GREEN BONDS: A GROWING PHENOMENA OR A PASSING FAD?

ISSN 2277-7733
Volume 9 Issue 1,
June 2020

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Abstract

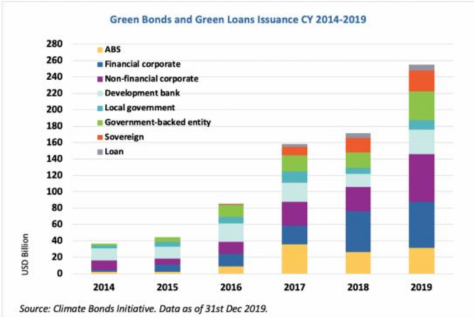
Green bonds are fixed income securities whose proceeds are used for environmental friendly projects. They were first issued by World Bank and since have gained popularity especially during last five years. However, in the absence of a standard metrics to assess the 'greenness' or the impact of the money invested there appears to be scepticism about their long term survival in the global financial markets. An improvement in the risk return profile of these bonds with the help of policy makers could help the sustainability of these bond.

Keywords: *Green Bonds, sustainable finance, Environmental friendly investments, Risk management*

Climate change is one of the greatest problems that mankind has been facing over the last decade or more. The Paris Agreement in 2015 is regarded as a landmark event in our fight to save the planet from exploitative actions of human race. This event marked the beginning of a global group action and commitment to climate change. A total of 195 countries signed the agreement. The Organisation for Economic Co-operation and Development (OECD) estimates that to meet the global infrastructure development requirement in a sustainable manner a total of US$6.9 trillion will be needed every year till 2030 (OECD,2020). Over and above this, investment will also be needed to make the existing infrastructure green. Public funds alone cannot generate this quantum. The funds need to be raised from both public and private sector through both financial institutions and markets. There is a need to innovate and introduce financial instruments that can allocate the risk appropriately to the party that is willing and able to take it. Green bonds have emerged as one such innovation.

Green bonds are financial debt securities issued by financial institutions, non-financial institutions and public enterprises,the proceeds of which are used for environmental friendlyinvestments only (Zachariah, 2020). This financial product ensures flow of funds for sustainable projects at the same time giving an opportunity to the environmentally conscious investor. According to the WorldBank, (World Bank, 2019) the first issue of green bond came to the market in November 2008, on request of a group of Swedish Pension Funds who wanted to contribute to the cause of environmental sustainability in November 2008. In other words, the biggest challenge was in ascertaining the impact of projects for the purpose of investment.This pioneering issue developed an awareness of the challenges of climate change and also demonstrated to the investors the possibility of their contributing towards this cause whileearning positive returns (OECD, 2020). However, one of the major concerns even at that time was how the investor couldascertain that his money was being used only for environmental friendly projects and contributing towards a positive impact on climate. The need for transparency in the bond processes was felt and resulted in the International Capital Markets Association (ICMA, 2018) framing the Green Bond Principles that are voluntary process guidelines to promote transparency and thus help in developing integrity in the green bond market.

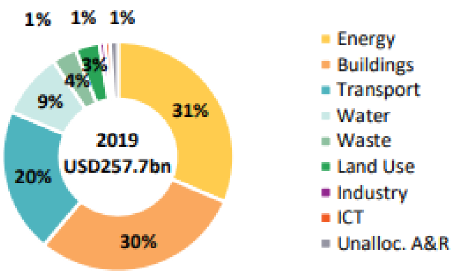
The interest in green bonds have been growing over the last decade and more so, over the last five years. Year 2019 saw a 51% increase in the issuance amount over 2018 at a total amount of US$257.5 bn (Climate Bond Initiative, 2020). Over the years these bonds are being issued by a variety of different entities (Chart 1).While a large portion of the green bonds are being issued by international agencies like the World Bank, International Finance Corporation and other such institutions, the point to note here is that over the last few years the money being raised through sovereign green bond has been increasing and same is the case with non-financial corporate entities.



Source: Climate Bond Initiative, Data as of 31st Dec 2019

Chart1: Green Bonds and Green Loan Issuance 2014-2019

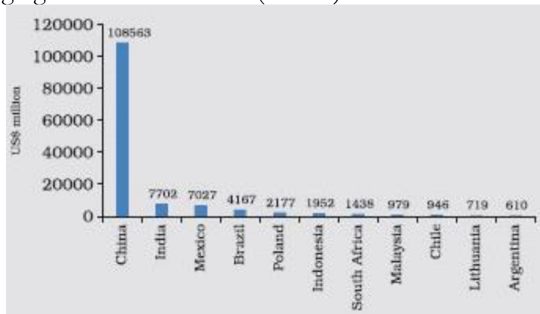
According to a report published by Climate Bonds Initiative in 2019, USA, China and France are the three countries that have raised maximum amount of funds through Green Bonds and energy and buildings are the largest users of these proceeds.



Source: Climate Bond Initiative

Chart 2: Use of proceeds of Green Bonds

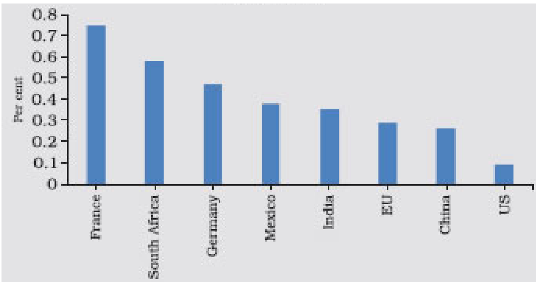
Green Bonds in India: According to the environment ministry estimates, India will need $2.5 trillion to meet climate change targets, of which $280 billion is needed in the next five years for green infrastructure alone. This is a large size of investment needed especially when we consider that the expenditure made in India on infrastructure over the last decade and a half has been a little over US$1 trillion (Agrawal, 2019). This increases the relevance of green finance sources in the country. According to a RBI report (RBI, 2019), India ranks second in green bond issuance among the Emerging Market Economies (Chart3).



Source: Emerging Market Green Bond Report, 2018, International Finance Corporation

Chart 3: Emerging Market Green Bond Issuance, 2012-18

As a percentage of the total bond issuance, India has numbers that are comparable to the other countries.



Source: Climate Transparency Group, G20 Brown to Green Report, 2017

Chart 4: Green Bond as a percentage of total Debt (As of 2017)

India's efforts to streamline green finance started in 2007, when RBI insisted on sustainable development practices to be followed by financial institutions and at the same time emphasized on non-financial reporting. In 2015, RBI included small renewable energy projects and social infrastructure projects within the priority sector lending requirements of the banks, thus, ensuring flow of funds in this sector. In 2017, SEBI came up with disclosure norms for issuance and listing of green debt securities (SEBI, 2017).

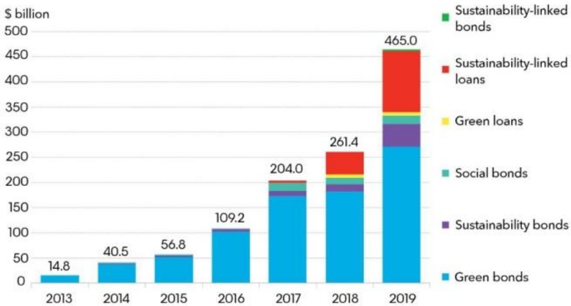
Innovations in the Green Bond Markets

As the popularity of green bonds increased, there were some innovations on the terms and conditions of the original bonds that appeared in the market.

Green Sukuk: The green bond market encouraged an innovation in the Islamic finance market too with the issue of Shariah complaint green sukuk. A green sukuk, like a conventional sukuk, buys assets which the investor partially owns and gets a share of the profits generated from it. However, after a pre-determined period, the issuer pays back the par value and the contract is terminated. In case of green sukuk the proceeds are used to buy environmental friendly assets like the assets for renewable energy.

The Green Sukuk was first issued by a renewable energy group, Tadau Energy, in Malaysia. Through this issue Tadau Energy raised US$59 mn. This was followed by Sovereign Green Sukuk issued by the Indonesian Government to raise US$1.2 bn and US$750 mn in 2018 and 2019 respectively. In 2019, a supranational agency, Islamic Development Bank raised US$1.12bn to invest in projects related to green transportation, renewable energy and pollution control in its member countries (Noronha, 2020).

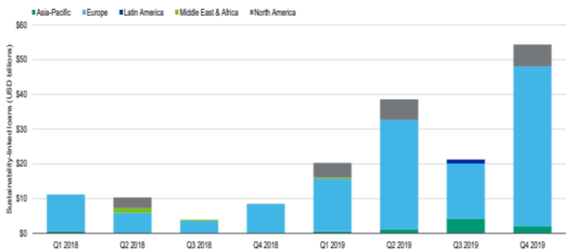
Sustainability linked loans: Sustainability-linked loans account for 25% of the Green bonds issued globally (Economist, The, 2020). These bond are different in the sense that they are not issued for a specific project but depend on the overall performance of the issuer. In this green paper, the coupon rate varies according to the performance of the borrower on the sustainability related key parameters. The chart below shows the growing popularity of these bonds within the overall sustainability debt which also includes the social bonds over the last couple of years.



Source: BloombergNEF, Bloomberg L.P.

Chart5: Global Sustainable Debt Annual Issuance, 2013-2019

If we look at the geographical distribution, these have been largely popular in the European countries.



Source: Moody's Investor Service, Dealogic

Chart6: Growth of sustainability-linked loans region-wise

The main challenge that may hamper the growth of these bonds is the unclear definitions of the key sustainability performance parameters. This could lead to greenwashing[1] rather than an actual green investment. Several global agencies like the International Capital Market Association are working on guiding principles for sustainability linked loans that may help the investors (ICMA, 2020). However, given the range of possible areas of investment there may still continue to be some ambiguity possible in this segment of green paper.

Technological Innovations: In February 2019, BBVA issued the first ever Green Bond using blockchain, for EUR 35 million, on behalf of the Spanish insurance company, MAPFRE using a fully automated blockchain platform that allows the client to structure the instrument directly(Fariña, 2019). Since then there have been several reports on the benefits of using blockchain and distributed ledger technology for the issuing and monitoring of green bond. Experts also see benefit in using technology to assess the impact of green investments.

Issues and Challenges: While green bond seems to be the need of the hour and have generated interest from both borrowers as well as investors there are still some issues that need to be addressed.

Initial Authentication and monitoring: The problem with green bond is that there needs to be authentication of the claimed greenness (positive impact on the environment) for the bonds that have been issued. This is needed to give credibility to the green bonds as the investors themselves cannot access the impact of their funds. There are several ways of achieving this. Some issuers follow the Green Bond Principles that are endorsed by the International Capital Market Association (ICMA). These principle were the first set of guiding principles on ways to invest the proceeds in order to be defined as green and are voluntary. While there are other set of issuers that go in for a private party validation. These private parties include credit rating companies like the Moody's or specialised firms like the Climate Bonds Initiative, Sustainalytics, Cicero Shades of Green and many more. However, the point to be noted here is that there is no universally accepted framework available and the green definition varies from one offer to another and one industry to another and this has led to controversies in the green bond market.

China has faced criticism that it has been using its green bond proceeds to finance the efficiency improvement measures of its fossil-fuel powered power plants (Shepherd &Weinland, 2020). It can be argued that these funds are having a positive impact on the environment, however, the fact remains that they are supporting the use of fossil fuel. Similarly there has been debate on whether the issuers overall commitment to environment and their total carbon footprints should be considered or not. Poland sovereign Green bonds were in a controversy because of the country's overall dependence on coal-based power plants. To handle these differences in the various investmentproposals, rating frameworks like Cicero's have come up with the idea of

[1] Green washing is the term being used to refer to the process of manipulating the information in a manner that it makes the investment seem much more environmental friendly than it actually is. This is a play on the term 'whitewashing' which means using misleading information to disguise bad/wrong behaviour.

different shades of green. It lefts to be seen if this improves the information communicated to the investor.

Risk Management

Green bonds carry two types of risks- financial risk and green risk. Financial risk coming from the fact that it is a financial instrument and different types of risks associated with a debt instrument will be applicable here. At the same time since it has a green agenda, in other words, the proceeds are being used for environmental friendly projects, and the risk here is that the shade of green may be other than what the investor expected (Bigger, 2017).

The green risk can be put into categories- impact of the investment and information asymmetry. According to Tripathy 2017, due to lack of development of a standardized metrics to communicate to the investor both green benefits and risk leads to an uneven use of green bonds across jurisdictions and industries. This results in variation in actual use of the proceeds vis-a vis the committed use and further resulting into variation in the perception of risk vis-a vis the actual risk.

Conclusion

Although green bonds have been quite successful over the last few years, the debate about their long-term sustainability continues. A senior executive at the world's largest pension fund states that in the current form these bonds could be just a passing fad and may not last long (Asgari, 2019). Two aspects need to be considered by the policy makers to ensure that this unique debt instrument continues to remain in the market instead of dying a slow death – risk and return associated with these bonds. As the risk-return profile of the green bonds improve, it will be possible to sustain them in the long term.

The cost of issuing a green bond is higher due to the fact that you need to validate the use of it's proceeds and at the same time the returns for the investors have been found to be same as that of the conventional bonds. As a result these bonds turn out to be costlier for the issuer. Green bond can be made attractive for the issuer if the price of carbon goes up. As the carbon pricing increases, environmental friendly projects are likely to have higher returns compared to the non-environmental projects. This implies that the cost of polluting will be factored into the cost of production which will indirectly incentivise the green bond market.

The Central banks can consider making investment in green bonds especially the sovereign green bonds as a part of reserve requirements for the banks in their countries. Other possibility could be to include them in the priority-sector lending category for the various banks to invest. But this would be possible only in count that have the provision for priority sector lending like India.

The policy makers should also consider reducing the risk associated with the sustainable investments by offering higher amount of guarantees and insurances. This will make them more attractive and make them sustainable instruments rather than a passing fad.

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