Improving Bond Market Situation in India

Worked By-

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Abstract-

In recent years, India has experienced a significant improvement in its bond market, which has become one of the fastest-growing markets in Asia. But still it has been facing a persistent problem of illiquidity. This paper seeks to understand the causes and consequences of this illiquid bond situation in India and also how to improve the situation. The research methodology involves a comprehensive review of the literature on bond markets in India, as well as an empirical analysis of data from various sources. The research methodology involves a comprehensive review of the literature on bond markets in India, as well as an empirical analysis of data from various sources.

Introduction-

As mentioned in the Abstract, this research paper seeks to understand the causes and consequences of the illiquid bond situation in India, and provide recommendations to address this issue. The study examines the factors contributing to the illiquidity of the bond market and the impact of this situation on the Indian economy. The research methodology involves a comprehensive review of the literature on bond markets in India, as well as an empirical analysis of data from various sources.

The paper is structured as follows: the first section provides an overview of the Indian bond market and the issue of illiquidity. The second section reviews the literature on the causes of illiquidity in bond markets, with a focus on the Indian context. The third section analyses the consequences of the illiquid bond situation in India. The fourth section proposes recommendations to address the issue of illiquidity in the Indian bond market.

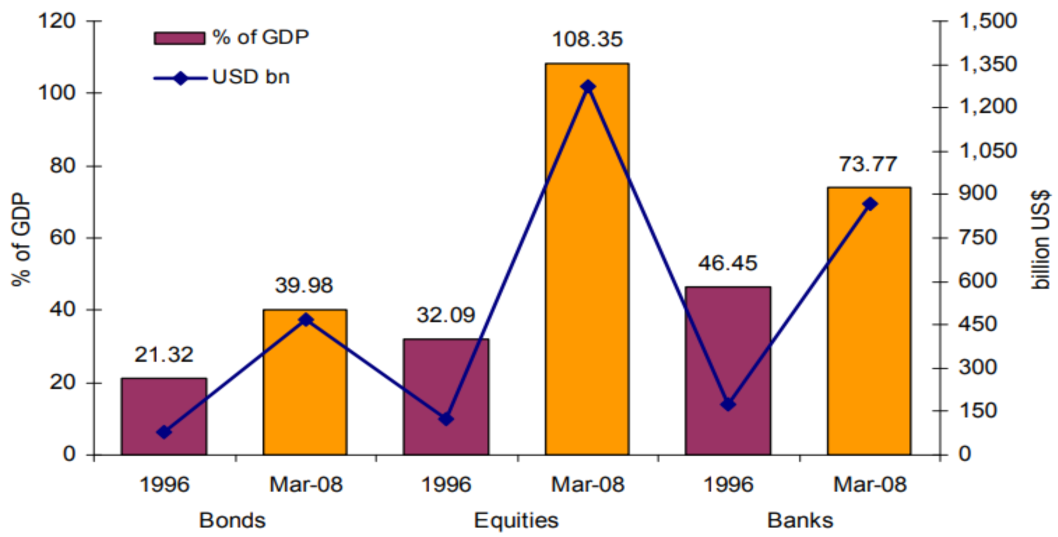
The study finds that the illiquid bond situation in India is primarily due to structural issues such as the dominance of the banking sector, limited participation of institutional investors, and lack of standardized debt instruments. Additionally, regulatory and tax barriers have also contributed to the illiquidity in the market. The consequences of the illiquid bond market in India are significant, including reduced access to financing for corporates, limited diversification options for investors, and a fragmented market structure.

The paper concludes by providing recommendations to address the illiquid bond situation in India. These include improving the regulatory and legal framework, introducing standardized debt instruments, and promoting the participation of institutional investors in the bond market. Additionally, the paper suggests that measures such as reducing transaction costs and improving market transparency can also contribute to enhancing the liquidity of the Indian bond market.

Review of Literature-

- **India's Bond Market— Developments and Challenges Ahead**

According to the Working paper published by Stephen Wells and Lotte Schouw – Zi Belle it has been concluded that even though India's economy has expanded an average of about 8.5% annually for the past 4 years, driven by rising productivity and investment and even in a process of rapid transformation marked by strong economic growth, increased market robustness, and a considerable increase in efficiency, Bank and financial intermediation, however, remain undeveloped with respect to lending and deposits, and most banks remain largely controlled by public sector institutions, limiting the development of a true credit culture, the skills to assess credit risks, and a willingness to accommodate any but the lowest risk borrowers.



Sources: Data for bonds sourced from Bank for International Settlements; equities from World Federation of Exchanges; and bank credit from CEIC.

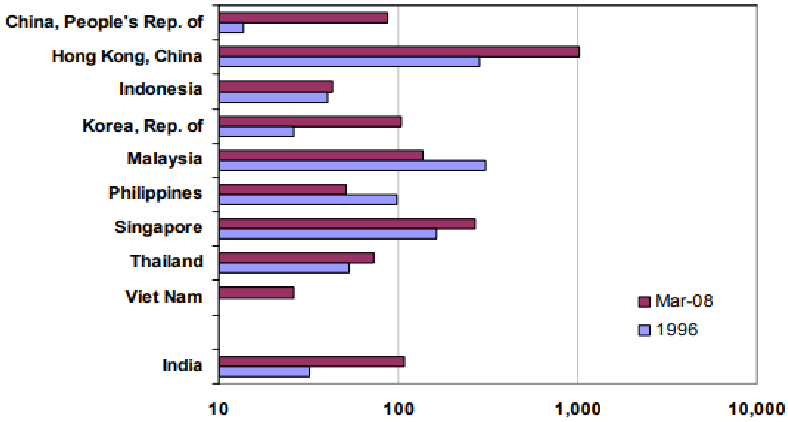
Table 1: India and EEA Bond Markets (% of GDP), March 2008

	Government	Corporate	Total
China, People's Rep. of	46.1	4.7	50.8
Hong Kong, China	8.7	35.3	44.0
Indonesia	17.1	2.0	19.1
Korea, Rep. of	48.8	61.8	110.6
Malaysia	48.1	37.5	85.6
Philippines	33.3	3.5	36.8
Singapore	41.2	30.7	72.0
Thailand	40.7	15.9	56.6
Viet Nam	14.6	2.1	16.7
India	36.1	3.9	40.0

Sources: AsianBondsOnline, Bank for International Settlements, and Reserve Bank of India.

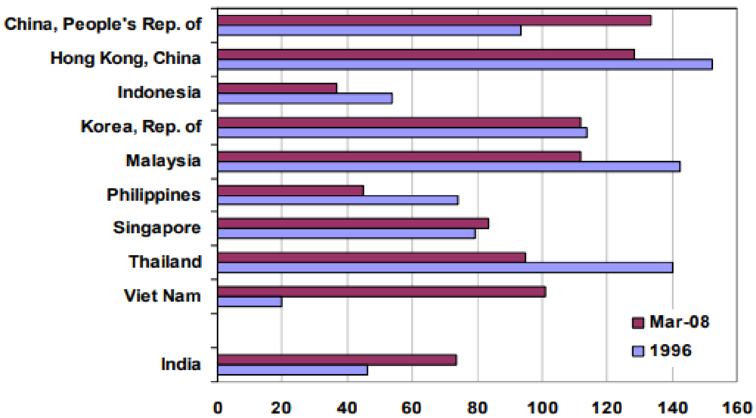
Trading in derivatives started in 2000 and the Indian market is now the tenth largest in the world for futures contracts on single stocks and indexes and the largest for futures on single stocks. Commodity markets have also developed. Three new markets were created in 2000, based on National Stock Exchange (NSE) architecture. However, of the 94 commodities traded, gold and silver account for half of turnover: by 2006 India had become home to the world's third largest derivative market for gold. The government bond market has developed steadily—with an increased supply of bonds, market reforms, and infrastructure enhancements—while new fiscal discipline aimed at controlling the deficit may reduce new bond issuance. Indian government borrowing since the late 1990s has been large and has grown rapidly. Government deficits have also been large. The revenue deficit increased to 5% of GDP in fiscal year 2001–02. Since then, although the deficit appears to be more under control at about 2.5% of GDP, growth has remained strong and suggests the actual deficit has continued to increase, calling for further government borrowing

Figure 2: Equity Market Capitalization (% of GDP)



Sources: AsianBondsOnline and World Federation of Exchanges.

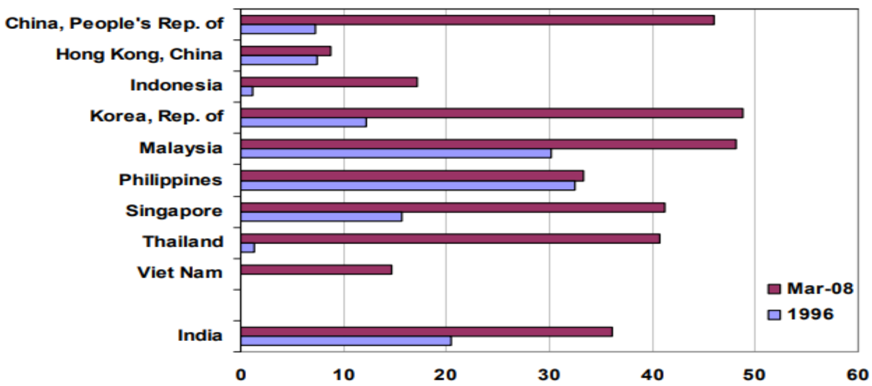
Figure 3: Bank Assets (% of GDP)



Sources: AsianBondsOnline; Reserve Bank of India; *International Financial Statistics*, International Monetary Fund; and CEIC.

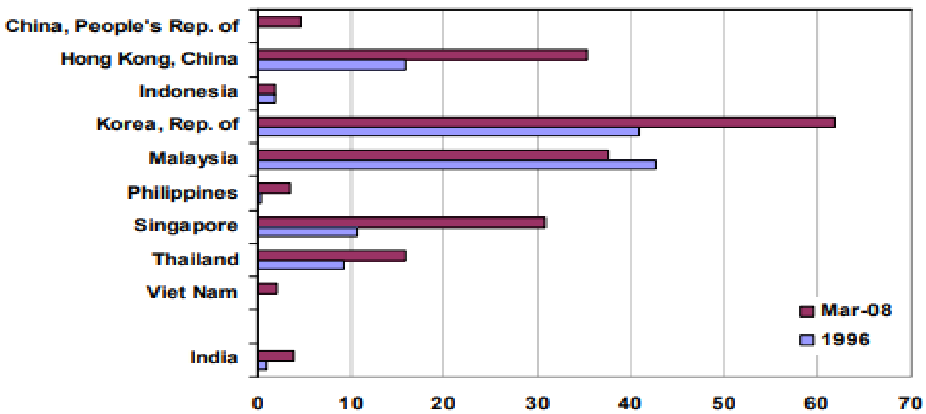
The Indian bond market is, however, less well-developed. While having seen rapid development and growth in size, the government bond market remains largely illiquid. Its corporate bond market remains restricted in regards to participants, largely arbitrage-driven (as opposed to driven by strategic needs of issuers) and also highly illiquid. The lack of development is anomalous for two reasons: First, India has developed world-class markets for equities and for equity derivatives supported by high-quality infrastructure. And second, the infrastructure for the bond market, particularly the government bond market, is similarly of high quality. Relatively weak development of bond markets is not unusual in the region, indeed in many ways the Indian market shows stronger progress—for example in the use of sophisticated and innovative tools such as collateralized lending and borrowing agreements—but it is the rapid development of its other markets which is in such stark contrast to its bond markets.

Figure 4: Government Bonds (% of GDP)



Sources: AsianBondsOnline, Bank for International Settlements, and Reserve Bank of India.

Figure 5: Corporate Bonds (% of GDP)



Sources: AsianBondsOnline, Bank for International Settlements, and Reserve Bank of India.

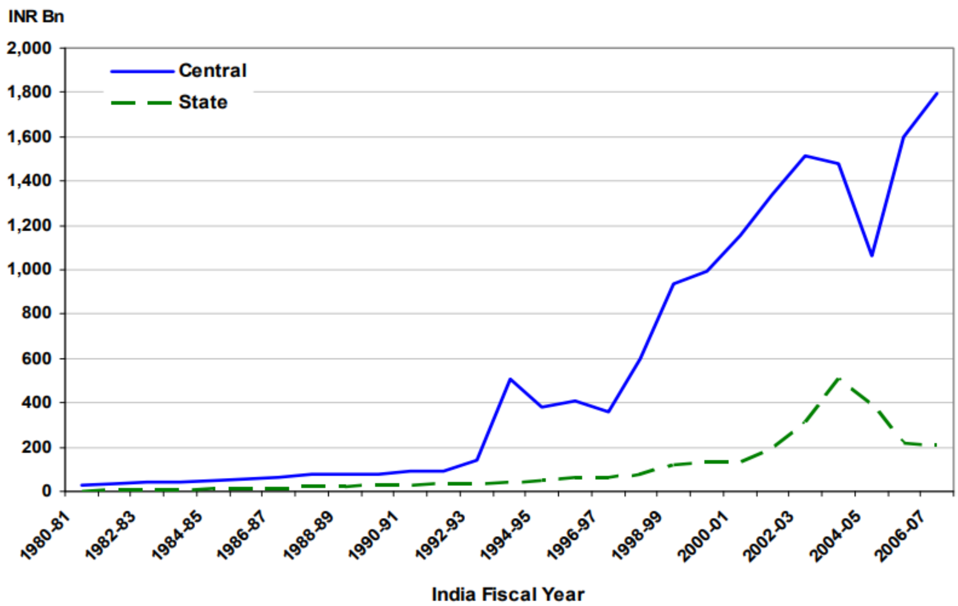
It also discusses about the reforms proceed and development lags of Government Bonds by discussing various factors such as-

- Key Developments-

The government bond market has developed steadily—with an increased supply of bonds, market reforms, and infrastructure enhancements—while new fiscal discipline aimed at controlling the deficit may reduce new bond issuance. Indian government borrowing since the late 1990s has been large and has grown rapidly. Government deficits have also been large. The revenue deficit increased to 5% of GDP in fiscal year 2001–02. Since then, although the deficit appears to be more under control at about 2.5% of GDP, growth has remained strong and suggests the actual deficit has continued to increase, calling for further government borrowing.

The enactment of the Fiscal Responsibility and Budget Management Act (FRBM) in 2003 was the culmination of a lengthy attempt to devise a control strategy for public finances. The act requires the government to follow a strategy to reduce the fiscal deficit to less than 3% of GDP by 2009. Additionally, the government is required to produce a Medium-Term Fiscal Policy Statement as part of the annual budget, in which it explains the sustainability of policies, how they are consistent with the FRBM, and to make projections for the current and following 2 years.

Figure 10: Indian Government Market Borrowing



Source: Reserve Bank of India.

- Reforms-

The Reserve Bank of India has introduced a number reforms since 1992 in an effort to move toward a more transparent and market-driven structure. The process of auctioning new issues was introduced in 1992, replacing the previous system whereby government issues were allocated to investors—largely banks and state-owned investment institutions. Until prohibited under the FRBM in 2006, the RBI frequently intervened in the auction, taking substantial holdings onto its own books ("devolvement") to ensure the auction achieved the right price.

Some of such reforms are-

- Primary Dealers
- Issuance
- Short-Selling
- Repo Market
- Collateralized Borrowing and Lending Obligations (CBLOs)
- Interest Rate Derivative Market
- Trading and Settlement Infrastructure

This research paper successfully concluded that as the markets develop, there is a lot to be learned from sharing experience with other financial centres. While this is widely practiced in equity markets information sharing needs further development in the bond markets. Every capital market has unique features derived from history, culture, and legal structures, but increasingly they also have common features. Equity markets, for example, now almost all follow some version of an electronic order display and execution system. But too often, in learning from others, developing markets try to mimic the more advanced markets of Europe and North America. Structures that suit vast and complex markets in developed countries with greater variety of instruments and investors are less appropriate (or excessively expensive) for less-developed markets. There is thus a strong case for looking to neighbouring emerging markets at similar stages of development for guidance. Doing so may suggest innovative solutions to problems that have been tried successfully in similar markets, provide support for local market innovations based on their success elsewhere, and allow markets to avoid other's mistakes. India has developed a number of unique features in its bond market—for example its CBLO system and the successful electronic trading platform—which could usefully be studied by its neighbours, many of which suffer from limited repo markets or which have (like India) tried unsuccessfully to move bonds on to electronic platforms. At the same time, in the development of its corporate bond market, India can no doubt learn from its neighbour's disclosure policies, bankruptcy processes, consolidation of government benchmark issues, and regulatory structures. Bond market associations are also less well-developed than their equity market counterparts, which benefit from international gatherings and regional associations like the World Federation of Exchanges. The Asian Bond Markets Initiative could play an instrumental role in helping address this shortfall.

- **Corporate bond markets in India – Challenges and Prospects**

According to the Research Paper published by T Rabi Sankar it has been concluded that an impressive growth in corporate bond market is seen and market is even large and growing; the issuer base is expanding; product diversity and sophistication are developing; secondary volumes are low but growing; and market infrastructure is the best in the world. Efforts need to focus on improving complementary– repo and derivative – markets, diversify the investor base, both domestic and global, and improve access of borrowers at the lower end of the credit spectrum.

- Regulatory Efforts taken

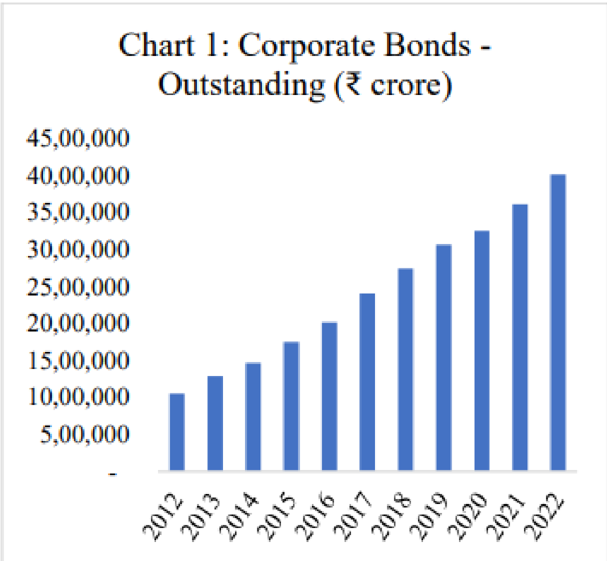
The efforts taken to develop the corporate bond markets broadly over the last decade and a half have been wide ranging. The reforms and developments have ranged from advancements in the corporate bond microstructure to the evolution of a facilitative regulatory framework, complemented by efforts to develop related risk and derivative markets and measures to enhance secondary market liquidity.

SEBI, the primary regulator of the corporate bond market, has taken significant steps over the years to improve the market microstructure for corporate bonds – settlement through delivery versus payment (DVP) mode which removes settlement risk; operationalisation of a trade reporting platform for enhancing transparency; introduction of an electronic bidding platform (EBP) for primary issuance; consolidation of stock through reissuance; introduction of request for quote (RFQ) platforms and many more. RBI has also been taking measures to develop the corporate bond market - permitting banks to provide partial credit enhancement (PCE) to incentivise a larger investor base; requiring large borrowers to raise a share (about 50%) of their incremental borrowings through market instruments; encouraging FPI investment by raising investment caps, introduction of Voluntary Retention Route; etc. As entity regulators, RBI, IRDAI and PFRDA have encouraged their regulated entities to invest in corporate debt securities.

- The Current Status

A. Resource Mobilisation – the primary market

The growing size of the corporate bond market and the number of issuances every year are important indicators of the success of the development efforts of the Government and regulators. Over the years, there has been a steady increase in mobilisation of resources through the corporate bond route. The outstanding stock of corporate bonds has increased four-fold from ₹10.51 lakh crore as at end of FY 2012 to ₹40.20 lakh core as at end of FY 2022 (Chart 1). Annual issuances during this period have increased from ₹3.80 lakh crore to close to ₹6.0 lakh crore (Chart 2).



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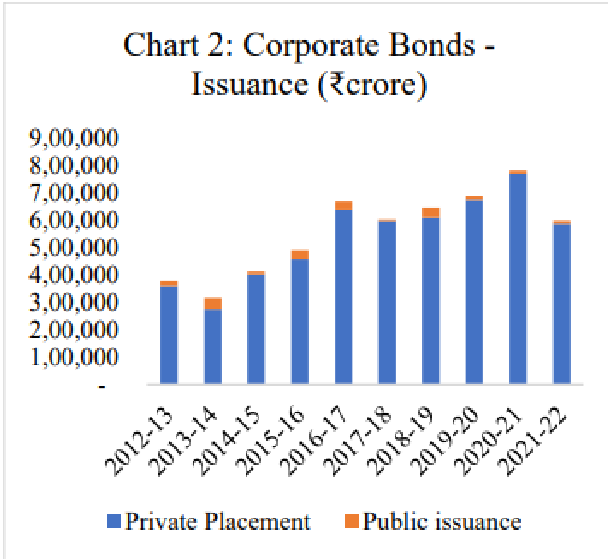
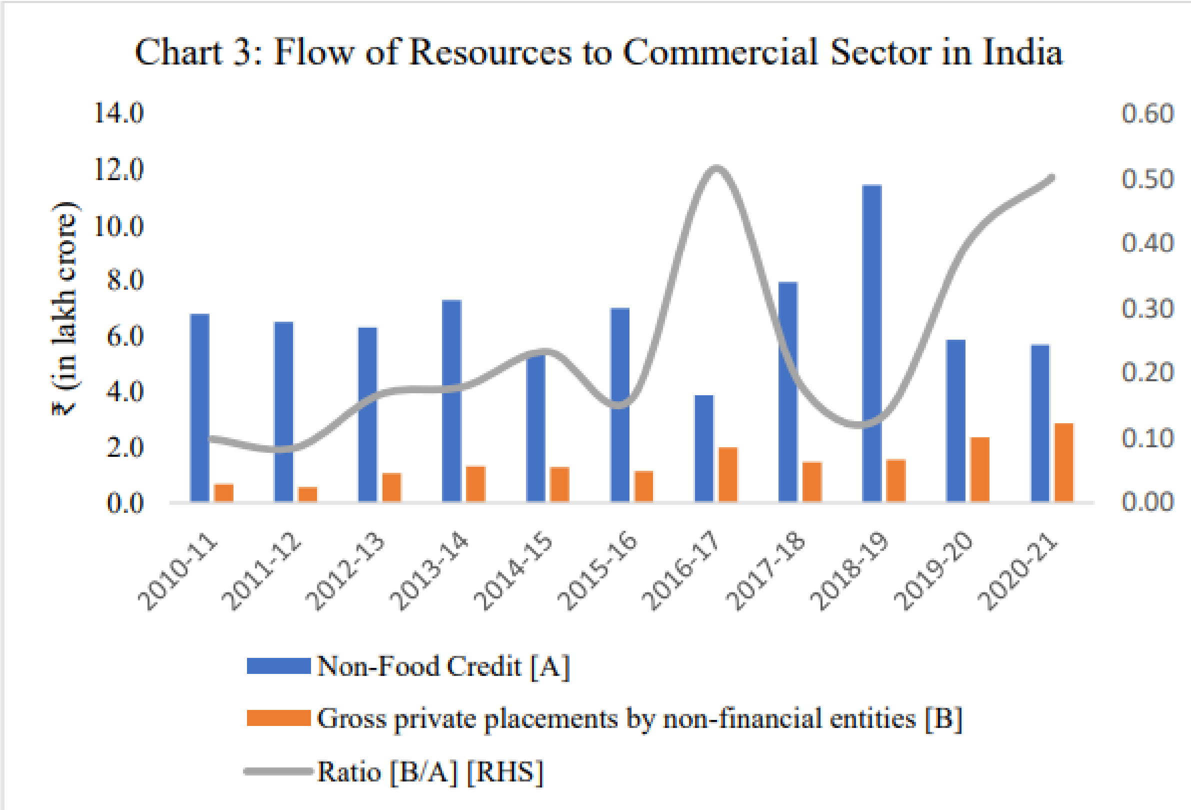


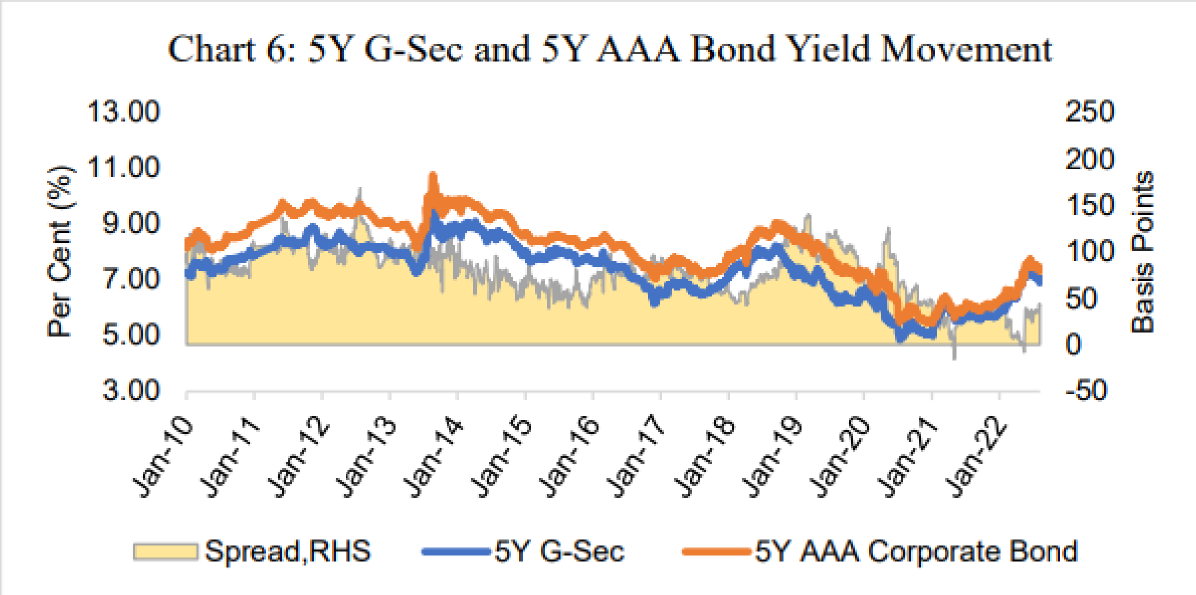
Source[4]

The long-term trend of the share of corporate bonds in the flow of resources to the commercial sector in India is reassuring. Data from RBI's Handbook of Statistics for the Indian economy shows that ratio of "gross private placements by non-financial entities" - a broad proxy for issuances by corporate bonds by non-financial entities – to non-food credit has increased from 0.09 in 2010-11 to 0.50 in 2020-21 (Chart 3).



Source: RBI

The growing size of the corporate bond market is accompanied by growing diversity of issuers and markets. We now have issuances by new types of entities e.g. REITs and INVIT' s pursuant to the Union Budget announcing changes in several Acts including the SEBI Act, 1992, the Securities Contract Regulation Act, 1956 and the SARFAESI Act, 2002 to provide a legal framework for these entities to issue corporate debt securities. The SEBI issuance of regulations on the issue and listing of municipal debt securities has enabled market-based financing of infrastructure projects. Of course, more will need to be done to put in place conducive conditions for this sector to develop through, for example, greater transparency in city budgets, credible accounting and financial statements, independent audits and monitorable performance criteria. Also reassuring are the early signs of the development of a market for distressed corporate debt securities including debt securities issued as part of corporate insolvency processes. There are other factors which testify to the development of the corporate bond market in the country and to its increasing resilience. A well-developed government securities market provides the backbone for the development of other rate markets such as corporate bond market. Corporate bonds are generally priced off the sovereign yield curve and resilient markets are characterised by stable credit spreads over benchmark yields of government securities. A comparison of the yields of 5-year government securities and AAA rated bonds of 5-year tenor over the last decade or so in the country clearly indicate that the government securities yield curve has provided a stable backbone for pricing of corporate bonds in the country (Chart 6). Trends in the variations of credit spreads has also been reassuring – the spreads have widened during times of stress and volatility, domestic or global, in testimony to the maturity of the corporate bond market in pricing.

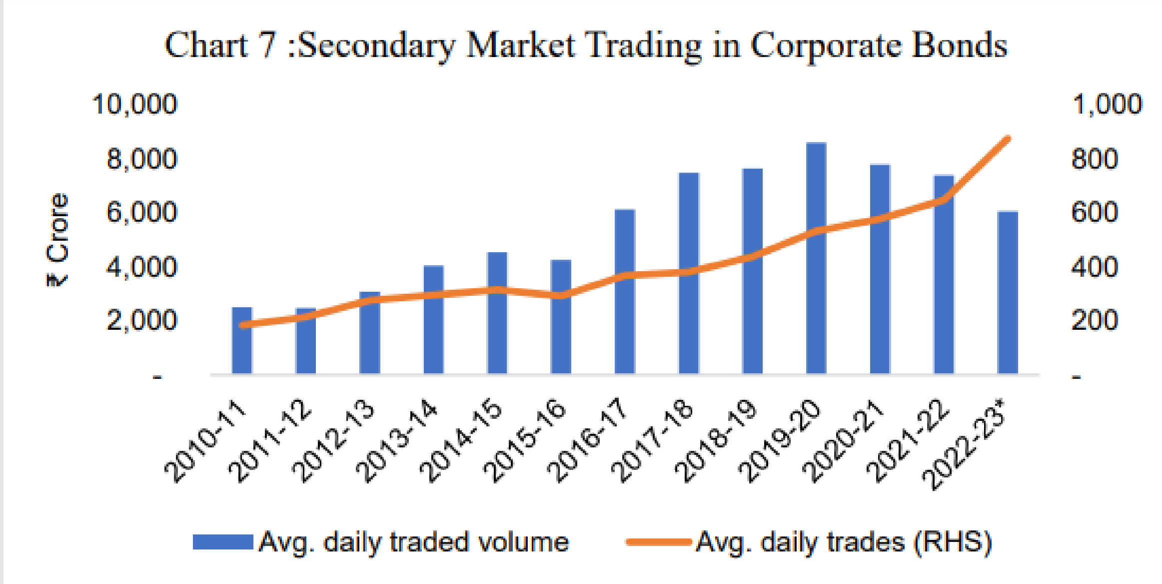


Source: Bloomberg

Another reassuring trend about the evolution and maturity of corporate bond markets has been its ability to innovate and adapt. Thus, when concerns about the credit quality of business firms and their ability to withstand the disruptions of lockdowns were dominating discourse in the early days of the pandemic, the corporate bond market innovated with bonds featuring conditional credit risk premium entailed to harmonise the interests of issuers preferring to lock in the low interest rates prevailing then with that of investors' concerns about credit quality. Similarly, while corporate bonds in India are predominantly issued as fixed coupon bonds, during the calendar year 2021, increased issuances of floating rate bonds with coupons linked to money market and government securities benchmarks were witnessed, indicating efforts by investors to hedge against any increase in domestic interest rates. These are important metrics testifying to the resilience of the market in particular is ability to function well in times of stress.

B. Liquidity Metrics – Developing the secondary market

The second important metric to assess the development of a corporate bond market is the development of secondary bond markets. Have secondary market trading volumes grown over the years? Undoubtedly, they have (Chart 7). The total settled value of secondary market trades during FY 2010-11 was ₹4.50 lakh crore which rose to ₹14.37 lakh crore for FY 2021-22. Clearly, secondary trading has not risen in consonance with the size of the market.



* Data for FY 2022-23 is upto June 2022
Source[7]

C. Developing the complementary markets

It is well-established globally that well-functioning related markets – derivatives and repo markets - complement and supplement the development of liquidity in the cash market by enabling investors and market-makers to better manage risks and fund positions. The primary risks associated with holding corporate bonds are interest rate risk and credit risk. The interest rate derivative market is reasonably liquid, particularly the overnight indexed swaps market. Markets for other interest rate derivative products like swaptions are developing. Recent regulatory efforts seek to harmonize on-shore and off-shore markets by, on the one hand, allowing non-residents to access the domestic market, and on the other hand, permitting domestic market makers to access the offshore market. Interest rate derivatives are also trading on exchanges though volumes are small. The absence of a market for credit derivatives, despite regulatory initiatives for more than a decade, is a concern. To a certain extent, there is a chicken and egg problem here. The dominance of rated issuances reduces the need to manage credit risk, while development of a Credit Default Swap (CDS) market is essential for the issuances of lower rated bonds. Two recent developments offer hope for the future development of the CDS market. The passage of the Act for Bilateral Netting of Qualified Financial Contracts, 2020, pursuant to which the Reserve Bank has notified CDSs, along with other OTC derivatives, as qualified financial contracts for netting. In February this year, RBI expanded the issuer (protection seller) and participant base for CDSs to include all major non-bank regulated entities viz., primary dealers, NBFCs, 9 insurance companies, pension funds, alternate investment funds and mutual funds in addition to banks and foreign investors. The market for repo in government securities is one of the most liquid markets in the country. But repo in corporate bonds has not taken off. Market feedback suggests that issues related to the lack of a trading platform like the one available for repos in government securities, lack of a central counterparty, high margin requirements, etc. have impeded the development of the market for repos in corporate bonds. SEBI is trying to facilitate the setting up of a repo clearing corporation. We keep our fingers crossed that going forward we will see this market too start to develop.

- Issues, concerns and challenges

A. Rating profile

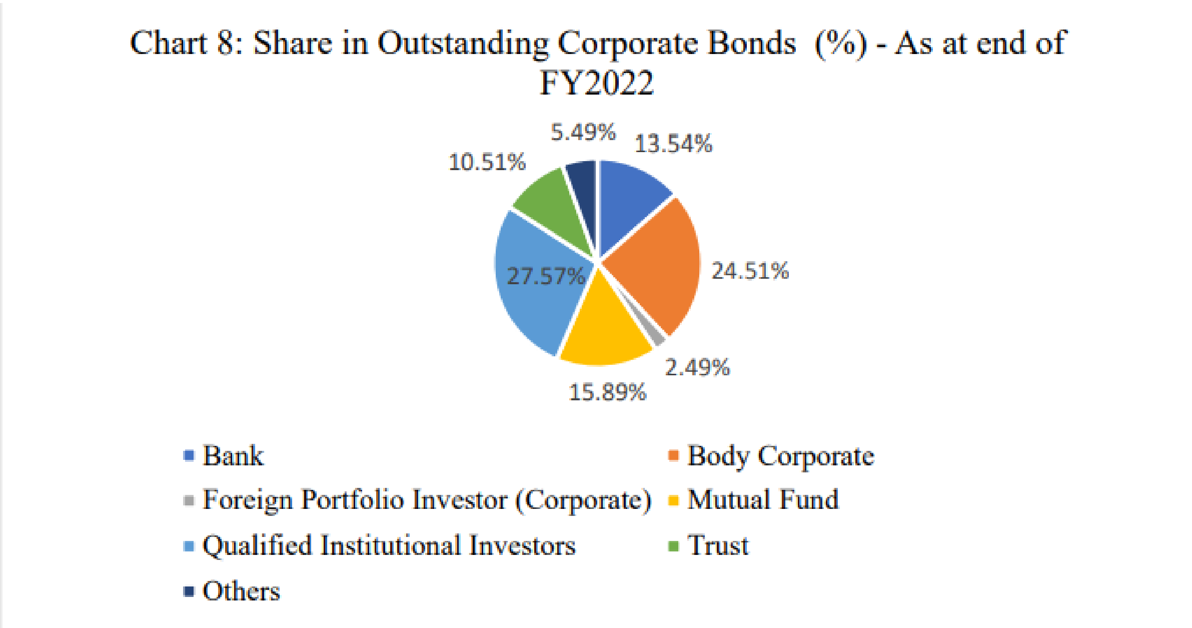
First, as is well known the market is dominated by highly rated issuers. But let us look at the dimension of the problem. In FY 2021-22, ratings were assigned to 1,235 corporate debt securities amounting to ₹22.55 lakh crore10. Of these, 278 or 22.5% were rated AAA and 358 or 29% were rated AA. 66 issuances or 5.3% of issuances were non-investment grade. While these numbers themselves are skewed in favour of highly rated issuances, the skew is much more pronounced when looked at in value terms – 80% of issuances in value terms were rated AAA and another 1.5% were rated AA. While we can discuss the reasons for this trend, it is clear that the corporate bond market largely meets the needs of highly rated corporates.

B. Mode of issuance

The second issue relates to the mode of issuance. The large bulk of corporate bond issuances every year is through the private placement route rather than through public issuances. In FY 2021-22, the amount of money raised through public issuances of corporate bonds was ₹11,589 crore – just about 2% of the amount of money raised through private placement at ₹5.88 lakh crore11. The advantages of a public issuance in terms of transparency and efficiency of price discovery are well understood. SEBI has been making efforts to make the private placement process more transparent and efficient, for example, through the introduction of the Electronic Bidding Process on stock exchanges. Nevertheless, there is an overwhelming preference for private placement. A hard look at the underlying issues including the reasons for issuers preferring to eschew the public issuance process is perhaps called for.

C. Investor Profile

Third, let us look at the investor base. The investor base for corporate bonds is, as can be expected given the market microstructure, largely dominated by domestic institutions – insurance companies, banks and mutual funds (Chart 8). Retail participation in corporate bonds remains low – this in fact is a global trend. What is somewhat unique in India is that investors in debt oriented mutual funds – which is the avenue through which globally the retail investor participates in debt markets – are also largely institutional. Foreign participation in corporate debt, has also not been favourable to secondary market activity.



Source: SEBI

D. E Price Transparency

The importance of high-quality and timely information on financial markets is basic to the development of the market. Most of you will be aware that in the domestic government securities market, information about every single trade is disseminated in near-real time ensuing the highest standards of transparency. There has been feedback from market participants about the need for improving the timeliness and integrity of data on primary and secondary market transactions in the corporate bond market. This is arguably a low hanging fruit which we can aspire for. It has also been highlighted that there is a need for adoption of uniform valuation methodology across investors. Valuation by an independent benchmark administrator would be ideal.

- **Corporate Bond Markets in India: A study and policy recommendations**

According to the working paper by Kanad Chaudhari, Meena Raja, Charan Singh and Mukherjee, Dr Kedar Nath it has been discussed that how bond market can be expanded in India by discussing various factors

- **Recent trends in corporate and debt markets in India**

The Corporate debt market is primarily regulated by three institutions, namely

1.Reserve Bank of India

2.The Securities and Exchange Board of India, and

3.The IRDA

The RBI is the monetary authority in India and is therefore majorly focused at ensuring an adequate flow of credit in the economy, maintaining foreign currency market, and managing economic development with price stability.

The SEBI’s outlook is more narrow- promotion, development and regulation of securities’ markets in India keeping the investors’ interests protected. It's main function is to protect the interests of investors in securities and to promote the development of, and to regulate the securities market.

IRDA has kept pace with the supply side reforms initiated by the RBI and SEBI. IRDA ensures the participation of insurance companies in the corporate debt setup.

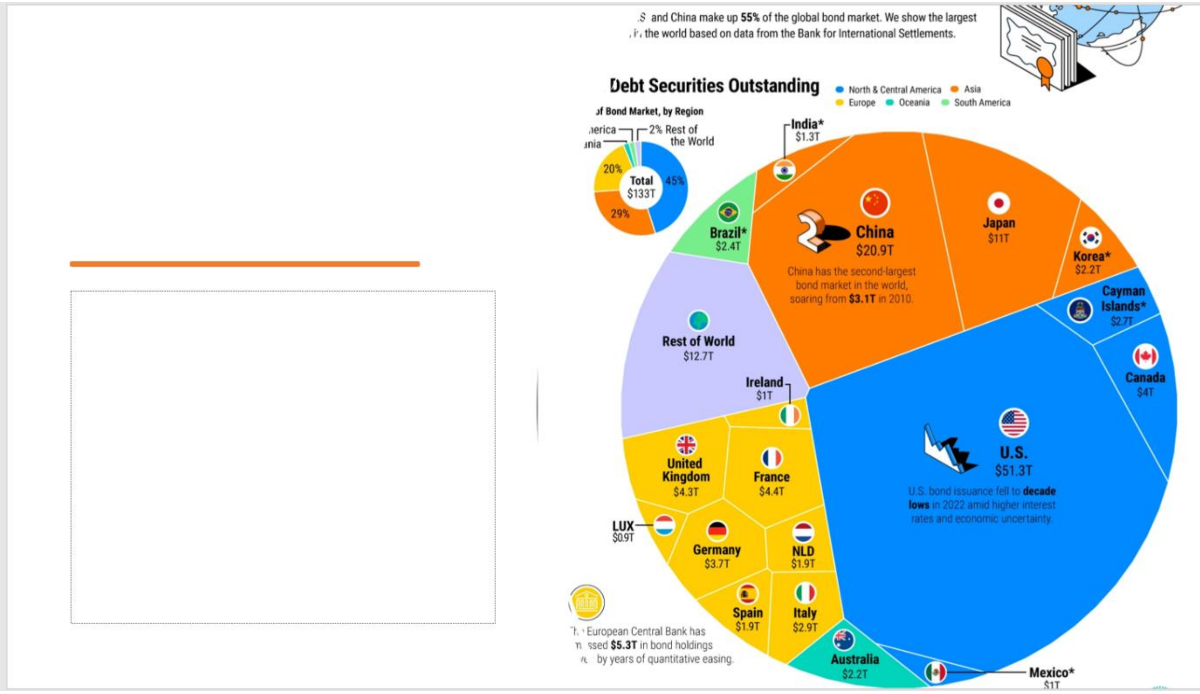


Table 2: Government and Corporate Bonds as percentage of GDP March 2013

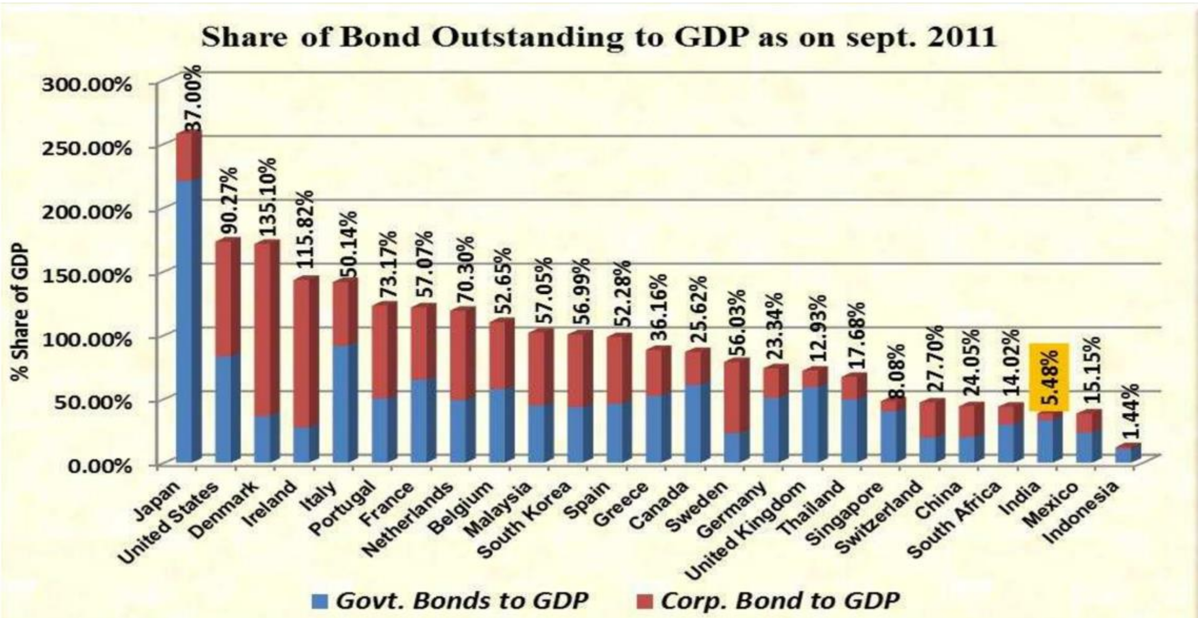
Debt as % of GDP	Government	Corporate	Total
People's Republic of China	33.1	13.0	46.2
Hong Kong	37.8	31.4	69.2
Indonesia	11.4	2.3	13.7
Republic of Korea	48.7	77.5	126.2
Malaysia	62.4	43.1	105.5
Philippines	32.2	4.9	37.1
Singapore	53.1	37.0	90.1
Thailand	58.6	15.9	74.4
Vietnam	19.8	0.7	20.5
India	49.1	5.4	54.5

- **Types of Corporate Bonds**
- Fixed Rate Bond
- Floating Rate Bond
- Zero Coupon Bond
- Debentures
- Municipal Bonds
- Public Sector Undertaking Bonds (PSU Bonds)

- Junk Bonds
- Secured / Unsecured Bonds
- **Risk and Returns in Corporate Bonds**
- When an investor thinks about purchasing a bond, there are four key risks attributes, namely Issuer, Currency, Coupon, Maturity; that they will assess to determine whether the bond is a good fit with their portfolio, and whether the price is fair.
- Issuer – Bond Issuer defines the credit risk of the bond. Alternatively, it describes the likelihood that the investor will be repaid their periodic returns (if any) and the face value of their original investment at the end of maturity.
- Currency − Unlike equity, bond can be issued in many currencies. Therefore, bond markets talk about the currency of issuance and not the country of issuance.
- Coupon – Coupon rate defines the rate of interest expected to be paid on a bond issue. This interest can be paid annually, semi-annually or even every 3 months, depending on the way the bond is structured.
- Maturity - Unlike in case of equity, bonds have a specific life or maturity, after which investors get their money back. Longer the date of maturity, more is the likelihood that the bond issuer may get into trouble and may fail to settle the claim of investors, leading to a higher credit risk for corporate bonds.
- Liquidity Risk is another type of risk that bond investors may face. Liquidity risk arises from the illiquidity of a debt issue in the secondary bond market. In other words, whenever an investor fails to sale a security at a fair price due to lack of sufficient demand, the market is said to be illiquid for that security, and creates liquidity risk for the investors.
- Credit risk in bond investment basically refers to Credit Spread Risk and Default Risk. Credit spreads reflects the credit worthiness of corporate borrowers, and depend upon the credit rating provided to the corporates by external rating agencies. The value of a corporate bond not only depends upon the risk-free rate, but also on the credit spread of respective securities. Poorer the credit quality of a corporate bond issuer

as reflected through a lower credit rating, greater would be the credit spread, leading to fall in bond price. Therefore, credit spread risk is the risk of fall in bond price due to migration of issuers' credit rating from higher to lower level

- **Corporate Bond Market in India**
- The underdevelopment of the corporate bonds market is directly reflected through the significant financing gap in corporate sectors, especially for infrastructure development, a crucial factor for maintaining and enhancing overall growth of an economy. Although several initiatives are taken by Indian regulators to revive the corporate bonds market in India, there is hardly any major progress observed on that front.
- Even if India boasts of a world-class equity market, its bond market segment is still underdeveloped and is dominated by government securities. The value of outstanding government bonds in India is 33.24% of its GDP as of September 2011 in comparison with Japan (220.29%), Italy (91.50%), United States (83.15%), France (63.82%), UK (59.27%), Germany (50.68%), South Korea (43.66%), China (20.24%).



AHMEDABAD MUNICIPAL CORPORATION	L&T INFRASTRUCTURE FINANCE CO LTD
AIRPORTS AUTHORITY OF INDIA	LIC HOUSING FINANCE LTD
ALLAHABAD BANK	MRF LTD
ANDHRA BANK	NATIONAL BANK OF AGRICULTURE & RURAL DEVELOPMENT
ASHOK LEYLAND LIMITED	NATIONAL HOUSING BANK
ASIAN DEVELOPMENT BANK	NEYVELI LIGNITE CORPORATION
BANK OF BARODA	NHPC LIMITED
BANK OF INDIA	NORTH KARNATAKA EXPRESSWAY LIMITED
BHARAT FORGE LIMITED	NUCLEAR POWER CORPORATION
BHARAT PETROLEUM CORPORATION LIMITED	ORIENTAL BANK OF COMMERCE
CAIRN INDIA LIMITED	POWER FINANCE CORPORATION LIMITED
CANARA BANK	POWER GRID CORPORATION OF INDIA LTD
CHOLAMANDALAM INVESTMENT & FINANCE CO. LTD.	PUNJAB NATIONAL BANK
CITIFINANCIAL CONSUMER FINANCE INDIA LTD	RELIANCE INDUSTRIES LIMITED
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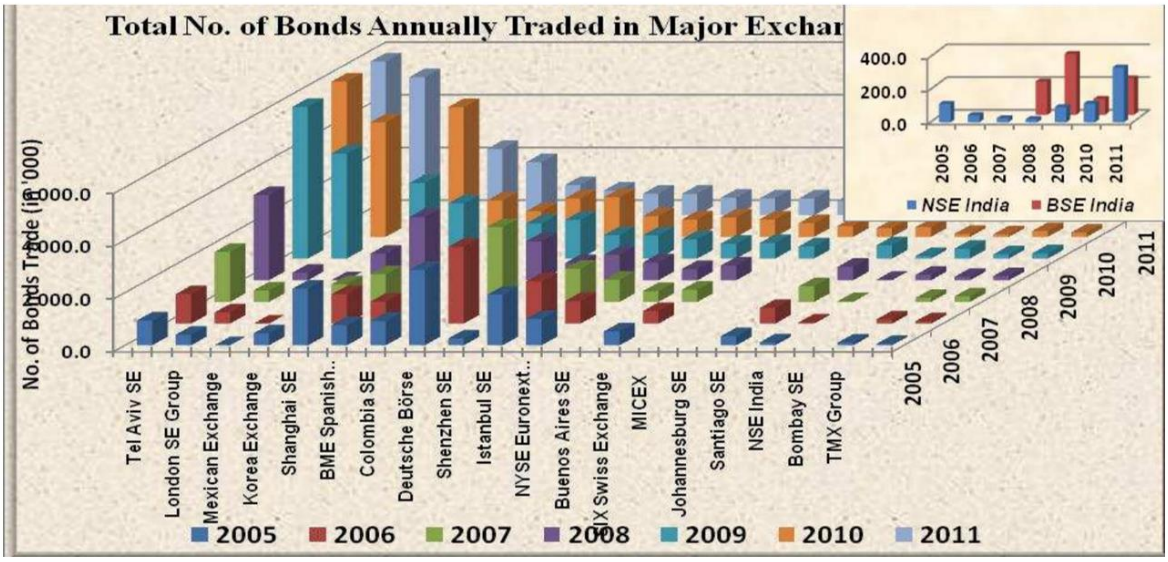
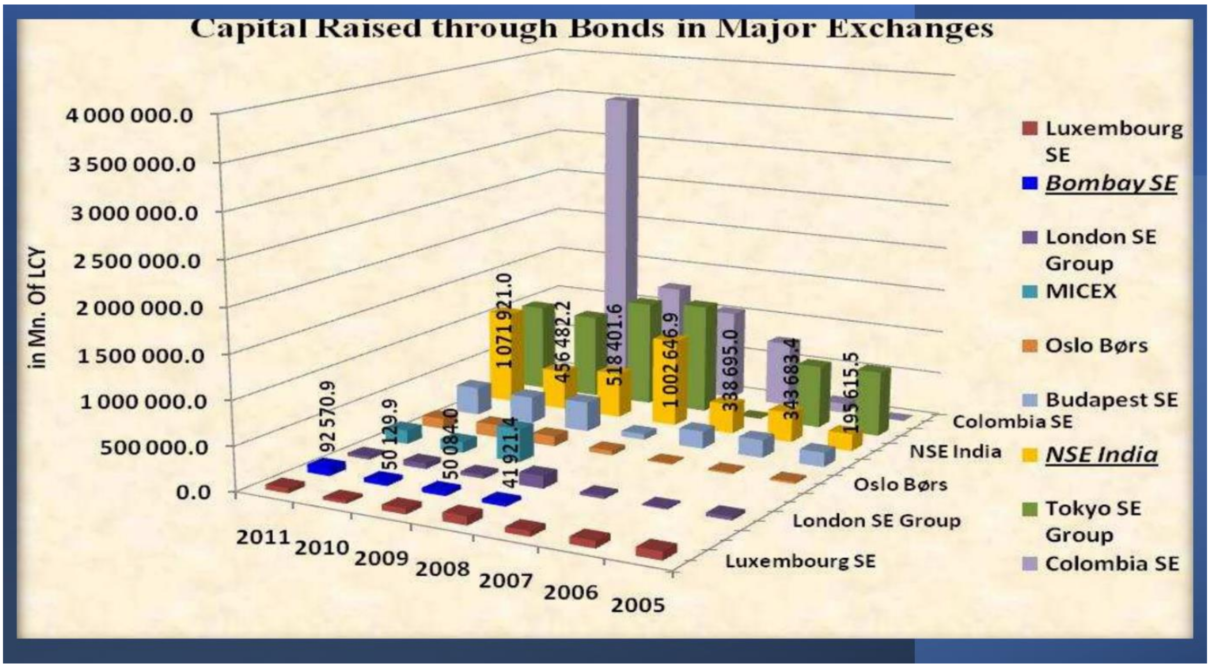
EMBASSY PROPERTY DEVELOPMENTS LIMITED	SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA
EXPORT IMPORT BANK OF INDIA	SREI EQUIPMENT FINANCE PRIVATE LIMITED
FULLERTON INDIA CREDIT COMPANY LTD	STATE BANK OF BIKANER AND JAIPUR
HCL TECHNOLOGIES	STATE BANK OF INDIA
HDFC BANK	STATE BANK OF PATIALA
HINDUSTAN PETROLEUM CORPORATION LIMITED	SUNDARAM BNP PARIBAS HOME FINANCE LIMITED
HOUSING AND URBAN DEVELOPMENT CORPORATION	SUNDARAM FINANCE LIMITED
HOUSING DEVELOPMENT FINANCE CORPORATION LIMITED	SYNDICATE BANK
ICICI BANK LIMITED	TAMILNADU STATE
ICICI HOME FINANCE COMPANY LTD	TATA CAPITAL HOUSING FINANCE LIMITED
INDIA INFOLINE FINANCE .LTD.	TATA CHEMICALS LIMITED
INDIA INFRASTRUCTURE FINANCE CO.LTD.	TATA COMMUNICATIONS LTD
INDIAN HOTELS COMPANY LIMITED	TATA IRON AND STEEL COMPANY LIMITED
INDIAN OIL CORPORATION	TATA MOTORS LIMITED
INDIAN OVERSEAS BANK	TECH MAHINDRA LIMITED
INDIAN RAILWAY FINANCE CORPORATION	THE ASSOCIATED CEMENT COMPANIES LTD
INDUSIND BANK LIMITED	THE GREAT EASTERN SHIPPING CO. LTD
INDUSTRIAL DEVELOPMENT BANK OF INDIA	TML FINANCIAL SERVICES LTD.
INFOTEL BROADBAND SERVICES LTD.	TUBE INVESTMENTS OF INDIA
INFRASTRUCTURE DEVELOPMENT FINANCE COMPANY LTD	UCO BANK
ING VYSYA BANK LIMITED	ULTRATECH CEMENT LIMITED
IVRCL ASSETS & HOLDINGS LIMITED	UNION BANK OF INDIA
KALYANI STEELS LTD	UTI BANK LIMITED
KOTAK MAHINDRA BANK LTD	VIJAYA BANK
L&T FINANCE	WIRE AND WIRELESS (INDIA) LTD

- **Secondary Markets for Corporate Bonds**

The secondary corporate bond market in India is still in the very nascent stage, comparative to other developed economies. First of all, predominance of private placements of corporate bonds makes it almost impossible for majority of the issues to enter into the secondary market, leading to narrowing down the scope for secondary market trading. Further, whatever public issues comes in the market, hardly are used for trading in the secondary market. Once some large new corporate bonds are issued, some trading is observed for few days, especially due to the existence of the underwriter as the market maker.





- **Need for development of Corporate Bonds in India**
- The need for developed corporate bond market can be explained from the view point of Investors, Lenders, corporate Borrower, and also of the whole economy. Investors in corporate bond consists of Institutional investors (Domestic and Foreign), and Retail investors (Domestic and Foreign). Lenders would be the one who would otherwise lend to corporate in absence of corporate debt route.
- On the other hand, borrower or the bond issuer would be the corporate bodies expected to get their projects financed. At the end, the concerned national economy, the growth of which depends on the developments of each segment of its financial sector in general, and of corporate bond market in particular.
- There is also a strong interest for the corporate borrower, expecting to raise money through bond issues. Corporate borrowers have two broader ways to meet their financing needs: Bank Loans and Corporate Bonds. Bank loans can be in the form of Term Loans or Cash Credit. There is no doubt that raising bank loans are comparatively easier, at least for a credit worthy corporate borrower, than approaching the securities market. But raising money by issuing corporate bonds seems to be much cheaper, at least for less credit worthy borrower, than approaching banks to extend term loans. In other words, less credit worthy corporate borrower can

issue bonds comparatively at a cheaper rate than otherwise have to be paid to the banks for their term loans.

- **ISSUES AND CHALLENGES IN DEVELOPMENT OF CORPORATE DEBT MARKET IN INDIA**
- Insufficient Supply & Lack of Varity
- Multiple and overlapping financial supervisory bodies
- Limited diversity among the issuers
- Missing and inadequate legal structures
- Improper Pricing, Clearing and Settlement System

- ## Empirical study on corporate bond market in India

The empirical study conducted by Dr BN Shubha focuses on the corporate bond market in the Indian economy. The report aims to provide an understanding of the current state of the corporate bond market and its growth potential in India. The study finds that the Indian corporate bond market has been growing steadily in recent years. This growth is attributed to various factors such as the increasing demand for capital by corporates, the government's efforts to develop the market, and regulatory initiatives to encourage investment in corporate bonds. The report also highlights the challenges faced by the Indian corporate bond market, such as the dominance of the banking sector and the lack of liquidity in the secondary market. The study suggests that these challenges can be addressed by encouraging greater participation from institutional investors and by improving market infrastructure. The study concludes that the corporate bond market in India has significant potential for growth and can play a crucial role in financing the country's economic development. The report recommends various measures to promote the development of the market, including tax incentives, regulatory reforms, and capacity-building initiatives for market participants. Overall, the study provides valuable insights into the current state of the corporate bond market in India and highlights the potential for growth and development in the future

- ## **Bond Market Analysis: Main Constraints in Research of 21st Century**

The report titled "Bond Market Analysis: Main Constraints in Research of 21st Century" by Leva Austroasiatic and Arvydas Jasikevicius discusses the current state of research on the bond market and identifies several key constraints that researchers face in analysing this complex market. The report begins by providing an overview of the bond market, including its structure, participants, and key instruments. It then discusses the challenges that researchers face in analysing this market, such as the large amount of data that needs to be analysed, the complexity of the instruments traded, and the high level of interconnectivity between different segments of the market. The report also identifies several areas where further research is needed, such as the impact of macroeconomic factors on bond yields, the behaviour of market participants during periods of stress, and the effectiveness of regulatory interventions in ensuring market stability. Overall, the report provides a useful overview of the challenges and opportunities facing researchers studying the bond market, and highlights the importance of continued research in this area to inform policy decisions and improve market functioning.

- ## **Valuation of Bond Illiquidity**

This article discusses the increasing interest in analysing the impact of liquidity on bond pricing and asset allocation decisions, prompted in part by spectacular losses suffered by finance companies due to diminishing market liquidity. The growing importance of the non-government sectors within fixed income markets, such as mortgage bonds and corporate bonds, also requires appropriate valuation models and risk management tools. Several studies have shown that illiquid bonds trade at a discount compared to more liquid bonds of the same maturity. The analysis of Boathook and Whitelaw shows similar benchmark effects for the Japanese government bond market, and Kompf and Unrig - Homburg find a significant illiquidity discount for government bonds with lower liquidity in the German market. The article presents a methodology for the valuation of illiquid bonds by extending a model originally designed to value the marketability of equities. The methodology incorporates stochastic interest rates of the extended Varick type to address bond valuation problems and discards the assumption that the security is restricted from trading for one time span only and becomes perfectly liquid afterward. Among other things, this specification enables the model to address time-varying liquidity of bonds. The authors find that their model of liquidity spreads shows several meaningful and plausible properties, including humped-shaped functions of maturity and an increase with interest rate volatility. The article conducts an empirical study with data from the German Jumbo Pandered market, which provides evidence for the empirical relevance of the authors' model. The estimates for the parameters of the model obtained through this procedure allow the translation of observable spreads into more intuitive parameters, such as the effective trading frequency of a bond. The article is organized as follows: Section 2 outlines the Longstaff (1995) model and presents the authors' extensions, Section 3 derives valuation formulae for the options, Section 4 analyses the influence of bond and market variables on the value of liquidity, and Section 5 describes the data and analyses the behaviour of empirical liquidity spreads in the German bond market.

- **Bank Leverage constraints and bond market illiquidity during the COVID 19 crisis**

In March 2020, bond markets experienced a sell-off due to the COVID-19 crisis, which was partly driven by mutual funds facing investor redemptions. To satisfy these redemptions, mutual funds had to sell off some of their assets, mostly bonds. However, dealer banks typically absorb this pressure from fire sales, but this did not happen in March 2020, leading to stress in even the most liquid markets such as the US Treasury market. One factor contributing to the market stress was dealer bank balance sheet constraints due to leverage ratio regulation, which requires banks to hold capital against all on- and off-balance sheet exposures, regardless of their risk. This may lead to dealer banks reducing balance sheet space available for market-making, resulting in market illiquidity, particularly during stress episodes. The US Federal Reserve temporarily changed its supplementary leverage ratio rule on April 1, 2020, to ease strains in the Treasury market resulting from the coronavirus and increase banking organizations' ability to provide credit to households and businesses. In Brecken Felder and Iva Shina (2021), it was found that bank leverage constraints did amplify bond market illiquidity during the March 2020 crisis, with mutual funds with larger exposures to bank balance sheet constraints facing bigger redemptions and pressure to sell off liquid bonds. The analysis highlights that leverage ratio regulation, while aimed at making banks more resilient, can have side effects for market functioning, particularly in times of stress. Both the Federal Reserve and the Euro system temporarily changed their respective leverage ratio rules in 2020 to alleviate such side effects, suggesting that the optimal leverage ratio is procyclical.

- ## State of Corporate Bond Markets in India

In this research paper by Vinod Kothari consultants P. Ltd. section 3 and 4 analyse how corporations finance themselves and how does the corporate bond market contribute in this process. Section 3 delves into how large Indian firms evolved in their financing pattern over the past decade. We further analyse what are some of the key drivers of such financing pattern when it comes to corporate bond markets in section 4. In section 5, we offer an analytical construct and mode that shows how liquidity, transparency and informational problems contribute not only to higher costs of financing but may create low level equilibrium trap in the bond market where few issuers, investors and market makers participate. In section 6, we summarise the policy implications of our findings and analyse what it would take for the corporate bond market to move from the current state (of lower-level equilibrium) to a higher-level equilibrium. We examine where the policy maker might have a role to play and where the market will respond to address its concerns spontaneously.

- **Key issues with Indian corporate bond market functioning**

The presence of corporate bond market in India is barely perceptible as compared to other economies. Despite of multiple endeavours by the government in the recent past, to revive the market, neither investors nor issuers showed any tangible interest. As a result, at least 80% of corporate bonds comprise of privately placed debt by public financial institutions.

- **Why debt market?**

Once one departs from a perfect world of frictionless arbitrage in the financial market between risky assets, various types imperfections tend to impart a bias in favour of class of financial instrument which yield least cost to issuer, as opposed to its alternatives.

- **Liquidity**

After buying a bond, an investor can have liquidity shock and may want to sell the bond or use it as collateral for borrowing funds. This could be with or without possibility of buying it back at a future date which gives rise to the repo market. The ease of selling the asset depends on (a) ratings of the bond (b) how many investors are willing to buy and sell bonds. Both depend on That is, one may think about the secondary market as ‘’searches’’ for potential trading partners. If someone wants to sell an asset, the probability of how quick one can sell the asset depends on how many buyers are there in the market. That is, the basic question is: how thick the market is and the answer depends on how informative the secondary market is and that in turn, depends on as well. The greater the precision of (the more accurate rating agencies are), the higher is the probability of meeting a trade partner and the lower is the liquidity costs and lower would be the costs of financing.

- **New thinking on corporate bond market in India**

State of Corporate Bonds Market in India & its peers

Globally, the bond markets are regarded as the largest and deepest source of capital for the companies.

• In India, the real sector consisting of non-banking non-financial companies (NBNCs) has a very small dependence on bonds,

• Thereby making it heavily reliant on bank and shadow-bank credit

• The policy direction of taking India to a $ 5 trillion economy by 2024-25 will need a substantial part of corporate resources to come from the bond market.

• There have been several committees and reports pertaining to bond markets in India in the past.

• H R Khan Committee report (2016)

• SEBI has a standing committee – Corporate Bonds and Securitisation Advisory Committee (COBOSAC)

India’s standing among its peers

• Penetration of bond markets in India is about 15.45%, much lesser than that in several other countries

(45.03% in USA)

• The extent of outstanding corporate bonds as a percentage of GDP is often referred to as

penetration.

• The penetration data is an indicator of the level of development of the bond market in a country.

• The three features that distinguish Indian market from the world are:

• predominance of the financial sector,

• predominance of the private placement market, and

• very significant share of mutual funds, and insurance companies as bond investors (57%).

• Corporate Bonds Turnover:

• The corporate bond market rate in India of 59.86% which is much better than several of its global

peers like South Korea (42.38%), Malaysia (15.04%), China (11.52%), but however is behind USA

(68.56%).

• However, non-standard market practices, still continues to haunt the investors in the secondary

corporate bonds market

Issuances and outstanding Corporate Bonds in

India

• Issuances and outstanding in India

• The corporate bond issuances in India during the FY 2019 stood at USD 92.43 billion as

against USD 86.30 billion in FY 2018, therefore, reporting a growth of 7.1%.

• The FY 2020 has already witnessed issuances worth USD 49.93 billion till October, 2019.

• The outstanding volume in the Indian market at end of 2018 stood at USD 421.17 billion

• Growth rate: Over the decade from FY 2009 to FY 2019, the bond market issuances grew at a

compounded annual growth rate of 13.98%.

• However, the growth rate between FY 2018 and FY 2019 stood at 7.1%, which is much lower

than the long term standard.

• Rating wise distribution: The issuance by AA and above bond issuers in India accounts for nearly

80% of the total issuance, of which 60% is represented by issuances by AAA rated issuers

• Mode of Issuance: In India, bonds are issued mainly on private placement basis (95%) and only a

fraction of the total issuances are through public offer.

• Dominated by financial sector: The bonds issued by financial sector entities represent 76% of the

total issuances.

Research Methodology

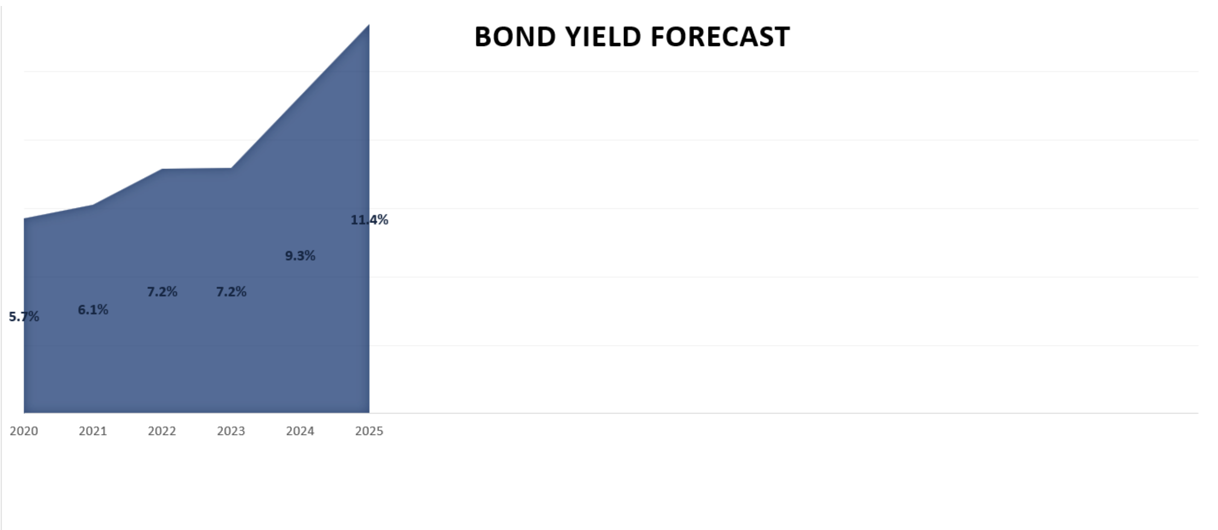
- **Objectives of the Study**

The main objective of our study would be to discuss the models and statistics which would justify the main factors by which the current bond market situation can be improved in India. We will include the models by which it could be justified very easily.

- **Research Design**

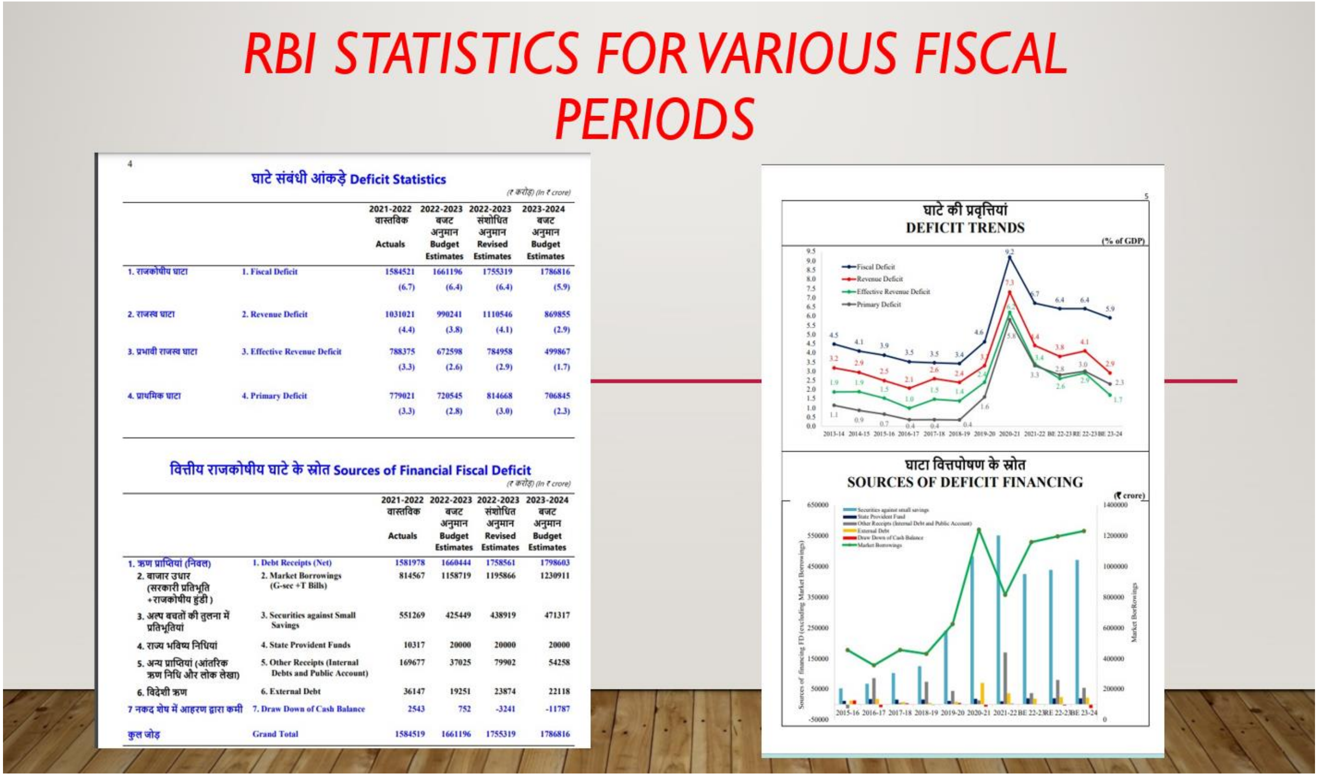
As mentioned in the objectives portion that we will prove the factors by which the current bond market situation can be improved. So, after a lot of research we have reached the crux that bond situation can only be improved if they have higher value of bond yield. A bond's yield is the return an investor expects to receive each year over its term to maturity. For the investor who has purchased the bond, the bond yield is a summary of the overall return that accounts for the remaining interest payments and principal they will receive, relative to the price of the bond. This bond yield has inverse relation with bond price. So, we worked out on the factors by which the yield can be increased. These mainly includes –

- Fiscal Deficit
- Inflation
- Yield Curve
- Economic Growth



Sources of Data

- Secondary Data-



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घाटे संबंधी आंकड़े Deficit Statistics

(₹ करोड़) (In ₹ crore)

		2021-2022 वास्तविक Actuals	2022-2023 बजट अनुमान Budget Estimates	2022-2023 संशोधित अनुमान Revised Estimates	2023-2024 बजट अनुमान Budget Estimates
1. राजकोषीय घाटा	1. Fiscal Deficit	1584521	1661196	1755319	1786816
		(6.7)	(6.4)	(6.4)	(5.9)
2. राजस्व घाटा	2. Revenue Deficit	1031021	990241	1110546	869855
		(4.4)	(3.8)	(4.1)	(2.9)
3. प्रभावी राजस्व घाटा	3. Effective Revenue Deficit	788375	672598	784958	499867
		(3.3)	(2.6)	(2.9)	(1.7)
4. प्राथमिक घाटा	4. Primary Deficit	779021	720545	814668	706845
		(3.3)	(2.8)	(3.0)	(2.3)

वित्तीय राजकोषीय घाटे के स्रोत Sources of Financial Fiscal Deficit

(₹ करोड़) (In ₹ crore)

		2021-2022 वास्तविक Actuals	2022-2023 बजट अनुमान Budget Estimates	2022-2023 संशोधित अनुमान Revised Estimates	2023-2024 बजट अनुमान Budget Estimates
1. ऋण प्राप्तियां (निवल)	1. Debt Receipts (Net)	1581978	1660444	1758561	1798603
2. बाजार उधार (सरकारी प्रतिभूति +राजकोषीय हुंडी)	2. Market Borrowings (G-sec +T Bills)	814567	1158719	1195866	1230911
3. अल्प बचतों की तुलना में प्रतिभूतियां	3. Securities against Small Savings	551269	425449	438919	471317
4. राज्य भविष्य निधियां	4. State Provident Funds	10317	20000	20000	20000
5. अन्य प्राप्तियां (आंतरिक ऋण निधि और लोक लेखा)	5. Other Receipts (Internal Debts and Public Account)	169677	37025	79902	54258
6. विदेशी ऋण	6. External Debt	36147	19251	23874	22118
7 नकद शेष में आहरण द्वारा कमी	7. Draw Down of Cash Balance	2543	752	-3241	-11787
कुल जोड़	Grand Total	1584519	1661196	1755319	1786816

INFLATION IN INDIA FOR FISCAL PERIOD 1959-2023

The value of money decreases, which means that a product or a service costs more with respect to time. This phenomenon is referred to as inflation.

INFLATION RATES IN INDIA IN RECENT YEARS :-

1. 2021 - 5.6%
2. 2020 - 6.65%
3. 2019 - 3.73%
4. 2018 - 3.96%

Notice the steep incline in inflation rate after fiscal period 2019. This sudden rise in inflation may be attributed to the rapid spread of covid-19.

Limitations

- **Limitations in reducing Fiscal Deficit**

The fiscal deficit is the difference between a government's total revenue and total expenditure, and reducing it has been a priority for India's policymakers in recent years. However, there are several limitations to decreasing fiscal deficit in India, including:

Structural issues: India has several structural issues, such as a low tax base, inefficient tax administration, and leakages in the subsidy system, which make it difficult to reduce the fiscal deficit.

Political pressures: Reducing the fiscal deficit often requires difficult political decisions, such as cutting subsidies and reducing government spending. However, these decisions can be politically unpopular, and therefore, difficult to implement.

Economic slowdown: Reducing the fiscal deficit can lead to a reduction in government spending, which can slow down the economy. This can be particularly problematic in India, where economic growth is already a challenge.

External factors: External factors such as changes in global oil prices or fluctuations in the exchange rate can impact India's fiscal deficit, making it difficult to control.

COVID-19 pandemic: The COVID-19 pandemic has had a significant impact on India's economy, leading to a decrease in government revenue and an increase in expenditure. This has made it even more challenging to reduce the fiscal deficit.

In conclusion, while reducing the fiscal deficit is essential for India's long-term economic health, there are several limitations to achieving this goal. Policymakers must carefully balance the need to reduce the fiscal deficit with the need to support economic growth and address structural issues in the economy.

- **Limitations in Reducing Inflation**

Reducing inflation has been a significant challenge for India's policymakers for many years. There are several limitations to reducing inflation in India, including:

Structural factors: India has several structural factors that contribute to inflation, such as a large informal sector, inefficient supply chain management, and inadequate infrastructure. Addressing these factors requires significant structural reforms, which can be challenging to implement.

External factors: External factors, such as changes in global commodity prices and fluctuations in the exchange rate, can also impact inflation in India, making it challenging to control.

Monetary policy limitations: The Reserve Bank of India (RBI) has limited tools to control inflation, as interest rate hikes can have a negative impact on economic growth.

Fiscal policy limitations: Fiscal policy, such as reducing government spending, can help to reduce inflation, but it can also have a negative impact on economic growth and employment.

Political pressures: Reducing inflation often requires difficult political decisions, such as cutting subsidies and increasing taxes. However, these decisions can be politically unpopular and challenging to implement.

In conclusion, reducing inflation in India requires a multifaceted approach that addresses structural factors, supply-side constraints, and external factors. Policymakers must carefully balance the need to control inflation with the need to support economic growth and employment.

Data Analysis and Interpretation

We have analysed a lot of data from previous years and in terms of Inflation and Fiscal Deficit, after analysing we created a simple regression model in Excel which have proved that the rising trend of bond yields will strengthen further in the coming years.

We took Inflation data as a percentage compared to previous year and on the other hand, we took Fiscal Deficit data as a percentage of Gross Domestic Production (GDP).

Factors

	FY'20	FY'21	FY'22	FY'23	FY'24	FY'25
Fiscal Deficit (As a % of GDP)	9.3%	6.7%	6.4%	5.9%	5.1%	4.5%
Inflation (Compared to Previous Year)	6.62%	5.13%	6.67%	5.0%	4.4%	4.09%
Constant	0.00035	0.00021	0.00031	0.00021	0.00021	0.00021

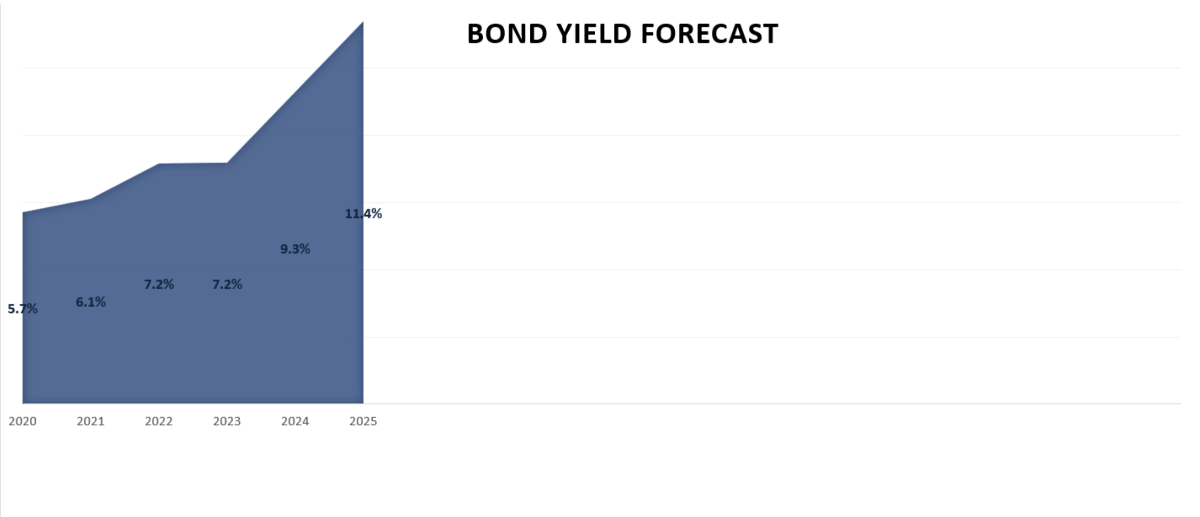
Selected Case

2

Best Case (1)
Average Case (3)
Worst Case (2)

Expected Bond Yields

	FY'20 (Actual)	FY'21 (Actual)	FY'22 (Actual)	FY'23 (Forecasted)	FY'24 (Forecasted)	FY'25 (Forecasted)
Bond Yield (In Percentage)	5.7%	6.1%	7.2%	7.2%	9.3%	11.4%



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Link to our financial model for analysis

Recommendations and Implications

Reducing inflation and fiscal deficit are two key objectives for policymakers in India, and achieving these goals can have significant implications for the economy. Here are some of the implications of reducing inflation and fiscal deficit in India:

- **Implications of reducing inflation:**

Increased purchasing power: Reducing inflation can increase the purchasing power of consumers, as prices for goods and services become more stable and predictable.

Increased investment: Lower inflation can increase investor confidence, leading to increased investment in the economy.

Increased competitiveness: Reduced inflation can make Indian goods and services more competitive on the global stage, as prices become more stable.

Improved economic growth: Lower inflation can help to promote economic growth by making it easier for businesses to plan and invest.

- **Implications of reducing fiscal deficit:**

Reduced inflation: Reducing the fiscal deficit can help to reduce inflation, as it can reduce the government's demand for borrowing, which can put upward pressure on interest rates.

Improved investor confidence: Lower fiscal deficit can help to improve investor confidence, as it signals that the government is committed to reducing debt and improving the fiscal health of the country.

Reduced borrowing costs: Lower fiscal deficit can reduce the government's borrowing costs, freeing up resources for other public investments.

Improved credit rating: Lower fiscal deficit can improve India's credit rating, making it easier and cheaper for the government to borrow money.

Overall, reducing inflation and fiscal deficit can have significant positive implications for the Indian economy, such as increased purchasing power, investment, competitiveness, economic growth, and improved investor confidence. However, achieving these goals requires careful policy planning and implementation to balance the need for economic growth with the need for fiscal stability.

Conclusion

So, at the end, we concluded that in spite of having illiquidity problem of both Government and Corporate bonds in India, it can definitely be improved and get more liquid if the yield would increase and it can be increased with the help of factors discussed above. Although many challenges are linked with the improvement of these factors but if proper management of these will be done then the bond yield would definitely get strengthened and the situation of bond markets in India can be improved which will attract more investors in this asset and will expect comparable returns with that of share market. Although, it is practically impossible that maximum return that can be generated with debt market matches exactly with that of share market but the average return can be made comparable.

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