

BSE SENSEX 37,165
S&P CNX 11,245

CMP: INR155 TP: INR194 (+25%)

Buy

Motilal Oswal values your support in the Asiamoney Brokers Poll 2018 for India Research, Sales and Trading team. We [request your ballot](#).



Stock Info

Bloomberg	NTPC IN
Equity Shares (m)	8,245
M.Cap.(INRb)/(USDb)	1281.3 / 18.7
52-Week Range (INR)	188 / 149
1, 6, 12 Rel. Per (%)	-4/-12/-24
12M Avg Val (INR M)	1212
Free float (%)	38.3

Financials Snapshot (INR b)

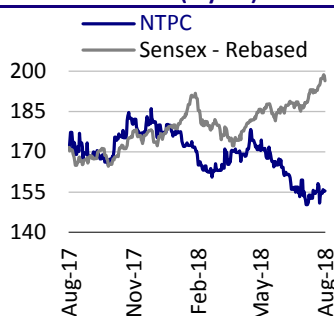
Y/E Mar	2018	2019E	2020E
Net Sales	886.4	944.6	1,027.4
EBITDA	229.8	294.0	331.9
PAT	108.9	126.3	134.4
EPS (INR)	13.2	15.3	16.3
Gr. (%)	6.8	16.0	6.4
BV/Sh (INR)	126.0	134.9	144.0
RoE (%)	10.8	11.7	11.7
RoCE (%)	6.5	7.2	7.8
P/E (x)	11.7	10.1	9.5
P/BV (x)	1.2	1.1	1.1

Shareholding pattern (%)

As On	Jun-18	Mar-18	Jun-17
Promoter	61.7	62.3	69.7
DII	23.6	22.8	17.0
FII	11.3	11.5	10.2
Others	3.4	3.4	3.0

FII Includes depository receipts

Stock Performance (1-year)



Under-recoveries to vanish by end-FY19

Analyst meet takeaways; Maintain Buy

Fixed-cost under-recoveries to vanish by end-FY19

There will be no major fixed-charge under-recoveries by the end of FY19, as:

- The Unchahar power plant, which is shut down post the unfortunate blast incident, should restart by October 2018 or at least before the end of CY18.
- The government has permitted coal imports, which will assist in coal availability at non pit-head plants.
- Coordination with Railways and Coal India has improved. It has given an advance of INR50b to Railways, which gives NTPC assured coal rake availability.
- Logistic bottlenecks at the Mouda power plant remain, which could be a risk factor. It is in engagement with Railways for smooth rake availability.

Targeting ~5GW commercialization in FY19, but some slippages possible

NTPC is targeting commercialization of ~5GW in FY19. It includes Kudgi U3 800MW, Lara U1 800MW, Bongaigaon U3 250MW, Gadarwara U1 800MW, Solapur U2 660MW in standalone, and Nabinagar U3 250MW, Meja U1 660MW, and NPGCL U1 660MW in subsidiaries and JVs. We expect some slippages and are building in commercialization of ~4.2GW in FY19.

Other highlights

- Inorganic growth:** NTPC has bought out the Bihar government's stake in the Kanti and NPGCL power plants. It has paid equity of INR21b, which will boost regulated equity. It is eyeing other subsidiary and JV projects, including Meja and Barauni. Acquisition of state genco assets at 1x regulated equity generates better IRRs than organic projects.
- Acquisition of SJVN and NHPC:** NTPC has shown interest to buy the government's stake in SJVN. It has received no official communication for buying the government's stake in NHPC.
- National merit order:** NTPC's low-cost power plants will benefit from the proposed national merit order scheme. It would gain from higher PLF incentives and better operating efficiency.
- Renewable energy:** The target is to achieve solar capacity of ~10GW by FY22.
- FGD for environment norms:** FGD systems are under implementation at ~7GW and are under tendering/NIT for balance ~56GW capacity (incl. under-construction). Capex is estimated at ~INR300b.

Earnings growth at inflection; valuations attractive; Maintain Buy

- NTPC's earnings and stock performance in the XII plan has been marred by project delays, a squeeze in incentives, and thermal efficiencies under the CERC regulation 2014-19. Consequently, EPS growth was subdued over FY12-17. While project execution picked up pace in FY18, earnings were impacted by unexpected shortage of domestic coal, resulting in fixed-charge under-recovery.
- All these issues are now behind. Capacity addition is expected to further pick up pace from ~4GW in FY18 to ~4.2GW in FY19, and ~5.9GW each in FY20 and FY21. This will drive healthy growth in regulated equity – key driver of earnings. Domestic coal supply situation is improving, and NTPC's plant availability has improved in the first four months of FY19.
- We expect EPS CAGR of ~12% over FY18-21, even after taking into account lower regulated RoE of 14% (v/s 15.5% currently) w.e.f. FY20.
- We expect capitalization to outpace capex over the next 2-3 years, which will boost consolidated RoE and re-rate the stock. We value the stock at INR194/share based on DCF calculations.
- Organic thermal capex may taper after a few years, but inorganic opportunities and renewable energy can drive growth.
- Favorable outcome on the GCV measurement issue can boost PBT by INR10-12b, while the completion of acquisition of the state genco assets (Chhabra and assets of Bihar Genco) will boost regulated equity and earnings growth.
- The stock is trading attractive at 9.5x P/E and 1.1x P/BV FY20E. **Maintain Buy.**

Exhibit 1: DCF valuation

	Case 1		Base		Case 2				
Rf. Nominal risk free rate	(%)	6.50	(%)	7.00	(%)	7.50			
B. Beta		0.79		0.79		0.79			
Km. Equity Risk premium	(%)	5.00	(%)	5.00	(%)	5.00			
Cost of equity (Rf+Km x B)	(%)	10.45	(%)	10.95	(%)	11.45			
DCFE	INR m	INR/sh.	INR m	INR/sh.	INR m	INR/sh.			
A. FY19-22	125,452	15	124,585	15	123,728	15			
	RoE	Re-Invst	Growth						
	(%)	(%)	(%)						
B. FY23-32	14.00	50	7.0	637,368	77	615,160	75	593,948	72
C. Terminal Value	12.00	25	3.0	974,104	118	860,784	104	763,868	93
Target price (A+B+C)				211		194		180	
CMP				155		155		155	
Upside (%)				35.9		25.2		15.9	
BV				126		126		126	
P/BV				1.7		1.5		1.4	

Exhibit 2: Utilities valuation

	Rating	CMP (INR)	TP (INR)	Up/ (dw) %	MCAP (USD M)	EPS			P/E (x)		P/B(x)		RoE (%)	
						FY18	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Powergrid	Buy	182	253	39	13,924	16.5	18.6	20.6	9.8	8.9	1.5	1.3	16.3	15.9
NTPC	Buy	155	194	25	18,687	13.2	15.3	16.3	10.1	9.5	1.1	1.1	11.7	11.7
JSW Energy	Neutral	66	77	16	1,582	3.0	3.9	4.8	17.1	13.7	1.0	0.9	5.7	6.9
CESC	Buy	945	1,335	41	1,840	75.5	97.5	106.7	9.7	8.9	1.0	0.9	11.0	11.0
Tata Power	Neutral	74	75	0	2,940	5.3	6.3	7.8	11.7	9.6	1.1	1.0	10.3	11.4
NHPC	Buy	24	34	43	3,857	2.4	2.9	3.2	8.1	7.5	0.8	0.8	9.8	10.3
Coal India	Buy	262	345	32	24,146	19.2	26.2	30.6	10.0	8.6	7.8	7.1	81.0	86.9

Source: MOSL, Company

Financials and Valuations

Income Statement							(INR Million)	
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Net Sales	657,370	789,506	806,220	727,055	817,171	886,437	944,568	1,027,438
Change (%)	5.9	20.1	2.1	-9.8	12.4	8.5	6.6	8.8
EBITDA	170,672	197,106	171,941	179,569	218,300	229,808	294,037	331,908
EBITDA Margin (%)	26.0	25.0	21.3	24.7	26.7	25.9	31.1	32.3
Depreciation	33,968	47,700	55,646	52,240	60,099	74,599	85,732	100,083
EBIT	136,704	149,406	116,295	127,329	158,201	155,209	208,306	231,825
Interest	19,244	32,031	35,704	33,137	36,511	44,346	61,658	74,365
Other Income	31,188	27,601	20,789	10,576	9,668	15,583	8,801	8,524
Extraordinary items	17,138	-119	3,182	0	0	0	0	0
PBT	165,786	144,858	104,562	104,768	131,358	126,446	155,448	165,985
Tax	39,592	30,824	4,638	-1,628	30,467	25,881	41,532	42,673
Tax Rate (%)	23.9	21.3	4.4	-1.6	23.2	20.5	26.7	25.7
Min. Int. & Assoc. Share	0	0	0	-204	-57	-425	-57	-57
Reported PAT	126,194	114,034	99,924	108,012	107,196	105,440	122,709	134,418
Adjusted PAT	109,726	91,496	87,596	96,957	101,937	108,908	126,299	134,418
Change (%)	20.6	-16.6	-4.3	10.7	5.1	6.8	16.0	6.4

Balance Sheet							(INR Million)	
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Share Capital	82,455	82,455	82,455	82,455	82,455	82,455	82,455	82,455
Reserves	721,421	790,843	738,485	809,511	895,926	956,840	1,030,075	1,105,126
Net Worth	803,875	873,297	820,940	891,965	978,380	1,039,294	1,112,530	1,187,580
Debt	581,461	814,549	1,022,520	1,120,194	1,137,512	1,279,541	1,368,439	1,356,042
Deferred Tax	9,153	12,393	12,656	14,094	14,849	14,849	14,849	14,849
Total Capital Employed	1,394,489	1,707,044	1,864,995	2,035,181	2,138,774	2,341,717	2,503,850	2,566,504
Gross Fixed Assets	1,032,457	1,313,937	1,443,608	1,632,140	1,170,879	1,549,163	1,914,115	2,314,974
Less: Acc Depreciation	403,096	471,858	525,077	587,180	125,562	233,624	319,356	419,439
Net Fixed Assets	629,361	842,080	918,530	1,044,959	1,045,317	1,315,538	1,594,759	1,895,535
Capital WIP	371,094	538,250	675,547	815,497	868,957	805,034	675,267	428,245
Investments	91,376	16,635	141	148	78,023	82,425	89,539	92,838
Current Assets	519,333	603,487	601,543	543,886	492,677	484,575	494,515	506,006
Inventory	40,572	59,885	79,725	79,592	65,861	64,730	68,871	76,129
Debtors	53,650	67,257	92,499	101,740	89,995	86,107	90,449	99,430
Cash & Bank	184,902	186,876	161,390	57,370	33,015	29,931	31,389	26,640
Loans & Adv, Others	240,210	289,470	267,929	305,185	303,806	303,806	303,806	303,806
Curr Liabs & Provns	216,676	293,408	330,766	369,310	346,200	345,855	350,229	356,120
Curr. Liabilities	216,676	293,408	330,766	369,310	346,200	345,855	350,229	356,120
Provisions	0	0	0	0	0	0	0	0
Net Current Assets	302,657	310,080	270,777	174,577	146,477	138,720	144,286	149,886
Total Assets	1,394,489	1,707,044	1,864,995	2,035,181	2,138,774	2,341,717	2,503,850	2,566,504

Financials and Valuations

Ratios

Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Basic (INR)								
EPS	13.3	11.1	10.6	11.8	12.4	13.2	15.3	16.3
Cash EPS	19.4	19.6	18.9	19.4	20.3	21.8	25.3	28.4
Book Value	97.5	105.9	99.6	108.2	118.7	126.0	134.9	144.0
DPS	5.8	5.8	5.8	3.4	4.8	4.5	5.0	6.0
Payout (incl. Div. Tax.)	37.6	41.6	47.4	25.6	36.8	35.2	33.6	36.8
Valuation(x)								
P/E	10.2	11.2	12.8	11.9	11.9	12.1	10.4	9.5
Cash P/E	8.0	7.9	8.2	8.0	7.7	7.1	6.1	5.5
Price / Book Value	1.6	1.5	1.6	1.4	1.3	1.2	1.2	1.1
EV/Sales	2.6	2.4	2.7	3.2	2.9	2.9	2.8	2.5
EV/EBITDA	10.9	10.9	13.4	13.9	11.2	10.8	8.8	7.9
Dividend Yield (%)	3.7	3.7	3.7	2.2	3.1	2.9	3.2	3.9
Profitability Ratios (%)								
RoE	12.0	10.9	10.0	11.3	10.9	10.8	11.7	11.7
RoCE	8.9	8.5	7.3	7.2	6.1	6.1	6.6	7.0
RoIC	16.0	13.7	11.2	11.8	10.5	9.6	9.7	9.2
Turnover Ratios (%)								
Asset Turnover (x)	1.2	1.1	0.9	0.7	0.8	0.8	0.6	0.6
Debtors (No. of Days)	30	31	42	51	40	35	35	35
Inventory (No. of Days)	30	37	46	53	40	36	39	40
Leverage Ratios (%)								
Net Debt/Equity (x)	0.5	0.7	1.0	1.2	1.1	1.2	1.2	1.1

Cash Flow Statement

(INR Million)

Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Adjusted EBITDA	154,204	174,568	159,613	168,514	213,041	233,277	297,628	331,908
Non cash opr. exp (inc)	64,572	49,633	35,881	35,146	20,354	12,115	5,211	8,524
(Inc)/Dec in Wkg. Cap.	-5,971	-13,109	-11,694	-36,422	-2,073	4,673	-4,108	-10,349
Tax Paid	-28,956	-26,867	-20,100	-14,584	-26,263	-25,881	-41,532	-42,673
Other operating activities	-28,896	-18,917	-16,242	1,452	-3,395	-15,583	-8,801	-8,524
CF from Op. Activity	154,952	165,308	147,459	154,106	201,666	208,600	248,397	278,886
(Inc)/Dec in FA & CWIP	-162,912	-189,485	-191,772	-232,470	-243,451	-280,898	-235,185	-153,837
Free cash flows	-7,960	-24,176	-44,314	-78,364	-41,785	-72,298	13,212	125,049
(Pur)/Sale of Invt	16,225	16,225	16,391	16,536	3,436	0	0	0
Others	6,519	37,017	17,182	-6,986	-17,558	16,056	10,480	16,331
CF from Inv. Activity	-140,169	-136,243	-158,200	-222,920	-257,573	-264,842	-224,705	-137,506
Inc/(Dec) in Net Worth	0	0	0	0	0	0	0	0
Inc / (Dec) in Debt	72,624	93,854	205,811	80,528	150,466	142,029	88,898	-12,397
Interest Paid	-39,461	-62,429	-72,371	-83,473	-75,645	-44,346	-61,658	-74,365
Divd Paid (incl Tax) & Others	-40,688	-58,516	-148,185	-32,261	-43,269	-44,525	-49,473	-59,367
CF from Fin. Activity	-7,524	-27,091	-14,745	-35,206	31,552	53,158	-22,233	-146,129
Inc/(Dec) in Cash	7,259	1,975	-25,486	-104,021	-24,355	-3,084	1,458	-4,749
Add: Opening Balance	177,643	184,902	186,876	161,390	57,369	33,015	29,931	31,389
Closing Balance	184,902	186,876	161,390	57,369	33,015	29,931	31,389	26,640

NOTES

Explanation of Investment Rating	Expected return (over 12-month)
Investment Rating	
BUY	>=15%
SELL	< -10%
NEUTRAL	> -10% to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst becomes inconsistent with the investment rating legend, the Research Analyst shall within 28 days of the inconsistency, take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures:

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Securities Ltd. (MOSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOSL is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Metropolitan Stock Exchange Of India Ltd. (MSE) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) & National Securities Depository Limited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf>

MOSL, its associates, Research Analyst or their relative may have any financial interest in the subject company. MOSL and/or its associates and/or Research Analyst may have actual/beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report. MOSL and its associate company(ies), their directors and Research Analyst and their relatives may: (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein, (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report. Research Analyst may have served as director/officer, etc. in the subject company in the last 12 month period. MOSL and/or its associates may have received any compensation from the subject company in the past 12 months.

In the last 12 months period ending on the last day of the month immediately preceding the date of publication of this research report, MOSL or any of its associates may have:

- managed or co-managed public offering of securities from subject company of this research report,
- received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.
- Subject Company may have been a client of MOSL or its associates during twelve months preceding the date of distribution of the research report.

MOSL and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report. To enhance transparency, MOSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report. MOSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions.

Terms & Conditions:

This report has been prepared by MOSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOSL will not treat recipients as customers by virtue of their receiving this report.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Disclosure of Interest Statement

NTPC

Analyst ownership of the stock

No

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOSL research activity and therefore it can have an independent view with regards to subject company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.:

Motilal Oswal Securities Limited (MOSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts"), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co.Reg. No. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore, as per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisers Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. MOSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, nor its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022 3080 1000. Compliance Officer: Neeraj Aganwal, Email Id: na@motilaloswal.com, Contact No.-022-38281085.

Registration details of group entities.: MOSL: SEBI Registration: INZ000158836 (BSE/NSE/MCX/NCDX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100.IRDA Corporate Agent-CA0541. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) offers wealth management solutions. *Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. * Motilal Oswal Commodities Broker Pvt. Ltd. offers Commodities Products. * Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. * Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products