.

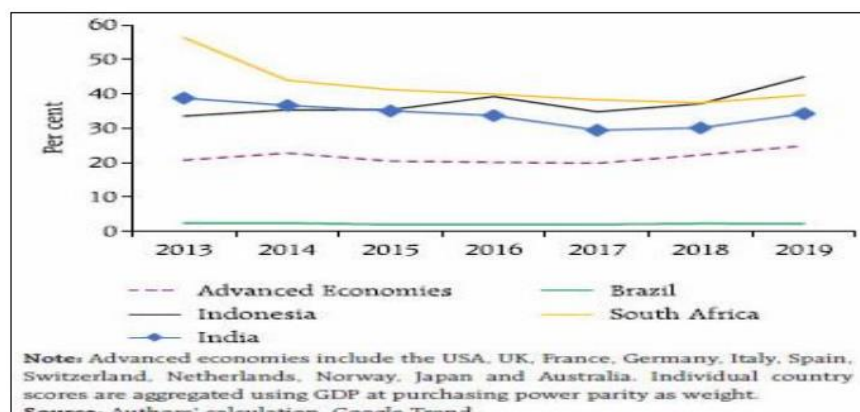


Chart 1: Google Search Related to Green Finance: India's comparative Score

Figure 1 demonstrate that, compared to developed and significant rising nations, India has just as many Google queries pertaining to climate change and green financing. As you can see from the graph, India's comparative score is better than that of the developed world. In order to normalize, we first set the most intense search for one nation to 100 and then modify the other countries' intensities proportionally. Chart 1 shows the nation scores as an average of these five keywords' scores, with the weights representing the proportion of all searches for each keyword relative to the total number of searches for all five terms.

Eco-Friendly Loans:

Information on Scheduled Commercial Banks (SCBs) in India can be found on the Reserve Bank's

	Public Sector Banks	Private Sector Banks	Foreign Banks	All Banks
Amount outstanding (Rs. Cr.)	21.655	12.302	2.586	36.543
As per cent of power sector credit	6.2	11.9	27.1	7.9
As per cent of total bank credit (excluding personal loans)	0.5	0.5	0.7	0.5

Note: Excludes Regional Rural Banks and Small Finance banks
Source: BSR, RBI, Authors, calculations

Green Bonds

Green bonds are bonds that are issued by corporations, intergovernmental organisations or alliances and sovereigns, with a purpose to expend the bond proceeds on projects that are environmentally friendly. Since 2015, India has been issuing green bonds. The outstanding amount of green bonds in India is \$16.3 billion as of February 12, 2020. As of March 2020, more than 7.9% of bank loans to the power industry were to non-conventional energy sources, and since January 1, 2018, green bonds to the tune of about US\$8 billion have been issued in India and make up about 0.7% of the bond issuances in the Indian financial market. Although the amount of green bonds issued in India since 2018 has been a negligible portion of the total amount of bonds issued, India was in a better position in terms of the volume of issuance of green

Database on the Indian Economy which contains data on policy rates, aggregate credit, sectoral credit, financial ratios, all in the public domain. In 2015, the Reserve Bank's Priority industry Lending (PSL) program extended to cover the small renewable energy industry, taking the green financing push one step further. A total of over Rs. 36,543 crore amount was owed by banks to non conventional energy industry as of March 2020, constituting 7.9% of the total owed by banks to power generating, from 5.4% in March 2015. Bank groups and the major states were found to have variance in the amount of commercial banks that have exposure to the non-conventional energy industry.

bonds compared to a number of developed and developing nations.

4. Obstacles and Future Directions

Green finance is undeniably benefiting from the integrated policy approach. The largest barriers may be high borrowing costs, Investors' relatively short-term objectives, conflicting definitions of green financing, and fraudulent promises on environmental compliance to long-term green investments, despite advancements in public awareness and funding options in India.

The cost of issuing green bonds in India has consistently been greater than that of other bond kinds. Companies and government agencies in India's public sector often issue green bonds when they're in a stronger financial position. Possible causes for the greater cost of borrowing green bonds in India include governance problems, asymmetric information, and

increased risk perception. It is evident from the available data that green initiatives generally entail high initial investments and some aspects of cost savings require longer pay-off periods. Due to the information asymmetry and the lack of a consensus definition of "green finance," green washing, i.e., the misleading claims made by investors regarding green bonds, is a common issue.

There are numerous opportunities for the further growth of instruments because of the size of the domestic market and the comparatively low penetration of green instruments. Policymakers must take steps to rectify the green finance market, including expanding the corporate bond market, standardizing the language used for green investments, requiring corporate reporting, and eliminating knowledge asymmetry between investors and receivers.

5. CONCLUSION

As a matter of public policy, green financing is quickly rising to the forefront. If we look at how green finance has evolved in India over the last several years, we can see that both public awareness and available funding have grown significantly. Sustainable long-term economic development may be possible with improved information management systems and more cooperation amongst the stakeholders if the information asymmetry around Green Projects is reduced.

Considering that every country, including India, is now battling COVID-19, the devastating effect it has had on world economic development over the last fifteen months is clear. However, as the COVID-19 pandemic has proven, development must be inclusive and sustainable if it is to endure. The stakeholders may take advantage of the crisis to reevaluate their policy, financial, and operational plans, and adopt a more sustainable strategy going forward. The Prime Minister recently unveiled a unique economic package for "Atma Nirbhar Bharat" (self-reliant India) with a budget of INR 20 lakh crores; this would greatly facilitate India's integration with the global community. Nevertheless,

India will now have a chance to green its economy in areas that will have the most influence on sustainable development thanks to the recovery packages offered by this epidemic. In order to recover economically from this crisis, India must prioritize both sustenance and sustainability.

An essential tool that may help bring about this change towards long-term economic prosperity is green financing.

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