IISL

India Index Services & Products Limited

NIFTY 50

NIFTY 10 Year SDL

October 2017

Introduction

In a G-Sec dominated domestic debt market, State Development Loans (SDLs) have gradually started to gain traction amongst investors. Providing a major impetus to the supply of the SDLs is an increasing GFD (Gross Fiscal Deficit) to GSDP (Gross State Domestic Product) ratio which breached 3 per cent mark for the first time since 2004-05. SDLs, which are used to fund the fiscal deficit of state governments, have witnessed a sizeable growth in trading volumes during past 5 years. During FY14 to FY17, the share of SDLs to total government securities amount outstanding has increased from 21% to 28% to reach a record Rs. 20.9 trillion. With increasing level of state borrowings, issuances of SDLs has almost doubled from Rs. 1.97 trillion in FY14 to Rs. 3.88 trillion in FY17. Within Mutual funds, exposure to SDLs in Gilt funds as a percent of their total AUM has increased from 6% in FY15 to 15% in FY 18 (YTD as on August 31, 2017). SDLs are also eligible for meeting the SLR requirements of banks as well as collateral for availing liquidity under RBI's Liquidity Adjustment Facility (LAF) window. Further, as per RBI, risk weights assigned to the investments in SDLs by the commercial banks is zero. SDLs, being issued by state governments, have lower risk as compared to corporate bonds.

India Index Services & Products Ltd (IISL), an NSE group company, has launched the NIFTY 10 Year SDL Index to represent the evolving segment of State Development Loans (SDLs). The index will act as benchmark for asset managers for their investments in SDLs. The index will also be available for licensing for launch of passive financial products such as exchange traded funds, index funds and structured products.

About NIFTY 10 Year SDL Index

NIFTY 10 Year SDL Index seeks to measure the performance of a portfolio of SDL securities with residual maturity of about 10 years. The index contains SDLs issued by top 14 states selected every year based on their primary issuance pattern during previous year.

The base date for the index is September 03, 2001 and base value is 1000. The index is rebalanced and reconstituted on every auction.

The NIFTY 10 Year SDL Index outperforms the NIFTY 10 yr Benchmark G-Sec Index for most of the calendar years and almost matches the NIFTY AAA Long Term Corporate Bond Index returns.

Exhibit 1: Represents the NIFTY 10 Year SDL Index values and the average 10 year SDL yields since inception

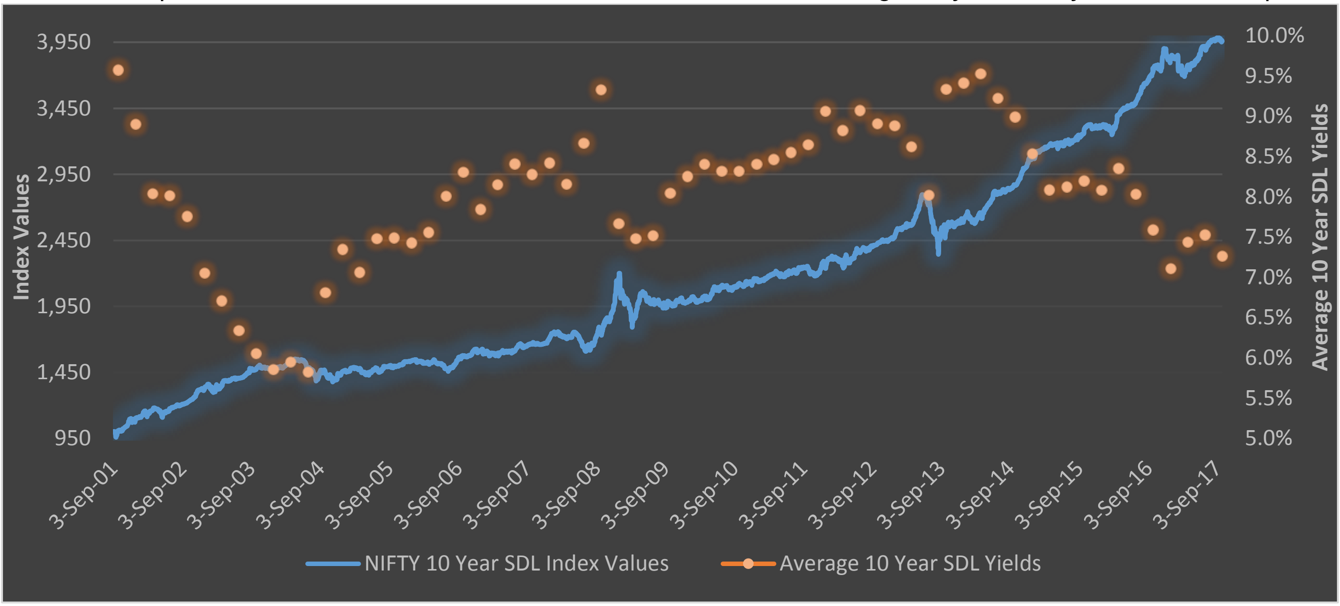


Exhibit 2: Represents period wise index returns

Period	Index Returns		
	NIFTY 10 Year SDL Index	NIFTY 10 yr Benchmark G-Sec Index	NIFTY AAA Long Term Corporate Bond Index
2001-02#	16.55%	*16.96%*	-
2002-03	15.85%	*16.62%*	-
2003-04	12.97%	*13.38%*	-
2004-05	-2.95%	-4.61%	-
2005-06	2.16%	1.91%	-
2006-07	5.60%	5.54%	-
2007-08	6.67%	8.15%	-
2008-09	10.73%	10.50%	-
2009-10	7.09%	*0.31%*	-
2010-11	8.76%	4.90%	-
2011-12	2.96%	3.47%	-
2012-13	13.67%	11.44%	-
2013-14	3.39%	*-1.12%*	-
2014-15	19.50%	*15.02%*	*17.64%*
2015-16	7.13%	*7.84%*	*8.54%*
2016-17	10.87%	*11.93%*	*11.73%*
2017-18 (YTD)	4.96%	2.73%	*5.12%*
Since 03rd Sept '01	8.93%	7.59%	-
Since 31 Mar '14	12.05%	10.66%	12.28%

As on 30th September, 2017
#since 03rd September, 2001

Since its inception in 2001, the NIFTY 10 Year SDL Index has delivered an average annual return of 8.93%, outperforming the NIFTY 10 yr Benchmark G-Sec Index by 1.34% per annum.

During FY 2002 to 2004, NIFTY 10 Year SDL Index delivered double digit annual returns, ranging from 12.97% to 16.55% with yields easing by 360 bps (basis points) during the 3 financial years.

During FY 2010, the NIFTY 10 Year SDL Index, with returns at 7.09%, outperformed the NIFTY 10 yr Benchmark G-Sec Index (which returned 0.31%) significantly with SDL spreads over G-Secs narrowing by 60 bps. During this year, SDL yields increased by 20 bps while G-sec yields increased by 80 bps.

Similarly, in FY 2014, SDL spreads over G-Secs narrowed, with SDL yields hardening by 83 bps while G-Sec yields hardening by 134 bps. Consequently, the NIFTY 10 Year SDL Index, with returns of 3.39%, outperformed the NIFTY 10 yr Benchmark G-Sec index (which returned -1.12%) by 4.51 %.

In the recent 3.5 year period (31st March, 2014 to September 30, 2017), the average annual returns of the NIFTY 10 Year SDL Index at 12.05% is only marginally lower than the average annual return of NIFTY AAA Long Term Corporate Bond Index at 12.28% per annum. Given the lower credit risk in SDLs as compared to corporate bonds and almost similar returns, SDLs emerges as an appealing investment avenue on a risk-adjusted –return basis.

FY 2015 particularly stands out, with SDL yields decreasing by 148 bps and spreads over G-Sec narrowing by 41 bps, the SDL index delivered 19.5% return, outperforming not only the NIFTY 10 yr Benchmark G-Sec index (which returned 15.02%) but also the NIFTY AAA Long Term Corporate Bond Index (which returned 17.64%).

The index captures the 10 year maturity segment - the most popular segment with ~96% share of SDL primary issuances volume

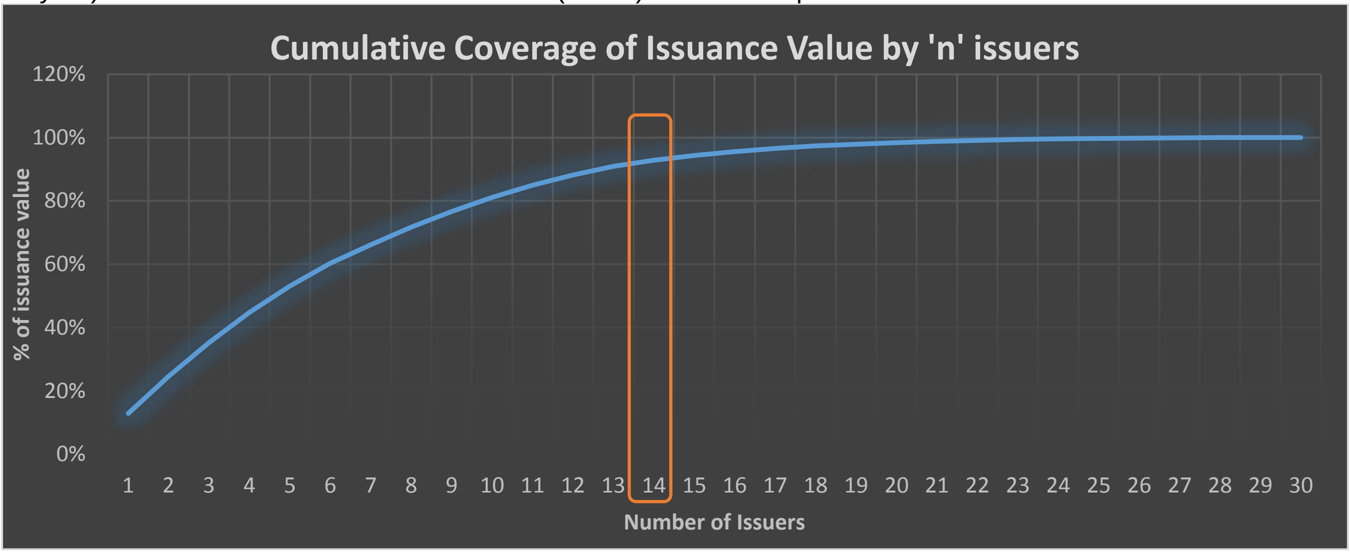
Exhibit 3: Percent share of SDL issuance volume within each maturity bucket

Period	Maturity (In Years)					
	5	10	15	20	Others	Total
FY 06-07	-	100%	-	-	-	100%
FY 07-08	-	100%	-	-	-	100%
FY 08-09	-	100%	-	-	-	100%
FY 09-10	-	100%	-	-	-	100%
FY 10-11	-	100%	-	-	-	100%
FY 11-12	-	100%	-	-	-	100%
FY 12-13	2%	93%	-	-	5%	100%
FY 13-14	1%	98%	-	-	1%	100%
FY 14-15	2%	96%	-	-	2%	100%
FY 15-16	0.8%	98.4%	0.7%	-	0.2%	100%
FY 16-17	2%	89%	4%	1%	4%	100%
FY 06-17	**1%**	**96%**	**1%**	**0%**	**2%**	**100%**

With 96% of issuances, the 10 year maturity segment dominates the SDL primary market. In FY 16-17, the share of 15 year maturity segment increased to 4% of issuance indicating the growing appetite of state governments in the long term segment. However, the long term issuance pattern remains skewed towards the 10 year maturity segment. Issuances, in maturity segments other than 10 year period, are negligible. By representing the 10 year maturity segment, the NIFTY 10 Year SDL Index captures the most active segment.

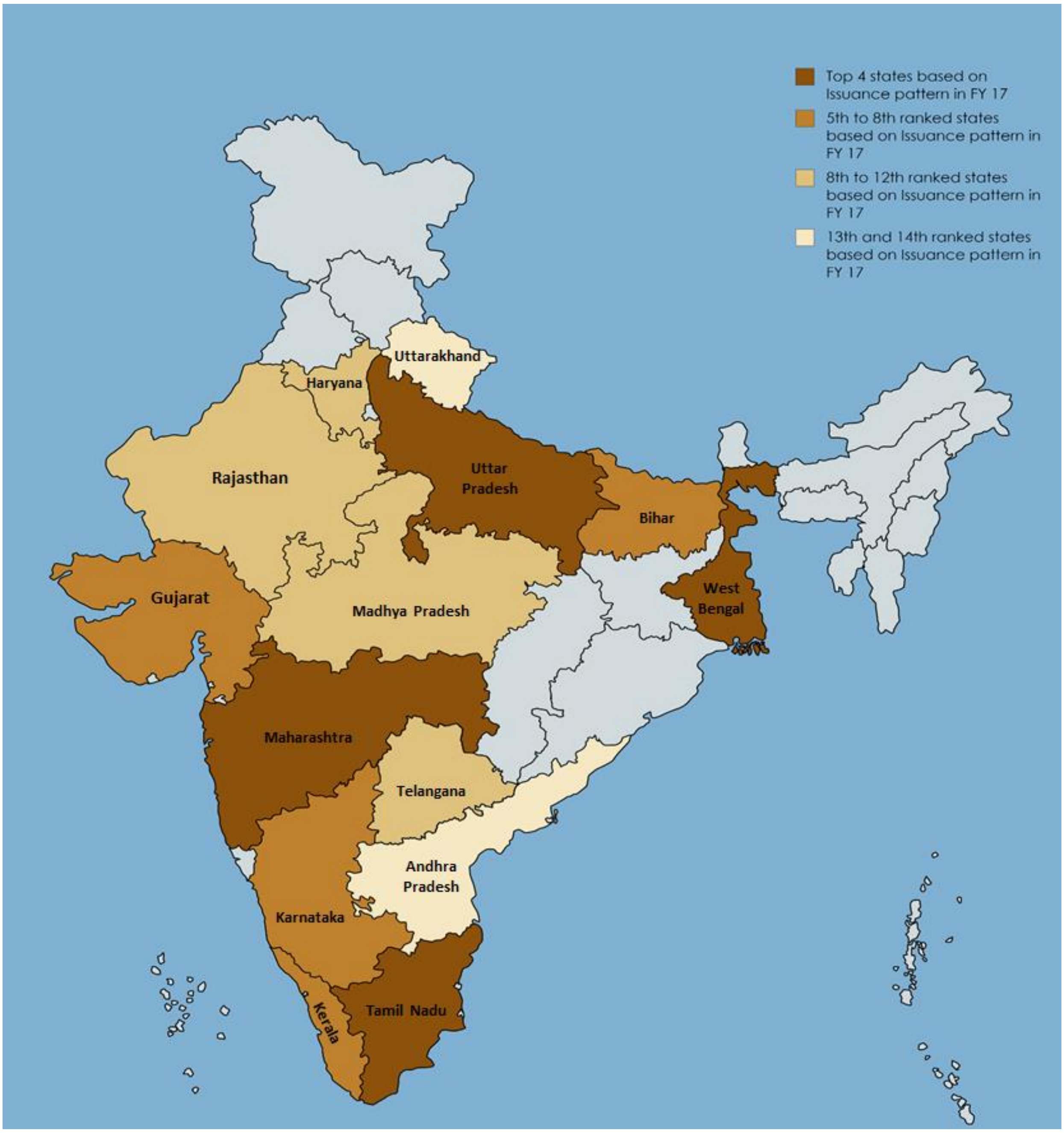
With 14 states included, The NIFTY 10 Year SDL Index provides high coverage of primary issuances in the SDL market

Exhibit 4: Represents cumulative percent coverage of issuance value within the 10 year maturity segment (for last 10 year) as we increase the number of issuers (states) in the index portfolio



The NIFTY 10 Year SDL contains SDLs issued by top 14 states selected every year based on their primary issuance volume during previous year. These 14 states, on an average, cover 93% of primary market issuance volume in the 10 year maturity segment. Further increasing the number of issuers in the index portfolio, would definitely increase the market coverage, however at the cost of including issuer states with relatively lower issuance of SDLs.

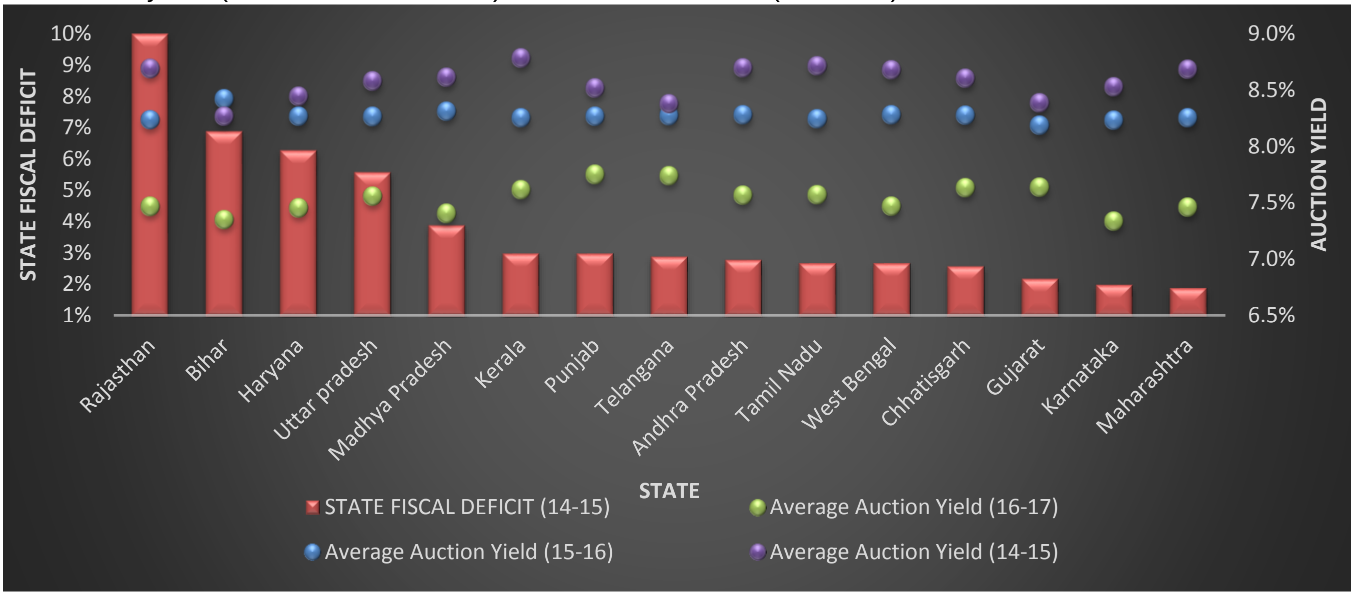
14 states included in the NIFTY 10 Year SDL Index during FY 18



Disclaimer: The Source of the map is https://mapchart.net/india.html. This map is being made available only for the convenience to the public. IISL does not certify, endorse or warrant (express or implied) the authenticity of this map including but not limited to its: accuracy, scale, timeliness, completeness, or reliability. This map is not developed by IISL and is used "as is". IISL shall not be held liable for any loss, damage, cost or expense relating to, or arising out of the use of the map referred herein.

SDL Yields – A stronger function of liquidity than State's fiscal position

Exhibit 5: Represents top 14 states selected in the index during the last 3 years against their average auction yields in the last 3 years (FY15, FY16 and FY17) and state fiscal deficit (FY 14-15).



*State Fiscal Deficit: GFD/GSDP – Ratio of GFD (Gross Fiscal Deficit) to GSDP (Gross State Domestic Product)

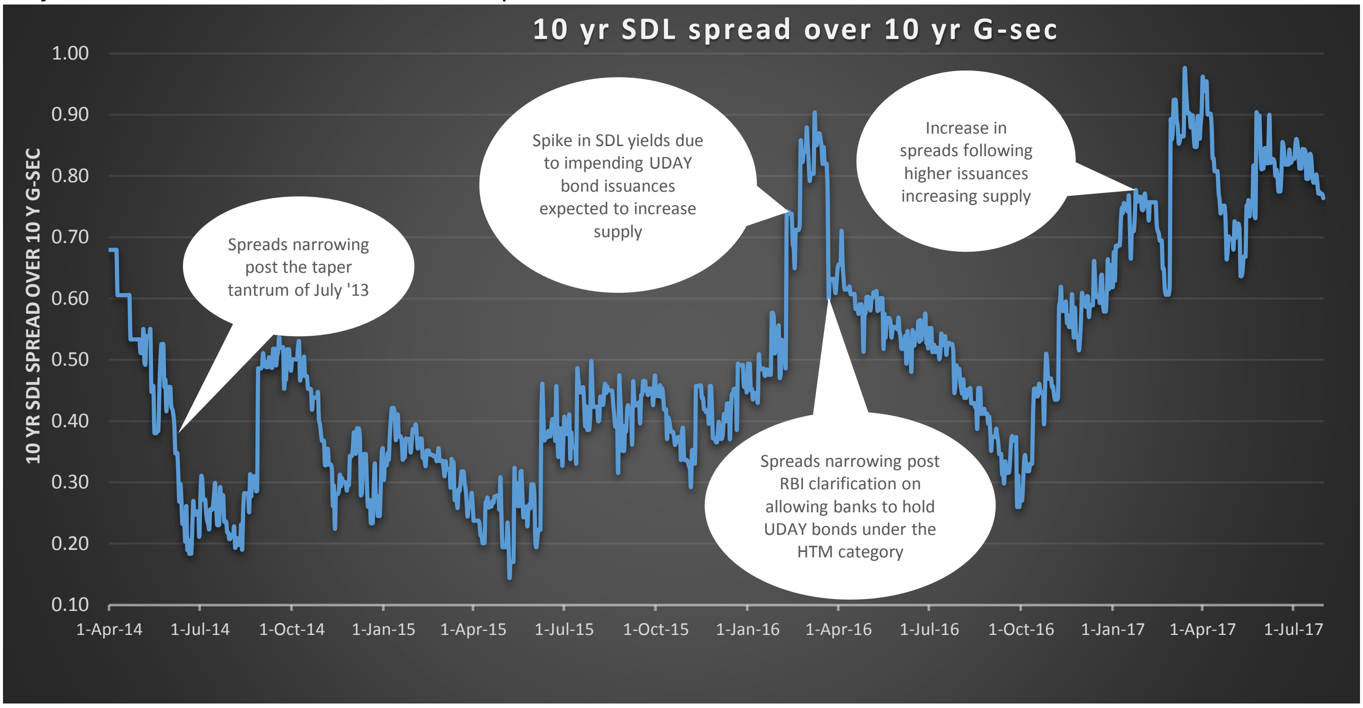
As observed, investors do not seem to price SDLs based on its fiscal position. Kerala, with its fiscal deficit at 3%, had an average borrowing cost of 8.26% in FY 15-16 whereas Rajasthan with a much higher deficit at 10%, had a marginally lower borrowing cost at 8.24%. Also, in FY 16-17, Madhya Pradesh had marginally higher cost (7.41%) than Bihar (7.35%) despite having a lower fiscal deficit of 3.9% as compared to 6.9% of Bihar.

One of the major factors for this low correlation between the fiscal deficit and its borrowing cost could be investors' perception of SDLs as a relatively safe asset class, coupled with the belief that management of issuances of SDLs is administered by RBI. With inter-state spreads more likely to be driven by the liquidity position and near-term demand-supply dynamics than macro-economic indicators, there seems to be a lack of consistency in inter-state spreads across time.

SDL spreads over G-Sec across time have been highly volatile – The NIFTY 10 Year SDL index captures the spread dynamics

Yields across different states do not differ much – and certainly not in line with their fiscal position. However, they are issued and traded at a spread over central government securities.

Exhibit 6: Represents the spreads between portfolio yield of the NIFTY 10 Year SDL Index and yield of the NIFTY 10 yr Benchmark G-sec Index since 01st April, 2014.



During the taper tantrum of July 2013, with the US Federal Reserve planning to curtail its bond buying program, Indian debt markets witnessed selling pressure from FPIs along with the rupee depreciating against the US dollar and G-sec yields hardening significantly by ~180 bps. SDL spreads over G-Sec during FY 14 were in the range of 70-100 bps. However, once the FPI selling pressure eased out, G-Sec yields normalised to reach around 8.71%. As a by-product, SDL yield spreads also eased to around 20 bps during July 2014.

Later, as per the memorandum dated 20th November 2015, the government of India initiated the UDAY program (Ujwal DISCOM Assurance Yojana) under which state governments, that own the power distribution companies (DISCOM) are allowed to take over 75 percent of their debt, and pay back lenders by selling UDAY bonds. Increased issuances of UDAY bonds, which increased the total supply of all securities issued by state governments, led to increase in SDL yields vis-à-vis G-sec yields resulting in SDL spreads increasing from ~49 bps in January 2016 to more than 75 bps in February 2016.

However, in March 2016, RBI allowed banks to classify bonds issued as part of the UDAY program under the held-to-maturity (HTM) category (thereby providing shield from MTM losses), leading to higher demand for these bonds and lowering spreads to ~60 bps in April 2016 and further to ~25 bps in Oct 2016.

Post Oct 2016, with G-Sec yields easing by ~50 bps, SDL spreads over G-Secs increased from ~25 bps to ~75 bps as SDL issuances increased significantly (from 2.95 trillion in FY 16 to 3.88 trillion in FY 17).

Given the illiquidity in SDLs as compared to central government securities, and given that SDLs are issued by state governments and not central government, SDLs have witnessed a positive spread over G-sec.

Signing off…

With SDLs gaining increasing popularity among domestic investors, as apparent through increased issuances over past years and increased exposure by mutual funds, SDLs have emerged as an evolving asset class with its own unique risk-return profile. Given the lower credit risk in SDLs as compared to corporate bonds and almost similar historical returns, SDLs appears to be an appealing investment avenue on a risk-adjusted –return basis. The NIFTY 10 Year SDL Index seeks to measure the performance of a portfolio of SDL securities with residual maturity of about 10 years. The 10 year maturity segment, that the index represents, dominates the SDL primary market with ~96% of issuance volume. With 14 states as part of the index, The NIFTY 10 Year SDL Index is well-diversified and provides high coverage (~93%) of total primary issuances volume in the SDL market. The NIFTY 10 Year SDL Index is expected to be helpful to investors in measuring the dynamics of the SDL segment of the Indian fixed income market.

For information on Index methodology and factsheet, please visit us at www.niftyindices.com or www.nseindia.com

About India Index Services & Products Ltd. (IISL):

India Index Services & Products Ltd. (IISL), a subsidiary of NSE, provides a variety of indices and index related services for the capital markets. IISL focuses on the index as a core product. IISL owns and manages a portfolio of indices under the NIFTY brand of NSE, including the flagship index, the NIFTY 50. IISL equity Indices comprises broad-based benchmark indices, sectoral indices, strategy indices, thematic indices and customised indices. IISL also maintains fixed income indices based on Government of India securities, corporate bonds and money market instruments. Many investment products based on IISL indices have been developed within India and abroad. These include index based derivatives traded on NSE, Singapore Exchange Ltd. (SGX), Chicago Mercantile Exchange Inc. (CME), Osaka Exchange Inc. (OSE), Taiwan Futures Exchange (TAIFEX) 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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