

InterGlobe Aviation

Estimate change	↔
TP change	↔
Rating change	↔

CMP: INR2,265 TP: INR2,135 (-6%) Neutral
Positive commentary in an increasingly competitive landscape

Bloomberg	INDIGO IN
Equity Shares (m)	385
M.Cap.(INRb)/(USD\$)	873.2 / 10.6
52-Week Range (INR)	2333 / 1513
1, 6, 12 Rel. Per (%)	13/28/22
12M Avg Val (INR M)	1687
Free float (%)	32.1

Financials & Valuations (INR b)

Y/E March	FY23	FY24E	FY25E
Sales	544.5	576.3	650.7
EBITDAR	68.1	124.4	143.9
NP	-3.2	39.2	49.6
EPS (INR)	-8.2	101.6	128.7
BV/Sh (INR)	-164.0	-62.0	67.1

Ratios

Net D:E	-3.6	-10.8	9.4
RoE (%)	5.1	-90.2	5124.9
RoCE (%)	11.0	28.2	29.1
Payout (%)	0.0	0.0	0.0

Valuations

P/E (x)	-275.7	22.3	17.6
P/BV (x)	-13.8	-36.5	33.8
Adj.EV/EBITDAR(x)	16.1	9.3	7.9
Div. Yield (%)	0.0	0.0	0.0
FCF Yield (%)	1.5	-1.7	4.2

Shareholding pattern (%)

As On	Mar-23	Dec-22	Mar-22
Promoter	67.9	71.9	74.8
DII	10.5	8.3	5.5
FII	19.4	17.8	17.7
Others	2.2	2.0	2.1

FII Includes depository receipts

- INDIGO reported a PAT of INR9.2b, lower than our expectation, on account of higher-than-expected fuel and employee costs. Revenue passenger kilometers (RPK) came in at 25.6b. Passenger load factor (PLF) was higher at 84.2%, with available seat kilometers (ASK) of 30.4b (est. 29.6b) and the yield at INR4.9 (est. INR5.4) in 4QFY23.
- The yield was lower QoQ due to seasonality, while capacity growth stood at 19% in FY23 as the company targets growth in the mid-teens range in FY24. The management does not expect lease costs to increase substantially, but there could be a marginal increase due to rising interest costs.
- That said, according to **our airfare tracker**, the 30-day domestic forward prices are up by 12% QoQ in 1QFY24 till date and the 15-day prices are up by 20% QoQ in 1QFY24 till date. The total number of domestic passengers has also crossed pre-Covid levels in Jan-Apr'23, which suggests strong travel trends in the domestic aviation market.
- In order to harness the expected demand growth, the company plans to increase its fleet size to 350 in FY24 from 306 in FY23, while also adding 10-15 new destinations (both domestic and international). The management also expects the number of passengers to increase to 100m in FY24 from 85m in FY23.
- We increase our revenue estimates by 12%/17% for FY24/FY25 because of the strong pricing trend being seen in ticketing revenue. We keep other estimates largely unchanged. The stock continues to trade above its pre-Covid levels. We reiterate our Neutral rating on the stock with a TP of INR2,135 at 7.5x FY25E EV/EBITDAR.

Miss due to higher-than-expected fuel costs and employee expenses

- The yield stood at INR4.9 v/s our estimate of INR4.8 (INR5.4 in 3QFY23 and INR4.4 in 4QFY22). RPK came in at 25.6b (+64% YoY, +4% QoQ), with PLF at 84.2%. ASK was at 30.4b (+49% YoY, +6% QoQ).
- Thus, revenue stood at INR141b (+7% est., +77% YoY, -5% QoQ). EBITDAR came in at INR28.9b (est. of INR42.9b, -9% QoQ). PAT stood at INR9.2b v/s our estimate of INR21.2b (INR14.2b in 3QFY23).
- Free cash of INR121.9b in 4QFY23 v/s INR77.6b in 4QFY22; capitalized lease liability of INR415.4b, with total debt of INR448.5b in 4QFY23.
- **For FY23**, Revenue grew 110% YoY at INR544b and EBITDAR jumped 709% at INR68b with EBITDA at INR64b (up 1,123% YoY). However, INDIGO reported a net loss of INR3.2b (v/s net loss of INR62b in FY22).

Valuation and View

- INDIGO is working to increase its international presence through strategic partnerships (codeshare agreement with Turkish Airlines) and loyalty programs. The company's loyalty program subscriber base has increased 4.5 times from FY21 levels.

Swarnendu Bhushan – Research Analyst (Swarnendu.Bhushan@MotilalOswal.com)

Research Analyst: Aman Chowdhary (Aman.Chowdhary@MotilalOswal.com) | **Rohit Thorat** (Rohit.Thorat@MotilalOswal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report.

Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

- The management has been taking several pre-emptive measures to increase its global brand awareness, as it expects to capture a bigger share of growth from the international market in the coming years (due to lower base right now).
- However, competition in the sector is expected to intensify with the resurgence of Air India and the entry of Akasa Air. We value the stock at 7.5x FY25E EV/EBITDAR to arrive at a TP of INR2,135. We reiterate our Neutral rating on the stock.

Standalone Quarterly performance

Y/E March	FY22				FY23				FY22	FY23	FY23	(INR b)
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			4QE	Var. (%)
Net Sales	30.1	56.1	92.9	80.2	128.6	125.0	149.3	141.6	259.3	544.5	151.9	-7%
YoY Change (%)	292.2	104.6	89.3	28.9	327.5	122.8	60.7	76.5	77.1	110.0	89.4	
EBITDAR	-14.2	2.5	19.1	1.0	6.6	0.7	31.8	28.9	8.4	68.1	42.9	-33%
Margin (%)	-47.1	4.5	20.5	1.3	5.2	0.6	21.3	20.4	3.2	12.5	28.2	
Net Rentals	0.5	0.6	1.3	0.7	0.7	0.5	0.7	1.4	3.1	3.3	0.4	220%
EBITDA	-14.7	1.9	17.8	0.4	6.0	0.3	31.1	27.5	5.3	64.8	42.4	-35%
Margin (%)	-48.9	3.3	19.1	0.4	4.6	0.2	20.9	19.4	2.0	11.9	27.9	
Depreciation	13.2	12.5	12.3	12.7	11.7	12.4	13.4	13.5	50.7	51.0	13.8	
Interest	5.6	5.7	6.0	6.3	6.6	7.3	8.3	9.2	23.6	31.3	8.8	
Other Income	1.6	1.9	1.9	1.9	1.6	3.5	4.8	4.4	7.2	14.3	5.0	
PBT	-31.8	-14.4	1.3	-16.8	-10.7	-15.9	14.2	9.2	-61.7	-3.2	25.0	-63%
Tax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	
Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.8	
Reported PAT	-31.8	-14.4	1.3	-16.8	-10.7	-15.9	14.2	9.2	-61.7	-3.2	21.8	-58%
EPS	-82.6	-37.4	3.3	-43.6	-27.7	-41.2	36.8	23.8	-160.3	-8.2	56.6	-58%
YoY Change (%)	Loss	Loss	LP	Loss	Loss	Loss	1,004.1	LP	Loss	LP	LP	
Operational Data												
ASK (b)	11.2	15.8	23.0	20.4	27.5	27.7	28.8	30.4	70.4	114.4	29.6	3%
YoY Chg (%)	433%	78%	51%	6%	146%	75%	25%	49%	55%	63%	45%	0%
Load factor (%)	58.9	70.9	79.6	76.5	79.6	79.1	85.1	84.2	73.4	82.1	80.1	409%
RPK (b)	6.6	11.2	18.3	15.6	21.9	21.9	24.5	25.6	51.7	93.9	23.7	8%
Yield (INR/RPK)	3.5	4.2	4.4	4.4	5.2	5.1	5.4	4.9	4.1	5.1	4.8	2%
RASK	2.68	3.55	4.04	3.93	4.67	4.51	5.19	4.66	3.68	4.76	5.13	-9%
CASK	5.52	4.46	3.99	4.76	5.06	5.08	4.69	4.36	4.56	4.79	4.29	2%
RASK less CASK	-2.84	-0.91	0.06	-0.82	-0.39	-0.57	0.49	0.30	-0.88	-0.03	0.84	-64%
CASK ex-Fuel	4.43	3.19	2.55	3.15	2.86	2.80	2.66	2.49	3.17	2.70	2.53	-2%
Fuel Cost	1.09	1.27	1.44	1.60	2.20	2.28	2.04	1.87	1.39	2.09	1.76	7%

Key matrix

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Capacity								
ASK (million)	63,510	81,016	96,300	45,471	70,400	1,14,400	1,37,579	37,690
YoY (%)	16%	28%	19%	-53%	55%	63%	20%	2%
Load Factor	87%	86%	86%	69%	73%	82%	88%	88%
RPK (million)	55,524	69,787	82,600	31,595	51,700	93,900	1,21,070	33,168
YoY (%)	20%	26%	18%	-62%	64%	82%	29%	35%
Revenue Calculation								
Ticket Revenue (INR m)	1,99,433	2,51,359	3,14,682	1,18,735	2,19,239	4,81,759	4,84,279	1,32,670
Yield (INR/RPK)	3.59	3.60	3.81	3.76	4.24	5.13	4.00	4.00
Ancillary revenues (incl. others)	30,776	33,609	42,878	27,671	40,070	62,706	92,013	25,207
Total Revenue (INR m)	2,30,209	2,84,968	3,57,560	1,46,406	2,59,309	5,44,465	5,76,292	1,57,878
Fuel Cost								
Exchange rate (INR/USD)	64	70	71	74	75	81	84	83
ATF Prices (INR/ltr)	54	67	63	43	74	118	90	90
YoY (%)	7%	24%	-6%	-32%	71%	60%	-24%	0%
Aircraft fuel expenses (INR m)	78,853	1,20,820	1,26,316	38,868	98,117	2,39,320	2,28,730	62,662
Spreads								
RASK	3.6	3.5	3.7	3.2	3.7	4.8	4.2	4.2
CASK	3.1	3.5	3.7	4.5	4.6	4.8	3.8	15.5
RASK-CASK	0.5	0.0	0.0	-1.3	-0.9	0.0	0.4	-11.3
CASK-ex fuel	1.9	2.0	2.4	3.6	3.2	2.7	2.1	8.7
RASK-CASK (ex-fuel)	1.7	1.5	1.3	-0.4	0.5	2.1	2.0	-4.5



Conference call highlights

- 1H FY23 was hit by high fuel prices and a forex loss.
- INDIGO aims to double the size and scale of its operation over the next decade.
- A second wide-body aircraft commenced operations from Mumbai to Istanbul yesterday.
- Expanded to 78 domestic locations and 28 international locations.
- First Indian airline to start an international flight from Bhubaneswar
 - Will start flights from Delhi to Singapore and Bhubaneswar to Singapore
- Pending order book of 500 planes
- Fleet age is 3.5 years, which is one of the youngest and most fuel-efficient.
- Some aircraft were grounded during the quarter due to a shortage of spare engines in the market.
 - Grounded airlines in high 30s range
- Capacity growth of 19% in FY23
 - Targets to grow in mid-teens range in FY24
- Targets to serve 100m customers in FY24
 - Hiring 5,000 employees
- International operations have lower cost/unit compared to domestic operations
- Yield was lower QoQ due to seasonality
- It does not expect a substantial increase in lease costs, but there may be a marginal increase due to increasing interest rates.
- ~30 planes were added in FY23
 - Looking for net additions of 40-50 planes in FY24
- New planes will come with LEAP engines instead of Pratt & Whitney

4QFY23 in charts

Exhibit 1: Total ASKs stood at 30.4b...

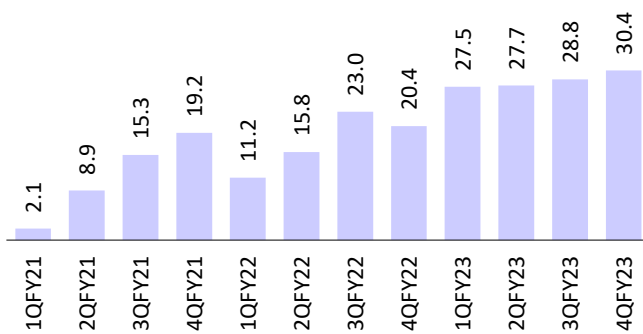


Exhibit 2: ...up 49% YoY (up 6% QoQ) in 4QFY23

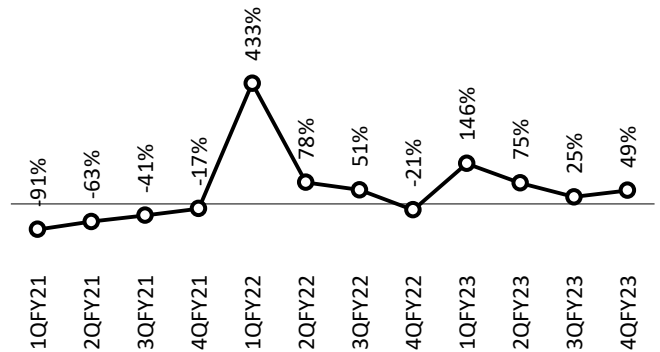


Exhibit 3: Total RPKs stood at 25.6b...

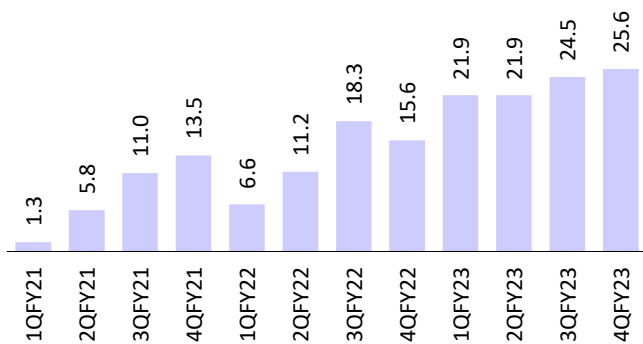


Exhibit 4: ...up 64% YoY in 4QFY23

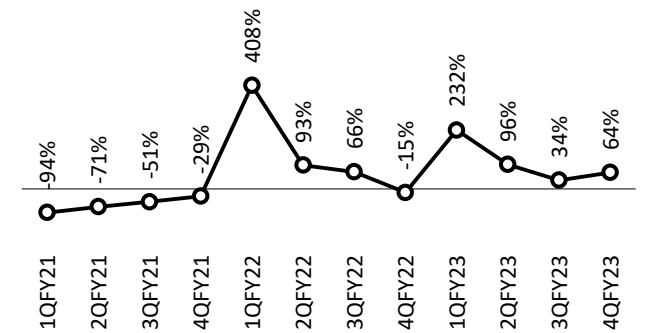


Exhibit 5: RASK stood at INR4.7 (+18% YoY, -10% QoQ)

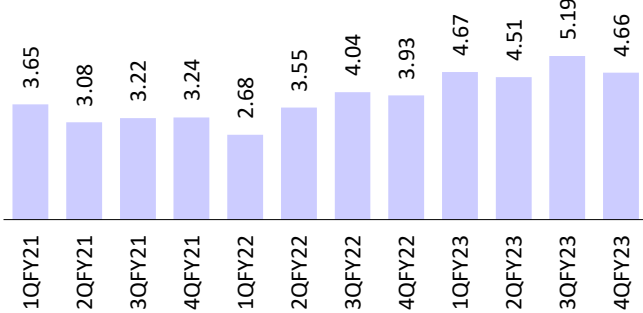


Exhibit 6: CASK stood at INR4.4 (-8% YoY, -7% QoQ)

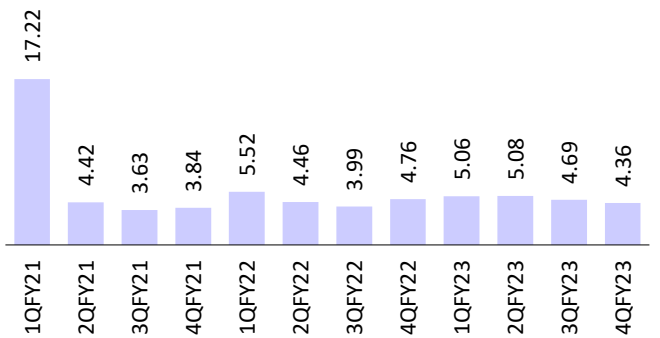


Exhibit 7: Load factor increased to 84.2% (85.1% in 3QFY23)

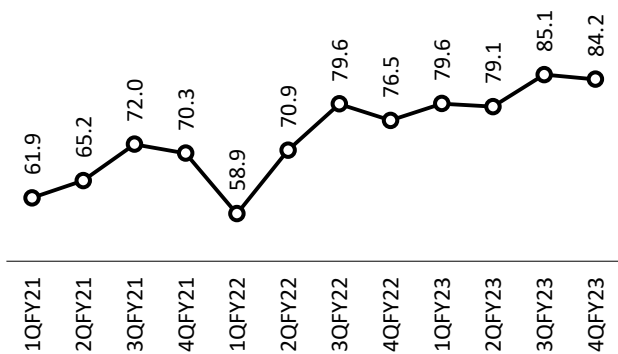
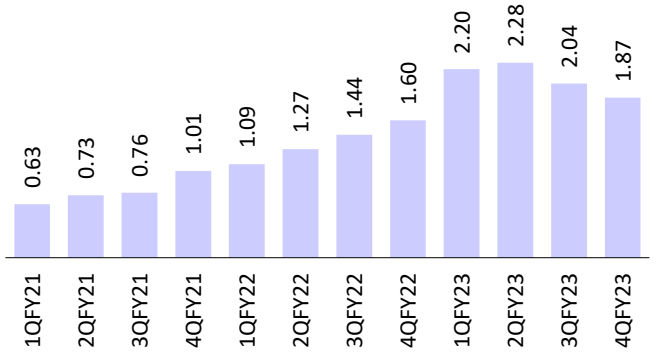


Exhibit 8: Fuel cost stood at INR1.9 in 4QFY23



Source: Company, MOFSL

Source: Company, MOFSL

Financials and Valuation

Standalone - Income Statement

(INR m)

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Total Income from Operations	2,30,209	2,84,968	3,57,560	1,46,406	2,59,309	5,44,465	5,76,292	6,50,710
YoY Chg (%)	23.9	23.8	25.5	-59.1	77.1	110.0	5.8	12.9
EBITDAR	65,667	47,940	45,348	2,550	8,420	68,107	1,24,381	1,43,924
Margin (%)	28.5	16.8	12.7	1.7	3.2	12.5	21.6	22.1
Aircraft & Engine Lease Rentals	36,102	49,994	4,967	2,805	3,117	3,258	3,439	3,884
EBITDA	29,565	-2,055	40,382	-255	5,303	64,848	1,20,941	1,40,040
Margin (%)	12.8	-0.7	11.3	-0.2	2.0	11.9	21.0	21.5
Depreciation	4,369	7,596	39,736	46,987	50,678	51,012	52,356	53,195
EBIT	25,196	-9,651	645	-47,241	-45,376	13,836	68,586	86,845
Int. and Finance Charges	3,398	5,090	18,759	21,420	23,580	31,317	32,801	34,577
Other Income	9,469	13,248	15,362	10,363	7,245	14,314	16,575	14,066
PBT	31,267	-1,492	-2,751	-58,298	-61,710	-3,167	52,360	66,333
PBT after EO Exp.	31,267	-1,492	-2,751	-58,298	-61,710	-3,167	52,360	66,333
Tax	8,843	-3,052	-269	0	0	0	13,179	16,696
Tax Rate (%)	28.3	204.5	9.8	0.0	0.0	0.0	25.2	25.2
Reported PAT	22,424	1,560	-2,482	-58,298	-61,710	-3,167	39,181	49,637
Change (%)	35.1	-93.0	PL	Loss	Loss	Loss	LP	26.7
Margin (%)	9.7	0.5	-0.7	-39.8	-23.8	-0.6	6.8	7.6

Standalone - Balance Sheet

(INR m)

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Equity Share Capital	3,844	3,844	3,848	3,849	3,853	3,855	3,855	3,855
Total Reserves	66,930	65,604	54,776	-3,140	-64,205	-66,887	-27,706	21,932
Net Worth	70,774	69,448	58,624	709	-60,353	-63,031	-23,850	25,787
Total Loans	22,414	21,937	1,59,257	2,27,862	2,89,554	3,44,769	3,45,769	3,45,769
Capital Employed	96,883	92,029	2,17,881	2,28,571	2,29,201	2,81,738	3,21,919	3,71,557
Gross Block	57,906	77,078	2,27,976	2,95,336	3,70,680	4,85,372	5,88,594	7,00,992
Less: Accum. Deprn.	12,862	20,458	60,194	1,07,181	1,57,860	2,08,872	2,61,228	3,14,423
Net Fixed Assets	45,043	56,620	1,67,782	1,88,155	2,12,821	2,76,500	3,27,366	3,86,568
Capital WIP	294	220	1,293	664	1,193	0	11,469	13,763
Total Investments	63,440	65,167	94,994	72,902	80,326	1,15,143	1,15,143	1,15,143
Curr. Assets, Loans&Adv.	1,02,516	1,28,110	1,56,416	1,68,023	1,64,261	1,98,784	1,72,981	2,00,278
Inventory	1,832	2,114	2,861	3,164	4,081	5,911	5,607	6,288
Account Receivables	2,263	3,625	2,596	2,192	3,329	5,199	5,503	6,214
Cash and Bank Balance	65,806	86,064	1,08,294	1,12,271	1,01,165	1,18,106	88,236	1,04,633
Loans and Advances	32,614	36,307	42,665	50,396	55,686	69,568	73,635	83,144
Curr. Liability & Prov.	1,14,410	1,58,089	2,02,603	2,01,172	2,29,400	3,08,689	3,05,041	3,44,197
Account Payables	10,002	14,552	15,655	15,561	31,519	32,130	30,481	34,182
Other Current Liabilities	1,01,407	1,39,164	1,67,465	1,64,171	1,84,635	2,60,651	2,74,560	3,10,015
Provisions	3,001	4,372	19,484	21,440	13,246	15,908	0	0
Net Current Assets	-11,894	-29,979	-46,187	-33,149	-65,139	-1,09,905	-1,32,059	-1,43,918
Appl. of Funds	96,884	92,029	2,17,881	2,28,571	2,29,201	2,81,738	3,21,919	3,71,557

Financials and Valuation

Ratios

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
Basic (INR)								
EPS	58.2	4.0	-6.4	-151.2	-160.1	-8.2	101.6	128.7
Cash EPS	69.7	23.8	96.9	-29.4	-28.7	124.5	238.1	267.5
BV/Share	184.1	180.7	152.5	1.8	-157.0	-164.0	-62.0	67.1
DPS	6.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Payout incl. tax (%)	12.4	148.3	0.0	0.0	0.0	0.0	0.0	0.0
Valuation (x)								
P/E	38.9	559.8	-351.9	-15.0	-14.2	-275.7	22.3	17.6
Cash P/E	32.5	95.1	23.4	-77.0	-78.9	18.2	9.5	8.5
P/BV	12.3	12.5	14.9	1,227.9	-14.4	-13.8	-36.5	33.8
EV/Sales	3.6	2.8	2.6	6.7	4.1	2.0	2.0	1.7
EV/EBITDAR	12.6	16.8	20.3	387.2	125.9	16.1	9.3	7.9
EV/EBITDA	28.0	-393.1	22.9	-3,878.9	199.9	16.9	9.3	7.9
Dividend Yield (%)	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
FCF Yield (%)	3.9	2.9	-7.8	-8.2	-5.7	1.5	-1.7	4.2
FCF per share	89.4	65.0	-177.5	-185.0	-129.1	33.9	-38.1	96.0
Return Ratios (%)								
RoE	41.3	2.2	-3.9	-196.5	206.9	5.1	-90.2	5,124.9
RoCE	31.0	-4.0	9.3	-16.5	-16.7	11.0	28.2	29.1
RoIC	-68.2	-21.9	-2.5	-168.6	-101.7	29.1	66.0	53.0
Working Capital Ratios								
Fixed Asset Turnover (x)	4.0	3.7	1.6	0.5	0.7	1.1	1.0	0.9
Asset Turnover (x)	2.4	3.1	1.6	0.6	1.1	1.9	1.8	1.8
Inventory (Days)	4	3	3	8	6	5	4	4
Debtor (Days)	4	5	3	5	5	3	9	9
Creditor (Days)	22	22	18	39	46	25	19	19
Working Cap. Turnover (Days)	-123	-149	-158	-363	-234	-153	-140	-139

Standalone - Cash Flow Statement

(INR m)

Y/E March	FY18	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E
OP/(Loss) before Tax	31,267	-1,492	-2,751	-58,298	-61,710	-3,167	52,360	66,333
Depreciation	4,369	7,596	39,736	46,987	50,678	51,012	52,356	53,195
Interest & Finance Charges	-6,070	-8,159	3,396	11,057	16,335	17,003	16,225	20,511
Direct Taxes Paid	-7,905	3,007	-8	0	0	0	-13,179	-16,696
(Inc)/Dec in WC	20,090	17,309	92,472	-3,752	21,360	62,183	-6,461	28,256
CF from Operations	41,750	18,262	1,32,845	-4,007	26,663	1,27,031	1,01,301	1,51,600
CF from Operating incl EO	41,750	18,262	1,32,845	-4,007	26,663	1,27,031	1,01,301	1,51,600
(Inc)/Dec in FA	-7,356	6,767	-2,01,171	-67,206	-76,350	-1,13,974	-1,15,946	-1,14,691
Free Cash Flow	34,395	25,029	-68,325	-71,213	-49,687	13,056	-14,644	36,908
(Pur)/Sale of Investments	-26,306	-1,727	-29,827	22,092	-7,424	-34,817	0	0
Others	9,469	13,248	15,362	10,363	7,245	14,314	16,575	14,066
CF from Investments	-24,193	18,289	-2,15,635	-34,751	-76,529	-1,34,477	-99,370	-1,00,626
Inc/(Dec) in Debt	-1,543	-477	1,37,320	68,605	61,692	55,216	1,000	0
Interest Paid	-3,398	-5,090	-18,759	-21,420	-23,580	-31,317	-32,801	-34,577
Dividend Paid	-2,775	-2,313	0	0	0	0	0	0
CF from Fin. Activity	1,923	-16,292	1,05,019	42,735	38,760	24,387	-31,801	-34,577
Inc/Dec of Cash	19,480	20,258	22,230	3,977	-11,105	16,941	-29,870	16,397
Opening Balance	46,326	65,806	86,064	1,08,294	1,12,271	1,01,165	1,18,106	88,236
Closing Balance	65,806	86,064	1,08,294	1,12,271	1,01,165	1,18,106	88,236	1,04,633

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.

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 dp grievances@motilaloswal.com.