Green Bonds-Trend and Challenges in India

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Abstract. Green bonds in Indian market play a vital role to shape the debt market and to position the environment sustainability by generating funds specifically for green projects. The objectives of this paper is to understand the green bond as an environmental sustainable tool and further to draw the trend of green bond and challenges so far in context to the Indian financial market. The emergence of green/climate bonds takes place from Paris Agreement in 2015 where 188 countries sign up to limit the rising temperature by less than two degree Celsius and India is one of the countries to sign the agreement. The paper is based on a descriptive study using secondary data source from several government reports, other published reports and banking sector reports. The paper concludes that the green bond successfully fulfils criteria to become a sustainable tool which can be seen as an investment opportunity alternative to equity funds, other corporate bonds. The green bond trend is upward sloping showing great potential to grow and develops the sustainable goals with success achievement. Certain challenges as hedge currency cost, lack of awareness, low sovereign rating makes green bonds a less attractive among investor which can be fairly reduced by proper governmental strategic actions.

Keywords: Green bonds, Green finance, Sustainable goals, Indian green bond market.

I. Introduction

Gradually the finance is turning to green globally in terms of green finance, green bonds, green trade exchange, green banks which in turn focusing on the sustainable development goals (SDGs) in efforts to make low carbon economy. In 2015, 188 countries signed up the Paris Agreement emphasizing Climate Change to limit the rising temperature even by less than two degree Celsius. In this context, initiative undertake by global finance on the footprint as Green finance. As of now, the green bond is one of the finest initiatives being adopted and India entered the green bond market in 2015. Green bonds are the subset of the Corporate Bond which is earmarked for investment in Green projects only to deter the climate change and its impact on the planet. The green bond market is trending among the Indian economy which can add to the asset class and enhance the Indian financial market infrastructure. It is presumed that green bonds are safer and reliable instrument to invest as they are backed by trustworthy banks and hence is a great path to expand the financing for green project in the country.

Out of the world, China is the leading country in an issue of green bonds as of the governments strong own decisions to develop green financing system in 2015 itself. India with a signatory to the Paris agreement for Climate change alongside is a member to other conventions too under UNFCCC i.e. 'United Nations Framework Convention on climate change' to have access to an innovative way to mitigate the impact of changing climate and to achieve the set target of emission intensity of the economy by 33-35% by 2030.

Regulation of green bonds is performed by SEBI and trade exchange as NSE and BSE are being an active member of the SSE Initiative and Global Dialogue. Indian government actively issues the guidelines on energy efficiency and related to emission control to achieve the set target by 2030. There is the number of facilitators joined hands with different bodies in the same context as IDFC being a member of Equator principles, SIDBI as member of Montreal Protocol to protect the ozone layer, NABARD as member of UNFCCC and accredited with first National Implementing Entity (NIE) and SBI to carbon disclosure project. The government encourages the investment in green projects by providing investors with taxation incentives, lower rate interest to loans for green projects and quite longer repayment time plans. We are motivated to examine the green bonds as an environmental sustainability tool in Indian market.

II. REVIEW OF LITERATURE

In 2105 the introduction to green bonds, only handful of development banks were involved in the issuing process but as per the growing market for such bonds, there are several other players too ready to explore to green market bonds with diversification and enthusiasm (Nehmeh and Leffel, 2019). Over two years, the green bond market indicated an exponential development phase as of joining partners like municipalities, commercial banks, corporate which in turn increases the market size and thus investment demand to green projects. This trend changes the traditional funding sources to modern phase to access to fund required for green projects which now can be directly pool from the market specifying the need and content. Thus, open up the doors for private financial institutions to enjoy the flooded market and contribute to green environment mission (Bandi, 2016). Study conducted in Asia excluding Japan, revealed the proportion contribution of social responsibility towards the environment by corporate is just 0.8% in comparison to world regions in 2016. The reasons for such low margin contribution is lack of disclosure requirement entitle to environment sustainability due to which corporate hide major profit estimations and put less towards the environment (Volz, 2018).

The investment in green financing will be allowed to hike the market by using pension fund, mutual funds etc, which can be initiated by Institutional investors, stated in 2019 by Climate Bonds Initiative Report (Jha and Bakhshi, 2019). A study conducted in Bangladesh implicates that Banks can play a better role to build a model of finance through green bonds to promote and flourish the sustainable development all around and also banks can initiate the design new policies concerning to environmentally friendly products (Hoshen, Hassan et. al 2017). According to the UN Environment Report (UNEP) (2016), there is the crucial role played by government and financial system to promote the green financing which in tune influence the investment behaviour of the organization and the public on the same platform. Also, the companies need to go for a private-public partnership to ease the investment process towards environmental sustainability. Domestic green bonds market is considered to be an effective place to add to the funding required for green infrastructure projects.

In India, the trend for green bonds will increase as there is a continuous and trendy hike in awareness for environment sustainability which increases the potential investment in green projects (Goel, 2016). The collected fund via climate bonds should be utilized in various environmental-related projects rather solely meant for carbon emission. The study profound that government has a vital role to play about reduce environmental risk and ascertain the green investment along with removing barriers to green financing (Jha and Bakhshi, 2019). Statements in favour to Indian government highlighted that government of India continuously thriven towards framing favourable policies and regulations and adherence to Paris agreement to provide a green flag for green finance market (Aggarwal and Singh, 2017).

The study conducted by Mazumdar and Rajeev (2005) analyze that investors to the stock market now becoming aware of environment-related issues and coming forward to contribute by any means. Thus, this environment sensitivity made them to explore for green financing, in which investors have participated wholeheartedly. The banking sector realizing the relevance and significance of the environment and becoming responsive to the same to build a sustainable banking system. This need to be taken care of by the banking sector to reveal the quality improvement achieved through business process re-engineering, balanced scorecard, six sigma approach etc (Verma and Aggarwal, 2020).

The study about awareness of green finance among the general public, bank employees' primary data collected as 100 i.e. 50 bank employees of different banks and 50 general public suing random sampling. The majority were aware of green products like green credit card, online banking, green loans, mobile banking etc. and banks employees to implement all such as business strategies (Jha and Bhome, 2013). This paper analyzes the recent trend in green financing in India and identify the challenges concerning to green bonds in India.

III. METHOD AND ANALYSIS

The study is based on descriptive research analyzing the trend and challenge of a green bond using secondary data extracted from several published report, banks website, government reports and private companies report in India. In the following sections, we examine the trends and identify the challenges.

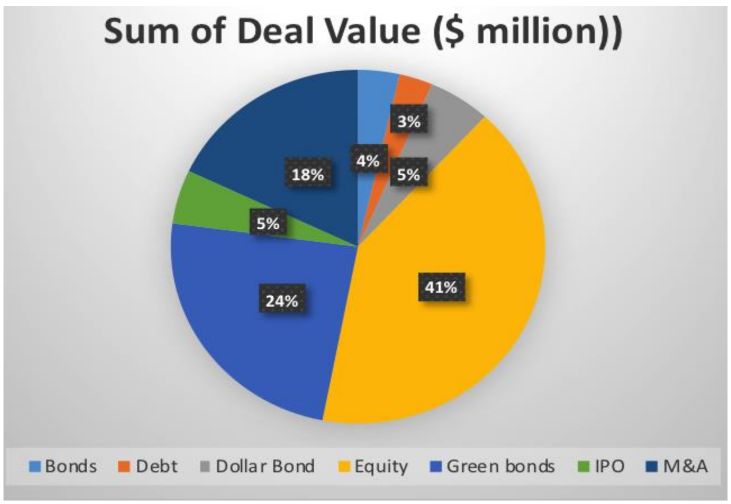
Trends in Green Bond Market

With the optimistic opportunities entitle by Indian government concerning renewable energy and carbon emission providing incentives and offers to the corporate which then encourages them to participate more and more to grab the opportunities. Thus, this makes a trend among Indian market to explore for green finance and actively puts efforts towards environmental friendly objectives. Though with just past 5 years from now, the Indian market accepted the green bonds and sizable issuance in such a short time makes it possible to grow at a higher rate. Also, multilateral financial institutes and foreign banks equally showed potential interest to Indian market green finance through green bonds in Indian currency denomination.

The 'Masala bonds' with Indian currency denomination already reported enormous demand from overseas investors, now will bring the same platform for green bonds to expand its boundaries.

The below diagram represents the investment trend in renewable energy showing 24% investment of total via green bonds issuance which is the second-largest contribution after equity capital. Green bonds are specifically issued and accepted only for green projects and assets which are considered to be a debt security and can be issued by public entities as well and financial and non-financial institutions. Also, the Indian market becomes second-largest market emerging green bonds after China. Therefore, it is analyzed that the increased awareness and prioritizing of green bonds in Indian market takes place.

Figure 1: Investment trend in renewable energy in India during 2019-20



Source: https://images.app.goo.gl/ahCAym38VuN5bfiH6

The Indian green bonds market still counts the numbers to the extent the series as till February 2020, $10.3 billion worth transaction accepted under the purview of green bonds and favourable policies and strategies fairly adopted by investors and issuers to cater to sustainable goals. The trend is improving all around and shows the capabilities to underwrite the green projects successfully with compliances of green bonds norms. With another figure which depicts the actual deal comprises in between companies to issue the green bonds to finance the projects reveals that green bonds give a tough competition to the equity market. The projects with due diligence involves green bonds funding and companies coming forward to accept the deal. Thus this improving phase highlights the increasing trend in the Indian market.

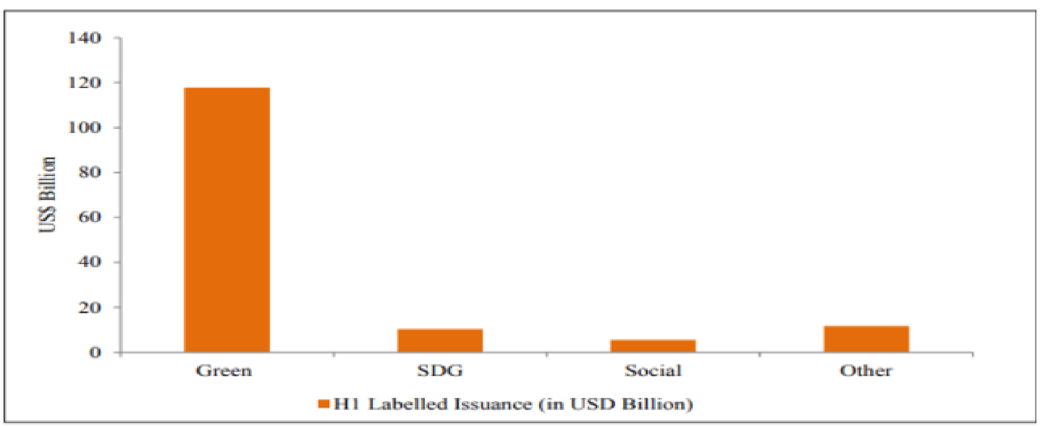
Figure 2: Renewable energy deals in Indian market during 2019-20

Company Name	Deal Type	Acquirer/Investor	Deal Value (in $ million)
Greenko Energy Holdings	Equity+Green Bonds	GIC and ADIA	2124
Renew Power	Offshore Bonds+Dollar Bonds+Equity	HSBC, JP Morgan, Barclays, Goldman Sachs, ADIA, CPPIB	1050
Adani Green Energy	Green Bonds+Equity	Adani Green Energy	837.99
IL&FS	M&A	Orix	669
Sterling & Wilson	IPO+Equity	27 Anchor Investors including Nomura, Schroder, ADIA	608

Source: https://images.app.goo.gl/MroY32vZLkRD3Pzf7

Several government bodies like Indian railway finance corporation (IRFC), Indian Renewable Energy Development Agency (IREDA) has significantly contributed towards climate/green bonds to meet out the set targets. Also in 2018, $650 million amount was invested by SBI in the green bond market. The increasing trend for green bonds encourages India to join hands with the International Platform on Sustainable Finance (IPSF) for further fruitful investment. The motives behind such joining is based on the nature of IPSF as it provides healthy recommendations to transit the finance for green, low carbon and environmental sustainability. The diagram below relates to the proportion of green bonds in comparison to other bonds as SDG bonds, social bonds. The green bonds posses with more than $100 billion investment about social bonds with just $5.5 billion.

Figure 3: Labeled issuance of Bonds in India during January to June 2019



Source: https://images.app.goo.gl/nLMM41CH2LutChNT9

So, therefore to better understand the green bond trend in the Indian market, the international market has to be explored as of green bond market is at its infancy stage but has a potential to grow rapidly with all involvement of mass participants. Thus, the current market trend posses with full of opportunity and reflect the demand and supply gap which can be filled and taken as advantage for green bonds. The normal bonds and green bonds do fall onto the same risk and reward equation, thus investor likely to opt for green bonds as of low tenure than normal bond. The tenure of green bonds concentrated in between 3-10 years, it is suggested to opt for low tenure period green bonds then later stage apply for long tenure when the international market shows a high rating to issuers.

Challenges of Green Bond Market in India

The flow of green bonds brings some challenges too as low sovereign ratings (rated as BBB), high currency hedging cost, low tenure and less explored market in Indian context. Low credit rating as BBB is a challenge to the growing Indian market as an investor does not get attract, thus credit rating agencies like IFC, AFD can do in this regard. Currently hedging cost seems to be high around 8 to 10 per cent which dissolve all cost advantage of currency financing in India. Thus, there is a sincere need to solve the issue by identifying such instrument which can reduce the hedge cost. Green bond market regulation poses some guidelines which are not favorably working as per the plan need an effective watch to revise under the circumstances. The external commercial borrowing (ECB) involves with such guidelines and need for certain solutions like; refinancing of special purpose vehicles (SPVs) in foreign currency undertaken by Independent Power Producers (IPPs). Insufficient framework to evaluate the sustainable project at its early stage itself a challenge in India which further channelize the slow growth and less return due to which investors are related less interested to invest. The issues concerning green bonds market can be successfully eliminated by government and participants to make the market a boom and provide a possible solution to fund for sustainable development.

IV. CONCLUSION

Indian market his having a great potential to develop in terms of green finance as green bond as the economy's financial sector is rapidly adapting the foreign market trends and transforming into the domestic market needs. The overall role played in the green bond market is in second

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place by India in turns developing the connection with the global market. The objective is to understand the green bond as a sustainable tool, hence proved that it is an emerging financing tool providing sustainability finance to environmental projects in India. The trend of green bond in Indian market seems to be upward sloping held with the second position to the issuance of green bonds and achieved target of $100 billion investment through green bonds by 2020. Number of the renewable energy projects funded via green bonds while the government provides incentive plans to encourage the growth and adoption of green bonds by corporate. The supportive banking system and vibrant financial market of India make progress fast and develops growth for green bonds. The challenges to green bonds in Indian market highlighting the hedging currency cost, lack of awareness, low sovereign rating as BBB to green bond market implies less attractive to domestic investment. Thus, it can be retrieved by proper government planning and strategic actions to implement regulatory structure. The seamless collaboration with the overseas market for green projects and regulatory standard adoptions flame the smoothness of the emerging Indian market to develop its green bond market.

REFERENCES

- Aggarwal, S., Singh, T. (2017) *'Unlocking the green bond potential in India'*. Teri- the energy and resource Institute. Retrieved from: https://www.teriin.org/projects/nfa/files/ Green-Bond-Working-Paper.pdf
- Bandi, R.P (2016) *'Green Bonds India Perspective'*. Growth Market Advisory Services. Retrieved from: https://www.researchgate.net/publication/311517461_GREEN_BONDS-_INDIA_PERSPECTIVES
- Goel, P. (2016) *'Green finance: A step towards sustainable financial system'*. Journal of Research in Management & Technology. 5(3). Retrieved from: https://pdfs.semanticscholar.org/c913/3f51340feddcddc38ebdf7e23ad24a82d27d.pdf?_ga=2. 267705614.1050030437.1594313291-410421662.1594313291
- Hoshen, S., Hasan, N., Hossain, S., Mamun, A.A., Mannan, A., Mamun, A.A. (2017) *'Green Financing: An Emerging Form of Sustainable Development in Bangladesh'*. IOSR Journal of Business and Management, 19(12), pp 24-30. Retrieved from: https://www.researchgate.net/publication/322419818_Green_Financing_An_Emerging_Form_of_Sustainable_Development_in_Bangladesh

- Jha, B., Bakhshi P. (2019) *'Green Finance: Fostering Sustainable Development in India'.* International Journal of Recent Technology and Engineering (IJRTE). 8(4). Retrieved from: https://www.ijrte.org/wp-content/uploads/papers/v8i4/D8172118419.pdf
- Jha, N., Bhome, S. (2013) '*A Study of Green banking trends in India*'. Abhinav International Monthly Refereed Journal of Research in Management & Technology. 2. pp.127 – 132. Retrieved from: https://www.worldwidejournals.com/paripex/ recent_issues_pdf/2016/October/October_2016_1476452863__104.pdf
- Mazumdar, I., Rajeev, P.V (2016) '*Green bond considerations in the renewable energy sector'*. World Wide Journal of Multi disciplinary Research and Development (WWJMRD). 2(4). Pp.48-56. Retrieved from: https://www.researchgate.net/profile/ Rajeev_Pv/publication/321825915_Green_bond_considerations_in_the_renewable_energy_s ector/links/5a339c49aca2727144b76fba/Green-bond-considerations-in-the-renewable-energy-sector.pdf.
- Nehmeh, A., Leffel, B. (2019) *'Green Bonds and Marketing'*. University of California. Retrieved from: https://www.researchgate.net/publication/ 337935585_ Green_Bonds_Marketing
- UNEP Inquiry. (2017) *'Green finance progress report'*. UNEP Inquiry. Retrieved from: http://unepinquiry.org/wp-content/uploads/2017/07/Green_Finance_Progress_Report_2017.pdf
- Verma, A., Aggarwal, R. (2020) 'A Study of Green Bond Market in India: A Critical Review'. International Symposium on Fusion of Science and Technology (ISFT 2020). Retrieved from: https://iopscience.iop.org/article/10.1088/1757-899X/804/1/012052/pdf
- Volz, U. (2018) *'Fostering Green Finance for Sustainable Development in Asia'*. Asian Development Bank Institute (ADBI). Working Paper 814 Retrieved from: https://www.adb.org/sites/default/files/publication/403926/adbi-wp814.pdf