

Indus Towers

Estimate changes

TP change

Rating change



CMP: INR170

TP: INR170

Neutral

VIL provision continues; FCF turns negative

- Indus Towers (Indus) reported a subdued quarter with revenue/EBITDA of +1/-2% QoQ (in-line/6% miss), due to flat rental revenue and continued VIL provision. Tenancy additions have lagged tower additions, which impacted its profitability adversely. Further, FCF turned negative due to high capex and the amount blocked in trade receivables, primarily due to VIL.
- Indus is benefiting from the aggressive site additions from Bharti along with the 5G rollout, but being single-tenancy sites, it could alter the return profile despite adding linear (single-tenant) sites. Further, VIL's weak outlook and limited funding capability could: a) dilute tenancies in the near term, and b) increase risk on the long-term tower-sharing-led business model. Subsequently, we reiterate our Neutral rating on the stock.

Subdued earnings owing to weak rental segment

- Indus' revenue grew 1% QoQ to INR71b (in line) led by energy revenue growth of 2% QoQ to INR28b, while rental revenue was flat QoQ to INR43b.
- The company added ~6k towers and only ~5.6k co-locations. This implies a reduction in the average sharing factor to 1.75x from 1.77x.
- EBITDA declined 2% QoQ to INR34b (6% miss), due to an increase in VIL provision to INR1.3b (vs. INR870m in 1QFY24).
- After adjusting VIL provisions, **EBITDA was flat QoQ to INR36b (in-line) and the adjusted margin contracted 60bp QoQ to 49.8%**.
- The increase in depreciation costs has led to a 4% QoQ decline in PAT to INR13b (12% miss).
- Adjusted PAT (after VIL provision) was flat QoQ to INR14b.
- For 1HFY24, FCF turned negative at -INR9b (vs. +INR2b in 1HFY23) due to higher capex of INR39b in 1HFY24 (vs. INR13b in 1HFY23). The company generated 3.5% FCF yield in FY23.
- Net debt (excluding lease) rose from INR10b in 1HFY23 to reach INR54b.

Highlights from the management commentary

- The demand for passive infrastructure will rise as a result of rising data consumption and the quick adoption of 5G networks.
- VIL continues to pay monthly payments until Oct'23, and Indus is working on another plan to clear-off past dues.
- Order book is healthy and likely to remain even stronger in the next couple of quarters. Hence, it is expected that the capex may remain elevated.
- As the network matures, the company expects the demand for new sites to increase in order to aid the network decongestion. The launch of FWA will also drive data consumption that will require infrastructure.

Bloomberg	INDUSTOW IN
Equity Shares (m)	2695
M.Cap.(INRb)/(USDb)	458.7 / 5.5
52-Week Range (INR)	206 / 135
1, 6, 12 Rel. Per (%)	-6/13/-16
12M Avg Val (INR M)	1210

Financials & Valuations (INR b)

INR b	FY23	FY24E	FY25E
Net Sales	283.8	287.8	301.0
EBITDA	96.7	138.4	145.6
Adj. PAT	24.0	50.9	52.4
EBITDA Margin (%)	34.1	48.1	48.4
Adj. EPS (INR)	8.9	18.9	19.4
EPS Gr. (%)	-62.3	111.8	2.9
BV/Sh. (INR)	78.3	97.2	116.7

Ratios

Net D:E	0.9	0.7	0.4
RoE (%)	11.1	21.5	18.2
RoCE (%)	8.5	14.2	13.8

Valuations

EV/EBITDA (x)	6.7	4.6	3.9
P/E (x)	19.1	9.0	8.7
P/BV (x)	2.2	1.7	1.5
Div. Yield (%)	0.0	0.0	0.0

Shareholding pattern (%)

As On	Sep-23	Jun-23	Sep-22
Promoter	69.0	69.0	69.0
DII	6.7	4.5	2.9
FII	21.4	24.0	26.5
Others	2.9	2.5	1.6

FII Includes depository receipts

Valuation and view

- We believe that Indus has the potential to capitalize on Bharti's aggressive network density and 5G rollout. The new smaller sites with sharing alternatives could also help the business economics, while churning in tenancies is a concern.
- On the other hand, VIL's lack of ability to raise capital is a risk to its survival, which, in turn, hampers the company's visibility. This could also limit the company's ability to deleverage, generate FCF and pay dividends, thus posing a risk to the company's financials.
- We factor in a revenue/EBITDA growth of 3%/23% in FY23-25E on a low base of FY23 due to VIL write-offs, and arrive at our TP of INR170, implying an EV/tenancy ratio of INR1.6m and an EV/EBITDA ratio of 3.9x. **We reiterate our Neutral rating on the stock.**

Quarterly Performance

Y/E March (Consolidated)	FY23				FY24E				FY23	FY24E	FY24E	(INR b)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			2QE	Var (%)
Revenue from operations	69	80	68	68	71	71	73	73	284	288	72	-0.7
YoY Change (%)	1.5	15.9	-2.3	-5.1	2.6	-10.5	7.2	8.4	10.6	1.4	-9.8	
Total Expenditure	46	52	56	33	36	37	38	38	187	149	35	4.7
EBITDA	23	28	12	34	35	34	35	35	97	138	36	-6.0
YoY Change (%)	-35.7	-22.4	-68.6	-15.5	53.8	21.7	197.7	1.4	-26.2	43.2	29.5	
Depreciation	13	13	14	13	14	15	16	16	53	61	14	9.3
Interest	4	4	4	3	4	2	3	3	15	12	4	-31.5
Other Income	1	1	1	1	1	1	1	1	4	3	1	36.2
PBT before EO expense	6	12	-5	19	18	17	17	16	33	68	20	-10.7
Extra-Ord expense	0	0	5	0	0	0	0	0	5	0	0	
PBT	6	12	-10	19	18	17	17	16	28	68	20	-10.7
Tax	2	3	-2	5	5	5	4	4	7	17	5	
Rate (%)	25.8	25.8	25.6	26.1	25.5	25.9	25.2	25.2	26.1	25.4	25.2	
Reported PAT	5	9	-7	14	13	13	12	12	20	51	15	-11.6
YoY Change (%)	-66.3	-44.1	-145.1	-23.5	182.4	48.5	-462.2	-13.3	-51.7	111.8	68.0	

E: MOFSL Estimates

VIL provision terms

- VIL reported difficulties in fulfilling the scheduled payments for the outstanding amount due in Dec'22, which were anticipated to be paid between Jan'23 and Jul'23. This was because the funding strategy did not materialize during the quarter.
- However, VIL has been paying the monthly billing amount from Jan'23 onwards. The cumulative provision booking for VIL over the last six quarters stood at INR56.5b.

Segment margins

- Energy revenue grew 2% QoQ led by an increase in towers (+3% QoQ) to 204k during the quarter.
- Rental revenue was flat QoQ to INR43b.
- Rental EBITDA (adjusting for VIL provisions) declined 1% QoQ to INR36b and margin contracted 90bp QoQ to 83%.
- At operating level, Energy continued with its loss of INR618m (vs. INR850m loss in 1QFY24).

Exhibit 1: Valuation on FY25

	Value (INR b)	Value (INR/sh)	Implied EV/Tenancy (INR m)	Implied EV/EBITDA (x)
EV (DCF based)	574	213	1.6	3.9
Net Debt	116	43		
Shares o/s (b)	2.7			
Fair value	458	170	1.2	3.1
CMP		170		
Upside		0%		

Source: MOFSL, Company

**Highlights from the management commentary****Key takeaways**

- The demand for passive infrastructure will rise as a result of rising data consumption and the quick adoption of 5G networks.
- VIL continues to pay monthly payments until Oct'23, and Indus is working on another plan to clear-off past dues.
- Order book is healthy and likely to remain even stronger in the next couple of quarters. Hence, it is expected that the capex may remain elevated.
- As the network matures, the company expects the demand for new sites to increase in order to aid the network decongestion. The launch of FWA will also drive data consumption that will require infrastructure.

Detailed notes:**VIL payment terms**

- VIL continues to pay monthly payments until Oct'23, and Indus is working on another plan to clear-off past dues.
- Receivables increased during 1HFY24 (<INR13b), but has been cleared off in this quarter.

5G rollout

- Top 2 operators now serving +50m 5G customers each and urban coverage across the country is expected to be completed by Dec'23.
- 5G Base Transceiver Stations (BTS) of 340,000 have been deployed by the operators with more than 7,000 BTS deployed per week where RJio deployed 800,000 5G cells in 300 days.
- As the network matures, the company expects demand for new sites to increase in order to aid the network decongestion.
- Launch of FWA will also drive the data consumption which will need infrastructure.
- Total data consumption across the top three operators grew by 24% YoY in 1QFY24 and the average data consumed per user per month grew by 15% YoY to 22.4 GB

Tower and Co-Location base & additions

- Indus owned and operated 204,212 macro towers with 353,462 macro colocations in 22 circles
- During the quarter,
- net macro co-locations increased by 5,583. Exits during the quarter were 840.

- added 5928 macro towers.
- net lean co-location additions aggregated to 789. Total lean co-locations stood at 8,643.
- Cost of a leaner tower ranges between INR350-500k and a macro tower between INR1.5-2.5m. In terms of return, leaner tower are slightly better at around mid-double digit while macro tower returns depends on the tenancy duration. Starting with a single-digit return and when the tenancy improves, returns would be in double digits.

Reduction in rentals

- The rental per operator declined during the quarter due to delay in revenue recognition for their customer.
- Company is in discussion with the customer and hence will recognize the revenue.

Order book

- Order book is healthy and likely to remain even stronger in the next couple of quarters. Hence, it is expected that the capex may remain elevated.
- The rural expansion for a major customer should continue in the near term.

Exhibit 2: Revisions to our estimates

	FY24E	FY25E
Revenue (INR b)		
Old	288.5	301.4
Actual/New	287.8	301.0
Change (%)	-0.2	-0.1
EBITDA (INR b)		
Old	145.0	155.1
Actual/New	138.4	145.6
Change (%)	-4.5	-6.1
EBITDA margin (%)		
Old	50.3	51.5
Actual/New	48.1	48.4
Change (%)	-218bps	-310bps
PAT (INR b)		
Old	57.9	64.1
Actual/New	50.9	52.4
Change (%)	-12.0	-18.3
EPS (INR)		
Old	21.5	23.8
Actual/New	18.9	19.4
Change (%)	-12.0	-18.3

Source: MOFSL, Company

Exhibit 3: KPI performance

Revenue Drivers	2QFY23	1QFY24	2QFY24	YoY%	QoQ%	2QFY24E	v/s est (%)
Consolidated							
Total Towers (nos)	1,87,926	1,98,284	2,04,212	8.7	3.0	2,00,284	2.0
Total Co-locations (nos)	3,38,128	3,47,879	3,53,462	4.5	1.6	3,50,379	0.9
Average sharing factor	1.80	1.77	1.74	-3.3	-1.7	1.75	-0.7
Sharing revenue per operator per month (INR)	47,093	41,503	40,940	-13.1	-1.4	41,607	-1.6

Source: MOFSL, Company

Exhibit 4: Pro-forma consolidated performance (INR b)

	2QFY23	1QFY24	2QFY24	YoY%	QoQ%	2QFY24E	v/s est (%)
Consolidated Revenue	79.7	70.8	71.3	-10.5	0.8	71.9	-0.7
-Rent	47.8	43.3	43.4	-9.3	0.1	43.9	-1.2
-Energy and other reimbursements	31.8	27.4	27.9	-12.2	1.9	27.9	0.0
Operating Expenses	51.6	36.0	37.1	-28.0	3.2	35.5	4.7
Consolidated EBITDA	28.1	34.8	34.2	21.7	-1.7	36.4	-6.0
EBITDA margin (%)	35.3	49.2	48.0	1268bps	-120bps	50.7	-270bps
Depreciation and amortization	13.1	13.7	15.3	16.8	11.0	14.0	9.3
EBIT	15.0	21.1	19.0	26.0	-10.0	22.5	-15.6
Net finance cost	3.3	3.0	1.5	-54.7	-49.4	2.9	-48.2
Profit Before Taxes & Exceptional items	11.8	18.1	17.5	48.7	-3.5	19.6	-10.7
Exceptional item	0.0	0.0	0.0	NM	NM	0.0	NM
Profit Before Taxes	11.8	18.1	17.5	48.7	-3.5	19.6	-10.7
Tax	3.0	4.6	4.5	49.1	-2.2	4.9	-8.2
Effective Tax Rate (%)	25.8	25.5	25.9	7bps	33bps	25.2	71bps
Profit After Tax	8.7	13.5	12.9	48.5	-3.9	14.6	-11.6

Source: MOFSL, Company

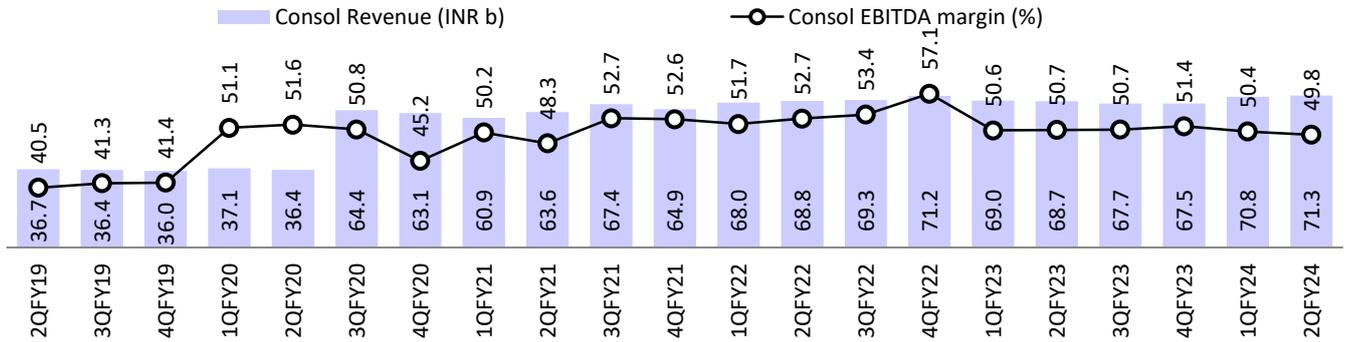
Exhibit 5: Adjusted revenue and EBITDA

INR m	2QFY23	1QFY24	2QFY24	YoY	QoQ
Consolidated revenue	79,666	70,759	71,325	-10%	1%
less: One off provision reversal and exit charges	11,000				
Adj revenue	68,666	70,759	71,325	4%	1%
Operating expenses	51,554	35,964	37,110	-28%	3%
less: VIL Provision	17709	870	1,335		
Adj Operating expenses	33,845	35,094	35,775	6%	2%
Reported EBITDA	28,112	34,795	34,215	22%	-2%
Adj EBITDA	34,821	35,665	35,550	2%	0%
Adj EBITDA margin	50.7%	50.4%	49.8%	-87	-56
a) Rental EBITDA	23,468	35,645	34,833	0	-2%
less: One off reversal	5,500				
add: VIL Provision	17709	870	1,335		
Adj EBITDA	35,677	36,515	36,168	0	-1%
Adj EBITDA margin	84%	84%	83%	-90	-89
b) Energy EBITDA	4,644	-850	-618	-1	-27%
less: One off reversal	5,500				
Adj EBITDA	-856	-850	-618	NA	NA
PBT reported	11,750	18,103	17,467	49%	-4%
Adj PBT	18,459	18,973	18,802	2%	-1%
PAT reported	8,718	13,479	12,947	49%	-4%
Adj PAT	15,427	14,349	14,282	-7%	0%

Source: MOFSL, Company

Story in charts

Exhibit 6: Consolidated adjusted revenue up 1% QoQ and EBITDA margin declined 60bp QoQ



*Revenue & EBITDA in 1QFY23-2QFY24 were adjusted after provisioning for IDEA and one-off. Similar adjustment done in Exhibit 7, 8, and 10

Exhibit 7: Rental revenue flat QoQ

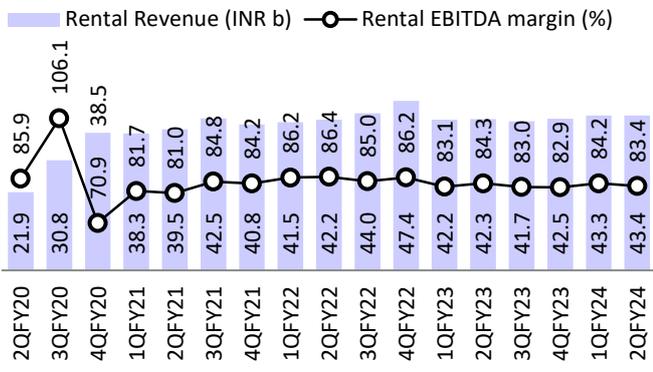


Exhibit 8: Energy revenue up 2% QoQ

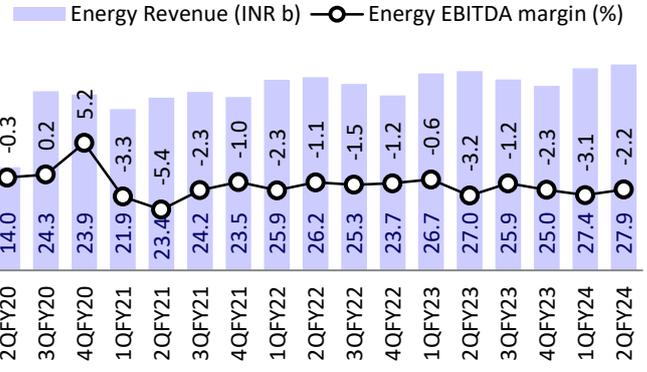


Exhibit 9: Average sharing factor reduced QoQ

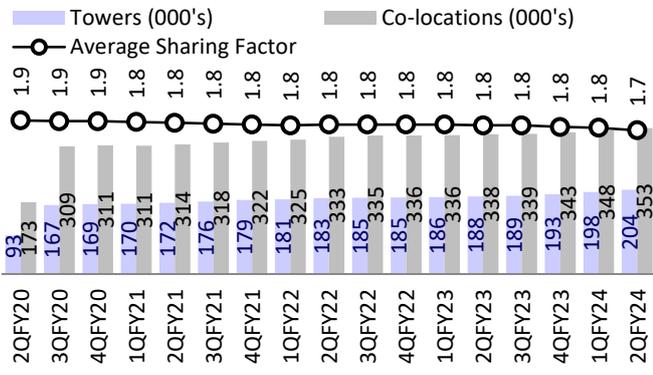


Exhibit 10: Sharing revenue/operator down 1% QoQ

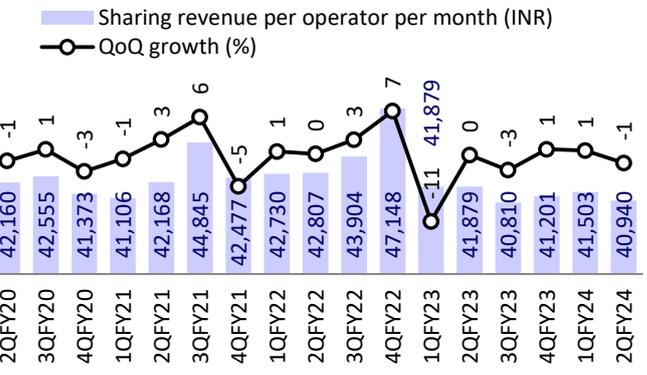


Exhibit 11: Witnessed 6k tower additions

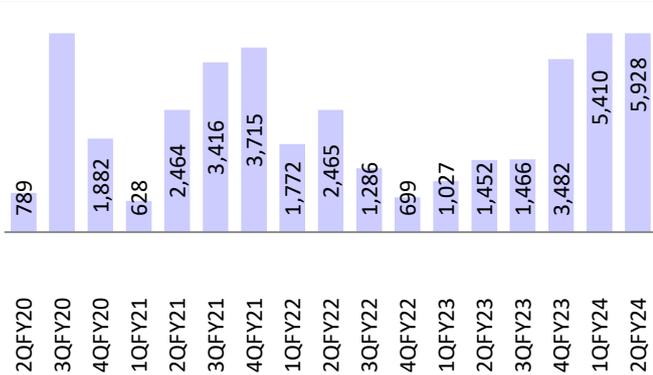
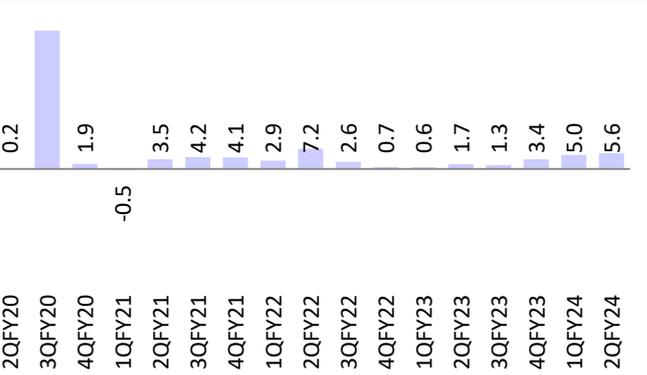


Exhibit 12: Net tenancy adds lower than tower adds



Source: MOFSL, Company

Source: MOFSL, Company

Financials and valuations

Consolidated - Income Statement						(INR m)	
Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Total Income from Operations	1,45,823	2,55,624	2,56,729	2,77,172	2,83,818	2,87,806	3,01,008
Change (%)	0.6	75.3	0.4	8.0	2.4	1.4	4.6
Power and fuel	56,384	96,737	95,831	1,02,658	1,05,908	1,15,213	1,17,832
Rent	12,551	0	0	0	0	0	0
Employee benefits expenses	4,914	7,028	7,681	7,722	7,741	8,044	9,343
Other Expenses	11,962	25,991	22,248	17,785	73,483	26,126	28,229
Total Expenditure	85,811	1,29,756	1,25,760	1,28,165	1,87,132	1,49,384	1,55,403
% of Sales	58.8	50.8	49.0	46.2	65.9	51.9	51.6
EBITDA	60,012	1,25,868	1,30,969	1,49,007	96,686	1,38,422	1,45,605
Margin (%)	41.2	49.2	51.0	53.8	34.1	48.1	48.4
Depreciation	22,239	52,710	53,394	53,252	53,239	60,975	66,997
EBIT	37,773	73,158	77,575	95,755	43,447	77,447	78,608
Int. and Finance Charges	-1,571	11,953	14,021	14,973	14,539	11,983	13,548
Other Income	2,034	2,777	2,983	3,525	3,613	2,854	4,954
PBT bef. EO Exp.	41,378	63,982	66,537	84,307	32,521	68,318	70,014
EO Items	-357	0	0	0	-4,928	0	0
PBT after EO Exp.	41,021	63,982	66,537	84,307	27,593	68,318	70,014
Total Tax	16,083	13,712	16,786	20,576	7,193	17,387	17,623
Tax Rate (%)	39.2	21.4	25.2	24.4	26.1	25.4	25.2
Reported PAT	24,938	50,270	49,751	63,731	20,400	50,931	52,392
Adjusted PAT	25,155	50,270	49,751	63,731	24,043	50,931	52,392
Change (%)	-0.3	99.8	-1.0	28.1	-62.3	111.8	2.9
Margin (%)	17.3	19.7	19.4	23.0	8.5	17.7	17.4

Consolidated - Balance Sheet						(INR m)	
Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Equity Share Capital	18,496	26,949	26,949	26,949	26,949	26,949	26,949
Total Reserves	1,26,749	1,50,132	1,31,821	1,94,556	1,84,146	2,35,077	2,87,469
Net Worth	1,45,245	1,77,081	1,58,770	2,21,505	2,11,095	2,62,026	3,14,418
Total Loans	29,242	76,372	69,703	54,868	47,126	32,126	10,469
Lease liabilities		1,29,275	1,34,119	1,42,392	1,44,723	1,44,723	1,44,723
Deferred Tax Liabilities	6,153	795	703	918	-19,469	-19,469	-19,469
Capital Employed	1,80,640	3,83,523	3,63,295	4,19,683	3,83,475	4,19,406	4,50,141
Net Fixed Assets	1,25,871	2,19,574	2,15,892	2,09,051	2,11,954	2,26,365	2,17,810
Capital WIP	2,485	2,928	2,736	1,787	3,546	3,546	3,546
Right of use assets		99,603	1,02,110	1,09,210	1,11,882	1,11,882	1,11,882
Total Investments	47,973	39,382	22,714	16,521	2,756	2,556	2,556
Curr. Assets, Loans&Adv.	46,167	1,01,604	1,05,985	1,43,107	1,16,117	1,38,230	1,79,295
Account Receivables	14,883	34,529	38,285	70,586	48,687	63,081	65,974
Cash and Bank Balance	1,371	2,825	145	9,802	224	181	36,373
Loans and Advances	29,913	64,250	67,555	62,719	67,206	74,968	76,948
Curr. Liability & Prov.	41,856	79,568	86,142	59,993	62,780	63,172	64,948
Account Payables	20,991	33,454	32,588	21,293	21,219	21,517	22,504
Other Current Liabilities	13,547	31,300	37,407	20,967	22,147	22,378	23,142
Provisions	7,318	14,814	16,147	17,733	19,414	19,277	19,302
Net Current Assets	4,311	22,036	19,843	83,114	53,337	75,058	1,14,347
Appl. of Funds	1,80,640	3,83,523	3,63,295	4,19,683	3,83,475	4,19,406	4,50,141

E: MOFSL Estimates

Financials and valuations

Ratios

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Basic (INR)							
EPS	13.6	18.7	18.5	23.6	8.9	18.9	19.4
Cash EPS	25.6	38.2	38.3	43.4	28.7	41.5	44.3
BV/Share	78.5	65.7	58.9	82.2	78.3	97.2	116.7
DPS	15.0	7.2	20.1	11.0	0.0	0.0	0.0
Payout (%)	129.1	44.8	126.4	54.0	0.0	0.0	0.0
Valuation (x)							
P/E	12.5	9.1	9.2	7.2	19.1	9.0	8.7
Cash P/E	6.6	4.4	4.4	3.9	5.9	4.1	3.8
P/BV	2.2	2.6	2.9	2.1	2.2	1.7	1.5
EV/Sales	2.0	2.4	2.5	2.3	2.3	2.2	1.9
EV/EBITDA	4.9	4.9	4.9	4.2	6.7	4.6	3.9
Dividend Yield (%)	8.8	4.2	11.8	6.5	0.0	0.0	0.0
Return Ratios (%)							
RoE	16.0	31.2	29.6	33.5	11.1	21.5	18.2
RoCE	13.2	21.4	16.2	19.2	8.5	14.2	13.8
RoIC	18.1	24.6	17.2	19.9	8.4	14.6	14.3
Working Capital Ratios							
Fixed Asset Turnover (x)	1.2	1.2	1.2	1.3	1.3	1.3	1.4
Asset Turnover (x)	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Debtor (Days)	37	49	54	93	63	80	80
Creditor (Days)	53	48	46	28	27	27	27
Leverage Ratio (x)							
Current Ratio	1.1	1.3	1.2	2.4	1.8	2.2	2.8
Interest Cover Ratio	-24.0	6.1	5.5	6.4	3.0	6.5	5.8
Net Debt/Equity	-0.1	0.2	0.3	0.1	0.2	0.1	-0.1

Consolidated - Cash Flow Statement

(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
OP/(Loss) before Tax	41,021	63,982	66,537	84,307	27,593	68,318	70,014
Depreciation	22,239	52,710	53,394	53,252	53,239	60,975	66,997
Interest & Finance Charges	-1,571	0	14,021	16,033	16,704	11,983	13,548
Direct Taxes Paid	-16,083	-19,768	-16,283	-19,129	-22,192	-17,387	-17,623
(Inc)/Dec in WC	-8,186	-21,064	-3,175	-33,897	-44,048	-21,763	-3,098
CF from Operations	37,420	75,860	1,14,494	1,00,566	31,296	1,02,126	1,29,839
Others	-19,158	9,092	-6,930	-9,355	47,752	-2,854	-4,954
CF from Operating incl EO	18,262	84,952	1,07,564	91,211	79,048	99,272	1,24,885
(Inc)/Dec in FA	-15,789	-28,807	-31,507	-28,697	-31,681	-75,386	-58,442
Free Cash Flow	2,473	56,145	76,057	62,514	47,367	23,886	66,442
(Pur)/Sale of Investments	19,877	-3,548	18,154	6,391	13,824	200	0
Others	2,034	1,273	673	569	557	2,854	4,954
CF from Investments	6,122	-31,082	-12,680	-21,737	-17,300	-72,332	-53,488
Issue of Shares	0	-24,822	37	-154	-75	0	0
Inc/(Dec) in Debt	6,840	2,338	-24,690	-55,244	-37,947	-15,000	-21,657
Interest Paid	1,571	-4,696	-3,310	-4,418	-3,666	-11,983	-13,548
Dividend Paid	-32,183	-30,985	-65,654	0	0	0	0
Others	0	0	0	0	-29,639	0	0
CF from Fin. Activity	-23,772	-58,165	-93,617	-59,816	-71,327	-26,983	-35,205
Inc/Dec of Cash	612	-4,295	1,267	9,658	-9,579	-43	36,191
Opening Balance	-2,498	3,172	-1,123	144	9,803	224	181
Closing Balance	-1,886	-1,123	144	9,802	224	181	36,373
Other bank balance	3,257	3,948	1	0	0	0	0
Closing balance (incl. other bank bal)	1,371	2,825	145	9,802	224	181	36,373

Investment in securities market are subject to market risks. Read all the related documents carefully before investing

NOTES

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 alternations 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.

This report is meant for the clients of Motilal Oswal only.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 - 71934200 / 71934263;

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.:022-40548085.

Grievance Redressal Cell:

Contact Person	Contact No.	Email ID
Ms. Hemangi Date	022 40548000 / 022 67490600	query@motilaloswal.com
Ms. Kumud Upadhyay	022 40548082	servicehead@motilaloswal.com
Mr. Ajay Menon	022 40548083	am@motilaloswal.com

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; 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.