A STUDY ON INVESTOR'S AWARENESS TOWARDS GREEN BOND

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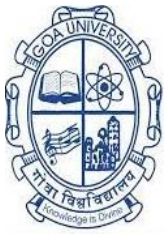

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DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation report entitled, "**A Study On Investor's Awareness towards green bonds"** is based on the results of investigations carried out by me in the Financial Services at the Goa Business School, Goa University under the Supervision and guidance of **Mr. Jick Castanha Assistant Professor,** and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities will not be responsible for the correctness of observations / experimental or other findings given the dissertation.

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COMPLETION CERTIFICATE

This is to certify that the dissertation/internship report **"A Study On Investors Awareness Towards Green Bond"** is a bonafide work carried out by **Mr. Viraj Sharadchandra Narvekar** under my supervision/mentorship in partial fulfilment of the requirements for the award of the degree of **MBA (Financial Services)** in the Discipline Financial Services at the Goa Business School, Goa University.

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INDEX

TABLES INDEX

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

1.1 Introduction

The green bond is a model of a financial tool used to raise funds for green initiatives or projects. The proceeds from the bond issuance are specifically designated for projects that have a beneficial effect on the environment, such as green energy, sustainable agriculture, or climate change mitigation, and they are typically issued by governments, companies, or other organizations.

1.1.2 History Of Green Bond

Green bonds were first issued in 2007 by the European Investment Bank (EIB) and the World Bank. These bonds were designed to raise funds for projects with environmental benefits such as renewable energy, energy efficiency, and pollution prevention. However, it wasn't until 2013 that the green bond market began to gain significant momentum. That year, the energy company, EDF, issued the first corporate green bond.

Since then, the green bond market has grown rapidly, with a total of $258.9 billion in green bonds issued in 2020 alone. The market has attracted issuers from a variety of sectors including banks, utilities, municipalities, and corporations. In addition, certain other standards and guidelines have been developed to ensure that green bonds meet certain environmental criteria and provide transparency to investors.

Green bonds have become an important tool for financing the transition to a low-carbon economy and addressing climate change. They allow potential investors to support environmentally beneficial projects while earning a financial return.

Green bonds are fixed-income investments used to finance green initiatives. Bonds for energy-efficient buildings and renewable energy projects are classic examples. As observed in 2019, when a new world record of green bond issuance of USD 257.7 billion was established, green bond issuance has been rising significantly. (Climate Bonds Initiative 2019)

The 2030 Agenda for Sustainable Development discusses climate change's importance. Businesses, individuals, and governments agreed in the most recent Paris Agreement (2017) on the urgent requirement to invest in a green future. As a result, financial players are developing appropriate solutions. Green bonds are undoubtedly one of the new approaches in India. The primary goal of green investment is to concentrate on emerging markets that have

the potential to offer investment opportunities consistent with the development of low-carbon and climate-resilient (LCR) economies (CPI, 2012). Bonds have long been used to finance LCR projects, but since 2007, a market specifically for "green" bonds has emerged. This branding sets a green bond apart from a standard bond.

From the below Fig 1.1 In 2021, the emerging market green bond issuance saw significant growth as investors increasingly turned their attention toward environmentally sustainable investments. emerging markets issued a total of $29.5 billion in green bonds in 2021, up from $20.7 billion in 2020.

China remained the largest issuer of green bonds in emerging markets, accounting for over half of the total issuance. Other notable emerging market issuers included Brazil, India, and Mexico. The majority of the issuance was in the energy and transportation sectors, with renewable energy projects being the most popular.

The demand for green bonds in emerging markets was largely driven by investors' growing concerns about climate change and their desire to support sustainable investments. The pandemic also played a role, as governments and corporations looked for ways to support economic recovery while also addressing environmental concerns.

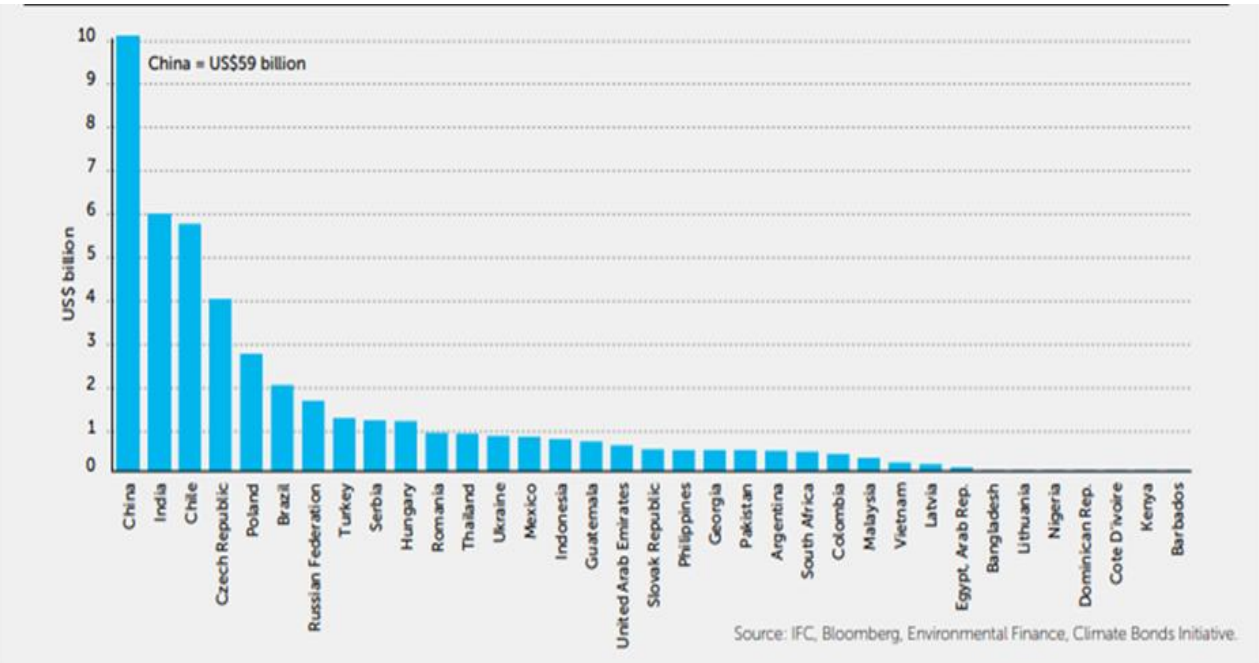

Fig 1.1: Emerging market Green bond

Source: emerging market green bond issuance 2021

India started issuing green bonds in 2015 with YES Bank being the first to issue a green bond for financing renewable and clean energy projects such as wind and solar. Since then, multiple state-owned commercial banks and financial institutions have been part of the public sector, corporates, and the banking sector have also entered the green bond market. When an organization issues a green bond, it might pull in new investors who are keen on sustainable investments, increasing the bond's demand. This can lead to a lower yield difference, known as the "green premium" or "greenium," which investors may accept for the larger environmental benefit. Issuing green bonds can also help entities access a new segment of investors and diversify their investor base. The entry of sovereigns into the green bond market signals a commitment to low-carbon growth strategies and helps to grow private green bond markets

The Indian Finance Minister, Nirmala Sitharaman, has made several announcements on green bonds in her successive budget statements. Nirmala Sitharaman stated that the Indian government would take several steps to encourage the issuing of green bonds in India in her Budget Speech for the fiscal year 2021–2022. The development of a was one of these initiatives a new framework for social stock exchanges by the Securities and Exchange Board of India (SEBI), which would allow non-profit organizations, volunteer groups, and social enterprises to raise money by issuing bonds or other securities creating a long-lasting institutional framework to offer loan enhancement for infrastructure and housing projects, including those that support environmental sustainability. This framework would make it easier and less expensive for such initiatives to access the bond market.

The idea of green bonds was developed through scholarly study and has been thoroughly examined in research articles. The effectiveness, significance, and potential of green bonds as a financing method for environmental initiatives have been examined in several study articles.

1.2 Green bond

A special kind of bond called a "green bond" is one that is used to fund environmentally beneficial initiatives including sustainable infrastructure, renewable energy, and energy efficiency. These projects must comply with particular environmental requirements and requirements to receive the money from a green bond. Governments, businesses, and other institutions that are dedicated to advancing sustainable finance and lowering carbon emissions frequently issue green bonds. Since investors are increasingly looking to make investments that

are both socially and ecologically responsible, the issue of green bonds has increased dramatically.

1.2.1 Scope Of The Study

The scope of this study would aim to examine the current level of awareness among investors about green bonds and their potential benefits for the environment and society. The study would also identify the factors that influence investor decision-making when it comes to green bonds, such as risk perception, financial returns, and social impact, and assess the current barriers to investment in green bonds.

1.2.2 Importance

This study will help to understand the importance of promoting sustainable finance, encouraging investment in green bonds, supporting the growth of the green bond market, and addressing climate change. By raising awareness among investors about the importance of investing in environmentally-friendly projects, the study can help promote sustainable finance. It can also encourage investment in green bonds by identifying barriers to investment. the study can support the growth of the green bond market by providing insights into investor behaviour and preferences Finally, by promoting investment in sustainable projects, green bonds can be used to reduce carbon emissions, increase energy efficiency, and promote the transition to a low-carbon economy.

1.3 Literature Review

The Indian green bond market is still in its early stages. To offer sustainable finance, it is maximizing the growth of the green bond market by attracting various investors to it Jha & BaChart., (2019)**.** According to a study by Maltais & Nykvist., (2021)**,** companies that issue green bonds view the expansion of their investor base, reduced capital costs, and ability to meet the demand for sustainable products as the key benefits of doing so Queen., (2016) discovered that the innovative use of green bond proceeds can both hinder and attract investors. The impact of information quality on the growth of green bonds was coved in several studies. In their study, Bhutta et al., (2022) highlighted the importance of favorable market Jha & Bakhshi., (2019) conditions for the continued growth of green bonds. For this financial instrument to be successful, both issuers and investors must be content with the returns and safety of the securities. Otherwise, green bonds may face difficulties in the future. However, despite potential challenges, the issuance of green bonds has increased globally, with US$257.7 billion

worth of green bonds issued in 2019 alone, according to the Climate Bonds Initiative, (2020) Martin & Moser.,(2016) looked at whether or not investors valued information quality when making investment decisions. Their study's findings indicate that investors value social benefits connected to investments. Investors respond favorably to investment possibilities when managers provide complete information on the usage of funds. Investors are confident in their ability to use the money for lengthy environmental initiatives. They feel secure making investments in certain financial products**.** The academic research on green bonds is still in its early stages. The theories explaining why investors choose to invest in green bonds mainly revolve around social, financial, and institutional factors. According to Derwall et al., (2011)**,** socially responsible investors prioritize personal and social values over profit maximization. Green bonds attract diverse investors, including mainstream institutional investors, special Environmental, Social, and Governance (ESG) focused investors, responsible investors, corporate treasurers, municipal governments, and retail investors, among others Tukiainen.,(2020) Biddle et al.,(2009) researched related issues, Meanwhile, Tolliver et al., (2019)addressed the problem of using green bond funding for ongoing projects instead of investing in new green projects. The authors argue that investing in sustainable projects and providing better environmental planning with dedicated financial instruments for climate-friendly projects can help achieve ESG objectives. Barua & Chiesa., (2019)investigated the supply side of green bonds and related factors. They utilized the Blinder-Oaxaca method to analyze issuer-specific characteristics and their impact on the supply of green bonds. Their findings suggest that certain bond-related factors, such as issuer quality and geographical location, influence the green bond market. This study complements previous research on the topic of environmental commitment and firms' capacity to raise funds. It highlights that socially responsible firms can quickly raise funds for new projects due to their stakeholders' trust. Issuing high-yield green bonds provides issuers with a broader range of green investment options for investors and allows issuers to access different investor segments. In August 2014, NRG Yields, an American energy company, issued the first high-yield green bond, amounting to US$ 500 million. Corporate green bonds enable companies to invest in reducing their environmental impact while also attracting investors who prioritize environmental concerns Flammer., (2020) However, financial and institutional considerations are more closely attached to the purpose of investing in green bonds. There are many new environmental and social issues as a result of globalization. As a result, international investors are more conscious of the need to consider social and environmental factors before investing (Jansson & Bie., (2011)**.**

1.4 Research Gap.

The lack of investor knowledge and the advantages of investing in green bonds is the research gap. Many investors might not be aware of the chances presented by green bonds, despite the potential advantages of investing in environmentally friendly initiatives. Addressing this gap is important because it can inform efforts to increase investor education and awareness of green bonds, and help to drive increased investment in sustainable finance.

1.5 Objectives

The following are the key goals of the paper

- To study the demographic profile of investors and to know the level of awareness regarding green bonds.
- To identify the factors influencing investors to invest in green bonds

1.6 Methodology

This study shows data collected from the primary source (google form) in the form of quantitative the purpose of the study was convenience sampling was followed and 101 responses were collected from the 120 people sent. The study uses a questionnaire method of data collection in the form of quantitative method. The data was collected from the range of 8th April 2023 to 16th April 2023 the questionnaire consisted of Three parts: the first part covers demographic information and second it aims at measuring the level of awareness and the Third part aims to analyze benefits and factors influencing investors for green bonds. The techniques used to identify the first objectives which are related to the statistic of data (age, gender, income, occupation), etc. which help to know the amount of interest in accordance with the green bond. The second objective related to different factors that could force and motivate them to invest in green bond

1.7 Limitation

There are four constraints that require recognition and resolution of the current research. These four limitations are as follows:

- Limited Sample Size: The study may have a small number of participants, potentially limiting the general ability of the findings to the larger population of individuals interested in green bonds.

- Difficulty in Measuring Awareness: Measuring awareness towards green bonds may be challenging, as the concept of green bonds is relatively new and may not be well-understood by participants. This could lead to potential inaccuracies in the data collected.
- Limited Geographical Scope: The study may only focus on a specific geographic region, potentially limiting the applicability of the findings to other areas where awareness towards green bonds may be different.
- Social Desirability Bias: Participants may respond in a way that they believe is socially desirable, potentially skewing the results and leading to an overestimation of awareness towards green bonds.

1.8 Chapterisation

Chapter One: Introduction

This unit includes an introduction to green bonds followed by brief history, meaning, scope, importance literature review, the objective of the study Research Methodology research gap, and Limitations of the Study.

Chapter Two: Data Analysis and Interpretation

This unit includes a Study demographic table graphical representation and factor analysis.

Chapter Three: Summary, Findings Conclusion, and Suggestion

This unit includes the conclusion of the study and suggestions of the author include findings of the study conclusion and suggestion

CHAPTER 2: DATA AND ANALYSIS

2.1 Introduction

To achieve the objectives of the study, data were collected from 101 investors through a questionnaire. Convenience sampling was followed as the sampling method. The questionnaire consisted of two parts; the first part collected demographic information, and the second part aimed to measure the level of awareness and analyze the benefits and factors influencing investors to invest in green bonds.

2.2 Demographic profile

Demographic profiling is the system of identifying and examining a population's or group's characteristics. A population's demographic profile can include details like age, gender, race, income position, the position of education, employment, and other important aspects. This data is employed for understanding the population's makeup and to discover patterns and trends that might help with decision-making across various fields.

Although the general demographic profiling (see Table 1) The table shows the distribution of a sample of 101 individuals based on their age demographic characteristics and the purpose of green bond. The age groups are divided into five categories: (up to 20), (21-30), (31-40), (41-50), and (51 and above). Out of the 101 individuals surveyed, 3 (or 3.0%) are in the age group of (up to 20), 84 (or 84.0%) are in the age group of 21-30, 8 (or 8.0%) are in the age group of (31-40), 4 (or 4.0%) are in the age group of (41-50), and 2 (or 2.0%) are in the age group of (51 and above) so up to 84 % so we see that. The sample includes 50 (or 50.0%) males and 51 (or 51.0%) females, indicating that the sample has slightly more females than males. The total percentage adds up to 100.0, which is expected as this is the total percentage of individuals in the sample. The income levels are divided into four categories: "less than 1.5 lakh", "1.5 lakhs to 3 lakhs", "3 lakhs to 5 lakhs", and "more than 5 lakhs". Out of the 101 individuals surveyed, 56 (or 55.4%) have an income of "less than 1.5 lakh", 21 (or 20.8%) have an income of "1.5 lakhs to 3 lakhs", 10 (or 9.9%) have an income of "3 lakhs to 5 lakhs", and 14 (or 13.9%) have an income of "more than 5 lakhs". This table indicates that the majority of individuals in the sample have an income of "less than 1.5 lakhs", with a smaller percentage of individuals having higher income levels. However, it is important to note that this sample may not be representative of the entire population and may not reflect the true distribution of income levels in the population. the sample includes 2 (or 2.0%) individuals with SSC education, 5 (or 5.0%)

Table 1: Demographic Profile			
Demographic Characteristic (N = 101		**Frequency**	**Percentage%**
Age	Up to 20	3	3.0
	21-30	84	84.00%
	31-40	8	8.00%
	41-50	4	4.00%
	51 and above	2	2.00%
Gender	Male	50	50.00%
	Female	51	51.00%
Income	less than 1.5 lakh	56	55.40%
	1.5 lakhs to 3 lakhs	21	20.80%
	3lakhs to 5 lakhs	10	9.90%
	more than 5 lakhs	14	13.90%
Marital Status	Married	12	11.90%
	Unmarried	89	88.10%
Education	SSC	2	2.00%
	HSSC	5	5.00%
	Graduation	49	48.50%
	Post Graduation	40	39.60%
	PhD	2	2.0%
	Professional	3	3.0%
occupation	Student	50	49.50%
	Govt Employed	2	2.0%
	Private Employee	32	31.70%
	Unemployed	8	7.90%
	Business	9	8.90%

Source: Authors Compliance

individuals with HSSC education, 49 (or 48.5%) individuals with graduation education, 40 (or 39.6%) individuals with post-graduation education, 2 (or 2.0%) individuals with a Ph.D. degree, and 3 (or 3.0%) individuals with professional education. The total percentage adds up to 100.0, which is expected as this is the total percentage of individuals in the sample. This table indicates that the majority of individuals in the sample have a graduation or post-graduation education, with a smaller percentage of individuals having other education levels. The demographic table shows the distribution of a sample of individuals based on their employment status. The sample includes 50 (or 49.5%) students, 2 (or 2.0%) government employees, 32 (or 31.7%) private employees, 8 (or 7.9%) unemployed individuals, and 9 (or 8.9%) business owners. The total percentage adds up to 100.0, which is expected as this is the total percentage of individuals in the sample. This table indicates that the majority of

individuals in the sample are students or private employees, with a smaller percentage of individuals being government employees, unemployed, or business owners.

2.3 Source of green bond

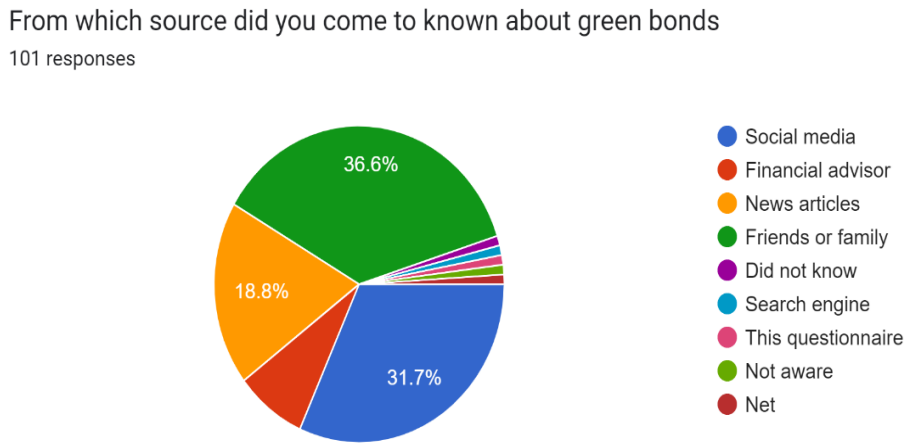

Fig 2.: Green Bond Sources

Source: Authors' compliance

As we see from (figure 2) describes that social media is the most common source through which investors came to know about green bonds, accounting for 31.7% of the responses from social media. Friends and family are the first most common source, accounting for 36.6% of the responses. News articles are the third most common source, accounting for 18.8% of the responses. Financial advisors are the fourth most common source, accounting for 7.9% of the responses. Other sources combined account for the remaining 5% of the responses. However, based on the data provided, it seems that social media and personal networks (friends and family) are the most common sources through which investors come to know about green bonds, followed by social media, news articles and financial advisors.

2.4 Awareness of Green Bond

The (figure 3) shows the level of awareness among respondents about green bonds. The chart is divided into four segments, each representing a different level of awareness. The largest segment, representing nearly 30% of respondents, indicates that they are not at all aware of green bonds. This suggests that there is a significant portion of the population that is unfamiliar with this type of investment.

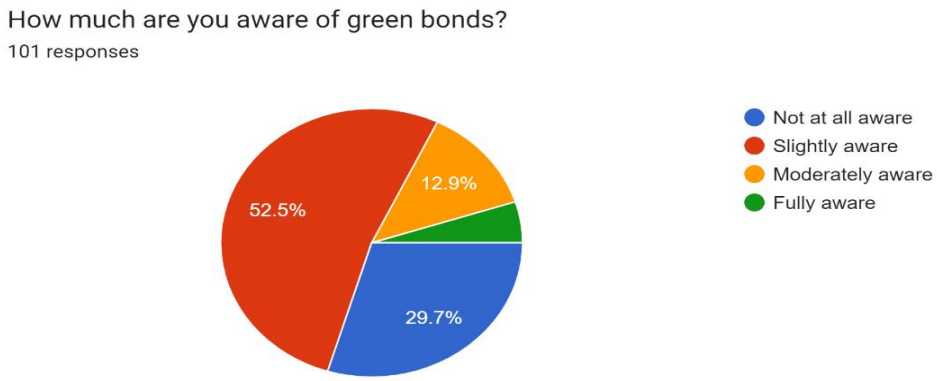

Fig 3: Awareness of green bond

Source: Authors Compliance

The next largest segment, representing 52.5% of respondents, indicates that they are slightly aware of green bonds. This suggests that while many people have heard of green bonds, they may not fully understand the concept or the potential benefits. The third segment, representing 12.9% of respondents, indicates that they are moderately aware of green bonds. This suggests that some respondents have a better understanding of the concept and may have done some research or reading on the topic. Finally, the smallest segment, representing only 5% of respondents, indicates that they are fully aware of green bonds. This suggests that there is a very small group of respondents who have a comprehensive understanding of the concept and may be actively following developments in the market.

2.5 Sustainable Development in Green Bond

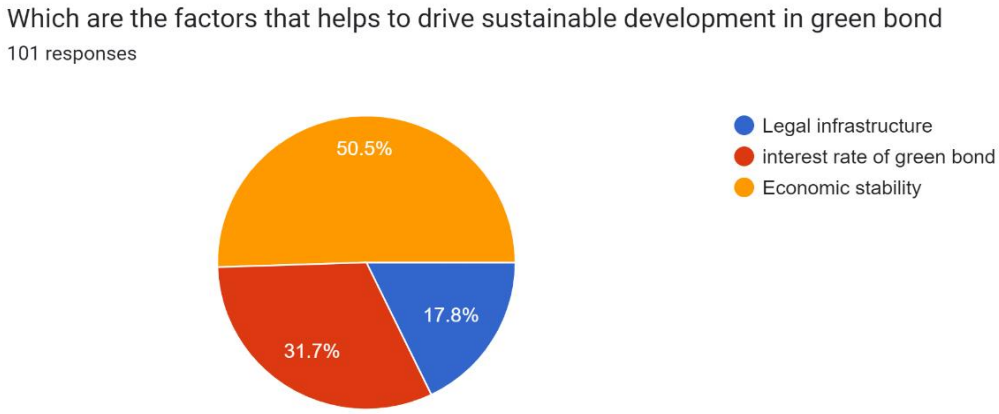

Fig 4: Sustainable development in green bond

Source: Author's compliance

As we see in (figure 4), the most commonly identified factor is economic stability, with 50.5% of respondents selecting this option. This suggests that many people believe that the stability of the economy is an important factor in driving sustainable development in green bonds. The next most commonly identified factor is the interest rate of green bonds, with 31.7% of respondents selecting this option. This suggests that many people believe that the interest rate offered on green bonds is an important factor in attracting investors and driving sustainable development.

The final option provided was legal infrastructure, and 17.8% of respondents selected this as a factor driving sustainable development in green bonds. This suggests that some people believe that having a legal framework in place to support green bonds is important for encouraging investment and driving sustainable development.

2.6 Exploratory factor analysis model

EFA stands for Exploratory Factor Analysis, which is a statistical method used in research to identify underlying factors or dimensions in a set of data. EFA is often used in the social sciences to explore complex relationships between variables and to develop measurement instruments. In EFA, researchers input a set of observed variables, such as survey responses, into a statistical software program, which then identifies the underlying factors that explain the relationships among the variables. These factors are often expressed as a set of latent variables that cannot be directly measured but can be inferred from the observed variables. EFA is useful in research because it can help to simplify complex data and identify underlying structures that may not be immediately apparent. It is often used in the early stages of research to develop may not be immediately apparent. It is often used in the early stages of research to develop h1potheses and refine measurement instruments before further analysis is conducted.

Table – 2: Factor Analysis					
FACTOR ANALYSIS (overall α = 0.881, N= 13)		**F1**	**F2**	**F3**	**F4**
F1 (Recomendation) (α = 0.885)	Would you recommend others to invest in green bonds	**0.813**			
	A Green bond suitable for investors who are looking for an environmental project	**0.833**			
	Investing in green bonds helps to fund the green/environmental project	**0.839**			
	Investing in green bonds leads to a better environment in future	**0.748**			
F2 (Advantages) (α = 0.725)	Investing in green bonds helps investors to claim tax benefits		**0.809**		
	It is easy to invest in green bonds		**0.689**		
	Are green bonds helpful in the development of financial markets		**0.687**		
F3 (Cost) (α = 0.732)	Investing in green bond is expensive			**0.761**	
	Green bonds offer higher coupon rate as compared to non-green bonds			**0.680**	
	Investing in green bond will yield higher to investment			**0.630**	
	Higher coupon rates on green bond will attract many investors			**0.493**	
F4 (Criteria) (α = 0.729)	Green bonds will help to fund the non-environment projects				**0.856**
	Rank the factor which you will consider while investing in green bond				**0.75**
Kmo Measure Of Sampling Adequacy		**0.829**			
Eigen Value		**5.55**	**1.556**	**1.188**	**1.062**
Variance Explained		**26.831**	**15.926**	**15.009**	**14.204**
Total Variance Explained		**71.97%**			

Source: Authors Compliance

From (Table 2) we see that the total number of responses collected was 101 and with the help of exploratory factor analysis, The result of factor analysis based on 13 perception-related items from the survey data gave four underlying dimensions (see Table 2) F1 – recommendation, F2 -Advantages, F3 – cost, F4 -criteria. These four factors explained 71.97% % of the variance

A factor analysis was conducted with one factor (F1) and four variables related to investing in green bonds. The factor analysis yielded a Cronbach's alpha reliability coefficient of 0.885 for the factor, indicating high internal consistency among the variables. The loadings for each variable on the factor are as follows: “Would you recommend others to invest in green bonds" has a loading of 0.813"A Green bond suitable for investors who are looking for an environmental project" has a loading of 0.833."Investing in green bonds helps to fund the green/environmental project" has a loading of 0.839 "Investing in green bonds leads to a better environment in future" has a loading of 0.748. These loadings indicate the strength and direction of the relationship between each variable and the underlying factor. In this case, it seems that all four variables are strongly related to the factor, with loadings above 0.7 indicating a substantial relationship. but it seems to reflect attitudes and beliefs related to investing in green bonds, such as recommending them to others, perceiving them as suitable for environmental projects, and recognizing their potential to fund and promote a better environment in the future.

on a second factor (F2) that emerged from a factor analysis. The factor analysis had a Cronbach's alpha reliability coefficient of 0.725 for F2, indicating moderate internal consistency among the variables. The loadings for each variable on F2 are as follows: "Investing in green bonds helps investors to claim tax benefits" has a loading of 0.809."It is easy to invest in green bonds" has a loading of 0.689"Are green bonds helpful in the development of financial markets" has a loading of 0.687. These loadings suggest that all three variables are moderately related to F2, with the first variable ("Investing in green bonds helps investors to claim tax benefits") having a stronger relationship with the factor than the other two variables. but it seems to reflect perceptions of the practical advantages and benefits of investing in green bonds, such as tax benefits and ease of investment. Additionally, the third variable suggests a potential link between green bonds and the development of financial markets.

A third factor (F3) emerged from a factor analysis. The factor analysis had a Cronbach's alpha reliability coefficient of 0.732 for F3, indicating moderate internal consistency among the variables. The loadings for each variable on F3 are as follows:
"Investing in green bond is expensive" has a loading of 0.761"Green bonds offer higher coupon rate as compared to non-green bonds" has a loading of 0.680"Investing in the green bond will yield higher to investment" has a loading of 0.630 "Higher coupon rates on the green bond will attract many investors" has a loading of 0.493
These loadings suggest that all four variables are moderately related to F3, with the first variable ("Investing in green bond is expensive") having a stronger relationship with the factor than the other three variables. The nature of F3 is not explicitly stated in the information provided, but it seems to reflect perceptions of the costs and benefits of investing in green bonds, such as the potential for higher coupon rates and yields, as well as concerns about the costliness of green bonds. Additionally, the fourth variable suggests a potential link between higher coupon rates and increased investor interest in green bonds.

A fourth factor (F4) emerged from a factor analysis which has two variables. The factor analysis had a Cronbach's alpha reliability coefficient of 0.729 for F4, indicating moderate internal consistency among the variables. The loadings for each variable on F4 are as follows: green bonds will help to fund the non-environment projects" has a loading of 0.856"Rank the factor which you will consider while investing in green bond" has a loading of 0.75These loadings suggest that both variables are moderately related to F4, with the first variable ("Green bonds will help to fund the non-environment projects") having a stronger relationship with the factor than the second variable. But it seems to reflect perceptions related to the use of funds raised through green bonds, as well as criteria that investors might consider when deciding whether to invest in green bonds.

The overall reliability (α =0.881) of all the 13 factors gave a satisfactory value: factors gave satisfactory value: **F1**- recommendation (α = 0.885), **F2 -Advantages** (α = 0.725), and **F3 – cost** (α = 0.732), whereas **F4 –** Criteria gave α = (0.729), so F1 recommendation gave high indicator compared to the F2, F3, F4 gave moderate the levels of moderate indicators

2.7 Conclusion.

on the demographic table provided, we can conclude that the sample consists of 101 individuals, slightly more females than males, and most individuals in the age group of "21-30". The majority of individuals in the sample have an income of "less than 1.5 lakh", and have a graduation or post-graduation education. In terms of employment status, the majority of individuals in the sample are students or private employees. The study conducted a factor analysis on 13 perception-related items related to investing in green bonds, which resulted in the identification of four underlying dimensions: F1 - recommendation, F2 - advantages, F3 - cost, and F4 - criteria. The overall reliability of all 13 factors gave a satisfactory value. F1 recommendation had the highest indicator with a Cronbach's alpha reliability coefficient of 0.885, while F2, F3, and F4 had moderate levels of indicators. The factors reflect attitudes and beliefs related to investing in green bonds, perceptions of the practical advantages and benefits of investing in green bonds, perceptions of the costs and benefits of investing in green bonds, and criteria that investors might consider when deciding whether to invest in green bonds. There is a significant portion of the population that is not aware of green bonds, with nearly 30% of respondents indicating that they are not at all aware of this type of investment. However, social media and personal networks are the most common sources through which investors come to know about green bonds. News articles and financial advisors also play a role in increasing awareness. While many people have heard of green bonds, the majority of respondents (52.5%) are only slightly aware of the concept, indicating that they may not fully understand the potential benefits. Only a small segment of respondents (5%) are fully aware of green bonds and may be actively investing in them. Regarding factors driving sustainable development in green bonds, economic stability was identified as the most commonly selected factor by 50.5% of respondents. This suggests that people believe that the stability of the economy is crucial for sustainable development in green bonds. The interest rate offered on green bonds was the next most commonly identified factor, with 31.7% of respondents selecting this option. Legal infrastructure was selected by 17.8% of respondents as a factor driving sustainable development in green bonds. Overall, the data suggests that there is a need for more education and awareness about green bonds among the general population, as well as a need to emphasize the potential economic benefits and importance of legal frameworks to support this type of investment.

CHAPTER – 3: SUMMARY, FINDINGS, AND CONCLUSION

3.1 Summary

Green bonds are financial instruments used to fund environmental projects, and the market has seen significant growth in recent years due to investor concerns about climate change. my study successfully achieved its objectives, which were to examine the demographic profile and awareness of investors regarding green bonds and identify the factors influencing their investment decisions. The study found that most investors were male and female aged 21-30, and had a postgraduate degree, with environmental benefits, potential for higher returns, and social responsibility being the top factors influencing their investment decisions. Lack of knowledge and information and the perception of risk were identified as the main barriers to investing in green bonds. Green bonds are effective and significant in financing environmental initiatives in previous research.

3.2 Findings

The finding of my study are as follows

- Objective 1 was to study the demographic profile of investors and to know the level of awareness regarding green bonds.
- Majority of the investors were both male female and aged between 21-30 years (84%).
- Most of the investors had a graduate degree and were students (49.50%).
- About 57% of the investors had heard of green bonds, and only 22% had interest in them.
- The main sources of information about green bonds were from family and friends (36.6%) and social media (31.6%).
- Objective 2 is to identify the factors influencing investors to invest in green bonds.
- The top three factors that influenced investors to invest in green bonds were environmental benefits (79%), potential for higher returns (67%), and social responsibility (54%).
- The main barriers to investing in green bonds were lack of knowledge and information (52%), followed by the perception that green bonds are risky (26%).
- The majority of investors (64%) were willing to pay a premium for green bonds compared to traditional bonds.

- The most preferred green bond issuers were government entities (47%), followed by corporations (38%).
- The result of factor analysis based on 13 perception-related items from the survey data gave four underlying dimensions: F1 – recommendation, F2 -Advantages, F3 – cost, and F4 -criteria. These four factors explained 71.97% of the variance.
- F1 reflects attitudes and beliefs related to investing in green bonds, such as recommending them to others, perceiving them as suitable for environmental projects, and recognizing their potential to fund and promote a better environment in the future.
- F2 reflects perceptions of the practical advantages and benefits of investing in green bonds, such as tax benefits and ease of investment. Additionally, there is a potential link between green bonds and the development of financial markets.
- F3 reflects perceptions of the costs and benefits of investing in green bonds, such as the potential for higher coupon rates and yields, as well as concerns about the costliness of green bonds. Additionally, there is a potential link between higher coupon rates and increased investor interest in green bonds.
- F4 reflects perceptions related to the use of funds raised through green bonds, as well as criteria that investors might consider when deciding whether to invest in green bond

3.3 Conclusion

Based on study's findings, it can be concluded that there is a moderate level of awareness among investors about green bonds, with more than half of them having heard of them. However, the number of investors who have actually interested in green bonds is relatively low. The study also found that environmental benefits, potential for higher returns, and social responsibility were the top factors that influenced investors to invest in green bonds.

The main barriers to investing in green bonds were found to be lack of knowledge and information and the perception that green bonds are risky. Despite these barriers, the majority of investors were willing to pay a premium for green bonds compared to traditional bonds. Additionally, the study found that government entities were the most preferred green bond issuers, followed by corporations.

Furthermore, factor analysis revealed four underlying dimensions that influence investors' perceptions and attitudes towards green bonds. These dimensions are recommendation, advantages, cost, and criteria. The dimensions of recommendation and advantages were found

to have a positive effect on investor attitudes towards green bonds, while the dimensions of cost and criteria had a mixed effect.

In summary, the study suggests that while there is some awareness of green bonds among investors, more education and information is needed to increase investor participation. The study highlights the potential benefits of investing in green bonds, such as environmental benefits and potential for higher returns, and the importance of understanding the factors that influence investor perceptions and attitudes towards green bonds.

3.4 SUGGESTION

One of the most helpful suggestions I can provide following this research is green bond market is an evolving marker the researcher in future can use both surveys (to gather opinions from a lot of people) and interviews/case studies (to get more detailed information from a smaller group). By using both methods, researchers can get a more complete picture of what investors know and think about green bonds. This can help create better ways to encourage sustainable finance.

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ANNEXURE 1: QUESTIONNAIRE

Dear Respondent

The survey has been conducted for the study of investor's awareness towards green bonds As a part of my dissertation, I am Conducting a survey awareness on green bonds. Requesting all to kindly Spare some time to fill in the questionnaire as it will be an immense help to me. I ensure that your responses will be kept confidential and will be used for academic purposes only

Part 1: Demographic Profile (please tick)

Gender:

Male	Female

Age:

Up to 20 years	21-30 years	31-40 years	41-50 years	51and above

Education:

SSC	HSSC	Graduation	Post-Graduation	PhD	Professional

Annual Income:

Less than 1.5 lakh	1.5- 3lakh	3-5 lakh	More than 5 lakh

Occupation:

Student	Govt employee	Private employee	Unemployed	Business	Other (specify)

Part 2: Awareness

1. How much are you aware of green bonds?

Not at all aware	
Slightly aware	
Moderately aware	
Fully aware	

2. Are you interested to invest in green bond

Yes	No

3. If yes why?

High coupon rate	
Diversify portfolio	
Low risk	
Corporate social responsibility	
Tax benefit	
Other	

4. If no why?

Interest rate risk	
Credit risk	
Inflation risk	
Low liquidity	
Low returns	
Other	

5. From which source did you come to know about green bonds?

Social media	
Financial Advisor	
News articles	
Friends or family	
Other (please specify)	

on the scale of 1 to 5(strongly disagree, disagree, neutral, agree, strongly agree.)	1	2	3	4	5
Would you recommend others to invest in green bonds?					
A Green bond suitable for investors who are looking for an environmental project					
Investing in green bonds helps to fund the green/environmental project					
Green bonds will help to fund the non-environment projects					
Investing in green bonds leads to a better environment in future					
Investing in green bonds is expensive					
Investing in green bonds helps investors to claim tax benefits					
It is easy to invest in green bonds					
Are green bonds helpful in the development of financial markets?					
Green bonds will help to fund the non-environment projects					
Green bonds offer higher coupon rates as compared to non-green bonds					
Investing in green bonds will yield higher investment					
Higher coupon rates on green bonds will attract many investors					

Part 3: Benefits & Factors

6. Ready markets easily available to invest in green bond

Yes	No

7. Rank the factor which you will consider while investing in green bond

High coupon rate	
Diversify portfolio	
Tax benefits	
Low risk	
Corporate social responsibility	
Environment projects	

8. Which factor do you think affects more on green bonds? Multiple choice

Inflation rate	
Legal and regulatory framework	
Political will	
International corporation	

9. Do you think a green bond yield more return as compared to a non-green bond?

Yes	No

10. Which are the factors that help to drive sustainable development in green bond

Legal infrastructure	The interest rate of the green bond	Economic stability	others