

NTPC (NTPC IN)

Pace of capacity addition to pick up

INDIA | POWER | Quarterly Update

5 August 2015

We recently attended NTPC's analyst meet — here are our key takeaways. With 24GW under construction, capacity addition is likely to pick up early in the 13th plan driven by commissioning of bulk-tender projects awarded at the beginning of the 12th plan. However, in the near term, the demand situation continues to remain weak leading to weak incentive earnings. The company has outlined aggressive plans in the solar sector with a target of 3GW capacity in the next three years and 10GW by FY22. We maintain our Neutral rating on the stock with a target price of Rs 160.

Capacity addition to be front ended in the 13th plan (FY18-19): NTPC expects to add 15GW capacity in 12th plan (8GW added till date) vs. CEA's estimate of 12GW. We believe capacity addition targets are aggressive — this is because other than two units of Kudgi, most of the bulk-tender projects are likely to be commissioned in the 13th plan (due to limited progress in captive coal blocks). Accordingly, we expect 4GW addition during FY16 and FY17, implying capacity addition of 11.7GW in 12th plan. We highlight early in the 13th plan we could see ~20GW capacity addition.

Solar capacity addition target of 3GW by FY19, 10GW by FY22: NTPC has outlined its plans to bundle coal-fired plants (that have completed 25 years of service) with new solar capacity to sell power to states at a blended cost of ~Rs3.2/unit. It intends to have 3GW of solar capacity by FY19 with 250MW at Andhra Pradesh already awarded and 250MW each tendered out in Rajasthan and MP. It is looking at ordering a cumulative 1.5GW by next year and 3GW by FY19. Via NVVN, it is looking at also tying up another 15GW of solar capacity on which it would earn a margin of 4 paisa/unit. In the recently awarded bid for AP (250MW), it has also put in a domestic manufacturing clause whereby the cells and panels have to be sourced from Indian manufacturers.

Fuel – supplies rising from Coal India: NTPC expects to begin captive mining at Pakri Barwadih (Jharkhand) in FY16 as local law and order issues resolve. It also intends to award two MDO contracts, one each for the west and east sides of the mine; it expects to mine 1mn tonne in FY16 and raise production to 3mn tonne in FY17. EC and FC clearances are in place for all mines except Kerandari and Dulanga that are yet to receive Stage-2 forest clearance. Materialization of coal from CIL continues to remain robust led by improvement in supply from CIL. While the target of imports is 20mn tonnes, it expects to manage with 12mn tonnes on higher supplies from Coal India.

Ordering activity robust with ~8-11GW each in FY16 and FY17: In FY16, NTPC is likely to place orders for 4GW Pudmidaka and 1.32GW Khulna TPS in Bangladesh, 2.6GW Barethi TPS (order will be placed with BHEL once the linked Banai mine receives required clearances) and 1.32GW Kareemnagar TPS. It will order for the 1.32GW Katwa TPS by FY17, once the project gets coal linkage. For Barh 1 (70% complete for Unit 1 and 2), which has been stalled due to issues with Russian contractor, NTPC is likely to tender out awards for completion on an 'as is' basis.

Q1FY16 results miss estimate on lower other income: Q1FY16 results were below our estimate led by lower other income. Generation was down 7% yoy due to maintenance shutdown. Sales at 170bn (-6% yoy) was lower than our estimate led by lower fuel cost. EBITDA at Rs 42bn (+11% yoy) was higher than our estimate due to lower other income

Outlook and Valuation:

We reduce our FY16/17 earnings by 3%/1% to incorporate lower incentive earnings. We expect NTPC to commercialise 4GW capacity in FY16 and FY17, which will lead to 3% CAGR in PAT. At Rs 136, NTPC trades at 1.2x FY17 P/B and 12x P/E. We maintain our Neutral rating on the stock with a target price of Rs 160 (Rs 165 earlier).

Neutral

CMP RS 135

TARGET RS 160 (+19%)

COMPANY DATA

O/S SHARES (MN) :	8245
MARKET CAP (RSBN) :	1111
MARKET CAP (USDBN) :	17.4
52 - WK HI/LO (RS) :	169 / 127
LIQUIDITY 3M (USDMMN) :	15.7
PAR VALUE (RS) :	10

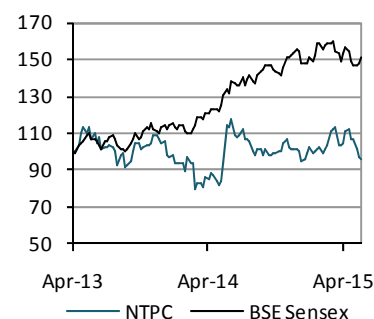
SHARE HOLDING PATTERN, %

PROMOTERS :	75.0
FII / NRI :	10.4
FI / MF :	12.3
NON PROMOTER CORP. HOLDINGS :	0.3
PUBLIC & OTHERS :	2.1

PRICE PERFORMANCE, %

	1MTH	3MTH	1YR
ABS	-9.1	-14.9	-12.7
REL TO BSE	-10.5	-9.2	-24.9

PRICE VS. SENSEX



Source: Phillip Capital India Research

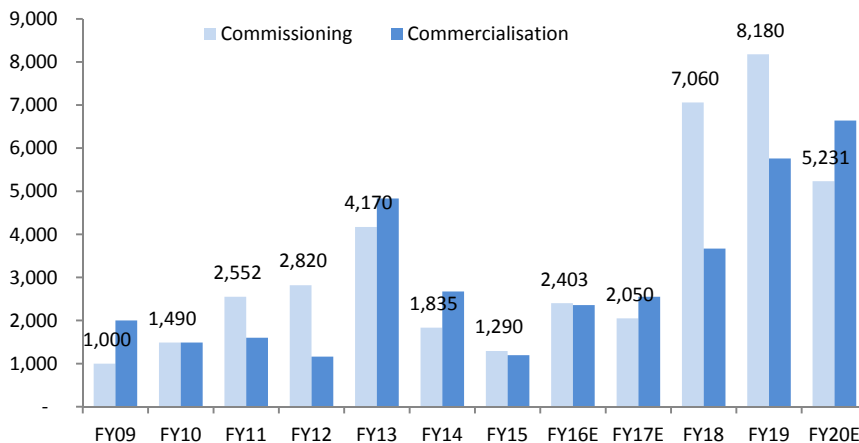
KEY FINANCIALS

Rs mn	FY15	FY16E	FY17E
Net Sales	712,178	777,730	838,834
EBIDTA	140,573	169,155	192,050
Net Profit	88,709	88,482	95,766
EPS, Rs	10.8	10.7	11.6
PER, x	12.6	12.7	11.7
EV/EBIDTA, x	12.6	11.5	10.9
P/BV, x	1.4	1.3	1.2
ROE, %	10.9	10.2	10.5
Debt/Equity (%)	96.2	108.8	119.5

Source: PhillipCapital India Research Est.

AnkurSharma(+ 9122 6667 9759)
asharma@phillipcapital.in

HrishikeshBhagat(+ 9122 6667 9986)
hbhagat@phillipcapital.in

Capacity addition


Capacity addition to gain traction after FY17

Source: Company, PhillipCapital India Research Estimates

Limited production from captive blocks

Fuel sourcing for power plants	FY13	FY14	FY15	FY16E	FY17E
Domestic					
-Annual Contracted Quantity(ACQ)for pre FY09	133.8	131.3	125.0	127.5	118.8
-LOA/MOU - 65% supply post signing FSA's in July	8.0	13.8	20.9	29.0	37.5
-Captive - 50% of target	-	-	-	1.2	3.0
-Others - Bilateral/E auction	2.3	4.8	4.8	4.8	4.8
Total domestic	144.0	149.8	150.6	162.5	164.0
Imported	9.0	10.8	12.0	11.7	14.9
Total	153.0	160.6	162.7	174.1	178.9

Source: Company, PhillipCapital India Research Estimates

Status of captive coal blocks

Coal blocks	Geological	Mining	EC	FC	MDO	Acquisition
	Reserve	Capacity				Notice
Pakri Barwadih -Jharkhand	1436	15	Yes	Yes	In Process	Yes
Chatti Bariatu - Jharkhand	549	7	Yes	Yes	In Process	Yes
Kerandiri - Jharkhand	285	6	Yes	1st Stage	In Process	Yes
Talaipalli	1267	18	Yes	Yes	In Process	Yes
Dulanga	196	7	Yes	1st Stage	In Process	Yes
Total	3733	53				

Source: Company, PhillipCapital India Research

SOTP

		FY17
Regulated Equity (Parent)	Rs mn	434,108
Regulated Equity (Parent)	Rs	53
Multiple	x	1.8
Value Parent	Rs mn	792,371
Value Parent	Rs	96
Regulated Equity (JV)	Rs mn	49,814
Regulated Equity (JV)	Rs	6
Multiple	x	2
Value JV	Rs mn	90,925
Value JV	Rs	11
Cash	Rs mn	126,621
Cash	Rs	15
OTSS Bonds	Rs mn	32,884
OTSS Bonds	Rs	4
Value of equity	Rs mn	1,042,801
CWIP		33
Value of equity		160

Source: Company, PhillipCapital India Research Estimates

Capacity commercialisation schedule

FY16	2,358
Kol Dam Unit I	200
Kol Dam Unit II	200
Barh II U2	660
Kol Dam Unit III	200
Kol Dam Unit IIV	200
Bongaigaon Unit I	250
Muzaffarpur JV Unit I	195
Muzaffarpur JV Unit II	195
Nabinagar TPP JV Unit I	250
Singrauli hydro	8
FY17	2,550
Bongaigaon U2	250
Bongaigaon U3	250
Vindhyaachal Stage 5 (500 MW)	500
Nabinagar TPP JV Unit 2	250
Nabinagar TPP JV Unit 2	250
Kudgi U1	800
AP solar	250
FY18	4,580
Barh I	660
Kudgi U2	800
Kudgi U3	800
MAUDA II U1	660
Meja JV Unit I	660
Nabinagar JV	250
AP solar	750
FY19	7,080
Barh I	1,320
Gadarwara Unit I	800
MAUDA II U2	660
New Nabinagar JV U1	660
Tanda II	660
North Karanpura	660
Solapur	660
Meja JV U2	660
Unchahar	500
AP solar	500
FY20	7,300
Lara U1	800
Darli Palli U1	800
Lara U2	800
Gadarwara Unit II	800
Darli Palli U2	800
Solapur U1	660
Solapur U2	660
North Karanpura	1,320
New Nabinagar JV U2	660

Source: Company, PhillipCapital India Research Estimates

Quarterly results snapshot

(Rs mn)	Q1FY16	Q1FY15	yoy, %
Net Sales	170,187	180,865	-6%
EBITDA	41,940	37,930	11%
EBITDA margins(%)	24.6%	21.0%	
Depreciation	12,380	11,155	11%
EBIT	29,561	26,775	10%
EBIT margins(%)	17.4%	14.8%	
Interest	7,309	6,679	9%
Other Income	3,046	7,987	-62%
PBT	25,298	28,083	-10%
Tax	4,140	8,981	
Reported PAT	21,354	21,112	1%
Adjusted PAT	21,354	19,470	10%
PAT Margin(%)	13%	11%	
EPS	2.6	2.3	11%

Source: Company, PhillipCapital India Research

Operational highlights

Rs mn	Q415	Q414	% Change
Gross Generation (BU)			
Coal	56.2	59.7	-6%
Gas	2.5	3.5	-29%
Total	58.7	63.2	-7%
PAF (%)			
Coal	92%	89%	
Gas	97%	90%	
PLF (%)			
Coal	78%	84%	
Gas	28%	40%	

Source: Company, PhillipCapital India Research

Change in estimates

Y/E Mar, Rs mn	NEW estimates		Old estimates		% change	
	2016e	2017e	2016e	2017e	2016e	2017e
Sales	777,729.6	838,834.0	801,039.0	857,781.0	-3%	-2%
EBITDA	169,155.2	192,050.3	172,686.0	189,660.0	-2%	1%
PAT	88,482.2	95,765.8	91,896.0	96,499.0	-4%	-1%
EPS	10.7	11.6	11.1	11.7	-3%	-1%

Source: Company, PhillipCapital India Research

Financials

Income Statement

Y/E Mar, Rs mn	FY14	FY15e	FY16e	FY17e
Net sales	716,027	712,178	777,730	838,834
Growth, %	11	-1	9	8
Total income	716,027	712,178	777,730	838,834
Raw material expenses	-458,297	-488,452	-516,676	-552,416
Employee expenses	-38,680	-36,698	-40,076	-43,224
Other Operating expenses	-45,439	-46,455	-51,823	-51,144
EBITDA (Core)	173,612	140,573	169,155	192,050
Growth, %	10.8	(19.0)	20.3	13.5
Margin, %	24.2	19.7	21.7	22.9
Depreciation	-41,422	-49,117	-52,246	-57,381
EBIT	132,190	91,456	116,909	134,669
Growth, %	7.8	(30.8)	27.8	15.2
Margin, %	18.5	12.8	15.0	16.1
Interest paid	-24,066	-27,436	-29,280	-33,151
Pre-tax profit	139,176	91,266	112,098	122,145
Tax provided	-29,299	-2,558	-23,616	-26,379
Profit after tax	109,877	88,709	88,482	95,766
Net Profit	109,877	88,709	88,482	95,766
Growth, %	29.2	(19.3)	(0.3)	8.2
Net Profit (adjusted)	109,877	88,709	88,482	95,766
Unadj. shares (m)	8,245	8,245	8,245	8,245
Wtdavg shares (m)	8,245	8,245	8,245	8,245

Balance Sheet

Y/E Mar, Rs mn	FY14	FY15e	FY16e	FY17e
Cash & bank	153,114	128,788	108,560	126,621
Debtors	52,201	76,044	83,043	89,568
Inventory	53,734	74,530	81,390	87,785
Loans & advances	158,933	179,355	195,863	211,252
Other current assets	109,987	68,384	74,678	80,545
Total current assets	527,968	527,100	543,535	595,771
Investments	97,579	90,321	100,321	110,321
Gross fixed assets	1,169,921	1,180,125	1,307,790	1,424,640
Less: Depreciation	-448,812	-497,929	-550,175	-607,556
Add: Capital WIP	448,887	671,230	791,586	894,736
Net fixed assets	1,169,995	1,353,426	1,549,200	1,711,819
Total assets	1,795,542	1,970,847	2,193,057	2,417,912
Current liabilities	239,072	345,218	363,346	380,243
Total current liabilities	239,072	345,218	363,346	380,243
Non-current liabilities	698,317	809,056	966,056	1,123,056
Total liabilities	937,389	1,154,274	1,329,401	1,503,299
Paid-up capital	82,455	82,455	82,455	82,455
Reserves & surplus	775,699	734,119	781,201	832,158
Shareholders' equity	858,153	816,574	863,655	914,613
Total equity & liabilities	1,795,542	1,970,847	2,193,057	2,417,912

Source: Company, PhillipCapital India Research Estimates

Cash Flow

Y/E Mar, Rs mn	FY14	FY15e	FY16e	FY17e
Pre-tax profit	139,176	91,266	112,098	122,145
Depreciation	41,422	49,117	52,246	57,381
Chg in working capital	-5,585	82,689	-18,535	-17,277
Total tax paid	-24,278	-5,441	-20,616	-23,379
Cash flow from operating activities	150,735	217,631	125,193	138,869
Capital expenditure	-210,962	-232,547	-248,021	-220,000
Chg in investments	10,022	7,257	-10,000	-10,000
Cash flow from investing activities	-200,939	-225,290	-258,021	-230,000
Free cash flow	-50,205	-7,659	-132,828	-91,131
Debt raised/(repaid)	90,241	113,622	154,000	154,000
Dividend (incl. tax)	-55,459	-24,113	-41,400	-44,808
Other financing activities	-140	0	0	0
Cash flow from financing activities	34,641	89,509	112,600	109,192
Net chg in cash	-15,563	81,850	-20,228	18,061

Valuation Ratios

	FY14	FY15e	FY16e	FY17e
Per Share data				
EPS (INR)	13.3	10.8	10.7	11.6
Growth, %	29.2	(19.3)	(0.3)	8.2
Book NAV/share (INR)	104.1	99.0	104.7	110.9
FDEPS (INR)	13.3	10.8	10.7	11.6
CEPS (INR)	18.3	16.7	17.1	18.6
CFPS (INR)	14.5	23.1	12.2	14.3
Return ratios				
Return on assets (%)	7.4	5.6	5.1	5.1
Return on equity (%)	12.8	10.9	10.2	10.5
Return on capital employed (%)	8.5	6.7	6.2	6.0
Turnover ratios				
Asset turnover (x)	0.6	0.5	0.5	0.5
Sales/Total assets (x)	0.4	0.4	0.4	0.4
Sales/Net FA (x)	0.7	0.6	0.5	0.5
Working capital/Sales (x)	0.2	0.1	0.1	0.1
Receivable days	26.6	39.0	39.0	39.0
Inventory days	27.4	38.2	38.2	38.2
Payable days	105.8	125.8	129.0	130.9
Working capital days	69.2	27.2	33.6	38.7
Liquidity ratios				
Current ratio (x)	2.2	1.5	1.5	1.6
Quick ratio (x)	2.0	1.3	1.3	1.3
Interest cover (x)	5.5	3.3	4.0	4.1
Total debt/Equity (%)	78.3	96.2	108.8	119.5
Net debt/Equity (%)	60.4	80.4	96.2	105.7
Valuation				
PER (x)	10.2	12.6	12.7	11.7
PEG (x) - y-o-y growth	0.4	(0.7)	(49.7)	1.4
Price/Book (x)	1.3	1.4	1.3	1.2
EV/Net sales (x)	2.3	2.5	2.5	2.5
EV/EBITDA (x)	9.4	12.6	11.5	10.9
EV/EBIT (x)	12.4	19.4	16.7	15.5

Management

Vineet Bhatnagar (Managing Director)	(91 22) 2300 2999
Kinshuk Bharti Tiwari (Head – Institutional Equity)	(91 22) 6667 9946
Jignesh Shah (Head – Equity Derivatives)	(91 22) 6667 9735

Research
Automobiles

Dhawal Doshi	(9122) 6667 9769
Nitesh Sharma, CFA	(9122) 6667 9965

Banking, NBFCs

Manish Agarwalla	(9122) 6667 9962
Pradeep Agrawal	(9122) 6667 9953
Paresh Jain	(9122) 6667 9948

Consumer, Media, Telecom

Naveen Kulkarni, CFA, FRM	(9122) 6667 9947
Jubil Jain	(9122) 6667 9766
Manoj Behera	(9122) 6667 9973

Cement

Vaibhav Agarwal	(9122) 6667 9967
-----------------	------------------

Engineering, Capital Goods

Ankur Sharma	(9122) 6667 9759
Hrishikesh Bhagat	(9122) 6667 9986

Economics

Anjali Verma	(9122) 6667 9969
--------------	------------------

Infrastructure & IT Services

Vibhor Singhal	(9122) 6667 9949
Deepan Kapadia	(9122) 6667 9992

Logistics, Transportation & Midcap

Vikram Suryavanshi	(9122) 6667 9951
--------------------	------------------

Metals

Dhawal Doshi	(9122) 6667 9769
Yash Doshi	(9122) 6667 9987

Oil&Gas, Agri Inputs

Gauri Anand	(9122) 6667 9943
-------------	------------------

Pharma

Surya Patra	(9122) 6667 9768
Mehul Sheth	(9122) 6667 9996

Midap

Amol Rao	(9122) 6667 9952
----------	------------------

Portfolio Strategy

Anindya Bhowmik	(9122) 6667 9764
-----------------	------------------

Technicals

Subodh Gupta, CMT	(9122) 6667 9762
-------------------	------------------

Production Manager

Ganesh Deorukhkar	(9122) 6667 9966
-------------------	------------------

Database Manager

Deepak Agarwal	(9122) 6667 9944
----------------	------------------

Editor

Roshan Sony	98199 72726
-------------	-------------

Sr. Manager – Equities Support

Rosie Ferns	(9122) 6667 9971
-------------	------------------

Sales & Distribution

Ashvin Patil	(9122) 6667 9991
Shubhangi Agrawal	(9122) 6667 9964
Kishor Binwal	(9122) 6667 9989
Sidharth Agrawal	(9122) 6667 9934
Bhavin Shah	(9122) 6667 9974

Sales Trader

Dilesh Doshi	(9122) 6667 9747
Suniil Pandit	(9122) 6667 9745

Execution

Mayur Shah	(9122) 6667 9945
------------	------------------

Corporate Communications

Zarine Damania	(9122) 6667 9976
----------------	------------------

Contact Information (Regional Member Companies)
SINGAPORE
Phillip Securities Pte Ltd

250 North Bridge Road, #06-00 Raffles City Tower,
Singapore 179101
Tel : (65) 6533 6001 Fax: (65) 6535 3834
www.phillip.com.sg

JAPAN
Phillip Securities Japan, Ltd

4-2 Nihonbashi Kabutocho, Chuo-ku
Tokyo 103-0026
Tel: (81) 3 3666 2101 Fax: (81) 3 3664 0141
www.phillip.co.jp

THAILAND

Phillip Securities (Thailand) Public Co. Ltd.
15th Floor, Vorawat Building, 849 Silom Road,
Silom, Bangrak, Bangkok 10500 Thailand
Tel (66) 2 2268 0999 Fax: (66) 2 2268 0921
www.phillip.co.th

UNITED STATES
Phillip Futures Inc.

141 W Jackson Blvd Ste 3050
The Chicago Board of Trade Building
Chicago, IL 60604 USA
Tel (1) 312 356 9000 Fax: (1) 312 356 9005

MALAYSIA
Phillip Capital Management Sdn Bhd

B-3-6 Block B Level 3, Megan Avenue II,
No. 12, Jalan Yap Kwan Seng, 50450 Kuala Lumpur
Tel (60) 3 2162 8841 Fax (60) 3 2166 5099
www.poems.com.my

INDONESIA
PT Phillip Securities Indonesia

ANZ Tower Level 23B, Jl Jend Sudirman Kav 33A,
Jakarta 10220, Indonesia
Tel (62) 21 5790 0800 Fax: (62) 21 5790 0809
www.phillip.co.id

FRANCE
King & Shaxson Capital Ltd.

3rd Floor, 35 Rue de la Bienfaisance
75008 Paris France
Tel (33) 1 4563 3100 Fax : (33) 1 4563 6017
www.kingandshaxson.com

AUSTRALIA
PhillipCapital Australia

Level 37, 530 Collins Street
Melbourne, Victoria 3000, Australia
Tel: (61) 3 9629 8380 Fax: (61) 3 9614 8309
www.phillipcapital.com.au

INDIA
PhillipCapital (India) Private Limited

No. 1, 18th Floor, Urmi Estate, 95 Ganpatrao Kadam Marg, Lower Parel West, Mumbai 400013
Tel: (9122) 2300 2999 Fax: (9122) 6667 9955 www.phillipcapital.in

HONG KONG
Phillip Securities (HK) Ltd

11/F United Centre 95 Queensway Hong Kong
Tel (852) 2277 6600 Fax: (852) 2868 5307
www.phillip.com.hk

CHINA
Phillip Financial Advisory (Shanghai) Co. Ltd.

No 550 Yan An East Road, Ocean Tower Unit 2318
Shanghai 200 001
Tel (86) 21 5169 9200 Fax: (86) 21 6351 2940
www.phillip.com.cn

UNITED KINGDOM
King & Shaxson Ltd.

6th Floor, Candlewick House, 120 Cannon Street
London, EC4N 6AS
Tel (44) 20 7929 5300 Fax: (44) 20 7283 6835
www.kingandshaxson.com

SRI LANKA
Asha Phillip Securities Limited

Level 4, Millennium House, 46/58 Navam Mawatha,
Colombo 2, Sri Lanka
Tel: (94) 11 2429 100 Fax: (94) 11 2429 199
www.ashaphillip.net/home.htm

Disclosures and Disclaimers

PhillipCapital (India) Pvt. Ltd. has three independent equity research groups: Institutional Equities, Institutional Equity Derivatives, and Private Client Group. This report has been prepared by Institutional Equities Group. The views and opinions expressed in this document may, may not match, or may be contrary at times with the views, estimates, rating, and target price of the other equity research groups of PhillipCapital (India) Pvt. Ltd.

This report is issued by PhillipCapital (India) Pvt. Ltd., which is regulated by the SEBI. PhillipCapital (India) Pvt. Ltd. is a subsidiary of Phillip (Mauritius) Pvt. Ltd. References to "PCIPL" in this report shall mean PhillipCapital (India) Pvt. Ltd unless otherwise stated. This report is prepared and distributed by PCIPL for information purposes only, and neither the information contained herein, nor any opinion expressed should be construed or deemed to be construed as solicitation or as offering advice for the purposes of the purchase or sale of any security, investment, or derivatives. The information and opinions contained in the report were considered by PCIPL to be valid when published. The report also contains information provided to PCIPL by third parties. The source of such information will usually be disclosed in the report. Whilst PCIPL has taken all reasonable steps to ensure that this information is correct, PCIPL does not offer any warranty as to the accuracy or completeness of such information. Any person placing reliance on the report to undertake trading does so entirely at his or her own risk and PCIPL does not accept any liability as a result. Securities and Derivatives markets may be subject to rapid and unexpected price movements and past performance is not necessarily an indication of future performance.

This report does not regard the specific investment objectives, financial situation, and the particular needs of any specific person who may receive this report. Investors must undertake independent analysis with their own legal, tax, and financial advisors and reach their own conclusions regarding the appropriateness of investing in any securities or investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realised. Under no circumstances can it be used or considered as an offer to sell or as a solicitation of any offer to buy or sell the securities mentioned within it. The information contained in the research reports may have been taken from trade and statistical services and other sources, which PCIL believe is reliable. PhillipCapital (India) Pvt. Ltd. or any of its group/associate/affiliate companies do not guarantee that such information is accurate or complete and it should not be relied upon as such. Any opinions expressed reflect judgments at this date and are subject to change without notice.

Important: These disclosures and disclaimers must be read in conjunction with the research report of which it forms part. Receipt and use of the research report is subject to all aspects of these disclosures and disclaimers. Additional information about the issuers and securities discussed in this research report is available on request.

Certifications: The research analyst(s) who prepared this research report hereby certifies that the views expressed in this research report accurately reflect the research analyst's personal views about all of the subject issuers and/or securities, that the analyst(s) have no known conflict of interest and no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific views or recommendations contained in this research report.

Additional Disclosures of Interest:

Unless specifically mentioned in Point No. 9 below:

1. The Research Analyst(s), PCIL, or its associates or relatives of the Research Analyst does not have any financial interest in the company(ies) covered in this report.
2. The Research Analyst, PCIL or its associates or relatives of the Research Analyst affiliates collectively do not hold more than 1% of the securities of the company (ies)covered in this report as of the end of the month immediately preceding the distribution of the research report.
3. The Research Analyst, his/her associate, his/her relative, and PCIL, do not have any other material conflict of interest at the time of publication of this research report.
4. The Research Analyst, PCIL, and its associates have not received compensation for investment banking or merchant banking or brokerage services or for any other products or services from the company(ies) covered in this report, in the past twelve months.
5. The Research Analyst, PCIL or its associates have not managed or co-managed in the previous twelve months, a private or public offering of securities for the company (ies) covered in this report.
6. PCIL or its associates have not received compensation or other benefits from the company(ies) covered in this report or from any third party, in connection with the research report.
7. The Research Analyst has not served as an Officer, Director, or employee of the company (ies) covered in the Research report.
8. The Research Analyst and PCIL has not been engaged in market making activity for the company(ies) covered in the Research report.
9. Details of PCIL, Research Analyst and its associates pertaining to the companies covered in the Research report:

Sr. no.	Particulars	Yes/No
1	Whether compensation has been received from the company(ies) covered in the Research report in the past 12 months for investment banking transaction by PCIL	No
2	Whether Research Analyst, PCIL or its associates or relatives of the Research Analyst affiliates collectively hold more than 1% of the company(ies) covered in the Research report	No
3	Whether compensation has been received by PCIL or its associates from the company(ies) covered in the Research report	No
4	PCIL or its affiliates have managed or co-managed in the previous twelve months a private or public offering of securities for the company(ies) covered in the Research report	No
5	Research Analyst, his associate, PCIL or its associates have received compensation for investment banking or merchant banking or brokerage services or for any other products or services from the company(ies) covered in the Research report, in the last twelve months	No

Independence: PhillipCapital (India) Pvt. Ltd. has not had an investment banking relationship with, and has not received any compensation for investment banking services from, the subject issuers in the past twelve (12) months, and PhillipCapital (India) Pvt. Ltd does not anticipate receiving or intend to seek compensation for investment banking services from the subject issuers in the next three (3) months. PhillipCapital (India) Pvt. Ltd is not a market maker in the securities mentioned in this research report, although it, or its affiliates/employees, may have positions in, purchase or sell, or be materially interested in any of the securities covered in the report.

Suitability and Risks: This research report is for informational purposes only and is not tailored to the specific investment objectives, financial situation or particular requirements of any individual recipient hereof. Certain securities may give rise to substantial risks and may not be suitable for certain investors. Each investor must make its own determination as to the appropriateness of any securities referred to in this research report based upon the legal, tax and

accounting considerations applicable to such investor and its own investment objectives or strategy, its financial situation and its investing experience. The value of any security may be positively or adversely affected by changes in foreign exchange or interest rates, as well as by other financial, economic, or political factors. Past performance is not necessarily indicative of future performance or results.

Sources, Completeness and Accuracy: The material herein is based upon information obtained from sources that PCIPL and the research analyst believe to be reliable, but neither PCIPL nor the research analyst represents or guarantees that the information contained herein is accurate or complete and it should not be relied upon as such. Opinions expressed herein are current opinions as of the date appearing on this material, and are subject to change without notice. Furthermore, PCIPL is under no obligation to update or keep the information current. Without limiting any of the foregoing, in no event shall PCIPL, any of its affiliates/employees or any third party involved in, or related to computing or compiling the information have any liability for any damages of any kind including but not limited to any direct or consequential loss or damage, however arising, from the use of this document.

Copyright: The copyright in this research report belongs exclusively to PCIPL. All rights are reserved. Any unauthorised use or disclosure is prohibited. No reprinting or reproduction, in whole or in part, is permitted without the PCIPL's prior consent, except that a recipient may reprint it for internal circulation only and only if it is reprinted in its entirety.

Caution: Risk of loss in trading/investment can be substantial and even more than the amount / margin given by you. The recipient should carefully consider whether trading/investment is appropriate for the recipient in light of the recipient's experience, objectives, financial resources and other relevant circumstances. PCIPL and any of its employees, directors, associates, group entities, or affiliates shall not be liable for losses, if any, incurred by the recipient. The recipient is further cautioned that trading/investments in financial markets are subject to market risks and are advised to seek trading/investment advice before investing. There is no guarantee/assurance as to returns or profits or capital protection or appreciation. PCIPL and any of its employees, directors, associates, group entities, affiliates are not inducing the recipient for trading/investing in the financial market(s). Trading/Investment decision is the sole responsibility of the recipient.

For U.S. persons only: This research report is a product of PhillipCapital (India) Pvt Ltd., which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S.-regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances, and trading securities held by a research analyst account.

This report is intended for distribution by PhillipCapital (India) Pvt Ltd. only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by the U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a-6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated, and/or transmitted onward to any U.S. person, which is not a Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, PhillipCapital (India) Pvt Ltd. has entered into an agreement with a U.S. registered broker-dealer, Marco Polo Securities Inc. ("Marco Polo"). Transactions in securities discussed in this research report should be effected through Marco Polo or another U.S. registered broker dealer

PhillipCapital (India) Pvt. Ltd.

Registered office: No. 1, 18th Floor, Urmi Estate, 95 Ganpatrao Kadam Marg, Lower Parel West, Mumbai 400013