

Estimate change	↑
TP change	↑
Rating change	↔

Bloomberg	HPCL IN
Equity Shares (m)	1,452
M.Cap.(INRb)/(USDb)	299.4 / 3.6
52-Week Range (INR)	355 / 200
1, 6, 12 Rel. Per (%)	-9/-29/-35
12M Avg Val (INR M)	1185

Financials & Valuations (INR b)

Y/E March	FY22	FY23E	FY24E
Sales	3,499.1	4,243.7	4,027.1
EBITDA	102.4	-65.0	128.4
Adj. PAT	72.9	-75.4	69.2
Adj. EPS (INR)	47.9	-49.5	45.4
EPS Gr. (%)	-31.6	PL	LP
BV/Sh.(INR)	271.6	222.2	253.9

Ratios

Net D:E	1.1	1.9	1.6
RoE (%)	18.4	-20.0	19.1
RoCE (%)	8.3	-7.1	7.1
Payout (%)	27.9	0.0	30.1

Valuations

P/E (x)	4.4	-4.3	4.6
P/BV (x)	0.8	0.9	0.8
EV/EBITDA (x)	7.5	-14.9	7.4
Div. Yield (%)	6.3	0.0	6.5
FCF Yield (%)	11.8	-53.6	21.5

Shareholding pattern (%)

As On	Sep-22	Jun-22	Sep-21
Promoter	54.9	54.9	54.9
DII	18.0	16.4	15.9
FII	16.7	18.2	18.3
Others	10.4	10.5	10.9

FII Includes depository receipts

CMP: INR211 TP: INR216 (+2%) Neutral

Result above estimates; debt continues to remain a challenge

- HPCL reported a beat on both EBITDA and PAT in 2QFY23 mainly due to the one-time grant of ~INR56b given on account of LPG under-recoveries. GRM came in at USD8.4/bbl (est. GRM loss of USD3/bbl, 246% YoY, -50% QoQ). Refinery throughput was at 4.5mmt (est. 4.8mmt; +77% YoY, -7% QoQ). Singapore GRM of ~USD7.1/bbl in 2QFY23 has now fallen to USD2.5/bbl in 3QYTD, which would curtail refining margins further in the coming quarter.
- In the **marketing segment**, sales volumes were at 10.4mmt (est. 10.1mmt; +14% YoY, -3% QoQ). OMCs are estimated to be generating gross marketing margin of INR10.1 per liter on petrol and loss of INR5.6 per liter on diesel in 3QFY23YTD. **HPCL has the highest leverage to marketing and would suffer the most losses in the marketing segment.**
- The government recently approved a one-time grant of INR56.2b to compensate for the under-recoveries incurred on sale of domestic LPG during FY22 and current period, which has been duly recognized by the company in 2QFY23.
- We also highlight that HPCL is battling a three-headed monster: a) project execution risk, b) rising debt due to poor refining margin with delayed stabilization (INR707b in 2QFY23 v/s INR450b in end-FY22), and c) loss of marketing leverage in the longer term with capacity expansion at Vizag and the upcoming Rajasthan refinery.
- Owing to the beat in our estimates, we cut our EBITDA loss to INR65b (v/s loss of INR111b earlier) and Net loss to INR75b from net loss of INR111b in FY23. We expect consolidated net debt to surge ~1.6x to INR720b in FY24 from INR450b in FY22. We value the stock at 0.9x FY24E P/BV and recommend a Neutral rating with a TP of INR216.

Reported GRM above estimate; miss on refinery throughput

- HPCL's refining throughput was at 4.5mmt (our est. 4.8mmt, +77% YoY, -7% QoQ). Reported GRM stood at USD8.4/bbl (our est. GRM loss of USD3/bbl and GRM of USD16.7/bbl in 1QFY23).
- Marketing volumes were in line with our estimate of 10.4mmt (+14% YoY, -3% QoQ). While, marketing margins (inc. inv.) stood at INR0.6/lit (v/s loss of INR9.9/lit in 1QFY23 and +INR5.9/lit in 2QFY22).
- Resultant EBITDA loss was at INR8.9b (v/s est. EBITDA loss of INR105b). Net loss came in at INR21.7b (v/s our est. PAT loss of INR91b).**
- For 1HFY23, EBITDA loss was at INR124b (v/s EBITDA of INR63b in 1HFY22), with Net loss also at INR124b (v/s PAT of INR37b in 1HFY22).** This was primarily due to lower average marketing margin (inc. inv.) at -INR4.6/lit (v/s INR5.8/lit in 1HFY22), with marketing volumes up 18% YoY to 21.1mmt. Reported GRM stood at USD12.6/bbl in 1HFY23 (v/s USD2.9/bbl in 1HFY22), with refining throughput rising 85% YoY to 9.3mmt.
- Consolidated debt was at INR707b at end-2QFY23 v/s INR450b at end-FY22.**

Valuation and view

- **We expect FY23 capex at ~INR137b** and an estimated capex of INR610b in the next five years with the company's focus being on enhancing its refining and marketing infrastructure, foray into petrochemicals and expanding footprints in Alternate Energy.
- Completion of various ongoing projects will drive growth over the next 3-5 years, such as: Bhatinda refinery expansion, bottom up gradation unit at Vizag in 2HFY23, and Rajasthan (Barmer) refinery in FY24.
- Further, HPCL is working on the petchem projects such as setting up of a 4.6mmtpa petrochemical capacity by FY25 along with JVCs that will help it become the second-largest petrochemicals production facility in India.
- **Despite the potential highlighted above, we maintain our Neutral rating on the stock because of the project execution risk at Vizag and rising debt levels.** We value HPCL at 0.9x FY24E P/BV and arrive at a TP of INR216.

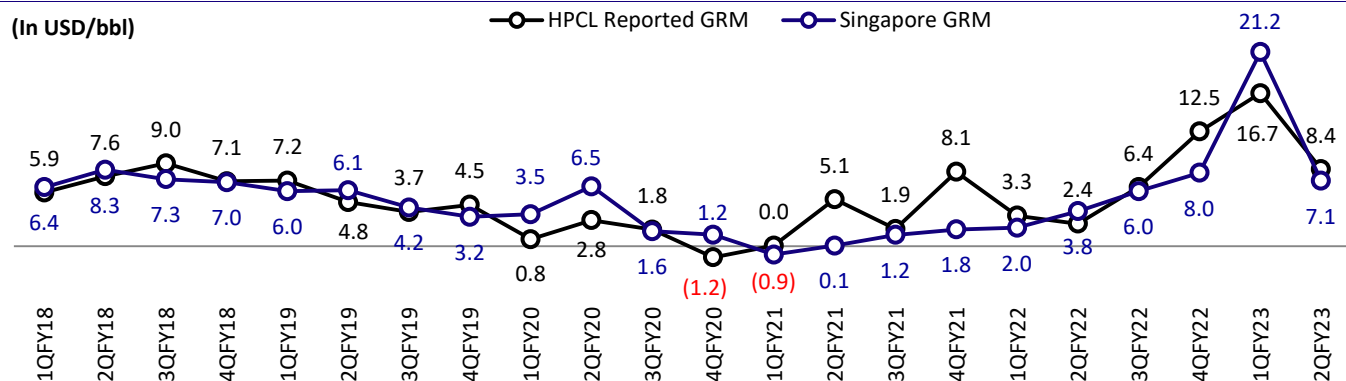
Standalone - Quarterly Earnings Model

Y/E March	FY22				FY23E				(INR b)		
	1Q	2Q	3Q	4Q	1Q	2Q	3QE	4QE	FY22	FY23E	FY23
Net Sales	724.4	830.6	966.0	975.7	1,144.5	1,084.2	1,079.2	933.5	3,496.8	4,241.4	953.8
YoY Change (%)	92.1	60.4	40.7	30.4	58.0	30.5	11.7	-4.3	50.1	21.3	14.8
EBITDA	32.6	30.1	18.7	21.9	-115.5	-8.9	30.3	28.4	103.3	-65.7	-105.3
Margins (%)	4.5	3.6	1.9	2.2	-10.1	-0.8	2.8	3.0	3.0	-1.5	-11.0
Depreciation	9.1	9.5	10.2	10.8	10.9	10.8	11.6	12.0	39.7	45.3	11.4
Forex loss	0.7	-1.1	-1.4	0.9	9.5	6.0	0.0	0.0	-1.0	15.5	7.0
Interest	2.5	1.5	2.4	3.3	3.3	5.9	3.0	-0.4	9.7	11.9	3.0
Other Income	3.7	3.4	4.1	16.0	3.4	2.8	5.3	9.2	27.2	20.6	5.2
PBT before EO expense	24.0	23.6	11.6	22.8	-135.8	-28.9	21.0	25.9	82.0	-117.8	-121.6
PBT	24.0	23.6	11.6	22.8	-135.8	-28.9	21.0	25.9	82.0	-117.8	-121.6
Rate (%)	25.1	18.5	25.1	21.4	24.9	24.9	25.2	25.2	22.2	24.8	25.2
Adj PAT	18.0	19.2	8.7	18.0	-102.0	-21.7	15.7	19.4	63.8	-88.6	-91.0
YoY Change (%)	-36.2	-22.4	-63.1	-40.5	PL	PL	80.7	8.1	-40.1	-238.8	PL
Key Assumptions											
Refining throughput (mmt)	2.5	2.5	4.2	4.7	4.8	4.5	5.5	7.2	14.0	22.0	4.8
Reported GRM (USD/bbl)	3.3	2.4	6.4	12.5	16.7	8.4	5.0	5.0	6.2	8.8	-3.0
Marketing sales volume incl exports (mmt)	8.8	9.1	10.5	10.7	10.7	10.4	10.3	9.7	39.1	10.3	10.1
Marketing GM incl inv (INR/litre)	5.8	5.9	3.0	2.7	-9.9	0.7	4.5	4.5	4.3	-0.1	-5.2

Y End: March 31	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Exchange Rate (INR/USD)	67.1	64.5	70.0	70.9	74.3	74.5	79.9	80.4
Brent Crude (USD/bbl)	48.6	57.6	70.1	61.2	44.4	80.5	100.0	90.0
Market Sales (MMT)	35	37	39	40	37	39	41	43
YoY (%)	3	6	5	2	(8)	7	5	4
GRM (USD/bbl)	6.2	7.4	5.0	1.0	3.9	7.2	8.2	5.0
Singapore GRM (USD/bbl)	5.8	7.3	4.9	3.2	0.5	5.0	10.1	6.0
Prem/(disc) (USD/bbl)	0	0	0	(2)	3	2	(1.9)	(1.0)
Total Refinery throughput (MMT)	17.8	18.3	18.4	17.2	16.4	14.0	22.0	24.0
YoY (%)	3%	3%	1%	-7%	-4%	-15%	57%	9%
Refining capacity utilization (%)	120%	116%	117%	109%	104%	88%	98%	98%
Blended marketing margin incld inventory (INR/lit)	4.0	3.6	4.3	4.0	6.3	4.3	(0.1)	4.5
Cons EPS	54.0	47.4	43.9	23.9	70.0	47.9	-49.5	45.4

Story in charts – 2QFY23

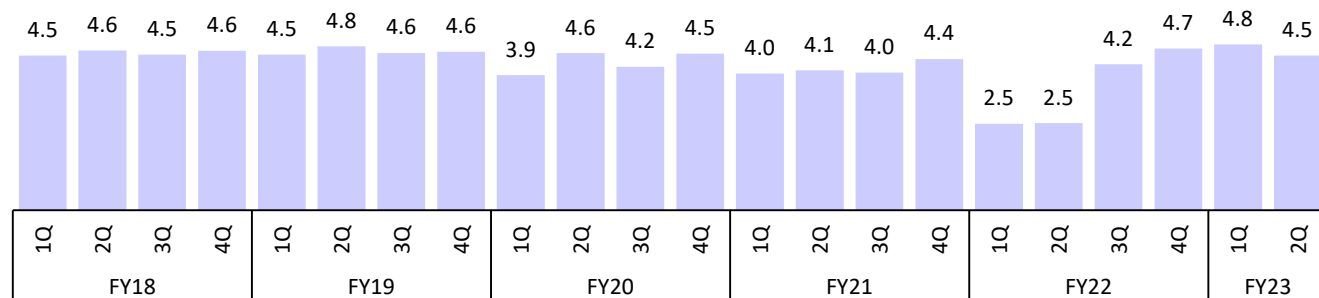
Exhibit 1: Reported GRM stood at USD8.4/bbl, while SG GRM stood at USD7.1/bbl in 2QFY23



Source: Company, MOFSL

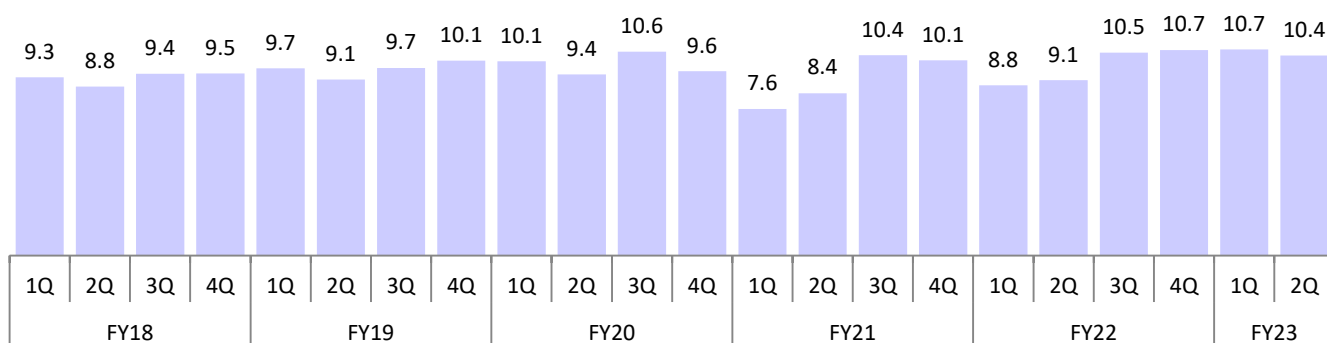
Exhibit 2: Throughput was at 4.5mmt in 2QFY23 (+77% YoY, -7% QoQ)

Refinery thr'put (mmt)



Source: Company, MOFSL

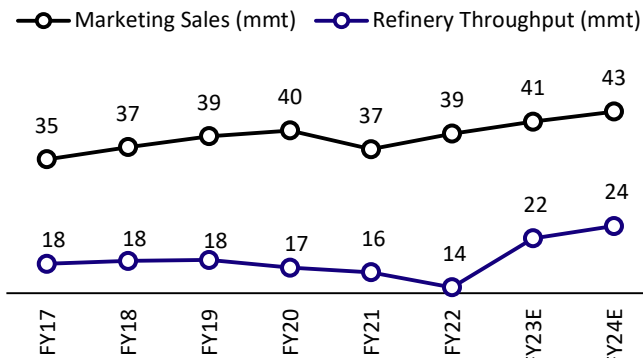
Exhibit 3: Marketing volume was +14% YoY, -3% QoQ to 10.4mmt



Source: Company, MOFSL

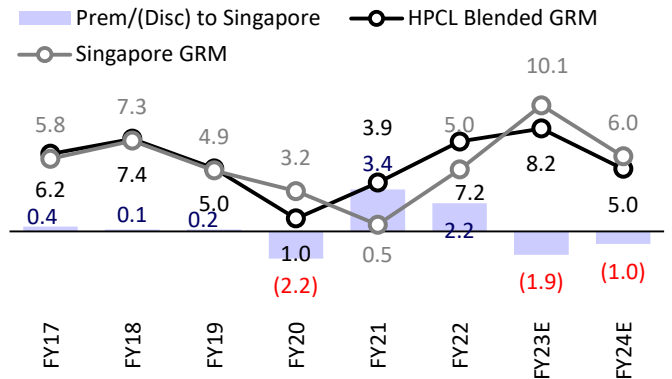
Story in charts

Exhibit 4: Refining throughput/marketing sales of HPCL



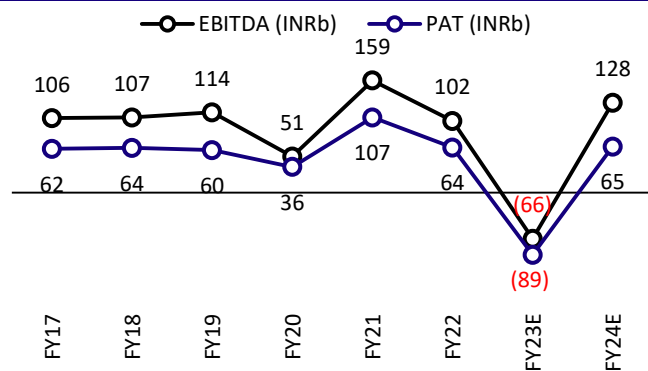
Source: Company, MOFSL

Exhibit 5: GRM trend of HPCL



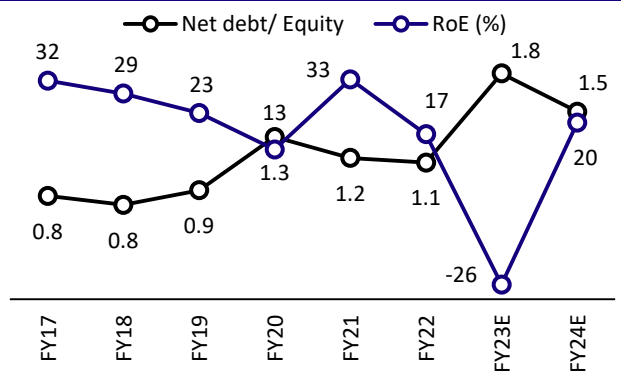
Source: Company, MOFSL

Exhibit 6: EBITDA v/s PAT (standalone)



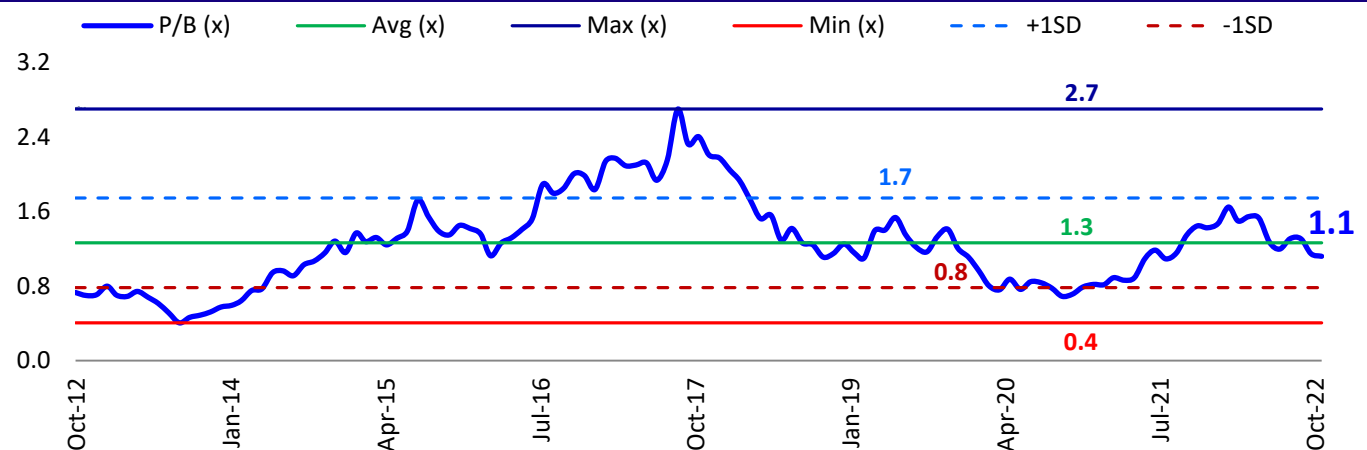
Source: Company, MOFSL

Exhibit 7: Standalone ratios



Source: Company, MOFSL

Exhibit 8: HPCL – 1-year forward P/B trades at 17% discount to its long-term average of 1.3x



Source: Company, MOFSL

Financials and valuations

Consolidated - Income Statement

(INR b)

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Total Income from Operations	1,874.9	2,195.1	2,754.9	2,690.9	2,332.5	3,499.1	4,243.7	4,027.1
Change (%)	5.4	17.1	25.5	-2.3	-13.3	50.0	21.3	-5.1
EBITDA	108.8	107.1	115.3	56.6	160.0	102.4	-65.0	128.4
Margin (%)	5.8	4.9	4.2	2.1	6.9	2.9	-1.5	3.2
Depreciation	27.8	28.3	30.9	33.7	36.3	40.0	47.0	50.1
EBIT	81.0	78.8	84.4	22.9	123.8	62.4	-112.1	78.3
Interest Charges (inclcd forex)	6.1	6.2	7.9	11.4	9.6	10.0	26.0	27.4
Other Income	13.8	15.3	14.5	16.8	26.4	24.4	20.5	24.6
PBT bef. JVs/associates EO	88.8	87.9	91.1	28.4	140.6	76.9	-117.6	75.6
EO Items	0.0	0.0	0.0	-10.0	0.0	0.0	0.0	0.0
Minority Interest	23.2	13.2	9.3	-4.6	1.4	14.6	16.8	16.9
PBT after EO Exp.	112.0	101.1	100.4	13.7	142.0	91.4	-100.8	92.5
Tax Rate (%)	26.4	28.6	33.4	-92.0	24.9	20.2	25.2	25.2
Reported PAT	82.4	72.2	66.9	26.4	106.6	72.9	-75.4	69.2
Adjusted PAT	82.4	72.2	66.9	36.4	106.6	72.9	-75.4	69.2
Change (%)	76.2	-12.4	-7.3	-45.6	192.8	-31.6	-203.4	-191.8
Margin (%)	4.4	3.3	2.4	1.4	4.6	2.1	-1.8	1.7

Consolidated - Balance Sheet

(INR b)

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Equity Share Capital	10.2	15.2	15.2	15.2	14.5	14.2	14.2	14.2
Total Reserves	200.6	240.1	288.8	294.6	366.3	399.9	324.4	372.8
Net Worth	210.7	255.3	304.0	309.8	380.8	414.0	338.6	387.0
Total Loans	180.3	205.4	260.4	393.9	427.1	450.3	720.5	720.5
Deferred Tax Liabilities	61.5	68.0	74.0	54.9	54.6	59.6	59.6	59.6
Capital Employed	452.5	528.7	638.3	758.6	862.5	923.9	1,118.7	1,167.1
Net Fixed Assets	368.6	386.8	416.2	489.4	505.9	578.0	680.7	730.6
Capital WIP	18.7	40.1	95.2	171.7	253.4	289.1	276.4	263.4
Total Investments	117.7	128.8	143.0	144.0	150.9	188.7	188.7	188.7
Curr. Assets, Loans&Adv.	283.6	322.5	395.5	336.8	397.3	453.0	614.2	609.3
Inventory	186.3	186.1	204.4	193.3	287.6	355.1	430.7	408.7
Account Receivables	40.9	55.9	56.7	39.3	68.7	63.4	76.9	73.0
Cash and Bank Balance	1.4	12.9	2.2	2.2	5.7	2.6	74.7	95.7
Cash	1.1	1.2	2.0	2.0	4.8	2.3	74.4	95.4
Bank Balance	0.2	11.7	0.2	0.2	0.9	0.2	0.2	0.2
Loans and Advances	5.3	10.4	19.9	18.2	11.1	10.8	10.8	10.8
Others	49.7	57.1	112.3	83.8	24.1	21.1	21.1	21.1
Curr. Liability & Prov.	350.7	368.0	435.1	410.5	479.1	622.3	678.7	662.3
Account Payables	127.0	157.8	190.5	114.7	178.0	264.8	321.1	304.7
Other Current Liabilities	199.1	185.0	223.2	268.9	272.3	332.2	332.2	332.2
Provisions	24.5	25.2	21.4	26.9	28.8	25.4	25.4	25.4
Net Current Assets	-67.1	-45.5	-39.7	-73.7	-81.8	-169.3	-64.5	-53.0
Appl. of Funds	453	529	638	759	862	924	1,118.7	1,167.1

Financials and valuations

Ratios

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Basic (INR)								
EPS	54.0	47.4	43.9	23.9	70.0	47.9	-49.5	45.4
Cash EPS	72.2	66.0	64.1	46.0	93.7	74.1	-18.6	78.3
BV/Share	138.2	167.5	199.5	203.3	249.8	271.6	222.2	253.9
DPS	22.8	16.2	15.2	9.3	21.7	13.3	0.0	13.7
Payout (%)	50.8	42.8	43.8	77.2	31.0	27.9	0.0	30.1
Valuation (x)								
P/E	3.9	4.5	4.8	8.8	3.0	4.4	-4.3	4.6
Cash P/E	2.9	3.2	3.3	4.6	2.2	2.8	-11.3	2.7
P/BV	1.5	1.3	1.1	1.0	0.8	0.8	0.9	0.8
EV/Sales	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2
EV/EBITDA	4.6	4.8	5.0	12.6	4.6	7.5	-14.9	7.4
Dividend Yield (%)	10.8	7.7	7.2	4.4	10.3	6.3	0.0	6.5
FCF per share	28.9	28.4	-17.8	-54.6	40.8	24.8	-112.9	45.4
Return Ratios (%)								
RoE	43.7	31.0	23.9	11.9	30.9	18.4	-20.0	19.1
RoCE	17.9	15.8	12.9	12.0	14.9	8.3	-7.1	7.1
RoIC	18.7	17.0	15.1	10.5	20.8	11.1	-16.4	9.8
Working Capital Ratios								
Fixed Asset Turnover (x)	4.4	4.7	5.2	4.2	3.4	4.4	4.5	3.8
Asset Turnover (x)	4.1	4.2	4.3	3.5	2.7	3.8	3.8	3.5
Inventory (Days)	36	31	27	26	45	37	37	37
Debtor (Days)	8	9	8	5	11	7	7	7
Creditor (Days)	25	26	25	16	28	28	28	28
Leverage Ratio (x)								
Current Ratio	0.8	0.9	0.9	0.8	0.8	0.7	0.9	0.9
Interest Cover Ratio	13.3	12.8	10.7	2.0	12.8	6.3	-4.3	2.9
Net Debt/Equity	0.8	0.8	0.8	1.3	1.1	1.1	1.9	1.6

Consolidated - Cash Flow Statement

(INR b)

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
OP/(Loss) before Tax	112.0	101.1	100.4	13.7	142.0	91.4	-100.8	92.5
Depreciation	27.8	28.3	30.9	33.7	36.3	40.0	47.0	50.1
Interest expense	6.1	6.2	7.9	11.4	9.6	10.0	26.0	27.4
Interest income and dividend	-3.5	-4.0	-4.0	-4.0	-4.0	-4.0	0.0	0.0
Direct Taxes Paid	-21.8	-20.0	-20.8	-17.2	-31.9	-14.5	25.4	-23.3
MI and others	-24.6	-10.7	-4.5	9.7	-2.7	-20.3	0.0	0.0
(Inc)/Dec in WC	6.6	9.4	-24.3	7.4	28.9	55.5	-32.7	9.5
CF from Operations	102.5	110.4	85.5	54.7	178.3	158.1	-35.1	156.2
(Inc)/Dec in FA	-58.5	-67.0	-112.7	-137.9	-116.1	-120.3	-137.0	-87.0
Free Cash Flow	44.0	43.3	-27.1	-83.2	62.2	37.8	-172.1	69.2
Others	-2.8	3.7	9.3	5.6	7.0	9.0	0.0	0.0
CF from Investments	-60.4	-66.0	-110.7	-141.7	-122.8	-137.4	-137.0	-87.0
Inc/(Dec) in Debt	5.3	-11.2	51.0	114.6	2.9	39.2	270.2	0.0
Interest Paid	-5.9	-5.1	-8.5	-12.9	-16.0	-17.2	-26.0	-27.4
Dividend Paid	-41.8	-27.9	-16.5	-17.3	-14.8	-32.2	0.0	-20.8
CF from Fin. Activity	-42.4	-44.2	26.0	87.0	-52.8	-23.1	244.2	-48.2
Inc/Dec of Cash	-0.3	0.1	0.8	0.1	2.8	-2.5	72.1	21.0
Opening Balance	1.4	1.1	1.2	2.0	2.0	4.8	2.3	74.4
Closing Balance	1.1	1.2	2.0	2.0	4.8	2.3	74.4	95.4

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
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 is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall be within following 30 days 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 Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - 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), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Limited are available on the website at <http://online.reports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOFSL 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 MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.

MOFSL 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 MOFSL 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. Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

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 MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL 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 MOFSL & 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 Financial Services Limited (MOFSL) 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 MOFSL 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 MOFSL, 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., MOFSL 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 Advisors 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.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- 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 or date of the public appearance.
- received compensation/other benefits from the subject company in the past 12 months
- 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 MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 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)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.
- Served subject company as its clients during twelve months preceding the date of distribution of the research report.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

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.

Terms & Conditions:

This report has been prepared by MOFSL 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 MOFSL. 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. MOFSL will not treat recipients as customers by virtue of their receiving this report.

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 alterations to this statement as may be required from time to time without any prior approval. MOFSL, 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 MOFSL. 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 MOFSL 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, not 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 MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL 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, Rahimtullah 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 71881000. Details of Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-71881085.

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN.: 146822. IRDA Corporate Agent – CA0579. Motilal Oswal Financial Services Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Insurance, Bond, NCDs and IPO products. Customer having any query/feedback/ clarification may write to query@motilaloswal.com. In case of grievances for any of the services rendered by Motilal Oswal Financial Services Limited (MOFSL) write to grievances@motilaloswal.com, for DP to dpgrievances@motilaloswal.com.