

Data Patterns (India)

Estimate change	↓
TP change	↑
Rating change	↔

Bloomberg	DATAPATT IN
Equity Shares (m)	56
M.Cap.(INRb)/(USDb)	177.8 / 2.1
52-Week Range (INR)	3444 / 1565
1, 6, 12 Rel. Per (%)	12/58/74
12M Avg Val (INR M)	812

Financials & Valuations (INR b)

Y/E Mar	FY24	FY25E	FY26E
Sales	5.2	6.7	9.0
EBITDA	2.2	2.8	3.8
Adj. PAT	1.8	2.3	3.1
EBITDA Margin (%)	42.6	42.1	42.5
Cons. Adj. EPS (INR)	32.4	40.6	55.2
EPS Gr. (%)	46.6	25.0	36.1
BV/Sh. (INR)	236.5	276.1	330.3

Ratios

Net D:E	-0.5	-0.5	-0.5
RoE (%)	14.6	15.8	18.2
RoCE (%)	15.1	16.3	18.6

Valuations

P/E (x)	98	78	58
EV/EBITDA (x)	77	61	44

Shareholding pattern (%)

As on	Mar-24	Dec-23	Mar-23
Promoter	42.4	42.4	42.4
DII	11.6	9.2	11.6
FII	14.6	6.7	5.1
Others	31.4	41.7	40.9

Note: FII includes depository receipts

CMP: INR3,180 TP: INR2,760 (-13%) Neutral

Margin expansion drives earnings growth

Earnings below estimates

- Data Patterns (DATAPATT) reported a revenue decline of ~2% YoY in 4QFY24. However, operating performance was healthy (EBITDA margin up 11.4pp YoY) as gross margin improved (up 14pp YoY), aided by a favorable business mix during the quarter.
- Factoring in 4Q results and lower growth guidance for FY25, we cut our FY25/FY26 EPS estimates by 7%/5%. **We reiterate our Neutral rating with a TP of INR2,760 (premised on 50x FY26E EPS)**, owing to its higher working capital cycle and rich valuations.

Order inflows remain healthy

- Consolidated revenue declined 2% YoY (up 31% QoQ) to INR1.8b (est. INR2.3b), due to a decline in production and service revenue and spillover of delivery of two orders in next quarter.
- EBITDA margins expanded 11.4pp YoY/8pp QoQ to 51% (est. 44.7%), led by a favorable business mix. EBITDA grew 27% YoY/55% QoQ to INR930m (est. INR1b).
- Adjusted PAT grew 29% YoY/39% QoQ to INR711m (est. INR746m).
- The order book stood at INR10.8b as of Mar'24 vs. INR9.6b/INR9.2b in Dec'23/Mar'23, led by strong order inflows of ~INR3b (up 37% YoY) in 4Q.
- For FY24, revenue/EBITDA/adj. PAT grew 15%/29%/47% YoY to INR5.2b/INR2.2b/INR1.8b.

Highlights from the management commentary

- **Guidance:** The company expects to achieve ~20-25% revenue growth in FY25. This is a conservative guidance and revenue growth can exceed this range in FY25. It is targeting over 25% revenue CAGR over the next two to three years. Margins are likely to sustain at ~40%.
- **Capex and new product development:** It will spend INR1b in the next two years to develop infrastructure on the already acquired land. DATAPATT also plans to spend ~INR1b on the development of new products in FY25.
- **Working capital:** Net working capital will decline as and when the mix of production contracts increases. The cash conversion cycle is expected to decline to ~270-280 days in the longer run (from ~432 days in FY24).

Valuation and view

- DATAPATT, a prominent player in the aerospace and defense electronics sector in India, is set to capture a larger share of pie (TAM of ~USD2b as of CY20; a 9% CAGR) with its vast experience, strong core competencies, and robust executional capabilities.
- We estimate a CAGR of 31%/31%/30% in revenue/EBITDA/adj. PAT over FY24-26, driven by robust order book growth (~43% CAGR over FY19-24).
- Factoring in 4Q results and lower growth guidance for FY25, we cut our FY25/FY26 EPS estimates by 7%/5%. **We reiterate our Neutral rating with a TP of INR2,760 (premised on 50x FY26E EPS)**, owing to its higher working capital cycle and rich valuations.

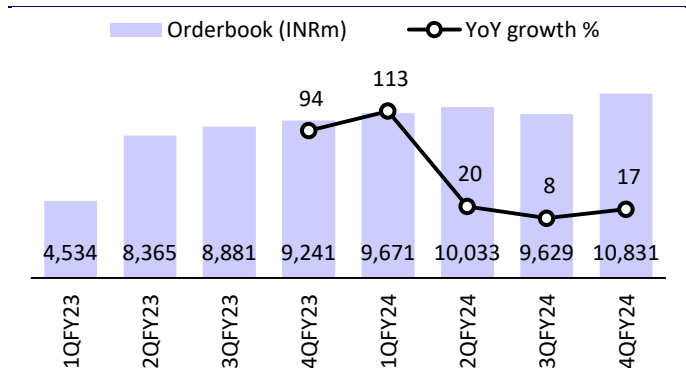
Consolidated - Quarterly Perf.

(INR m)

Y/E March	FY23				FY24				FY23	FY24	FY24E	Var
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			4QE	%
Gross Sales	684	882	1,118	1,851	897	1,083	1,395	1,823	4,535	5,198	2,304	-21
YoY Change (%)	NA	136.8	88.8	322.2	31.2	22.9	24.8	-1.5	45.9	14.6	24.5	
Total Expenditure	471	580	648	1,117	619	676	795	893	2,816	2,982	1,275	
EBITDA	213	302	470	734	278	408	600	930	1,718	2,217	1,029	-10
Margins (%)	31.1	34.2	42.1	39.6	31.0	37.6	43.0	51.0	37.9	42.6	44.7	
Depreciation	20	21	21	22	28	31	33	70	84	162	42	
Interest	16	12	21	28	17	23	23	30	77	93	35	
Other Income	17	19	19	38	116	108	113	123	92	460	45	
PBT before EO expense	194	287	446	721	349	463	657	953	1,649	2,422	997	
PBT	194	287	446	721	349	463	657	953	1,649	2,422	997	
Tax	52	76	113	168	91	125	148	242	409	605	251	
Rate (%)	26.7	26.6	25.4	23.3	25.9	27.0	22.4	25.4	24.8	25.0	25.2	
Reported PAT	142	211	333	554	258	338	510	711	1,240	1,817	746	
Adj PAT	142	211	333	554	258	338	510	711	1,240	1,817	746	-5
YoY Change (%)	NA	104.4	158.5	517.9	81.4	60.5	53.0	28.4	32.2	46.6	34.8	
Margins (%)	20.8	23.9	29.8	29.9	28.8	31.2	36.5	39.0	27.3	35.0	32.4	

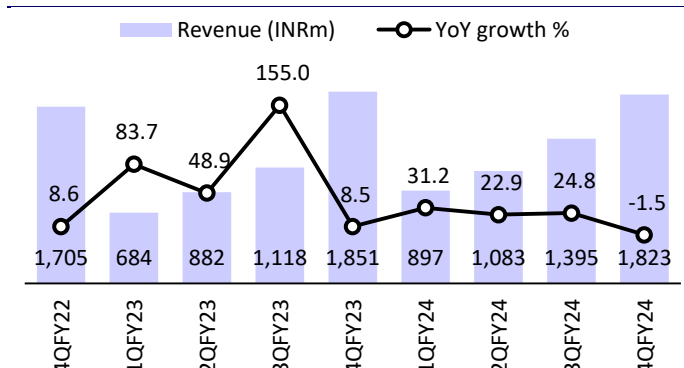
Key Exhibits

Exhibit 1: Consolidated order book trend



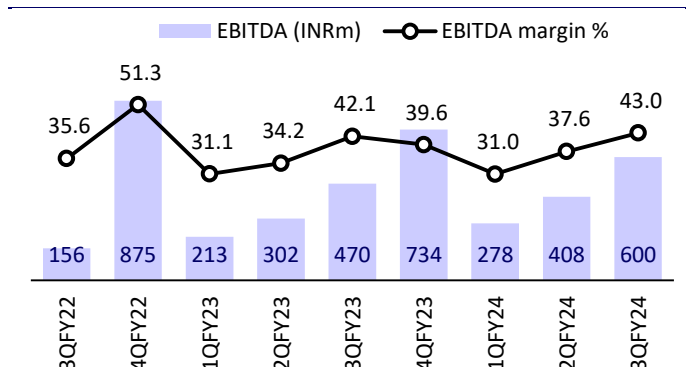
Source: Company, MOFSL

Exhibit 2: Consolidated revenue trend



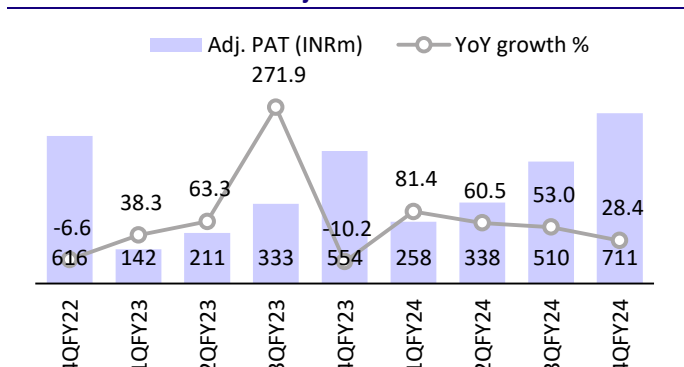
Source: Company, MOFSL

Exhibit 3: Consolidated EBITDA trend



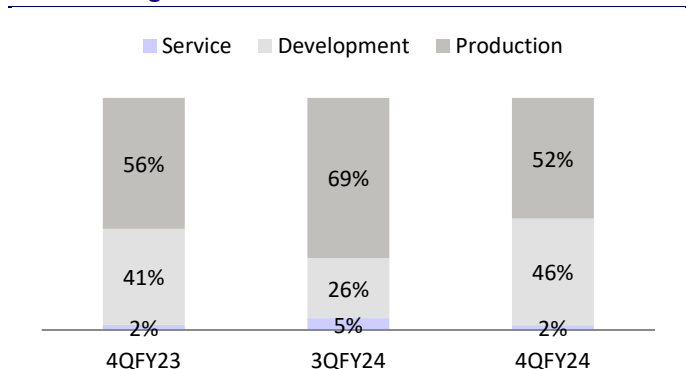
Source: Company, MOFSL

Exhibit 4: Consolidated Adj. PAT trend



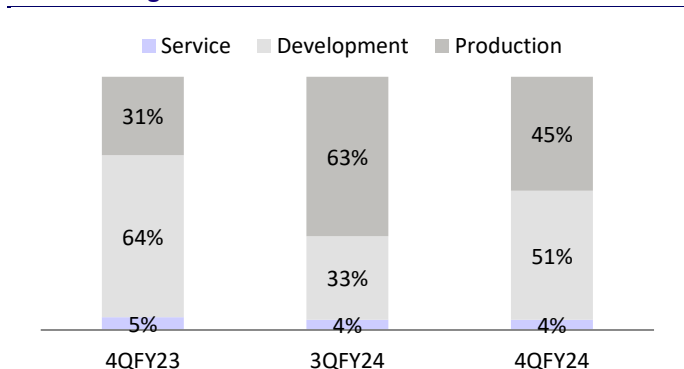
Source: Company, MOFSL

Exhibit 5: Segment revenue mix



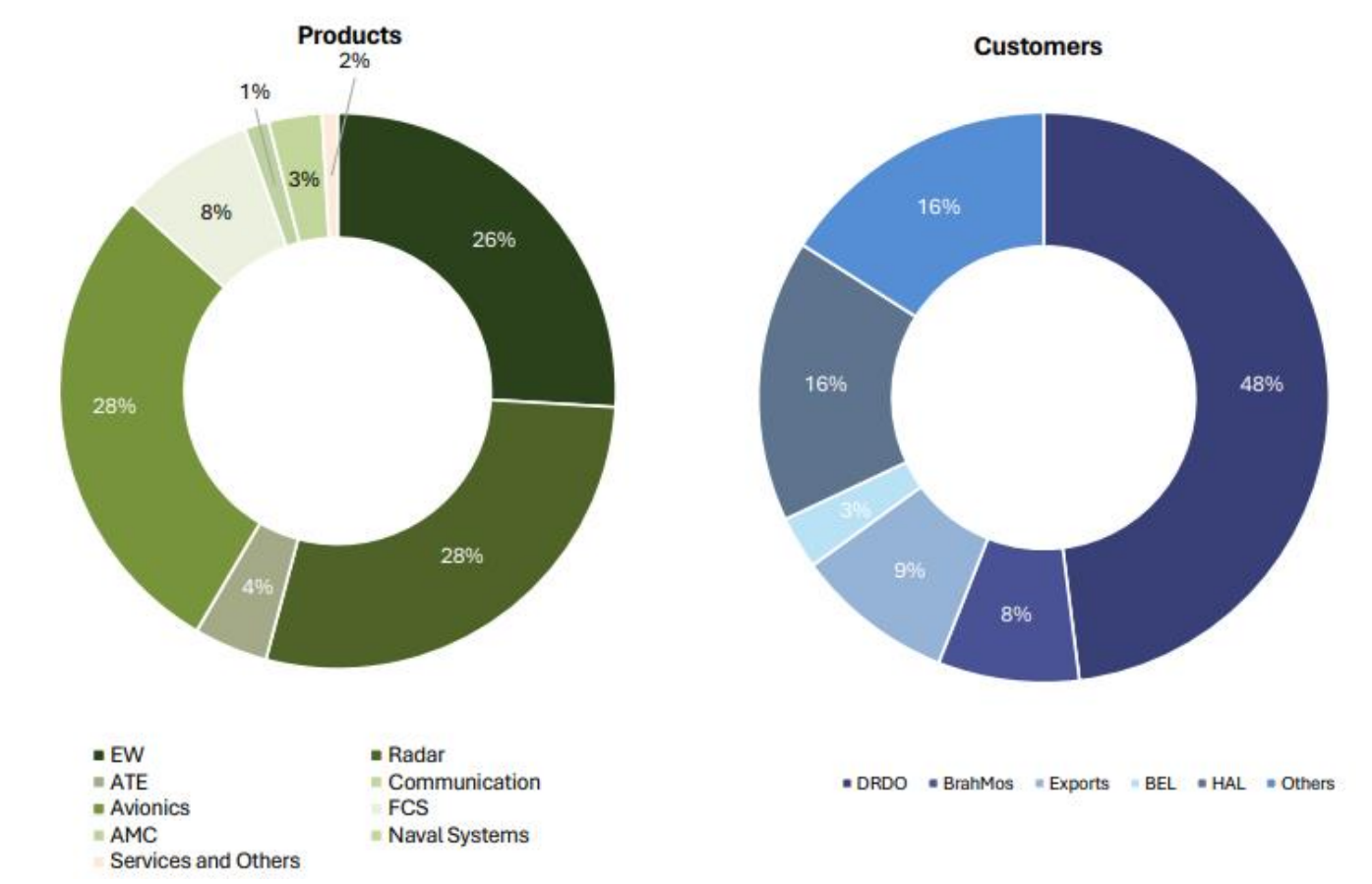
Source: Company, MOFSL

Exhibit 6: Segment order book mix



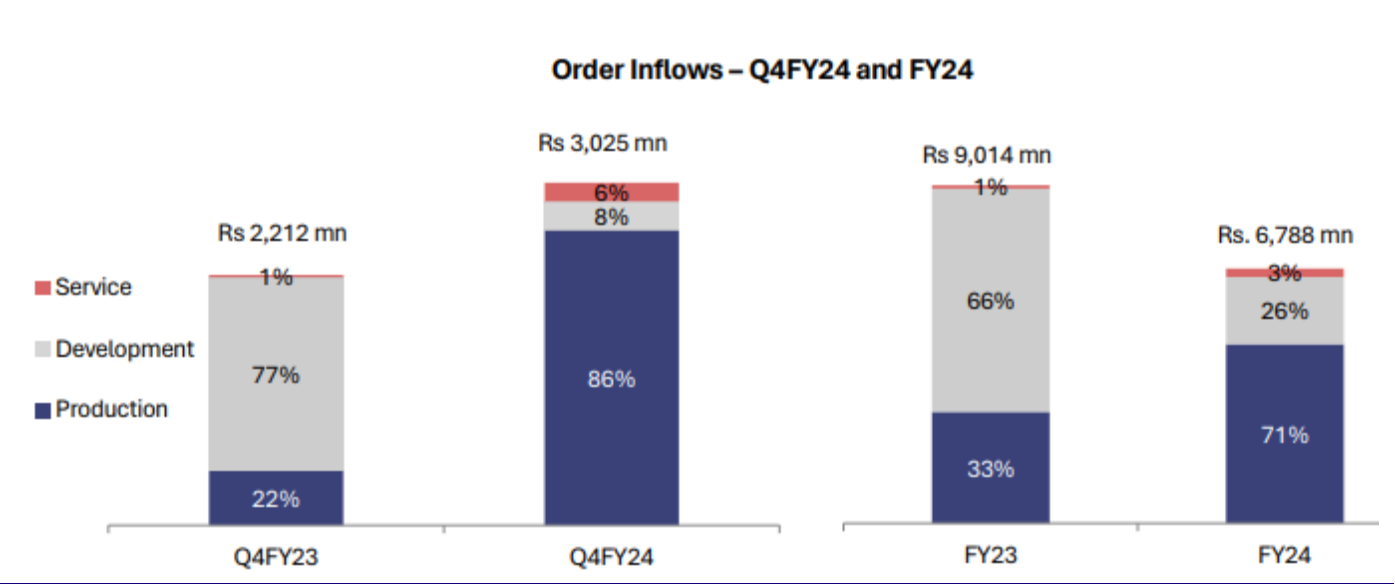
Source: Company, MOFSL

Exhibit 7: DATAPATT’s product-wise and customer-wise revenue break-up (4QFY24)



Source: MOFSL, Company

Exhibit 8: DATAPATT’s order inflow breakup



Source: MOFSL, Company

Exhibit 9: Major orders received by DATAPATT in 4QFY24/FY24

Major order received in Q4FY24

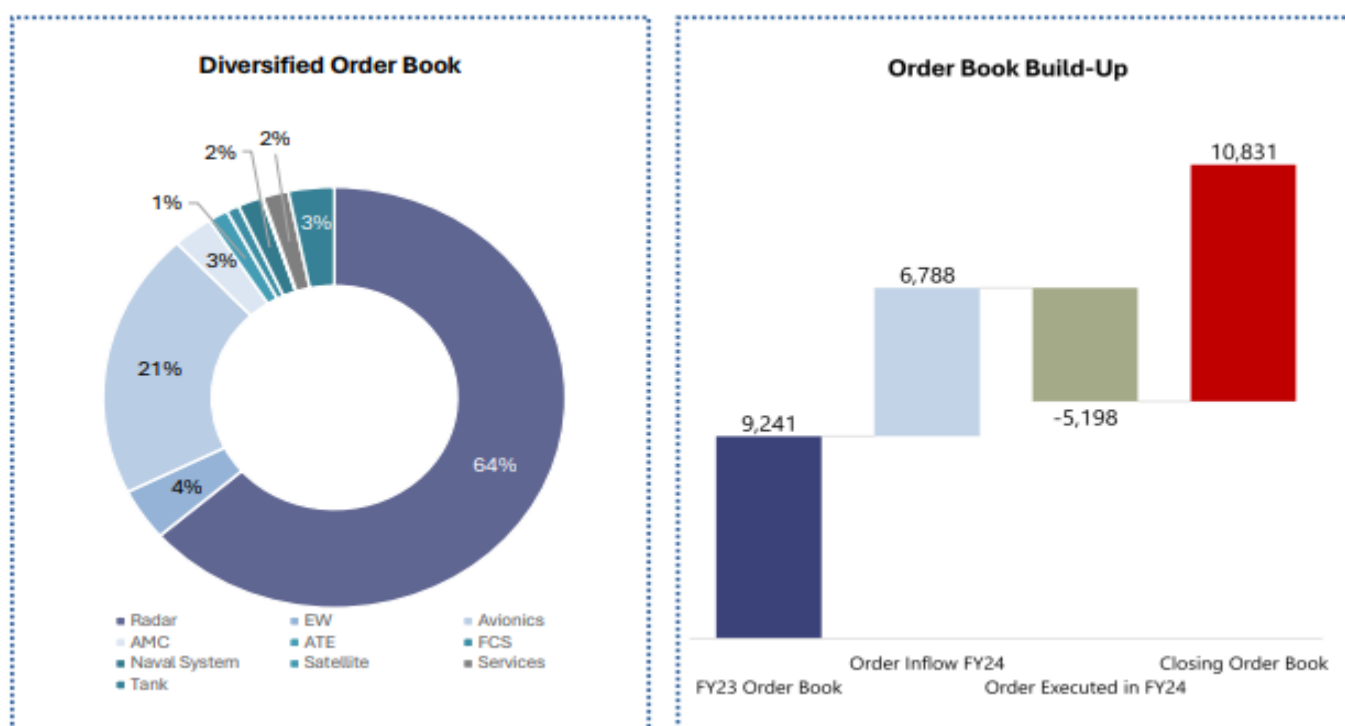
Product	Customer	Order Type	Value (Rs mn)
Radar	BEL	Production	1,827.8
Avionics	Export	Production	517.6
EW	DRDO	Development	177.4
Naval	BEL	Production	114.3
AMC	IMD	Service	106.6
FCS	BrahMos	Development	73.3
Avionics	ADA	Production	67.7
EW	DRDO	Production	23.6

Major order received in FY24

Product	Customer	Order Type	Value (Rs mn)
Radar	BEL	Production	1827.8
Avionics	Export	Production	517.6
Avionics	HAL	Production	446.9
Avionics	DRDO	Development	439.1
EW	DRDO	Development	362.0
Radar	Export	Production	326.9
Radar	BEL	Production	321.3
Radar	Export	Development	235.0

Source: MOFSL, Company

Exhibit 10: DATAPATT's has strong order book of ~INR10.8b as on Mar'24



Source: MOFSL, Company

DATA PATTERNS



- Surveillance Radars
- Weather Radars
- Coastal Surveillance Radars



- Surveillance and intelligence gathering ("SIGINT")
- Further divided into COMINT and ELINT



COTS modules designed in context of reusable building blocks for building Military Electronics systems with a quick turnaround Time



- Light Combat Aircraft ("LCA")
- Intermediate Jet Trainers
- Light Utility Helicopters ("LUH")



- Underwater electronics / Communications / Other Systems
- Automated Test Equipment (ATE)
- Small and Nano Satellites



- Fire control systems
- Mobile autonomous launcher
- Airborne launcher and Other electronic systems

6



Highlights from the management commentary

Operating performance

- The company was not able to meet internal guidance of ~INR5.4b of revenue in FY24 as two orders are not yet delivered due to pending inspection.
- Inventory has gone up due to advanced procurement of materials for contracts deliverable in FY25.
- The company has cash and liquid investments of ~INR7.5b as on Mar'24.

Guidance

- DATAPATT expects to achieve ~20-25% revenue growth in FY25. This is a conservative guidance and revenue growth can exceed this range in FY25. It is targeting over 25% revenue CAGR over the next two to three years.
- The company expects INR10b of order inflows in FY25. It has visibility for a healthy order book (~INR20-30b over next two years).
- It expects to sustain margins at ~40%.
- The demand outlook remains strong. The company is witnessing opportunities in multiple categories.
- Net working capital will keep on going down as and when the mix of production contracts increases. The cash conversion cycle is expected to reduce to ~270-280 days in the longer run.

MoD contracts

- DATAPATT has successfully developed and delivered nine precision approach radars to the Ministry of Defense (MoD) for the Air Force and Indian Navy requirements.
- It will continue to engage with DRDO going ahead. But the scale-up in business will come from MoD contracts. The company is engaging with MoD over a few large orders.
- The company is only looking at business with healthy margins.
- Revenue will grow substantially from MoD contracts, but margins will be relatively lower. However, the company has developed its own products instead of using IP of foreign companies, which will help it earn better margins in MoD projects.

Margins

- DATAPATT's margins vary contract to contract.
- It has been able to earn better margin than peers because it has invested heavily in product development in the last several years. Development expenses were ~20-25% of sales in FY24.
- Going ahead, the company expects to sustain margins at ~40%.
- There are two contracts in hand, where margins are relatively lower. For the rest of the contracts, margins are healthy.
- For the INR10b projects expected in FY25, the company expects margins to be in line the previous two years.

Capex

- It has already brought 800 acres of land adjacent to its current factory. It will spend INR1b on the development of infrastructure over this area in the next two years.

- Apart from this, the company will continue to spend (~INR1b) on product development. However, it does not capitalize the cost and this expense directly hits P&L. It will focus on key areas such as radars, electronic warfare suite, and communication equipment.

Others

- There is a delay in another order from Bharat Electronics, which the company expects to receive over the next couple of quarters.
- DATAPATT will have to create infrastructure for executing some of the larger contracts.
- 4Q is always the strongest quarter for the company. Employee expenses/other expenses as a percentage of sales vary QoQ due to seasonality in business.
- It has an export order book of more than INR700m. These are all offset contracts, which have been developed by the company with local IP.

Valuation and View

- DATAPATT, a prominent player in the aerospace and defense electronics sector in India, is set to capture a larger share of pie (TAM of ~USD2b as of CY20; registering a 9% CAGR) on the back of its vast experience, strong core competencies, and robust executional capabilities.
- We estimate a CAGR of 31%/31%/30% in revenue/EBITDA/adjusted PAT over FY23-26, driven by robust order book growth (at ~43% CAGR over FY19-24).
- Factoring in 4QFY24 results, we cut our FY25/FY26 EPS estimates by 7%/5%. **We reiterate our Neutral rating with a TP of INR2,760 (premised on 50x FY26E EPS),** owing to its higher working capital cycle and rich valuations.

Exhibit 13: Changes to our estimates

Earnings change (INR m)	Old		New		Change	
	FY25E	FY26E	FY25E	FY26E	FY25E	FY26E
Revenue	7,413	9,699	6,653	8,957	-10%	-8%
EBITDA	3,069	4,103	2,801	3,807	-9%	-7%
Adj. PAT	2,436	3,253	2,272	3,092	-7%	-5%

Financials and valuations

Consolidated - Income Statement

(INRm)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25E	FY26E
Total Income from Operations	1,311	1,561	2,240	3,109	4,535	5,198	6,653	8,957
Change (%)	NA	19.1	43.5	38.8	45.9	14.6	28.0	34.6
RM Cost	489	561	704	861	1,709	1,637	2,196	2,956
Employees Cost	367	411	472	604	795	1,003	1,231	1,630
Other Expenses	199	157	144	233	312	342	426	564
Total Expenditure	1,055	1,129	1,320	1,698	2,816	2,982	3,852	5,150
% of Sales	80.5	72.4	58.9	54.6	62.1	57.4	57.9	57.5
EBITDA	255	432	920	1,410	1,718	2,217	2,801	3,807
Margin (%)	19.5	27.6	41.1	45.4	37.9	42.6	42.1	42.5
Depreciation	59	55	56	66	84	162	204	253
EBIT	197	377	864	1,344	1,634	2,055	2,597	3,554
Int. and Finance Charges	108	133	145	110	77	93	93	93
Other Income	15	41	26	40	92	460	532	672
PBT bef. EO Exp.	104	284	745	1,274	1,649	2,422	3,036	4,132
EO Items	0	0	0	0	0	0	0	0
PBT after EO Exp.	104	284	745	1,274	1,649	2,422	3,036	4,132
Total Tax	27	74	190	334	409	605	764	1,040
Tax Rate (%)	25.6	26.0	25.4	26.2	24.8	25.0	25.2	25.2
Minority Interest	0	0	0	0	0	0	0	0
Reported PAT	77	211	556	940	1,240	1,817	2,272	3,092
Adjusted PAT	77	211	556	940	1,240	1,817	2,272	3,092
Change (%)	NA	173.4	163.9	69.1	31.9	46.6	25.0	36.1
Margin (%)	5.9	13.5	24.8	30.2	27.3	35.0	34.1	34.5

Consolidated - Balance Sheet

(INRm)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25E	FY26E
Equity Share Capital	17	17	17	104	112	112	112	112
Preference Capital	0	0	0	0	0	0	0	0
Total Reserves	1,312	1,518	2,062	5,641	11,559	13,130	15,351	18,388
Net Worth	1,329	1,535	2,079	5,745	11,671	13,242	15,463	18,500
Minority Interest	0	0	0	0	0	0	0	0
Total Loans	601	606	372	92	7	0	0	0
Deferred Tax Liabilities	9	8	9	-8	0	0	0	0
Capital Employed	1,940	2,148	2,460	5,830	11,678	13,242	15,463	18,500
Gross Block	423	447	425	634	1,176	1,629	2,264	2,791
Less: Accum. Deprn.	59	113	93	159	243	405	609	862
Net Fixed Assets	365	334	332	475	933	1,224	1,654	1,928
Goodwill on Consolidation	0	0	0	0	0	0	0	0
Capital WIP	0	0	0	173	14	481	346	319
Total Investments	0	0	0	0	557	2,622	2,622	2,622
Current Investments	0	0	0	0	557	2,622	2,622	2,622
Curr. Assets, Loans & Adv.	2,410	2,620	2,954	6,411	12,847	12,591	15,028	18,818
Inventory	867	794	737	1,198	1,930	2,668	2,406	3,077
Account Receivables	1,029	1,156	1,559	1,983	3,825	3,988	4,557	5,767
Cash and Bank Balance	3	15	88	1,771	5,445	3,927	5,736	6,839
Loans and Advances	511	655	569	1,460	1,647	2,009	2,329	3,135
Curr. Liability & Prov.	835	805	826	1,230	2,671	3,676	4,186	5,188
Account Payables	159	173	120	416	431	501	672	905
Other Current Liabilities	606	506	560	570	2,107	3,028	3,327	4,031
Provisions	71	126	146	244	134	146	187	252
Net Current Assets	1,575	1,815	2,128	5,182	10,175	8,916	10,841	13,630
Misc Expenditure	0	0	0	0	0	0	0	0
Appl. of Funds	1,940	2,148	2,460	5,830	11,671	13,242	15,463	18,500

Financials and valuations

Ratios

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25E	FY26E
Basic (INR)								
EPS	9.1	24.8	65.4	18.1	22.1	32.4	40.6	55.2
Cash EPS	16.0	31.2	71.9	19.4	23.6	35.3	44.2	59.7
BV/Share	156.3	180.6	244.6	110.7	208.4	236.5	276.1	330.3
DPS	0.0	0.0	0.0	0.0	0.7	0.9	0.9	1.0
Payout (%)	0.0	0.0	0.0	0.0	3.2	2.8	2.2	1.8
Valuation (x)								
P/E	351.0	128.4	48.7	175.6	143.6	98.0	78.4	57.6
Cash P/E	199.3	101.9	44.2	164.1	134.5	90.0	71.9	53.2
P/BV	20.3	17.6	13.0	28.7	15.3	13.4	11.5	9.6
EV/Sales	21.1	17.7	12.2	52.6	38.0	33.0	25.5	18.8
EV/EBITDA	108.2	64.0	29.7	115.8	100.2	77.4	60.6	44.3
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	-6.5	14.4	45.2	2.3	-9.9	8.5	25.4	10.4
Return Ratios (%)								
RoE	11.6	14.7	30.7	24.0	14.2	14.6	15.8	18.2
RoCE	16.3	15.2	28.9	24.6	14.8	15.1	16.3	18.6
RoIC	15.1	13.7	28.6	31.7	25.7	26.0	30.0	34.4
Working Capital Ratios								
Fixed Asset Turnover (x)	3.1	3.5	5.3	4.9	3.9	3.2	2.9	3.2
Asset Turnover (x)	0.7	0.7	0.9	0.5	0.4	0.4	0.4	0.5
Inventory (Days)	647	517	382	508	412	595	400	380
Debtor (Days)	287	270	254	233	308	280	250	235
Creditor (Days)	118	112	62	176	92	112	112	112
Leverage Ratio (x)								
Current Ratio	2.9	3.3	3.6	5.2	4.8	3.4	3.6	3.6
Interest Cover Ratio	1.8	2.8	6.0	12.2	21.2	22.0	27.8	38.1
Net Debt/Equity	0.5	0.4	0.1	-0.3	-0.5	-0.5	-0.5	-0.5

Consolidated - Cash Flow Statement

(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24	FY25E	FY26E
OP/(Loss) before Tax	104	284	745	1,274	1,649	2,422	3,036	4,132
Depreciation	59	55	56	66	84	162	204	253
Interest & Finance Charges	93	108	123	70	-15	-367	-439	-578
Direct Taxes Paid	-11	-28	-190	-284	-409	-605	-764	-1,040
(Inc)/Dec in WC	-289	-283	-299	-624	-1,482	-218	-117	-1,685
CF from Operations	-45	136	435	503	-173	1,394	1,920	1,081
Others	0	-2	-1	0	0	0	0	0
CF from Operating incl EO	-45	134	434	503	-173	1,394	1,920	1,081
(Inc)/Dec in FA	-10	-12	-50	-382	-383	-920	-500	-500
Free Cash Flow	-55	123	384	121	-555	473	1,420	581
(Pur)/Sale of Investments	0	0	0	0	0	0	0	0
Others	15	26	137	-796	-1	-1,319	532	672
CF from Investments	4	14	88	-1,178	-384	-2,239	32	172
Issue of Shares	0	0	0	3,000	0	0	0	0
Inc/(Dec) in Debt	27	-132	-300	-283	-85	-7	0	0
Interest Paid	0	0	-145	-89	-77	-93	-93	-93
Dividend Paid	-4	-4	-3	-111	-39	-50	-50	-56
Others	0	0	0	-159	4,432	-522	0	0
CF from Fin. Activity	23	-136	-449	2,359	4,231	-673	-144	-149
Inc/Dec of Cash	-18	12	73	1,683	3,675	-1,518	1,809	1,104
Opening Balance	21	3	15	88	1,771	5,445	3,927	5,736
Closing Balance	3	15	88	1,771	5,445	3,927	5,736	6,839

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

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") (UEN 201129401Z), which is a holder of a capital markets services license and an exempt financial adviser in Singapore. This report is distributed solely to persons who (a) qualify as "institutional investors" as defined in section 4A(1)(c) of the Securities and Futures Act of Singapore ("SFA") or (b) are considered "accredited investors" as defined in section 2(1) of the Financial Advisers Regulations of Singapore read with section 4A(1)(a) of the SFA. Accordingly, if a recipient is neither an "institutional investor" nor an "accredited investor", they must immediately discontinue any use of this Report and inform MOCMSPL.

In respect of any matter arising from or in connection with the research you could contact the following representatives of MOCMSPL. In case of grievances for any of the services rendered by MOCMSPL write to grievances@motilaloswal.com.

Nainesh Rajani

Email: nainesh.rajani@motilaloswal.com

Contact: (+65) 8328 0276

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.