

Alembic Pharma

Neutral

Estimate change TP change **Rating change**

Motilal Oswal values your support in the Asiamoney Brokers Poll 2020 for India Research, Sales and Trading team. We request your ballot.

Bloomberg	ALPM IN
Equity Shares (m)	189
M.Cap.(INRb)/(USDb)	188.4 / 2.5
52-Week Range (INR)	1044 / 436
1, 6, 12 Rel. Per (%)	-2/77/96
12M Avg Val (INR M)	192

Financials & Valuations (INR b)

Y/E MARCH	2020	2021E	2022E
Sales	46.1	52.6	58.4
EBITDA	12.2	14.2	15.1
Adj. PAT	8.6	9.8	10.0
EBIT Margin (%)	23.1	23.7	22.2
Cons. Adj. EPS (INR)	45.9	51.7	53.1
EPS Gr. (%)	47.7	12.8	2.7
BV/Sh. (INR)	170.8	210.5	251.6
Ratios			
Net D:E	0.5	0.4	0.3
RoE (%)	30.1	27.8	23.8
RoCE (%)	19.7	17.9	16.4
Payout (%)	27.4	23.3	22.6
Valuations			
P/E (x)	21.8	19.3	18.8
EV/EBITDA (x)	12.1	10.4	9.7
Div. Yield (%)	1.0	1.0	1.0
FCF Yield (%)	-1.0	1.9	3.1
EV/Sales (x)	3.2	2.8	2.5

Shareholding pattern (%)

As On	Jun-20	Mar-20	Jun-19
Promoter	73.0	73.0	73.0
DII	7.1	6.9	5.4
FII	7.3	8.3	9.6
Others	12.6	11.9	12.1

FII Includes depository receipts

TP: INR1,100 (+10%) **Export Formulations/API lead superior performance**

COVID-19-led drag on Domestic Formulations (DF) growth

CMP: INR999

- Alembic Pharma (ALPM) delivered record revenue/EBITDA/PAT for 1QFY21 on the back of strong performance in Export Formulations/API and partly due to lower R&D spend for the quarter. ALPM remains on track in terms of completing capex, with ~INR15b spent over FY16-20 and a similar amount expensed for R&D. We expect the meaningful benefit to be reflected from 2HFY22.
- We raise our EPS estimate by 20%/19.4% for FY21/FY22 to factor new launches in US Generics and a favorable outlook for Non-US Formulations/API sales. Accordingly, we revise our price target to INR1,100 (from INR975 earlier), valuing the stock on a 20x 12M forward earnings basis. Maintain Neutral stance on limited upside from current levels.

US Formulations momentum continues; India business declines

- ALPM's 1QFY21 revenues were up 41% YoY to INR13.4b (est.: INR11.3b), led by International Formulations (+70% YoY), supported by an increase in the US segment (44% of sales; +73% YoY) to INR6b (USD80m) and Non-US segment (13% of sales; +62% YoY) to INR1.8b. API revenue (20% of sales) grew by a strong 54% YoY to INR2.6b. However, this was offset to some extent by 5.6% YoY decline in the India business (22% of sales).
- The gross margin (GM) declined by 360bps YoY to 74.8% on increased share of Export Formulations and API sales.
- The EBITDA margin at 30.4% (our est.: 25.5%) expanded 670bp YoY despite lower GM on account of improved operating leverage, with reduced other expenses / R&D spend (-390bp/-430bp as a percentage of sales). Employee cost was also lower for the quarter (-210bp as a percentage of sales). Reduced travel cost and promotional expense resulted in lower opex for the quarter. EBITDA grew 81% YoY.
- PAT doubled to INR4.1b YoY (est.: INR1.9b) for the quarter.

Highlights from management commentary

- APLM guided for the US base business to have a quarterly run-rate of USD70m. ALPM plans to launch 15-20 ANDAs (three launched in 1QFY21) in the US this year, providing scope for revenues in addition to the base business.
- ALPM guided for capex of INR7b for FY21, comprising pre-op expenses of INR3.5b across new facilities of ALPM and maintenance capex of ~INR3b. It plans to spend INR6–7b in the next two years on injectable facilities and the Jarod expansion for additional lines and investments to build API capacity.
- While R&D spend was INR1.4b (1QFY21), it is expected to be ~INR7b for FY21.
- Opex for 1QFY21 was lower due to lower travel/promotional cost on the DF

Valuation and view

We raise our earnings estimate by 20%/19.4% over FY21/FY22 to factor a continued strong performance in the US, driven by new launches, better traction from approved products, improved business prospects in Non-US Formulations, the API segment, and gradual turnaround in the DF business.

We continue to value ALPM at 20x (in line with its five-year average) and arrive at price target of NR1,100 on a 12M forward earnings basis. Maintain Neutral.

1QFY21 financial snapshot

Y/E March	FY20					FY2	21E		FY20	FY21E	FY2	21E
	1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE			1QE	vs Est
Net Sales	9,489	12,409	12,091	12,068	13,413	13,428	12,911	12,878	46,060	52,630	11,323	18.5%
YoY Change (%)	10.0	10.1	18.8	30.2	41.4	8.2	6.8	6.7	17.0	14.3	19.3	
Total Expenditure	7,240	8,954	8,841	8,793	9,340	9,789	9,541	9,741	33,827	38,411	8,436	
EBITDA	2,249	3,455	3,251	3,275	4,074	3,639	3,370	3,137	12,233	14,220	2,887	41.1%
YoY Change (%)	49.0	14.3	34.2	84.0	81.1	5.3	3.7	-4.2	39.9	16.2	28	
Margins (%)	23.7	27.8	26.9	27.1	30.4	27.1	26.1	24.4	26.6	27.0	25.5	
Depreciation	354	360	418	441	415	430	450	474	1,573	1,769	450	
EBIT	2,603	3,815	3,669	3,717	4,489	4,069	3,820	3,611	13,806	15,989	3,337	
YoY Change (%)	28.3	25.6	44.0	47.4	72.4	6.7	4.1	-2.8	39.5	15.8	28	
Interest	50	71	74	78	67	90	120	184	272	461	88	
Other Income	33	4	4	9	3	8	12	14	49	37	15	
PBT before EO expense	1,878	3,029	2,763	2,765	3,595	3,127	2,812	2,493	10,437	12,027	2,364	52.0%
Extra-Ord expense	328	0	0	109	0	0.0	0.0	0	436	0	0	
PBT	1,550	3,029	2,763	2,660	3,595	3,127	2,812	2,493	10,001	12,027	2,364	52.0%
Tax	360	525	486	621	668	672	638	547	1,992	2,526	449	
Rate (%)	23.2	17.3	17.6	23.4	18.6	21.5	22.7	22.0	19.9	21.0	19.0	
MI & P/L of Asso. Cos.	-47	41	-65	-214	-87	-60	-45	-58	-285	-250	0	
Reported PAT	1,237	2,463	2,342	2,252	3,015	2,515	2,218	2,003	8,294	9,751	1,915	57.4%
Adj PAT	1,504	2,463	2,342	2,334	3,015	2,515	2,218	2,003	8,643	9,751	1,915	57.4%
YoY Change (%)	66.2	23.1	37.9	88.2	100.4	2.1	-5.3	-14.2	47.7	12.8	27.3	
Margins (%)	15.9	19.8	19.4	19.3	22.5	18.7	17.2	15.6	18.8	18.5	16.9	

Source: MOFSL, Company

Key performance indicators

Y/E March		FY	20			FY21E				FY21E	FY2	1E
	1Q	2Q	3Q	4Q	1Q	2QE	3QE	4QE			1QE	vs Est
India	3240	3910	3680	3420	3060	4027	3864	3746	14250	14698	3272	-6%
YoY Change (%)	(2.1)	1.6	0.8	13.2	(5.6)	3.0	5.0	9.5	3.0	3.1	1.0	
Exports	4,530	6,460	6,640	7,100	7,710	7,157	7,029	7,334	24,730	29,230	6,417	20%
YoY Change (%)	28.7	10.1	48.2	79.7	70.2	10.8	5.9	3.3	38.7	18.2	41.7	
APIs	1,720	2,040	1,770	1,550	2,640	2,244	2,018	1,801	7,080	8,703	1,634	62%
YoY Change (%)	(4.4)	31.6	(13.7)	(32.6)	53.5	10.0	14.0	16.2	(8.1)	22.9	(5.0)	
Cost Break-up												
RM Cost (% of Sales)	21.5	22.0	24.7	21.9	25.2	24.5	25.0	24.9	22.6	24.9	23.2	
Staff Cost (% of Sales)	22.6	17.5	18.8	20.5	20.5	20.5	20.0	20.6	19.7	20.4	21.2	
R&D Expenses (% of Sales)	14.8	14.0	12.1	15.3	10.5	12.5	13.5	12.8	14.0	12.3	14.5	
Other Cost (% of Sales)	17.3	18.6	17.6	15.2	13.4	15.4	15.4	17.5	17.2	15.4	17.0	
Gross Margins(%)	78.5	78.0	75.3	78.1	74.8	75.5	75.0	75.1	77.4	75.1	76.8	
EBITDA Margins(%)	23.7	27.8	26.9	27.1	30.4	27.1	26.1	24.4	26.6	27.0	24.1	
EBIT Margins(%)	27.4	30.7	30.3	30.8	33.5	30.3	29.6	28.0	30.0	30.4	28.1	

Source: MOFSL, Company

2

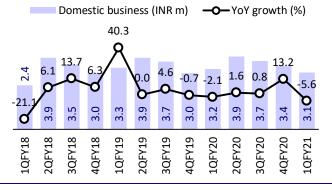


Conference call highlights

- With the resolution of the serialization issue in non-US markets, the 1QFY21 quarterly run-rate of INR1.8b could be considered sustainable over the medium term.
- The substantial adverse impact of lower sales of liquid forms of dosages was partially offset by higher Azithromycin OSD sales in the DF segment.
- The DF business showed signs of growth in June and the first 20 days of July. ALPM expects DF sales to continue to grow and liquids to see an uptick as hospital visits pick up, particularly in Pediatric and Gynaec.
- Sartans forms about 40% of US sales. While new competition has emerged for these sets of products, APLM has been able to hold on to its market share.
- The company filed five general injectables at the end of 1QFY21.
- Fundraising has been planned for investing in complex injectables/505b2 and reducing financial leverage. ALPM has not indicated any plans to enter the Biosimilars segment.
- The API business grew 53.5% YoY for the quarter, partly led by the higher off-take of Azithromycin.
- The Aleor R&D capitalization was INR250m for the quarter.

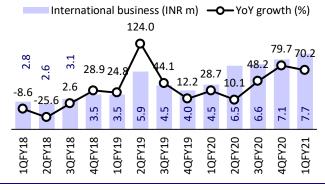
Key exhibits

Exhibit 1: DF sales decline 5.6% YoY in 1QFY21



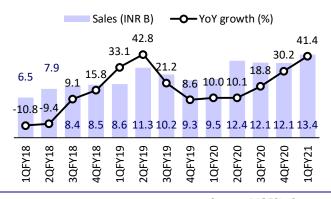
Source: MOFSL, Company

Exhibit 2: US (+73% YoY) leads growth in international sales



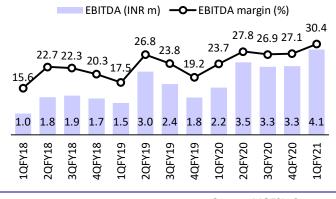
Source: MOFSL, Company

Exhibit 3: International business-led growth in overall sales



Source: MOFSL, Company

Exhibit 4: Margins expand ~670bp YoY



Source: MOFSL, Company

21 January 2020 3

Valuation and view

Healthy US traction; WIP to build capacity and product pipeline for new dosages

ALPM continued its strong performance in 1QFY21, driven by a 73% increase in US sales (44% of sales). Growth in the US was driven by an increase in the volumes of existing products, supported by three launches in the quarter. ALPM intends to launch 15–20 products in the US in FY21 and is well-positioned to support this, with 66 ANDAs pending approval. 12 of its ANDAs have been approved in the Ophthalmic Dosage category. Furthermore, it has started filing general injectables and intends to file onco-injectables from 2HFY21. Over FY16–20, through spending INR23b on R&D, it has built a development pipeline of 200+ products to cater to future growth in the US Generics segment. However, the meaningful benefit from the commercialization of these products is expected to reflect from 2HFY22, considering the time required for site compliance and product approval. Considering the high base of FY20, led by the Sartans opportunity, we expect an 11% CAGR in US sales to USD350m over FY20–22.

Consistent compliance minimizes regulatory risk over medium term

ALPM has had 20+ inspections at its four sites to date and has been consistently compliant, exhibiting a sound inspection track record. Even the new sites (F1 for oral solids and the Aleor derma site) were inspected successfully, with EIRs in place. This reduces regulatory risk for ALPM over the medium term.

India (22% of sales): Liquids drags down Domestic Formulations

ALPM posted a muted 5% CAGR in Domestic Formulations over FY16–20, weighed by underperformance in key therapies (Anti-Infectives, Cardiac, Respiratory, Gastrointestinal, Gynecology, and Anti-Diabetic).

ALPM has already implemented a strategy to revive growth in this segment, with reduced discounts to trade channels being a part of the strategy. The benefit of the same was partly reflected in its 4QFY20 performance.

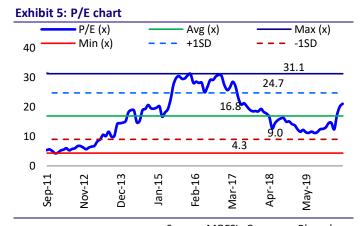
However, ALPM saw 5.6% YoY decline in 1QFY21 on low demand due to COVID-19, especially in the Liquids segment. Pediatric and Gynaec/Hormones witnessed a major impact as the patients using drugs in these categories largely stayed away from hospitals.

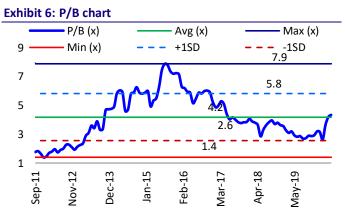
Nevertheless, ALPM has been seeing early signs of recovery from June'20 on the back of a favorable macro as well as the benefit of a renewed strategy. Considering the slowdown witnessed in DF due to COVID-19, we expect ALPM to post a 6% CAGR to INR16b over FY20–22.

Valuation and view

We raise our earnings estimates by 20%/19.4% over FY21/FY22 to factor a continued strong performance in the US, driven by new launches, better traction from approved products, improved business prospects in the Non-US Formulations and API segments, with gradual turnaround expected in the DF business for the remainder of the year. We continue to value ALPM at 20x (in line with its five-year average) and arrive at price target of NR1,100 on a 12M forward earnings basis. Maintain Neutral on limited upside from current levels.

 $Motilal\ Oswal$ Alembic Pharma



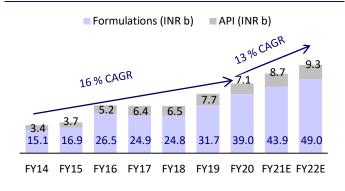


Source: MOFSL, Company, Bloomberg

Source: MOFSL, Company, Bloomberg

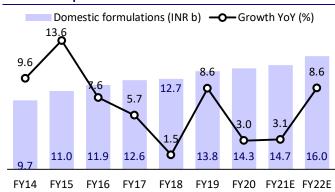
Story in charts

Exhibit 7: Expect Formulations CAGR of ~13% over FY20-22



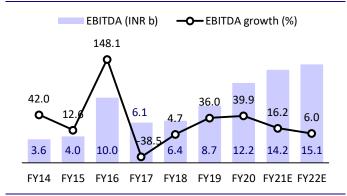
Source: MOFSL, Company

Exhibit 8: Expect DF biz to recover in FY22



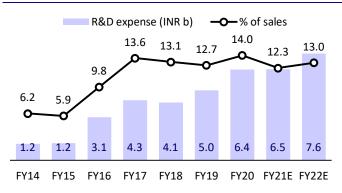
Source: MOFSL, Company

Exhibit 9: EBITDA to gradually improve over FY20-22



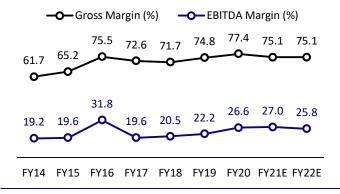
Source: MOFSL, Company

Exhibit 10: R&D spend to be steady over FY20-22



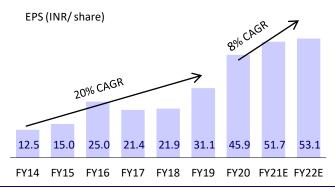
Source: MOFSL, Company

Exhibit 11: Slower DF growth to impact margins



Source: MOFSL, Company

Exhibit 12: EPS to grow slowly over FY20-22 on a high base



Source: MOFSL, Company

Financials and valuations

Consolidated - Income Statement									(INR m)
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E
Net Sales	18,632	20,527	31,416	31,345	31,310	39,357	46,060	52,630	58,384
Change (%)	22.6	10.2	53.0	-0.2	-0.1	25.7	17.0	14.3	10.9
EBITDA	3,577	4,026	9,988	6,146	6,433	8,746	12,233	14,220	15,074
Margin (%)	19.2	19.6	31.8	19.6	20.5	22.2	26.6	27.0	25.8
Depreciation	405	444	722	830	1,055	1,152	1,573	1,769	2,112
EBIT	3,172	3,582	9,266	5,316	5,378	7,594	10,660	12,451	12,961
Int. and Finance Charges	104	18	37	51	34	184	272	461	807
Other Income - Rec.	38	26	91	25	70	94	49	37	70
PBT bef. EO Exp.	3,106	3,591	9,320	5,290	5,415	7,503	10,437	12,027	12,225
EO Expense/(Income)	0	0	0	0	0	0	436	0	0
PBT after EO Exp.	3,106	3,591	9,320	5,290	5,415	7,503	10,001	12,027	12,225
Current Tax	685	764	1,986	1,224	1,236	1,781	2,046	2,766	2,812
Deferred Tax	66	0	174	-2	-33	-214	-54	-241	-244
Tax Rate (%)	24.2	21.3	23.2	23.1	22.2	20.9	19.9	21.0	21.0
MI & P/L of Asso. Cos.	0.0	-2.0	6.0	39.2	82.8	82.0	-284.7	-250.0	-360.0
Reported PAT	2,355	2,829	7,154	4,029	4,128	5,854	8,294	9,751	10,017
PAT Adj for EO items	2,355	2,829	4,720	4,029	4,128	5,854	8,643	9,751	10,017
Change (%)	42.5	20.1	66.8	-14.6	2.5	41.8	47.7	12.8	2.7
Margin (%)	12.6	13.8	15.0	12.9	13.2	14.9	18.8	18.5	17.2

Consolidated - Balance Sheet									(INR m)
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E
Equity Share Capital	377	377	377	377	377	377	377	377	377
Total Reserves	6,379	8,469	15,628	18,634	21,824	26,811	31,820	39,302	47,051
Net Worth	6,756	8,846	16,005	19,011	22,201	27,188	32,197	39,679	47,429
Minority Interest	0	0	0	1	3	-8	-290	-290	-290
Deferred Liabilities	227	314	501	369	354	188	122	-119	-363
Total Loans	1,238	2,385	1,325	802	7,078	9,284	18,208	20,208	18,208
Capital Employed	8,221	11,546	17,832	20,184	29,637	36,652	50,237	59,479	64,984
Gross Block	6,541	8,756	11,190	12,548	11,726	15,156	20,700	38,267	49,742
Less: Accum. Deprn.	2,688	3,132	3,878	4,554	2,456	3,608	5,181	6,950	9,062
Net Fixed Assets	3,854	5,978	7,748	8,264	10,928	11,585	15,518	31,317	40,680
Capital WIP	323	323	925	3,693	9,108	15,512	18,462	7,895	2,919
Total Investments	34	23	21	502	416	488	179	179	179
Curr. Assets, Loans&Adv.	7,968	10,089	15,900	14,408	18,959	20,193	25,734	33,133	35,449
Inventory	3,108	3,828	5,776	6,328	7,339	9,673	11,875	15,069	16,716
Account Receivables	2,734	3,612	3,505	3,375	5,263	4,889	8,648	10,602	11,761
Cash and Bank Balance	240	268	4,508	1,596	899	2,056	808	2,856	2,189
Loans and Advances	1,887	2,381	2,111	3,110	5,457	3,576	4,404	4,606	4,783
Curr. Liability & Prov.	3,957	4,866	6,762	6,683	9,774	11,125	9,656	13,044	14,243
Account Payables	2,884	3,109	5,664	5,232	7,593	6,443	6,259	7,893	8,756
Other Current Liabilities	339	715	656	755	1,429	3,838	2,270	2,594	2,877
Provisions	734	1,042	443	696	752	844	1,127	2,557	2,610
Net Current Assets	4,011	5,223	9,138	7,725	9,185	9,068	16,078	20,089	21,206
Appl. of Funds	8,221	11,546	17,832	20,184	29,637	36,652	50,238	59,479	64,984

Financials and valuations

Ratios									
	FV4.4	EV4E	EV4.C	EV47	EV40	FV40	EV20	FV24F	FV22F
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E
Basic (INR)	12.5	15.0	25.0	24.4	21.0	21.1	45.0	F4 7	F2 1
EPS	12.5	15.0	25.0	21.4	21.9	31.1	45.9	51.7	53.1
Cash EPS	14.6	17.4	28.9	25.8	27.5	37.2	54.2	61.1	64.3
BV/Share	35.8	46.9	84.9	100.8	117.8	144.2	170.8	210.5	251.6
DPS	3.0	3.5	4.0	4.0	4.0	5.5	10.0	10.0	10.0
Payout (%)	28.1	28.1	12.7	22.5	22.0	21.3	27.4	23.3	22.6
Valuation (x)									
P/E	80.0	66.6	39.9	46.8	45.7	32.2	21.8	19.3	18.8
Cash P/E	68.3	57.6	34.6	38.8	36.4	26.9	18.5	16.4	15.5
P/BV	27.9	21.3	11.8	9.9	8.5	6.9	5.9	4.8	4.0
EV/Sales	7.0	6.4	4.0	4.1	4.4	3.5	3.2	2.8	2.5
EV/EBITDA	36.6	32.8	12.7	21.0	21.2	15.7	12.1	10.4	9.7
Dividend Yield (%)	0.3	0.4	0.4	0.4	0.4	0.6	1.0	1.0	1.0
Dividend Held (70)	0.3	0.4	0.4	0.4	0.4	0.0	1.0	1.0	1.0
Return Ratios (%)									
RoE	40.0	36.3	37.9	22.8	19.6	23.4	30.1	27.8	23.8
RoCE	32.7	29.6	50.3	22.1	17.3	18.5	19.7	17.9	16.4
RoIC	34.0	30.4	61.1	30.5	24.9	31.8	34.6	24.8	18.9
Working Capital Ratios									
Asset Turnover (x)	2.3	1.8	1.8	1.6	1.1	1.1	0.9	0.9	0.9
Inventory (Days)	61	68	67	74	86	90	94	105	105
Debtor (Days)	53	64	40	39	61	45	69	74	74
Creditor (Days)	57	55	66	61	89	60	50	55	55
Leverage Ratio (x)									
Net Debt/Equity	0.1	0.2	-0.2	0.0	0.3	0.3	0.5	0.4	0.3
Canadidated Cook Flour Statement									(INID)
Consolidated - Cash Flow Statement	F)/4.4	= 1/4 =	E)/4.6	E)/4 =	E1/40	E)/40	E)/20	EV045	(INR m)
Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E
Net Profit / (Loss) Before Tax	3,106	3,591	9,360	5,291	5,413	7,493	9,998	12,027	12,225
Depreciation	405	444	722	830	1,055	1,152	1,573	1,769	2,112
Interest & Finance Charges	66	-9	54	52	34	184	272	424	737
Direct Taxes Paid	663	676	1,970	1,180	1,351	1,665	2,361	2,766	2,812
(Inc)/Dec in WC	-694	-1,184	1,389	-1,656	-1,809	1,116	-5,844	-1,962	-1,784
CF from Operations	2,221	2,166	9,555	3,337	3,342	8,281	3,638	9,491	10,478
CF from Operating incl EO	2,256	1,891	9,398	3,246	2,969	8,018	5,383	9,491	10,478
(inc)/dec in FA	-816	-2,215	-3,011	-5,101	-7,494	-6,539	-6,726	-7,000	-6,500
Free Cash Flow	1,440	-324	6,387	-1,856	-4,525	1,478	-1,343	2,491	3,978
(Pur)/Sale of Investments	0	0	-64	48	14	39	23	0	0
Others	37	15	201	299	-1,146	-1,030	-596	37	70
CF from Investments	-779	-2,200	-2,874	-4,754	-8,626	-7,530	-7,299	-6,963	-6,430
(Inc)/Dec in Debt	-633	1,149	-1,404	-336	6,194	2,203	5,919	2,250	-1,640
Interest Paid	-104	-18	-52	-52	-260	-703	-1,111	-461	-806
Dividend Paid	-662	-794	-787	-901	-908	-909	-3,260	-2,269	-2,269
Others	0	0	0	0	0	72	-878	32	32
CF from Fin. Activity	-1,398	337	-2,243	-1,289	5,026	662	671	-448	-4,682
Inc/Dec of Cash	79	29	4,281	-2,797	-631	1,150	-1,246	2,081	-635
Add: Beginning Balance	161	240	228	4,393	1,531	899	2,053	777	2,825
Closing Balance	240	268	4,509	1,596	899	2,048	808	2,856	2,190

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 within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

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, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd.. (PIMPL). 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://onlinereports.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 n/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.

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 brokerdealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this

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

- 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. MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 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
- Research Analyst has not served as director/officer/employee in the subject company
- MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 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
- received compensation/other benefits from the subject company in the past 12 months
- 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.

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.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website www.motilaloswal.com.CIN no.: L67190MH2005PLC153397.Correspondence Office Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad(West), Mumbai- 400 064. Tel No: 022 7188 1000.

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579; PMS: INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: na@motilaloswal.com, Contact No.:022-71881085.

MOSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench.