NSE

Nifty BHARAT Bond

BHARAT BOND ETF

A GAME-CHANGER IN INDIA'S CORPORATE BOND MARKET

Introduction

Savings from Indian household have always been flowing into traditional fixed income products such as fixed deposits (FDs), Public Provident Funds (PPFs), Post Office Deposits, Kisan Vikas Patra (KVP). However, when it comes to modern fixed income investment product such as bonds, the participation of retail investor is very small. For instance, demand for corporate bond as an investment is mostly confined to institutional investors with retail investors accounting for only 3 per cent of the outstanding corporate bonds (RBI Bulletin, Jan 2019). On the supply side, the corporate issuers typically prefer raising capital from bank over issuance of bonds, primarily due to low cost of borrowing, less disclosure & compliance requirements and operational ease.

Corporate bond markets help issuers raise funds more efficiently while providing investors with another investment avenue. However, the instrument is underpenetrated in India. Currently, the corporate bond outstanding to country's GDP ratio is 17%, which is one of the lowest in the world. In advanced economies, the ratio is much higher at 123% in USA, 34% in Singapore and 74% in South Korea. Globally, the bond market has been the leading source of financing for various economic participants. Further, fixed-income exchange-traded funds (ETFs) across the globe are a trillion-dollar asset class and an essential part of the retail investor's portfolio. Robust bond markets are integral for stimulating resource mobilization and allocation to critical economic activities.

Some of the factors that contribute to low penetration of retail investors in corporate bonds are high percentage of Over-the-counter (OTC) deals, private placements, large ticket sizes, difficulty in sourcing information, low volumes, and illiquidity amongst others. Debt mutual funds have played an important role in bringing in some retail participations in bond markets by providing investors exposure to well-diversified fixed income portfolios managed by professional fixed income fund managers. Mutual funds also provide investors reasonable liquidity by allowing them to make fresh investments or redeem their existing investments on a daily basis at the end of day NAV. However, fund management fees of debt mutual funds in India ranges from 32bps to 115bps (Source: Morningstar Global Investor Experience Study). Further, debt mutual funds suffer from lower transparency as they disclose their portfolios only on a monthly basis.

Bond ETFs could be a probable solution to the major problems associated with the bond market in India. Recently, Department of Investment and Public Asset Management (DIPAM) announced the launch of India's maiden Bond ETF – BHARAT Bond ETF, to be managed by Edelweiss Asset Management Company, that will be tracking the Nifty BHARAT Bond Index which invests in Public Sector companies.

Overview of Corporate Bond Market in India

As per a report titled “Development of Viable Capital Markets — The Indian Experience” by Dr. Viral V. Acharya, Deputy Governor, Reserve Bank of India, Outstanding issuance of corporate bond has increased to ₹ 31+ trillion as on March 2019, clocking an annualised growth rate of 13.5% during last four years. Further, total secondary markets trades volume has picked up from ₹ 12 trillion in FY 2014-2015 to ₹ 19 trillion in FY 2018–2019, but majority of the trades are Over-the-counter (OTC) deals.

As per RBI research paper titled “India’s Corporate Bond Market: Issues in Market Microstructure” published in March 2019, provides following interesting highlights of Indian corporate bond market.

- The most notable feature of the debt market is that bulk of the debt is placed privately.
- In the primary market, the bulk of bonds issued were 2-5 year tenor range (56 per cent).
- The highest rated bonds (AAA rated) accounted for more than half of total amount outstanding in the primary segment during the last two years. Similarly, highest rated bonds accounted for close to 80 per cent of the total secondary market trading.

Exhibit 1 depicts the outstanding bonds of Public Sector companies (CPSEs/PFIs/Stat Bodies) along with its liquidity share in total corporate bond market.

Exhibit 1: Bonds outstanding and liquidity figures

	Outstanding instrument	**Liquidity**
Issuer Category	**Amount (%)**	**Total Turnover (CY-2018) (%)**
Central Public Sector Enterprise	19	22
Public Financial Institutions	5	12
Statutory Body	3	1
Public Sector Banks	5	1
CPSE-Tax-free	4	1
Public Financial Institution (PFI) -Tax-free	0	0
Statutory (Stat) Body-Tax-free	2	0
Issuers other than Public sector issuers	62	63
Total	**100%**	**100%**

As on March 2019 Source: NSE Database

As observed above, the bonds issued by Public Sector companies (CPSEs/PFIs/Stat Bodies) represents one third of the total domestic corporate bond market size. Similarly, they represent ~37% of the total corporate bond market trading volumes.

Corporate Bond Exchange Traded Funds (ETFs)

ETFs or Exchange Traded Funds are essentially funds that are listed and traded on exchanges just like stocks. It's a basket of stocks (or bonds) that seeks to replicate the performance of independent index (like Nifty 50) by investing in same stocks as in index.

Corporate Bond ETFs are exchange-traded funds replicating the underlying index which comprises bonds issued by corporate entities. Investors of bond ETFs gain passive exposure to benchmark indices in an inexpensive way. They seek to replicate the performance of an independent index by matching the risk factors like credit quality, duration and yield of the index. Consequently, the returns on bond ETFs are largely in line with those of the underlying index.

Corporate Bond ETFs across the globe track indices that can be broadly classified into two categories:

- **All Term Bond Index:** All Term Bond Index reflects performance of bonds falling within a broad residual maturity bucket for instance 3 to 5 Yr. The index never expires as it keeps buying new bonds of higher maturity and sells bonds of lower maturity to keep average maturity within the prescribed range. This leads to higher churn in the portfolio.

- **Target Maturity Bond Index:** Target Maturity captures portfolio of bonds maturing in a specific calendar year (say 2023) behaving just like a bond, as the index matures in the prescribed maturity year (2023 / 2030 in the case of BHARAT Bond ETF) and the maturity proceeds of the ETF tracking the index are returned to the investors as the ETF matures. Since bonds in a target maturity-based ETFs are held till maturity it witnesses significantly lower portfolio churn. Due to a defined maturity year, held to maturity nature and negligible churn in the fund, the Target Maturity Year structure lends high predictability of returns to the ETF.

Exhibit 2: Example of Global bond indices and corresponding ETF

Category	ETF	Index
Target Maturity Bond Indices	BulletShares 2020 Corporate Bond ETF	Nasdaq Bulletshares® USD Corporate Bond 2020 Index
	iShares® iBonds® Dec 2020 Term Corporate ETF	Bloomberg Barclays 2020 Maturity Corporate Index
All Term Bond Indices	Vanguard Short-Term Corporate Bond ETF	Barclays Capital U.S. 1-5 Year Corporate Index
	iShares 7-10 Year Treasury Bond ETF	Barclays Capital U.S. 7-10 Year Treasury Bond Index

How Bond ETFs globally track Fixed Income Indices?

Bond ETFs are passive investment instruments as they attempt to track the performance of an index. They don't try to outperform the underlying index but simply replicate the risk and performance of the index. Methods followed globally to replicate the index are:

Full replication method: This is a classic method of physical replication where the ETF holds all the securities of the index. This method ensures tight tracking and matches all the key characteristics of the index closely. The challenge for the architect of a bond ETF is to ensure that it closely tracks its respective index in a cost-effective manner, despite the lack of liquidity in the bond market. Most equity ETFs usually hold every security in their index but the same is not possible with bonds. To get around the liquidity issue, bond ETFs opt for sampling method.

Sampling method: Here the ETF holds a representative sample of the securities that make up the index. A sampling methodology means that the ETF selects the securities from its underlying index universe to obtain a representative sample of securities that have investment characteristics like the underlying index. The fund manager aims to match the fundamental characteristics including Average duration/maturity, Credit ratings, Sector allocation, Yield of the underlying index across following areas:

Based on the above characteristics, fund manager classifies the securities of the underlying index into different categories and selects the representative securities for the ETF to generate the returns closer to its benchmark.

Globally, bond ETFs typically replicate their benchmarks using sampling approach as large number of bonds in indices and illiquid nature of bond market makes full replication prohibitive.

SEBI Guidelines on bond ETF for replication

Debt ETFs/Index Funds shall replicate the index completely. However, if it is not feasible to replicate owing to non-availability of the issuance of the issuer forming part of the index:

- Debt ETFs/Index Funds would be allowed to invest in other issuance issued by the same issuer having deviation of +/-10% from the weighted average duration of issuances forming part of the index, subject to single issuer limit.
- Debt ETFs/Index Funds would be allowed to invest in issuances of other issuers within the index having duration, yield and credit rating in line of the non-available issuance of the issuer(s) forming part of the index, subject to single issuer limit.
- In both cases, the duration of Debt ETFs/Index Funds should not deviate +/-5% from the duration of the index.
- In the event the issuance from the issuer within the index is not feasible, Debt ETFs/Index Funds are allowed to invest up to 20% of the aggregate portfolio in

issuances of the issuer(s) not forming part of the index with the duration, yield and credit rating in line with that of the non-available issuances of issuer.

- In an event where credit rating of issuance falls below investment grade or rating mandated in the index methodology, rebalancing by Debt ETFs/Index Funds shall be done with period of 5 working days.

The above guidelines shall not be applicable to Debt ETFs/Index Funds tracking debt indices having constituents as Government Securities (G-Sec), Treasury Bills and Tri-party Repo (TREPS) only.

BHARAT Bond ETF – A potential Game Changer in Indian Corporate Bond Market

The introduction of Corporate Bond ETFs through the launch of BHARAT Bond ETF, as announced by the Honourable Finance Minister, Smt. Nirmala Sitharaman, could be a gamechanger in India's fixed-income investment milieu. Conceptualized by the Department of Investment and Public Asset Management (DIPAM), BHARAT Bond ETF will track the Nifty BHARAT Bond Index series. The Nifty BHARAT Bond Index series will track performance of public sector bonds with AAA credit ratings and maturing in a specific year. The BHARAT Bond ETF which is a Target Maturity Exchange Traded Bond Fund will be predominantly investing in the constituents of Nifty BHARAT Bond Index. Target Maturity ETF means that it will have a fixed maturity period and at maturity investors will get back their investment proceeds along with returns.

As a target maturity bond ETF, the BHARAT Bond ETF seeks to address most of the issues deterring India's retail investors from investing in the corporate bond markets. It offers higher safety by investing in higher-rated bonds, transparency, liquidity (no lock-in), reasonable predictability of returns and tax efficiency. The structure has the potential to reshape the country's inherent preference in fixed-income products. But driving awareness is a critical factor to make this happen.

How BHARAT Bond ETF has an edge over Conventional Debt Instruments?

Accessibility:

In India ~98% of total issuance of bond is privately placed and minimum investment amount for subscription generally stands in multiple of ₹ 10,00,000 as a result of which retail investors find it difficult to participate in bond market. BHARAT Bond ETF makes bond market more accessible to retail investors by reducing the ticket size and providing exposure to a diversified basket of issuers. The BHARAT Bond ETF also has a small unit size of ₹ 1000.

Tax Efficiency:

Traditional measure of debt instruments such as fixed deposits are taxed as per investors' marginal tax rate. Unlike these, BHARAT Bond ETF offer the benefit of indexation for long-term capital gains when investments are held for three years or longer terms. Indexation helps in lowering overall tax liability by adjusting the purchase price of the underlying asset or investment. This can be demonstrated below:

Exhibit 3: Net post tax return of BHARAT Bond ETF and Traditional Investment

Particulars	BHARAT Bond ETF	Traditional Investment
Investment amount	₹ 1,00,000	₹ 1,00,000
Assumed rate of return	7.52%	7.52%
Indexation**	11	NA
Value on Maturity	₹ 2,12,000	₹ 2,12,000
Indexation value	₹ 1,54,000	-
Taxable amount	₹ 58,310	₹ 1,12,000
Applicable tax*	₹ 11,662	₹ 33,677
Post tax value	₹ 2,01,000	₹ 1,79,000
Net post tax return	***6.94%***	***5.74%***

Assumed tenure for traditional investment and Bond ETF (11 indexation) - 10.38 Years
***Assumed rate of inflation is 4%.*
** Traditional investment taxed at 30% and BHARAT Bond ETF at 20% post indexation*
Source: Edelweiss AMC

Exhibit 3 highlights that returns for investor (post-tax) for investor holding 10 Yr BHARAT Bond ETF is 6.94% vis-à-vis return of 5.74% on traditional investment such as fixed deposits. Thus, investor end up generating 120bps higher return over traditional investment due to benefit of indexation.

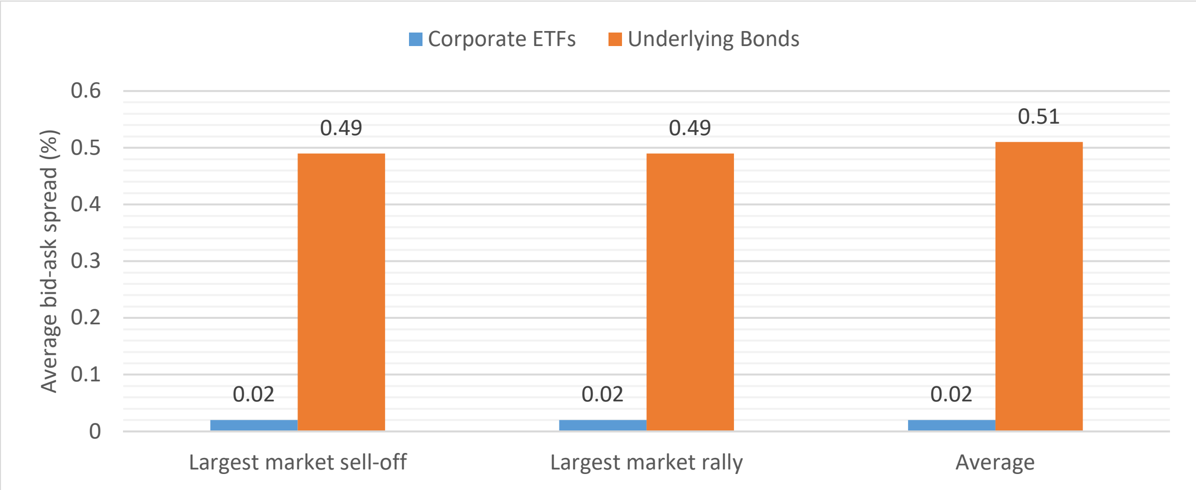
Transparency:

Portfolio holdings of ETFs are disclosed daily as opposed to monthly disclosures by debt mutual funds. The availability of live-traded prices on exchanges continuously update investors about the investment value of their portfolio.

Liquidity:

Just like a stock, Corporate Bond ETFs are traded on exchanges. This makes ETFs more liquid than a mutual fund which can be traded only at day end NAV. Further, in general, ETFs improve underlying bond liquidity (Morningstar Study, September 2019). Also the following exhibit illustrates that bond ETFs trade more efficiently than the underlying bond.

Exhibit 4: Average bid-ask spread of corporate bond ETFs and underlying bond



Source: Vanguard; provided to NSE Indices by Horizons ETFs, As of June 2019

Laddering:

The Target Maturity Bond ETF structure offers the potential to create a ladder structure. This enables availability of ETFs for each of the next 10 years. Similarly, investors have choice to invest in ETFs across various years.

How the Target Maturity Based BHARAT Bond ETF facilitates a ladder structure

Target Maturity Bond ETF structure consists of various ETFs maturing in each year for the next 10 years. This ladder structure provides choice to issuers to be able to borrow for any tenure maturing in any of the following 10 years. Similarly, it helps investors by providing choices of ETFs across various years.

Exhibit 5: Ladder structure of Target Maturity based ETF

As on Year	Residual Maturities (years) of CPSE ETFs										Total Number of CPSE ETFs available in the ladder structure
	1 Yr	2 Yr	3 Yr	4 Yr	5 Yr	6 Yr	7 Yr	8 Yr	9 Yr	10 Yr	
	Rolled Down ETFs		New ETF	Rolled down ETFs						New ETF	
2020	2021	2022	**2023**	2024	2025	2026	2027	2028	2029	**2030**	2
2021	2022	2023	**2024**	2025	2026	2027	2028	2029	2030	**2031**	4
2022	2023	2024	**2025**	2026	2027	2028	2029	2030	2031	**2032**	6
2023	2024	2025	**2026**	2027	2028	2029	2030	2031	2032	**2033**	7
2024	2025	2026	**2027**	2028	2029	2030	2031	2032	2033	**2034**	8
2025	2026	2027	**2028**	2029	2030	2031	2032	2033	2034	**2035**	9
2026	2027	2028	**2029**	2030	2031	2032	2033	2034	2035	**2036**	10
2027	2028	2029	**2030**	2031	2032	2033	2034	2035	2036	**2037**	10
2028	2029	2030	**2031**	2032	2033	2034	2035	2036	2037	**2038**	10
2029	2030	2031	**2032**	2033	2034	2035	2036	2037	2038	**2039**	10

Each colour in the table depicts the roll down of each ETF from 3 year and 10 year till its redemption. (colour selection is random)

- As depicted in the exhibit 5, in the first year of the BHARAT Bond ETF (say in 2020), a new 3 year ETF (maturing in 2023) and a new 10 year ETF (maturing in 2030) shall be created. Thus, the investors and issuers will have choice of 2 maturities (3 year and 10 year) in the year of launch.
- In the next year (2021), 2 new ETFs of maturities 3 year and 10 year shall be launched. These will mature in year 2024 and 2031. Also, the 2 ETFs previously launched will now roll down to residual maturity of 2 year and 9 year. Thus, in this year, investors and issuers will have choices of 4 maturities (2 year, 3 year, 9 year and 10 year).
  - If issuers choose to issue bonds for the rolled down 2 year or 9 year ETFs, that shall happen through re-issuances of existing bond's ISINs maturing in those 2 years. Due to re-issuance in the same ISIN, the amount outstanding of the bond's ISIN shall increase, possibly improving the liquidity of the ISIN.
  - In contrast, if the issuer issues a new ISIN every time, the same amount outstanding gets fragmented across various smaller sized ISINs restricting the liquidity of those ISINs – a possible reason for the existing lower liquidity in the corporate bond market in India. Please note that SEBI vide circular dated 30 June 2017 (CIR/IMD/DF-1/ 67 /2017) has restricted the number of ISINs that can be issued by an issuer maturing in any single financial year to 17 ISINs.

  - Presently, ₹ ~31+ trillion worth of corporate bonds amount outstanding is fragmented across 20000+ ISINs, whereas ₹ 60+ trillion worth of government securities amount outstanding is spread across only ~88 ISINs – a possible reason for the stark difference between the daily liquidity of the two categories of fixed income instruments (₹ ~7500 cr in case of corporate bond vs ₹ ~35000 cr in case of g-sec average daily trading volume)

- In this way, every year, 2 new ETFs are added to the ladder increasing the total number of ETFs by 2.
- In 2023, while 2 new ETFs (3 year and 10 year) are added, the very first 3 year ETF launched in 2020 maturing in 2023, will mature. This increases the total number of ETFs by 1 in every subsequent year starting 2023.
- In 2026, for the first time, the total number of ETFs available shall be 10 offering an ETF for each of the next 10 years. This is where the ladder gets filled fully.
- Subsequently, only a new 10 year CPSE ETF can be launched every year to maintain the total number of ETFs at 10 and to continue to cover all the 10 years of yield curve.

Following are the benefits of bond ETF laddering:

- It provides choice to issuers to be able to borrow for any tenure maturing in any of the following 10 years. Similarly, it helps investors by providing choices of ETFs across various fiscal years
- A ladder helps in smoothening out the effect of fluctuations in interest rate because there are ETFs maturing every year so there is no real need to sell bonds and take MTM losses
- In case of upward sloping yield curve, proceeds from each maturing bond ETF can be reinvested in longer-dated ETFs at higher rates enabling the investor to ride on the yield curve

Nifty BHARAT Bond Index Series

The Nifty BHARAT Bond Indices are first of its kind following a unique target maturity structure where the index matures in a particular year. Each such index captures performance of portfolio of public sector bonds with high credit rating and maturing in a specific year. BHARAT Bond ETF will be the first corporate bond ETF to track these indices. BHARAT Bond ETF tracking these indices will give investors an experience somewhat similar to investing in a bond with a specific maturity date and gives back the redemption money to investors on that date. Target Maturity Structure based ETFs provide reasonable predictability of returns if held till maturity.

Following are the first two indices within Nifty BHARAT Bond Index series:

- Nifty BHARAT Bond Index - April 2023 (a 3 year index) maturing in April 2023
- Nifty BHARAT Bond Index - April 2030 (a 10 year index) maturing in April 2030

Index Methodology

Since the BHARAT Bond ETF will be tracking Nifty BHARAT Bond Index, it is important to understand index methodology as shown in Exhibit 6. The selection of bond in BHARAT Bond ETF will be done as per index methodology.

Exhibit 6: The Nifty BHARAT Bond Index Methodology

Selection	•AAA bonds issued by public sector companies •Bonds maturing within 12 months to the maturity of the index
Weights	•Weights will be based on the total outstanding amount of the respective bonds; •Weightage of each issuer in index capped at 15%
Rebalancing	•Quarterly rebalancing of index constitutents

Apart from scheduled review, bonds of existing issuers to be excluded from the index if they are downgraded below AAA rating.

Index Termination

- The indices shall have the following maturity dates
  - Nifty BHARAT Bond Index - April 2023 : Maturing on 15 April 2023
  - Nifty BHARAT Bond Index - April 2030 : Maturing on 15 April 2030

When the last bond in the Index matures, the entire redemption amount shall be assumed to be reinvested in The Clearing Corporation of India Ltd. (CCIL) Tri-Party Repo (TREPS) overnight rate till the maturity of the index.

Index Portfolios

Exhibit 7: Portfolio of Nifty BHARAT Bond Index – April 2023

Sr. No.	Issuer Name	No. of ISINs	Average Yield	Residual Maturity	Mac Duration	Issuer Weight
1	REC LIMITED	10	7.21%	2.94	2.66	15.02%
2	POWER FINANCE CORPORATION LIMITED	10	7.16%	2.79	2.52	15.01%
3	NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT	7	6.76%	2.83	2.53	15.00%
4	HOUSING AND URBAN DEVELOPMENT CORPORATION LIMITED	6	6.83%	2.71	2.49	11.83%
5	EXPORT-IMPORT BANK OF INDIA	18	6.41%	2.76	2.48	8.00%
6	POWER GRID CORPORATION OF INDIA LIMITED	13	6.48%	2.98	2.62	7.26%
7	SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA	4	6.66%	2.59	2.39	6.99%
8	NTPC LIMITED	15	6.38%	2.56	2.31	6.66%
9	HINDUSTAN PETROLEUM CORPORATION LIMITED	1	6.75%	3.01	2.79	4.85%
10	NATIONAL HIGHWAYS AUTHORITY OF INDIA	2	6.42%	2.63	2.44	3.86%
11	NUCLEAR POWER CORPORATION OF INDIA LIMITED	3	6.61%	3.26	2.87	2.43%
12	INDIAN RAILWAY FINANCE CORPORATION LIMITED	2	6.54%	3.24	2.82	1.88%
13	NHPC LIMITED	8	6.53%	2.89	2.61	1.21%
Index Level Average Statistics		**99**	**6.79%**	**2.82**	**2.55**	**100.00%**

**Data as on December 11, 2019*

Exhibit 8: Portfolio of Nifty BHARAT Bond Index – April 2030

Sr. No.	Issuer Name	No. of ISINs	Average Yield	Residual Maturity	Mac Duration	Issuer Weight
1	INDIAN RAILWAY FINANCE CORPORATION LIMITED	5	7.62%	9.72	7.03	15.01%
2	POWER GRID CORPORATION OF INDIA LIMITED	10	7.49%	9.79	6.93	15.01%
3	NATIONAL HIGHWAYS AUTHORITY OF INDIA	5	7.73%	9.58	6.87	14.95%
4	REC LIMITED	3	8.03%	9.45	6.6	12.76%
5	NTPC LIMITED	11	7.53%	9.61	7	11.62%
6	INDIAN OIL CORPORATION LIMITED	1	7.52%	9.87	7.25	8.00%
7	NUCLEAR POWER CORPORATION OF INDIA LIMITED	5	7.49%	10	6.99	6.60%
8	POWER FINANCE CORPORATION LIMITED	2	7.98%	9.51	6.61	6.53%
9	NLC INDIA LIMITED	1	7.49%	9.47	6.75	3.93%
10	EXPORT-IMPORT BANK OF INDIA	3	7.61%	9.99	6.96	2.84%
11	NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT	1	7.67%	9.61	6.98	1.48%
12	NHPC LIMITED	3	7.51%	9.78	7.09	1.27%
Index Level Average Statistics		**50**	**7.66%**	**9.67**	**6.91**	**100.00%**

**Data as on December 11, 2019*

Exhibit 7 & 8 represents possible issuers which may be part of 3 Yr and 10 Yr BHARAT Bond ETF respectively. The portfolio detail reveals that BHARAT Bond ETF will provide choices to both conservative as well as aggressive investors. Conservative investor in order to avoid interest rate risk may opt for 3 year ETF whereas investor who wants to ride on the yield curve for long-term and has relatively higher risk appetite may opt for 10 year ETF. Indexation benefit shall apply in both the cases. Also, the interest rate risk minimises if these investments are held to maturity.

How the Target Maturity structure used in the BHARAT Bond ETF provides high returns predictability

A common factor prompting investments in fixed instruments is predictability of returns. As per a study by NSE Indices, returns for investments made in corporate bond ETFs with a target maturity structure can be predicted with reasonable accuracy based on the average index yields prevailing on the day of the investment. Returns expected from Target Maturity ETFs are close to the average yield of the ETF at the time of making the investment, provided the investment is held till maturity and in the absence of credit events in the fund. NSE Indices Limited back-tested model portfolios with 3 Yr and 5 Yr Target Maturity Indices as illustrated in Exhibit 9.

Exhibit 9: Back-testing of model portfolios of Target Maturity Indices for 3 and 5 year maturities.

Annualized Return* if HTM Investment made in 3-year product starting in January or July					
January			**July**		
Index Name	**Index Returns**	**Yield as on Start Date**	**Index Name**	**Index Returns**	**Yield as on Start Date**
TM 2011	8.92%	8.90%	TM 2011	10.26%	9.93%
TM 2012	8.57%	8.37%	TM 2012	6.97%	7.41%
TM 2013	7.63%	7.73%	TM 2013	7.80%	7.77%
TM 2014	8.93%	8.93%	TM 2014	9.33%	9.51%
TM 2015	9.42%	9.34%	TM 2015	8.91%	9.36%
TM 2016	8.95%	8.95%	TM 2016	8.61%	8.71%
TM 2017	9.59%	9.38%	TM 2017	8.56%	9.02%
TM 2018	8.52%	8.54%	TM 2018	7.96%	8.28%
TM 2019	8.05%	8.14%	-	-	-
Annualized Return* if HTM Investment made in 5-year product starting in January or July					
January			**July**		
Index Name	**Index Returns**	**Yield as on Start Date**	**Index Name**	**Index Returns**	**Yield as on Start Date**
TM 2013	9.17%	9.14%	TM 2013	10.12%	10.30%
TM 2014	8.17%	8.24%	TM 2014	7.82%	7.84%
TM 2015	8.27%	8.30%	TM 2015	8.03%	8.14%
TM 2016	9.03%	8.94%	TM 2016	9.25%	9.52%
TM 2017	9.39%	9.28%	TM 2017	8.88%	9.25%
TM 2018	8.78%	9.04%	TM 2018	8.60%	8.76%
TM 2019	9.33%	9.45%	-	-	-

**Purely based on back-tested indices and in no way indicate future performance.*

Exhibit 9 highlights that the Target Maturity Indices enable investors gauge their return by the end of investment horizon (if the ETF tracking the index is held-till-maturity (HTM)), based on yield at the time of investment assuming there is no credit event. For instance, in January 2014, if an investor had invested in TM 2016 Index, at the maturity of the index, he would have realised return of 8.95% which is similar to the yield as on the start date of the investment. The difference in returns could be due to factors including variation in reinvestment rates across tenure of investment.

Signing off

Globally, the corporate bond market has been leading source of financing for various economic participants. However, Corporate Bond market in India is often touted to be underdeveloped. Notwithstanding fact that the Indian corporate bond market annualized growth rate of 13.5% in terms of issuance as on March 2019 over the period of 4 years, but participation of retail investor is still subdued. Retail investor still holds only 3% of total outstanding corporate bonds as on March 2019. Large ticket sizes, information asymmetry, high percentage of OTC deals, low volumes and illiquidity are some of the structural factors that contribute to low penetration of retail investor's and sluggish pace of corporate bond development.

Debt mutual funds have played a decent role in bringing in some retail participations in fixed income markets by providing investors exposure to well-diversified fixed income portfolios managed by professional fixed income fund managers. However, these funds have their own challenges such as credit quality of the issuers, lack of instant intra-day redemption, monthly disclosure of portfolio instead of daily and cost (median expense ratio being 0.54% which ranges from 32bps for direct plans to 115bps for regular plans as per The Morningstar Global Investor Experience (GIE) study for 2019).

This is where bond ETF could be a game changer as it has potential to overcome most of these short-comings and be face of financial product and process innovation. BHARAT Bond ETF is India's maiden corporate bond ETF tracking the Nifty BHARAT Bond Index and will invest in public sector bonds issued by government owned entities rated as AAA.

BHARAT Bond ETF has the potential to draw a pool of retail investors and become essential portfolio construction tools. The BHARAT Bond ETF is a promising start. By entailing good quality credit issuers, low cost, liquidity, tax-efficiency and high predictability of returns, the product has the potential to change the way India invests in fixed income products. Increased retail participation will strengthen India's corporate bond market. This, in turn, will contribute to the creation of a viable alternative to institutional channels for short and long-term financing needs of critical economic activities. Indian Fixed Income market is poised for some interesting times ahead.

About NSE Indices Limited:

(Formerly known as India Index Services & Products Limited-IISL)

NSE Indices Limited (formerly known as India Index Services & Products Ltd. - IISL), a subsidiary of NSE, provides a variety of indices and index related services for the capital markets. The company focuses on the index as a core product. The company owns and manages a portfolio of indices under the Nifty brand of NSE, including the flagship index, the Nifty 50. Nifty equity indices comprises of broad-based benchmark indices, sectorial indices, strategy indices, thematic indices and customised indices. NSE Indices Limited also maintains fixed income indices based on Government of India securities, corporate bonds, money market instruments and hybrid indices. Many investment products based on Nifty indices have been developed within India and abroad. These include index based derivatives traded on NSE, NSE IFSC and Singapore Exchange Ltd. (SGX) and a number of index funds and exchange traded funds. The flagship 'Nifty 50' index is widely tracked and traded as the benchmark for Indian Capital Markets.

For more information, please visit: www.niftyindices.com

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