

**India I Equities** 

Oil & Gas

**Sector Update** 

18 March 2024

# Oil & Gas

Sensex: 72643

Another strong quarter on the cards; risk-reward favourable

Nifty: 22023

Based on Q4 ytd trends, OMCs are set for record FY24 earnings despite the cut in retail prices, which eliminate a key overhang. Earnings have been rising for the last one year due to higher refining margins (geo-political tension + low product stocks) and marketing profits (discounted Russian crude + supportive crude prices given strong supplies). However, our FY25e/26e and consensus' factor in a 40-57% drop in earnings over FY24e levels; there is upside risk to our estimates. Post-elections, with stable crude prices, daily price revisions could return, which would cushion marketing earnings volatility. We maintain our estimates and reiterate our Buy ratings on BPC and HPC, and a Hold on IOC with a higher TP as we raise its target multiple to 5.5x EV/EBIDTA (5x earlier) on its continued business strength. Our preferred pick is BPC.

Retail price cut removes a key overhang. Heading into the general elections, the government has cut retail prices of petrol/diesel by Rs2/litre each, a first since May'22. The government had held prices despite crude cooling by ~\$30/bbl (from ~\$110) to help OMCs recoup FY23 losses. With stable crude prices, we do not rule out daily retail price revisions returning, which would ease marketing earnings volatility, leading to re-ratings. The IEA expects CY24 global oil demand at 1.3m b/d (2.3m in CY23). Adjusted for voluntary supply cuts of OPEC+, the agency expects global supplies to rise by 0.8m b/d, holding prices at ~\$80/bbl. We have factored in Rs3.5/Rs4 blended marketing margins for FY25/26.

**Q/q rebound in earnings, set for a record FY24**. In Q4, OMCs are expected to grow q/q, driven by higher GRMs (Q4 ytd diesel/petrol spreads up \$2/\$6 a bbl q/q), marketing profits (blended margins ~Rs4/litre vs. Rs2 in Q3) and inventory gains. We expect the three OMCs to report Rs318bn/184bn EBIDTA/PAT (Q3: Rs238bn/120bn).

**Record FY24, but consensus factors earnings fall.** Powered by the good Q4 results, OMCs are set to report record profits in FY24. Earnings have been on an uptrend for the last one year due to high refining margins and marketing profits. However, our FY25e/26e and consensus' factor in a 40-57% drop in earnings over FY24e levels even though crude prices are range-bound and refining margins are high; there is upside risk to estimates.

**Valuation.** We retain our Buy ratings on Bharat Petroleum and Hindustan Petroleum and a Hold on Indian Oil with higher 12-mth TPs of Rs672/643/173 (earlier Rs627/561/151), on a sum-of-parts basis (core business at 5.5x FY26e EV/EBITDA; earlier 5x) and add the value of investments at a 20% discount to their market prices. Our pecking order is BPC>HPC>IOC. **Risks:** Lower GRMs, change in crude prices, inventory losses, adverse government policy: subsidy-sharing, anaemic marketing margins.

Avishek Datta Research Analyst

Anand Rathi Share and Stock Brokers Limited (hereinafter "ARSSBL") is a full-service brokerage and equities-research firm and the views expressed therein are solely of ARSSBL and not of the companies which have been covered in the Research Report. This report is intended for the sole use of the Recipient. Disclosures and analyst certifications are present in the Appendix.

Anand Rathi Research India Equities

# Non-OPEC supplies, weak demand to keep crude prices in check

Crude oil prices have been volatile since last year as the Russo-Ukraine war pushed up prices. However, strong non-OPEC supplies and the dicey demand context kept prices between \$75 and \$95 a barrel. Ahead, we expect crude oil prices to hold at ~\$80-90/bbl due to

- Strong non-OPEC supplies from the US, Brazil and Guyana
- Weaker demand due to recessionary pressures

### Non-OPEC supplies high

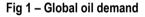
OPEC expects crude oil prices at \$80-90 a barrel, supporting its capital expenditure plans. To hold prices, it announced production cuts in CY23 of over 2.5m b/d. Besides, Saudi Arabia and Russia announced voluntary cuts of a combined 1.3m b/d from Jul'23 till Dec'23.

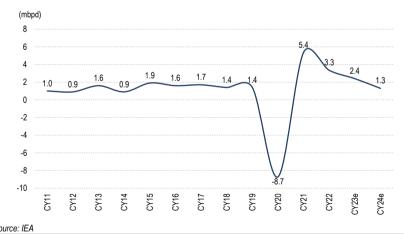
However, non-OPEC supplies from the US, Brazil and Guyana of a combined 1.7m b/d in CY23 would have helped meet demand of 2.4m b/d as stocks shrunk. In CY24, the IEA expects global production to rise by 1.6m b/d.

Strong non-OPEC supplies are likely to keep crude prices at ~\$80/bbl even though potentially greater supply cuts could push prices up.

### Weaker demand due to recessionary pressures

In CY23, global demand for oil grew 2.4m b/d to 102m b/d, supported by demand recovering in China to 1.8m b/d post pandemic restrictions being removed. For CY24, the IEA expects global oil demand to grow only 1.3m b/d due to recessionary pressures and high interest rates.





Impelled by strong non-OPEC supplies exceeding demand in CY24, we expect crude oil prices to hold at current levels and support OMCs' strong performances.

#### Refining spreads to be resilient

Refining margins are likely to benefit from strong demand and low product stocks. Geopolitical disturbances due to the ongoing Russo-Ukraine war have distorted product flows (the EU has banned imports of Russian oil products). Accordingly, in FY24 ytd, diesel/petrol/ATF spreads averaged \$20/16/21 a barrel.

OMCs also reported strong GRMs: HPC/IOC/BPC spreads at \$9.8/13.3/ 14.7 a barrel. We maintain our product margin assumptions for FY25/FY26.

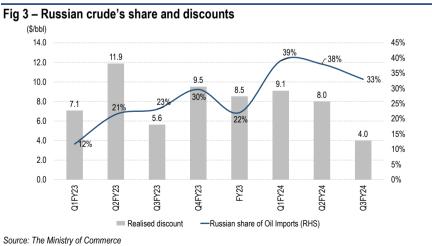
Fig 2 – Product spreads assumptions							
Singapore GRM (\$ / bbl)	FY20	FY21	FY22	FY23	FY24e	FY25e	FY26e
Petrol	10.1	4.6	13.7	18.7	18.0	15.0	15.0
ATF / kerosene	13.1	1.4	9.1	33.1	20.0	18.0	15.0
Diesel	13.6	4.7	10.4	35.6	20.0	18.0	16.0
Fuel oil	-7.0	-2.2	-6.6	-16.8	-10.0	-12.0	-12.0
LPG	-22.5	-6.9	-15.1	-33.0	-15.0	-15.0	-15.0
Naphtha	-5.3	-0.8	1.5	-12.4	-10.0	-12.0	-12.0
Calculated Singapore GRM (\$ / bbl)	5.3	1.7	5.9	12.2	9.3	7.0	6.2
Source: Industry, Anand Rathi Research							

Indian refiners' margins have trailed past (benchmark) Singapore margins; FY23, however, was a standout year as the refiners benefited from

- continued use of discounted Russian crude
- strong diesel and ATF/kerosene spreads

## Rising share of Russian crude

In 9M FY24, Bharat Petroleum and Indian Oil reported GRMs of \$14.7 and \$13.3 a barrel respectively, nearly double the benchmark Singapore's \$6.8, while Hindustan Petroleum's GRM of \$9.8/bbl was hit by the ongoing commissioning of its Vishakhapatnam unit. The GRMs were supported by greater use of discounted Russian crude, the proportion of which rose to ~39% (from ~2% in FY22) with the discount averaging \$7/bbl for 9M FY24.

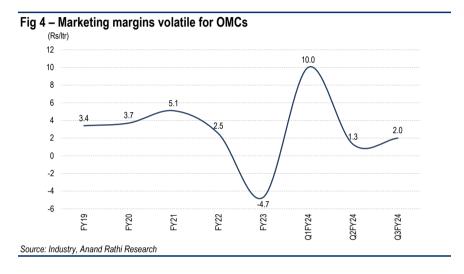


#### Strong product spreads

Indian refiners also benefited from strong spreads in diesel/ATF (\$20/bbl each) and gasoline (\$18), which make up  $\sim 70\%$  of the refinery product slate. Low inventory levels have also supported higher spreads.

#### **Marketing margins**

Marketing margins have been volatile on unchanged retail prices. However, after the recent Rs2/litre cut, we do not expect any further changes heading into the elections. However, if crude prices ease and geopolitical tensions cool, we do not rule out the move to free marketing of products. We have factored in FY24/25/26 marketing margins of Rs3/3.5/4 a litre.



# Q4 ytd trends suggest a strong quarter for OMCs

We expect the three OMCs to report Rs318bn/184bn EBIDTA/PAT (Q3: Rs238bn/120bn), aided by inventory gains (Rs54.8bn) and higher GRMs q/q (Q4 diesel/ petrol spreads up \$2/\$6/bbl). Marketing margins have recovered smartly from Q3 levels as crude prices have been range-bound; we calculate blended margins at ~Rs4 a litre (Q3 ytd average: ~Rs2).

	Q1 FY23	Q2 FY23	Q3 FY23	Q4 FY23	Q1 FY24	Q2 FY24	Q3 FY24	Q4 FY24e	% chng, Y/Y, est.	% chng Q/Q, est
Brent (\$/bbl)	1,13.0	99.5	88.5	82.0	78.1	86.6	84.3	82.4	0.5	<b>-</b> 2.3
\$/Rs	77.1	79.6	82.1	82.2	82.1	82.7	83.2	83.0	1.0	<b>-</b> 0.2
Singapore GRMs (\$/bbl)	21.6	7.8	6.0	8.2	4.1	9.5	5.4	7.8	<b>-</b> 4.9	44.4
Product spreads (\$/bbl)										
Gasoline	33.8	12.9	9.7	19.3	16.6	18.7	11.8	17.7	-8.0	50.7
Naphtha	-13.1	-21.2	-11.4	-4.1	-12.6	-16.5	-11.9	-6.0	<b>-</b> 44.4	50.1
Kerosene	38.7	32.8	33.9	27.7	14.3	26.0	23.3	21.9	<b>-</b> 21.1	-6.0
Diesel	42.3	34.2	39.9	26.2	13.9	26.5	20.2	22.2	-15.4	9.7
Fuel oil	-3.9	-24.0	-22.9	-16.0	-9.3	-5.9	-11.8	-11.0	31.2	6.6
BPCL										
Sales	1,383,896	1,283,327	1,333,315	1,334,138	1,282,567	1,165,943	1,299,756	1,332,645	-0.1	2.5
EBIDTA	(58,650)	14,340	42,339	111,537	158,098	129,079	62,263	106,876	<b>-</b> 4.2	71.7
PAT	(62,631)	(3,042)	19,596	78,378	105,509	85,011	33,973	67,526	-13.8	98.8
Debt	241,230	482,370	402,560	358,550	279,390	225,680	160,170			
Refining thruput (m tpa)	9.69	8.82	9.39	10.63	10.36	9.35	9.86	10.00	<b>-</b> 5.9	1.4
Refining margin (\$/bbl)	27.51	16.79	15.92	20.58	12.64	18.49	13.35	16.35	<b>-</b> 20.6	22.5
Inventory gains										
Refining	(3,710)	(3,840)	(7,520)	(19,130)	(10,700)	14,970	(3,690)	7,000		
Marketing	(3,710)	(3,840)	( . ,	, , ,	, , ,		, , ,	11,000		
	,	, ,								
HPCL										
Sales	1,214,488	1,141,723	1,161,266	1,144,447	1,190,437	1,026,184	1,184,429	1,240,986	8.4	4.8
EBIDTA	(124,946)	(14,979)	16,717	47,986	95,253	82,169	21,635	51,080	6.4	136.1
PAT	(101,969)	(21,721)	1,724	32,226	60,744	51,182	5,286	31,560	<b>-</b> 2.1	497.0
Debt	472,830	685,460	642,450	645,170	516,980	517,580	517,580			
Refining thruput (m tpa)	4.81	4.49	4.83	4.96	5.40	5.75	5.34	5.70	14.9	6.7
Refining margin (\$/bbl)	16.69	8.41	9.14	14.01	7.44	13.35	8.49	11.44	-18.3	34.7
Inventory gains										
Marketing	(9,770)	-	-	-	-	12,000	-	8,800		
Refining	-	-	-	-	-	9,000	(7,500)	3,100		
Debt										
IOCL										
Sales	2,519,329	2,283,594	2,281,683	2,264,921	2,211,454	2,023,120	2,230,124	2,188,591	-3.4	-1.9
EBIDTA	13,589	19,600	35,934	153,403	221,639	212,171	154,887	160,578	4.7	3.7
PAT	(19,925)	(2,724)	4,480	100,587	137,504	129,673	80,634	85,558	-14.9	6.1
Debt	1,107,990	1,403,220	1,440,650	1,324,950	1,010,120	,	1,061,900	130,558		
Refining thruput (m tpa)	18.94	16.09	18.20	19.12	18.80	17.77	18.50	18.00	<b>-</b> 5.9	<b>-</b> 2.7
Refining margin (\$/bbl)	31.81	18.49	12.93	15.28	8.34	18.11	13.60	13.05	<b>-14</b> .6	<b>-</b> 4.0
Inventory gains										
Marketing	-	-	-	-	-	-	-	9,400		
Refining	69,239	(94)	(48,904)	(42,856)	(8,043)	18,422	40,995	15,200		
Debt	1,822,050	2,571,050	2,485,660	2,328,670	1,806,490	1,737,330	1,739,650		<b>-</b> 32.4	-3.8
Sector inventory gains										
Marketing	(13,480)	(3,840)	-	-	-	12,000	-	25,300	-	-
Refining	65,529	(3,934)	(56,424)	(61,986)	(18,743)	42,392	29,805	29,400	117.7	-63.1
Total	52,049	(7,774)	(56,424)	(61,986)	(18,743)	54,392	29,805	54,800	131.9	-33.6
Source: Company, Anand Rat			,		,					

# **Valuation and view**

We value the OMCs at 5.5x FY26e EV/EBIDTA and add investments at a 20% discount to their market prices. Accordingly, our target prices for BPC/HPC/IOC work out to Rs672/443/173.

Fig 6 - OMCs' valuations (Rs m)			
	BPC	НРС	IOC
FY26e EV / EBITDA (x)	5.5	5.5	5.5
FY26e EBIDTA	252,041	194,285	497,798
EV	1,386,225	1,068,566	2,737,892
Net debt	146,258	283,764	712,025
Investments	103,853	59,311	363,054
E&P	82,444		
Bhatinda Refinery		54,869	
Equity value	1,426,264	912,699	2,388,920
Target Price (Rs/sh)	672	643	173
Source: Anand Rathi Research			

### **Risks**

- Sharply lower than anticipated GRMs.
- Persistently high crude prices, resulting in higher marketing losses.

Fig 7 - Consen	sus factors in wa	terfalls			
	FY24	FY25	FY26	FY24-25	FY24-26
HPC					
EBIDTA	244	181	191	<b>-</b> 26	<b>-</b> 22
PAT	151	91	95	-40	-37
BPC					
EBIDTA	416	230	228	<b>-</b> 45	<b>-</b> 45
PAT	270	125	116	-54	-57
IOC					
EBIDTA	603	338	331	<b>-</b> 44	<b>-</b> 45
PAT	410	239	236	<b>-</b> 42	<b>-</b> 42
Source: Bloomberg, A	nand Rathi Research				

# **Key Financials**

Fig 8 – HPC					
Year end Mar	FY22	FY23	FY24e	FY25e	FY26e
Sales (Rsbn)	3,510	4,404	3,877	3,626	3,502
EBITDA (Rsbn)	115	-75	277	189	194
Net profit (Rsbn)	77	-90	165	100	104
EPS (Rs)	54.0	-63.2	116.0	70.6	73.4
PE (x)	6.6	-7.4	4.0	6.6	6.4
EVEBITDA (x)	7.4	-15.3	3.6	4.9	4.1
PBV (x)	1.3	2.4	1.7	1.4	1.2
RoE (%)	20.5	-27.0	48.6	22.9	20.3
RoCE (%)	11.3	-9.2	21.4	12.5	12.3
Dividend yield (%)	3.2	-	8.3	5.0	5.2
Net debt/equity (x)	0.9	1.8	0.8	0.5	0.3
Source: Company, Anand Rathi Research					

Fig 9 – BPC		•	•	•	
Year end Mar	FY22	FY23	FY24e	FY25e	FY26e
Sales (Rsbn)	3,468	4,731	5,754	5,509	5,343
EBITDA (Rsbn)	192	110	441	259	252
Net profit (Rsbn)	115	22	274	146	145
EPS (Rs)	54.1	10.2	128.6	68.5	67.9
PE (x)	6.6	57.3	4.6	8.6	8.6
EVEBITDA (x)	7.0	14.9	3.5	5.7	5.5
PBV (x)	1.5	2.4	1.8	1.6	1.4
RoE (%)	21.8	4.2	45.0	19.6	17.2
RoCE (%)	9.7	5.9	26.1	12.9	11.7
Dividend yield (%)	2.7	0.7	7.7	4.1	4.1
Net debt/equity (x)	1.1	0.7	0.4	0.3	0.2
Source: Company, Anand Rathi Research					

Fig 10 – IOC					
Year end Mar	FY22	FY23	FY24e	FY25e	FY26e
Sales (Rsbn)	5,893	8,418	7,697	7,142	6,964
EBITDA (Rsbn)	477	307	713	559	532
Net profit (Rsbn)	233	100	406	292	268
EPS (Rs)	25.3	7.2	29.5	21.2	19.5
PE (x)	14.2	22.2	5.5	7.6	8.3
EVEBITDA (x)	12.3	10.9	4.0	4.7	4.7
PBV (x)	3.7	1.6	1.3	1.2	1.1
RoE (%)	19.0	7.3	26.5	16.5	13.5
RoCE (%)	10.8	5.6	14.7	10.5	9.3
Dividend yield (%)	7.8	1.9	7.2	5.1	4.7
Net debt/equity (x)	0.7	0.8	0.4	0.2	0.1
Source: Company, Anand Rathi Research					

#### Appendix

#### **Analyst Certification**

The views expressed in this Research Report accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. The research analysts are bound by stringent internal regulations and also legal and statutory requirements of the Securities and Exchange Board of India (hereinafter "SEBI") and the analysts' compensation are completely delinked from all the other companies and/or entities of Anand Rathi, and have no bearing whatsoever on any recommendation that they have given in the Research Report.

#### Anand Rathi Ratings Definitions

Analysts' ratings and the corresponding expected returns take into account our definitions of Large Caps, Mid Caps & Small Caps as described in the Ratings Table below:

Ratings Guide (12 months)			
	Buy	Hold	Sell
Large Caps (Top 100 companies)	>15%	0-15%	<0%
Mid Caps (101st-250th company)	>20%	0-20%	<0%
Small Caps (251st company onwards)	>25%	0-25%	<0%

#### Research Disclaimer and Disclosure inter-alia as required under Securities and Exchange Board of India (Research Analysts) Regulations, 2014

Anand Rathi Share and Stock Brokers Ltd. (hereinafter refer as ARSSBL) (Research Entity, SEBI Regn No. INH000000834, Date of Regn. 29/06/2015) is a subsidiary of the Anand Rathi Financial Services Ltd. ARSSBL is a corporate trading and clearing member of Bombay Stock Exchange Ltd (BSE), National Stock Exchange of India Ltd. (NSEIL), Metropolitan Stock Exchange of India Ltd. (MSDL) and Central Depository Participant with National Securities Depository Ltd (NSDL) and Central Depository Services Ltd. (CDSL), ARSSBL is engaged into the business of Stock Broking, Depository Participant, Mutual Fund distributor.

The research analysts, strategists, or research associates principally responsible for the preparation of Anand Rathi research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors and firm revenues.

General Disclaimer: This Research Report (hereinafter called "Report") is meant solely for use by the recipient and is not for circulation. This Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. The recommendations, if any, made herein are expression of views and/or opinions and should not be deemed or construed to be neither advice for the purpose of purchase or sale of any security, derivatives or any other security through ARSSBL nor any solicitation or or offering of any investment (trading opportunity on behalf of the issuer(s) of the respective security (ies) referred to herein. These information / opinions / views are not meant to seve as a professional investment guide for the readers. No action is solicited based upon the information provided herein. Recipients of this Report should rely on information/data arising out of their own investigations. Readers are advised to seek independent professional advice and arrive at an informed trading/investment decision before executing any trades or making any investments. This Report has been prepared on the basis of publicly available information, internally developed data and other sources believed by ARSSBL to be reliable. ARSSBL or its directors, employees, affiliates or representatives do not assume any responsibility for, or warrant the accuracy, completeness, adequacy and reliability of such information / opinions / views. While due care has been taken to ensure that the disclosures and opinions given are fair and reasonable, none of the directors, employees, affiliates or representatives of ARSSBL shall be liable for any direct, indirect, special, incidental, consequential, punitive or exemplary damages, including lost profits arising in any way whatsoever from the information / opinions / views contained in this Report. The price and value of the investments referred to in this Report and the income from them may go down as well as up, an

Opinions expressed are our current opinions as of the date appearing on this Research only. We do not undertake to advise you as to any change of our views expressed in this Report. Research Report may differ between ARSSBL's RAs and/ or ARSSBL's associate companies on account of differences in research methodology, personal judgment and difference in time horizons for which recommendations are made. User should keep this risk in mind and not hold ARSSBL, its employees and associates responsible for any losses, damages of any type whatsoever.

ARSSBL and its associates or employees may; (a) from time to time, have long or short positions in, and buy or sell the investments in/ security of company (ies) mentioned herein or (b) be engaged in any other transaction involving such investments/ securities of company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) these and other activities of ARSSBL and its associates or employees may not be construed as potential conflict of interest with respect to any recommendation and related information and opinions. Without limiting any of the foregoing, in no event shall ARSSBL and its associates or employees or any third party involved in, or related to computing or compiling the information have any liability for any damages of any kind.

Details of Associates of ARSSBL and Brief History of Disciplinary action by regulatory authorities & its associates are available on our website i.e. www.rathionline.com

Disclaimers in respect of jurisdiction: This report is not directed to, 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 or regulation or which would subject ARSSBL to any registration or licensing requirement within such jurisdiction(s). No action has been or will be taken by ARSSBL in any jurisdiction (other than India), where any action for such purpose(s) is required. Accordingly, this Report shall not be possessed, circulated and/or distributed in any such country or jurisdiction unless such action is in compliance with all applicable laws and regulations of such country or jurisdiction. ARSSBL requires such recipient to inform himself about and to observe any restrictions at his own expense, without any liability to ARSSBL. Any disoute arising out of this Report shall be subject to the exclusive jurisdiction of the Courts in India.

#### Statements on ownership and material conflicts of interest, compensation - ARSSBL and Associates

#### Answers to the Best of the knowledge and belief of ARSSBL/ its Associates/ Research Analyst who is preparing this report

Answers to the best of the knowledge and benef of Andobby its Associates, Nesearch Analyst who is preparing this report	
Research analyst or research entity or his associate or his relative has any financial interest in the subject company and the nature of such financial interest.  ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company, at the end of the month immediately preceding the date of publication of the research report?	No No
ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company ARSSBL/its Associates/ Research Analyst/ his Relative have any other material conflict of interest at the time of publication of the research report? ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation from the subject company in the past twelve months ARSSBL/its Associates/ Research Analyst/ his Relative have managed or co-managed public offering of securities for the subject company in the past twelve months	No No No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation for investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No
ARSSBL/fits Associates/ Research Analyst/ his Relative have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation or other benefits from the subject company or third party in connection with the research report ARSSBL/its Associates/ Research Analyst/ his Relative have served as an officer, director or employee of the subject company.  ARSSBL/its Associates/ Research Analyst/ his Relative have served as an officer, director or employee of the subject company.	No No No
The Cobbine Tools and The Tools and	

#### Other Disclosures pertaining to distribution of research in the United States of America

Research report is a product of Anand Rathi Share and Stock Brokers Ltd. (hereinafter refer as ARSSBL) under Marco Polo Securities 15a6 chaperone service 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 analyses.

among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

Research reports are intended for distribution by 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 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 the 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, ARSSBL has entered into a chaperoning agreement with a U.S. registered broker-dealer. Marco Polo Securities Inc. ("Marco Polo").

- 1. ARSSBL or its Affiliates may or may not have been beneficial owners of the securities mentioned in this report.
- 2. ARSSBL or its affiliates may have or not managed or co-managed a public offering of the securities mentioned in the report in the past 12 months
- 3. ARSSBL or its affiliates may have or not received compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities within the next three months.
- 4. However, one or more of ARSSBL or its Affiliates may, from time to time, have a long or short position in any of the securities mentioned herein and may buy or sell those securities or options thereon, either on their own account or on behalf of their clients.
- 5. As of the publication of this report, ARSSBL does not make a market in the subject securities.
- 6. ARSSBL or its Affiliates may or may not, to the extent permitted by law, act upon or use the above material or the conclusions stated above, or the research or analysis on which they are based before the material is published to recipients and from time to time, provide investment banking, investment management or other services for or solicit to seek to obtain investment banking, or other securities business from, any entity referred to in this report.

© 2023. This report is strictly confidential and is being furnished to you solely for your information. All material presented in this report, unless specifically indicated otherwise, is under copyright to ARSSBL. None of the material, its content, or any copy of such material or content, may be altered in any way, transmitted, copied or reproduced (in whole or in part) or redistributed in any form to any other party, without the prior express written permission of ARSSBL. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of ARSSBL or its affiliates, unless specifically mentioned otherwise.

As of the publication of this report, ARSSBL does not make a market in the subject securities.

Additional information on recommended securities/instruments is available on request

Compliance officer-Deepak Kedia, email id - deepakkedia@rathi.com, Contact no. +91 22 6281 7000.

Grievance officer-Madhu Jain-email id- grievance@rathi.com, Contact no. +91 22 6281 7191

 $ARSSBL\ registered\ address:\ Express\ Zone,\ A\ Wing,\ 9th\ Floor,\ Western\ Express\ Highway,\ Diagonally\ Opposite\ Oberoi\ Mall,\ Malad\ (E),\ Mumbai\ -400097.$