

# Hindustan Aeronautics



## Charting the next frontier in Defense!

**Teena Virmani - Research Analyst** (Teena.Virmani@MotilalOswal.com)

**Prerit Jain - Research Analyst** (Prerit.Jain@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](http://www.motilaloswal.com/Institutional-Equities), Bloomberg, Thomson Reuters, Factset and S&P Capital.

# 01

Page # 03  
Summary

# 02

Page # 06  
Story in charts

# 03

Page # 10  
Market leader in aerospace defense

# 04

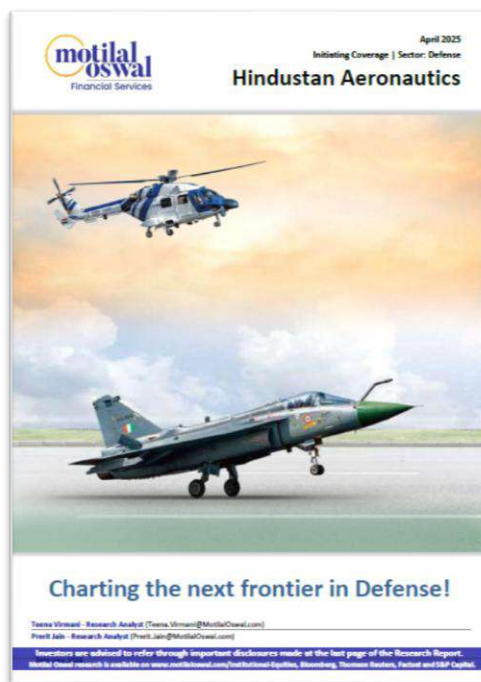
Page # 17  
Financial outlook

# 05

Page # 23  
Valuation and view: Initiate coverage with a BUY rating

# 06

Page # 32  
Key risks and concerns



## Charting the next frontier in Defense!

Hindustan Aeronautics (HAL) is a market leader in aerospace defense. It boasts a strong order book of INR1.8t as of 31st Mar'25, along with a promising prospect pipeline of INR6t, which is likely to be awarded over the next few years. The company is transitioning from a traditional licensed model to an indigenized model and is currently working on marque projects such as Tejas Mk1, Tejas Mk1a, Su-30 upgrade, Dornier-25, and Light Utility Helicopter (LUH), et al. These projects are anticipated to fuel manufacturing revenue growth for HAL. Based on recent announcements and our discussions with industry experts, the supply of engines from GE for Tejas Mk1A is likely to commence during FY26. We expect HAL to benefit from 1) a strong pipeline of projects, 2) execution scale-up aided by large platform orders, 3) a stable stream of RoH revenues, 4) backward integration, and 5) a healthy 29%/33%/29% revenue/EBITDA/PAT CAGR over FY25-27. We initiate coverage on the stock with a BUY rating with a TP of INR5,100 based on average of DCF and 32x P/E on Mar'27 estimates. We believe that near-term catalysts will emerge when aircraft deliveries commence as engine supplies from GE resume, while medium- to long-term triggers will stem from the finalization of orders for 97 Tejas-Mk1A, Tejas MK-II, LUH, Advanced Medium Combat Aircraft (AMCA), et al.

# 07

Page # 37  
Company background

# 08

Page # 42  
ESG initiatives

# 09

Page # 43  
SWOT analysis

# 10

Page # 44  
Management Team

# 11

Page # 45  
Financials and valuations

# Hindustan Aeronautics

BSE Sensex

73,847

S&P CNX

22,399



## Stock Info

Bloomberg	HNAL IN
Equity Shares (m)	669
M.Cap.(INRb)/(USDb)	2695.6 / 31.1
52-Week Range (INR)	5675 / 3046
1, 6, 12 Rel. Per (%)	17/2/15
12M Avg Val (INR M)	11262
Free float (%)	28.4

## Financials Snapshot (INR b)

Y/E MARCH	FY25E	FY26E	FY27E
Sales	303.9	401.6	503.6
EBITDA	78.8	110.1	138.9
Adj PAT	62.5	84.6	104.1
EPS (INR)	93.5	126.5	155.7
EPS Gr. (%)	3.6	35.2	23.1
BV/Sh (INR)	494.2	580.7	691.4

## Ratios

RoE (%)	18.9	21.8	22.5
RoCE (%)	19.8	22.6	23.2
Payout (%)	37.4	31.6	28.9

## Valuations

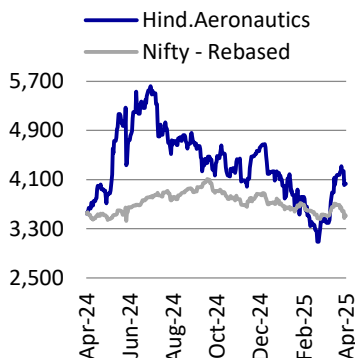
P/E (x)	43.2	31.9	25.9
P/BV (x)	8.2	7.0	5.8
EV/EBITDA (x)	30.7	21.4	16.4
Div Yield (%)	0.9	1.0	1.1

## Shareholding Pattern (%)

As On	Dec-24	Sep-24	Dec-23
Promoter	71.6	71.6	71.6
DII	8.2	8.4	9.1
FII	12.3	11.9	12.9
Others	8.0	8.1	6.3

FII includes depository receipts

## Stock's performance (one-year)



**CMP: INR4,031**

**TP: INR5,100 (+27%)**

**Buy**

## Charting the next frontier in Defense!

Hindustan Aeronautics (HAL) is a market leader in aerospace defense. It boasts a strong order book of INR1.8t as of 31<sup>st</sup> Mar'25, along with a promising prospect pipeline of INR6t, which is likely to be awarded over the next few years. The company is transitioning from a traditional licensed model to an indigenized model and is currently working on marque projects such as Tejas Mk1, Tejas Mk1a, Su-30 upgrade, Dornier-25, and Light Utility Helicopter (LUH), et al. These projects are anticipated to fuel manufacturing revenue growth for HAL. Based on recent announcements and our discussions with industry experts, the supply of engines from GE for Tejas Mk1A is likely to commence during FY26. We expect HAL to benefit from 1) a strong pipeline of projects, 2) execution scale-up aided by large platform orders, 3) a stable stream of RoH revenues, 4) backward integration, and 5) a healthy 29%/33%/29% revenue/EBITDA/PAT CAGR over FY25-27. We initiate coverage on the stock with a BUY rating with a TP of INR5,100 based on average of DCF and 32x P/E on Mar'27 estimates. We believe that near-term catalysts will emerge when aircraft deliveries commence as engine supplies from GE resume, while medium- to long-term triggers will stem from the finalization of orders for 97 Tejas-Mk1A, Tejas MK-II, LUH, Advanced Medium Combat Aircraft (AMCA), et al.

## Positive industry tailwinds to benefit HAL

The IAF continues to remain committed to upgrading and modernizing the existing fleet and strengthening its capabilities along the borders. In a recent development, the IAF has prioritized acquiring radars, combat aircraft, helicopters, and mid-air refuelers for FY25-26, focusing on indigenous upgrades and self-reliance under Aatmanirbhar Bharat. IAF listed low-level radars, light combat aircraft, light utility helicopters, multirole helicopters, and the leasing of mid-air refueler aircraft as its key priorities for acquisition for the coming financial year where HAL already is present. The IAF also plans to prioritize the indigenous upgrade of Russian-origin Sukhoi 30 fighter jets, along with acquiring signal intelligence and communication jamming aircraft and airborne early warning and control aircraft, which we believe again is positive for HAL.

## Transitioning from a licensed model to an indigenized model

HAL is shifting its focus from a licensed business model to an indigenized model. The company started as a licensed player and has now transitioned towards manufacturing aircraft and helicopters. Major platforms of HAL across aircraft such as Light Combat Aircraft (LCA), Dornier-228 (Do-228), and Basic Trainer Aircraft (HTT-40), and across helicopters such as LCH, LUH, and Naval Utility Helicopter (NUH) are already part of the positive indigenization list of the Ministry of Defense (MoD). HAL is also continuously increasing the indigenized content across its platforms and expanding the SME network of vendors. We expect the company to continuously benefit from indigenization.

### Working towards faster delivery of Tejas Mk1A from FY26

HAL is already expanding its facility in Nasik to scale up the production of aircraft, which is expected to be operational by 1HFY26. Along with this, the company has also outsourced a large number of structures and components to private players so that HAL can focus on the integration of sophisticated systems. HAL has outsourced the production of key fuselage modules to several private companies, including L&T, Alpha Tocol, Tata Advanced Systems, and VEM Technologies. Most of the avionics will be manufactured by BEL, and radars in the initial deliveries will be procured from ELTA Systems, Israel. Engines are procured from GE, while armament is either imported or will be manufactured domestically in the future. Once engine supplies resume from GE to around 12 deliveries per year, HAL will be able to fast-track deliveries of aircraft starting from FY26.

### Strong order book and recent inflows underpin revenue visibility

HAL's order book stood at ~INR1.8t as of Mar'25, providing visibility for the next three years. This year, the order book has strengthened, following inflows of ~INR1.2t during FY25. This growth has been driven by projects such as 12 additional Su-30 MKI aircraft (INR135b), 240 aero-engines (AL-31FP) for Su-30 MKI aircraft (INR260b), avionics upgrades of Dornier-228 transport aircraft, 156 helicopters for LCH Prachand etc. We believe that the manufacturing order book had bottomed out in FY24 and is poised for healthy growth as there is clear visibility for the various platforms manufactured by HAL. We expect an addressable market of INR6t for HAL over the next 3-4 years, which would materialize from the finalization of large-scale platforms such as 97 aircraft of Tejas Mk-1, Tejas Mk-II, AMCA, and Twin Engine Deck Based Fighter (TEDBF), as well as the RoH order book stemming from existing deliveries within the current order book.

### Finalization of additional orders to be the next trigger

We believe the next trigger for HAL will come from the finalization of further orders related to 97 Tejas Mk-1A totaling around INR650b and commencement of aircraft deliveries. Company has already received contract for 156 helicopters for LCH Prachand worth INR627b. Moreover, decision-making on engine supplies for Tejas Mk-II from GE would result in the finalization of the Tejas Mk-II order for HAL worth INR600-700b by FY27/28. An incremental order of 187 LUH worth nearly INR90-100b will also be in the works during FY27.

### Execution ramp-up likely from FY26

With a strong order book of ~INR1.8t as of 31<sup>st</sup> Mar'25 and an addressable market of INR6t over the next 4-5 years, we project HAL's revenue to record an 19% CAGR over FY24-27. We expect execution on large platforms such as Tejas Mk-1A to scale up from FY26 along with the execution of orders for LUH, LCH Prachand, ALH Dhruv, HTT-40, Dornier-25, Su-30 upgrade, 12 aircraft, and RD-33 engines.

### New and advanced platforms to be the next long-term growth drivers

We believe that future opportunities for HAL will arise from AMCA and TEDBF. This is likely to be a long-term opportunity for HAL, and we expect it to reflect only after FY29. HAL has already been selected as the primary manufacturer for the AMCA, India's fifth-generation stealth fighter jet, and will be responsible for developing and



producing the majority of the aircraft, including the prototypes. The TEDBF is being designed and developed by the Aeronautical Development Agency (ADA) and will be manufactured by HAL.

### RoH will continue to provide revenue stability

HAL's RoH revenue has recorded a 17% CAGR over FY16-24. Until manufacturing revenue ramps up, based on the delivery schedules of LCA Tejas Mk1A, LUH, ALH, AL-31FP, and RD-33, ROH will continue to provide secular growth visibility. Management has a stable growth guidance of 8-9% for this segment, with a higher uptick expected once the manufacturing segment ramps up.

### Exploring MRO as the next big opportunity

HAL is exploring opportunities in MRO services within the civil sector and even beyond India. The company has already commenced operations at the Nashik facility and is negotiating arrangements with Airbus for its A320 aircraft. Additionally, HAL aims to capitalize on the growing fleet of aircraft in India, which will translate into an increase in demand for maintenance services and MRO facilities.

### Continuous focus on R&D and technology tie-ups

HAL has a strong emphasis on R&D, for which it has 10 dedicated R&D centers. During FY18-23, R&D expenses have clocked a CAGR of 9.0%, and the company has hiked R&D expenses as a % of sales to 9.5% in FY24 from 6.0% in FY20. This has resulted in a quantum jump in the cumulative number of IPRs held by HAL from 108 in FY18 to 1,026 in FY24. Along with in-house R&D, it also has collaborations with reputed institutions such as DRDO, IITs, and IISC, alongside partnerships with foreign OEMs for joint development of products and technology transfers.

### Financial outlook

We expect the overall revenue to record a CAGR of 29% over FY25-27, primarily driven by a sharp scale up in manufacturing revenue and a 5% CAGR in RoH and spares. We project its EBITDA margin to remain strong at 25.9%/27.4%/27.6% for FY25/ FY26/FY27, fueled by indigenization efforts taken by the company. With an annual capex of INR30b/INR40b/INR50b and comfortable working capital, we expect PAT to register a 29% CAGR over FY25-27. With improving revenue and stable margins, we expect RoE/RoCE to remain comfortable, reaching 22.5%/23.2% by FY27.

### Valuation and recommendation

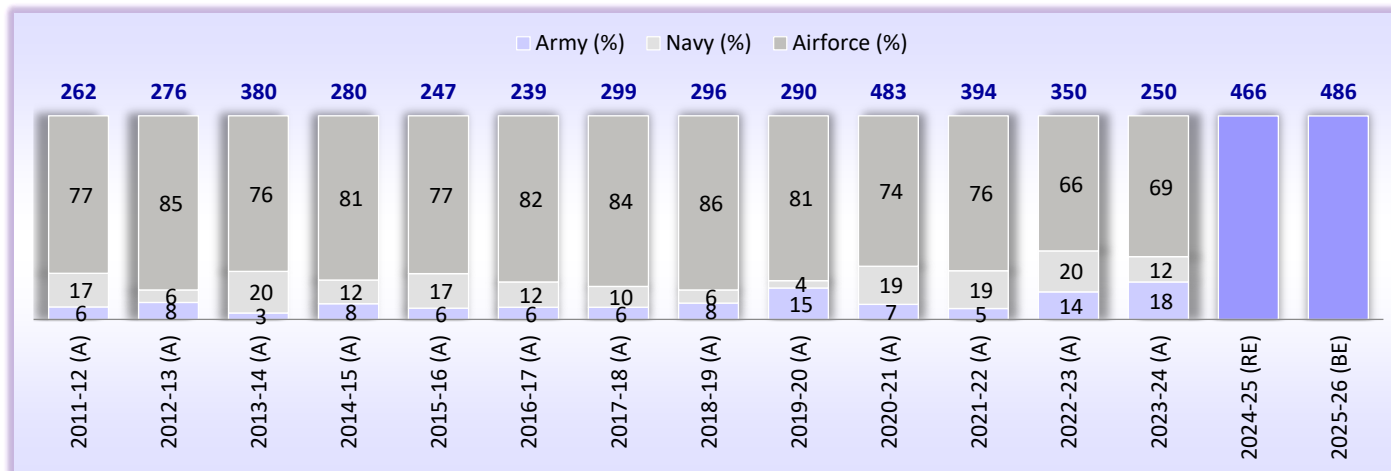
HAL is currently trading at 31.9x/25.9x FY26E/FY27E EPS. We initiate coverage on the stock with a BUY rating and a TP of INR5,100 premised on average of DCF and 32x P/E on Mar'27E estimates.

### Key risks and concerns

Key risks would include: 1) slower-than-expected finalization of large platform orders, 2) further delays in deliveries of key components such as engines for Tejas Mk1A, 3) delays in payments from MoD, and 4) increased involvement of the private sector.

## STORY IN CHARTS

### Aircraft and Aero-engines' budgets across platforms



Source: Union Budget, MOFSL

### HAL's addressable market over the medium to long term until FY30

Aircraft already awarded	Amount (INR b)	Quantity	Comments
Tejas Mk1a	480	83	❖ IAF has already placed an order for 83 Tejas Mk1A aircraft, including 73 fighters and 10 trainers. Delivery is yet to commence for Tejas Mk1a.
Su30 upgrade	260	240	❖ Already awarded to HAL
ALH	81	34	❖ Already awarded to HAL
Dornier	29	25	❖ Already awarded to HAL
RD-33	52	100	❖ Already awarded to HAL
12 Su-30 Mk1 aircraft	135	12	❖ Already awarded to HAL
LCH - Prachand	630	156	❖ LCH Prachand was recently awarded to HAL
<b>Upcoming projects over 2-3 years</b>			
Tejas Mk1a	650	97	❖ IAF's proposal for 97 additional aircraft hinges on GE Aerospace's ability to deliver at least 24 F404 engines annually from FY26 onwards
Tejas Mk2	680	108	❖ Tejas Mk2 is designed to replace aging aircraft such as the Mirage 2000, MiG-29, and Jaguar in IAF.
LUH	95	187	❖ LUH will replace the army and the Indian Air Force's (IAF) aging fleets of Cheetah and Chetak helicopters.
LUH	97	197	
Su 30 Mk1	630	84	❖ IAF also plans to prioritize the Indigenous upgrade of Russian-origin Sukhoi 30 fighter jets during FY26.
NUH	217	111	❖ Naval utility helicopter prototype in development; first flight expected by May'25.
<b>Total</b>	<b>2,370</b>		
<b>Upcoming projects over 5-6 years</b>			
AMCA	1,200	120	❖ Prototype rollout by 2026-27, first flight in 2028, certification by 2032, and induction by 2034.
IMRH (multi-utility)	1,000	400	❖ Indian armed forces are expected to procure 400 units of Indian Multi-Role Helicopter (IMRH) to replace the aging Mi-17 helicopters.
TEDBF	1,450	145	❖ The Indian Navy has projected requirements for nearly 145 TEDBF aircraft. Each prototype will cost INR10b (USD110m). The prototype rollout is planned for late 2026 or early 2027, followed by the first flight in 2028, certification by 2032, and induction in 2034.
<b>Total</b>	<b>3,650</b>		
<b>Overall TAM</b>	<b>6,020</b>		

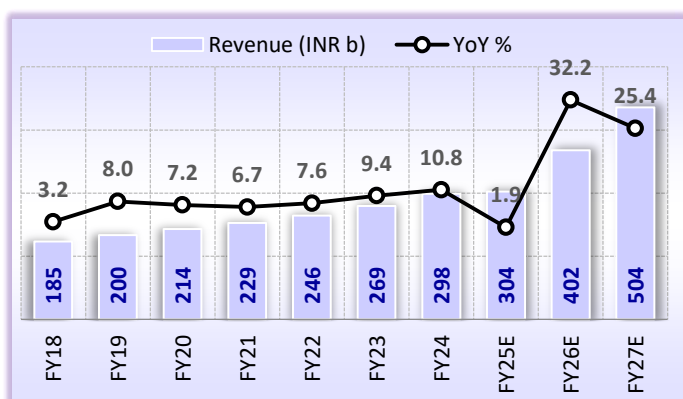
Source: Company, Industry, MOFSL

## Order inflows and awarded AoNs have been healthy for HAL during the last two years

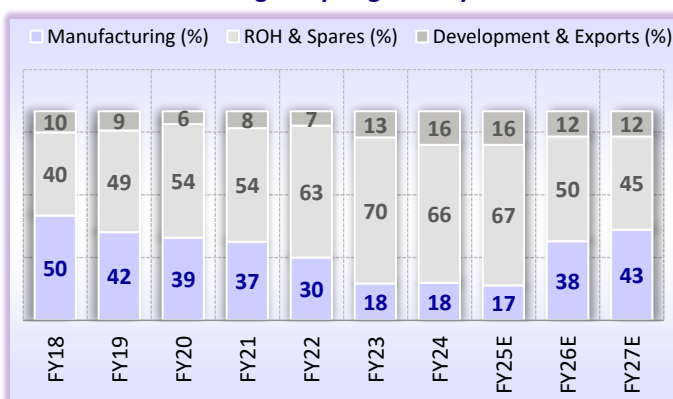
Date	Orders awarded / AON announced	Value (INR b)	Customer	Comments
<b>Orders awarded</b>				
28-Mar-25	156 LCH Prachand	627	MoD	❖ 90 for Indian Army, 56 for IAF
12-Dec-24	12 additional Su-30 MKI aircrafts	135	MoD	❖ Order placed. 62.6% indigenous content.
08-Nov-24	Avionics Upgrade of Dornier-228 Transport Aircraft		MoD	❖ Contract awarded.
03-Sep-24	240 aero-engines (AL-31FP) for Su-30 MKI aircraft	260	MoD	❖ Contract awarded. 30 aero-engines per annum for 8 years.
28-Mar-24	6 sets of LM2500 Gas Turbines (GT) and GT Auxiliaries (GTAE), Spares, Tools	12	Cochin Shipyard Limited	❖ Contract signed. Delivery between FY26-29.
22-Mar-24	2 Hindustan-228 commuter aircraft along with Manufacturer Recommended List of Spares (MRLS), Ground Handling/Support Equipment, Training, Hand-holding	2	Guyana Defence Force (GDF)	❖ Contract signed. Export order. Delivery by FY25.
15-Mar-24	Mid Life Upgrade (MLU) of 25 Dornier Aircraft	29	MoD	❖ Contract signed. Execution span of 6.5 years
13-Mar-24	34 Advanced Light Helicopters (ALH) Dhruv Mk III along with Operational Role Equipment (25 nos. for IA, and 9 nos. for ICG)	81	MoD - IA & ICG	❖ Contract signed.
01-Mar-24	RD-33 Aero Engines for MiG-29 aircrafts	52	MoD	❖ Contract signed. The aero-engines will be manufactured under TOT license from the Russian OEM.
07-Jul-23	2 Dornier-228 Aircraft with associated Engineering Support package	5	MoD - ICG	❖ Contract signed.
10-Mar-23	6 Dornier-228 aircrafts	7	MoD - IAF	❖ Contract signed.
07-Mar-23	70 HTT-40 Basic Trainer Aircraft	68	MoD - IAF	❖ Contract signed.
16-Feb-23	Supply of spares and engine repair of legacy two tonne class helicopters		Argentinian Air Force	❖ Contract signed.
<b>AONs announced</b>				
03-Dec-24	6 Advanced Light Helicopters (ALH)		ICG	❖ AON announced.
03-Sep-24	Procurement of Dornier-228 Aircraft		ICG	❖ AON announced.
17-Jun-24	156 Light Combat Helicopter (LUH) - 90 nos. for IA, and 66 nos. for IAF		MoD	❖ RFP issued.
30-Nov-23	Procurement of Light Combat Helicopter (LCH) for IAF & IA and Light Combat Aircraft (LCA) Mk 1A for IAF and, upgradation of Su-30 MKI Aircrafts		MoD	❖ AON announced. Minimum 50% of indigenous content.
15-Sep-23	Procurement of 12 Su-30 MKI Aircraft with associated equipment & avionics upgradation of Dornier Aircraft		MoD	❖ AON announced.
17-Mar-23	Procurement of Advance Light Helicopters (ALH) MK-III		MoD - ICG	❖ AON announced.

Source: Company, MOFSL

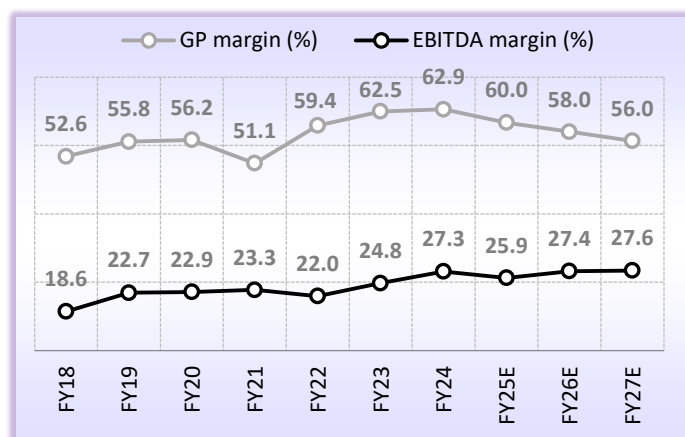
## Revenue to clock a CAGR of 29% over FY25-27E



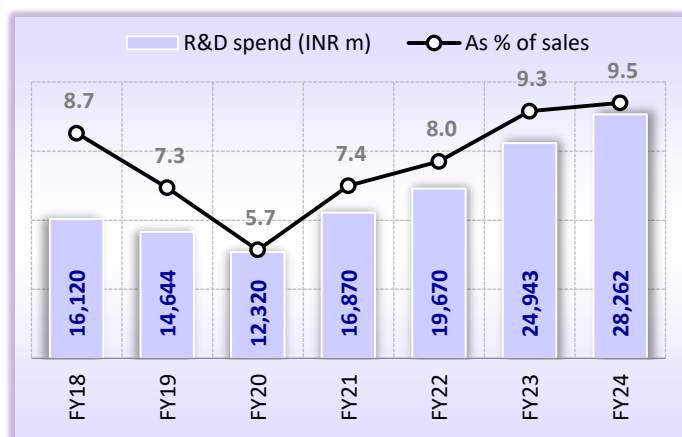
## Share of manufacturing likely to grow beyond FY25



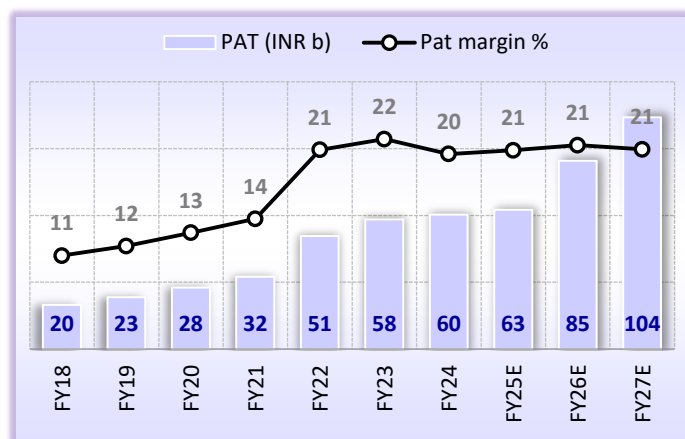
Gross margin to gradually come down as the share of RoH declines in revenue



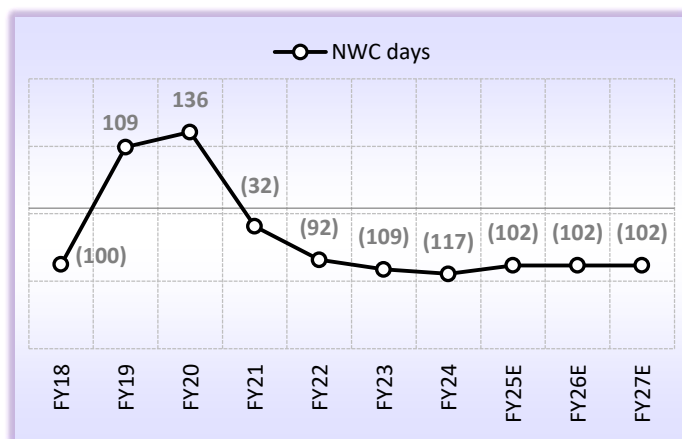
R&D spending as a % of total sales has mounted YoY as HAL continues to raise Indigenous components



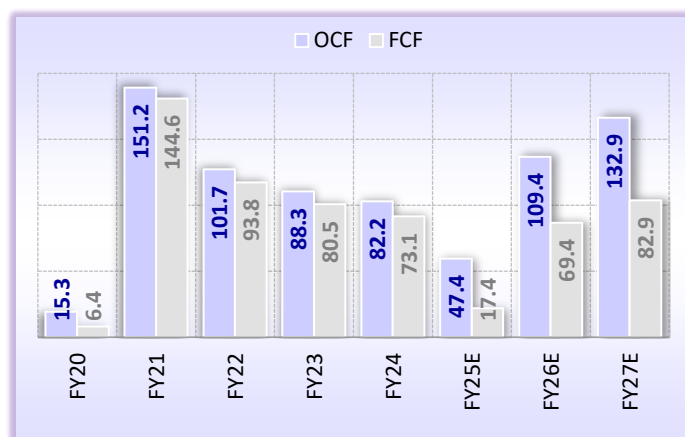
We expect PAT margin to be stable at 20-21%



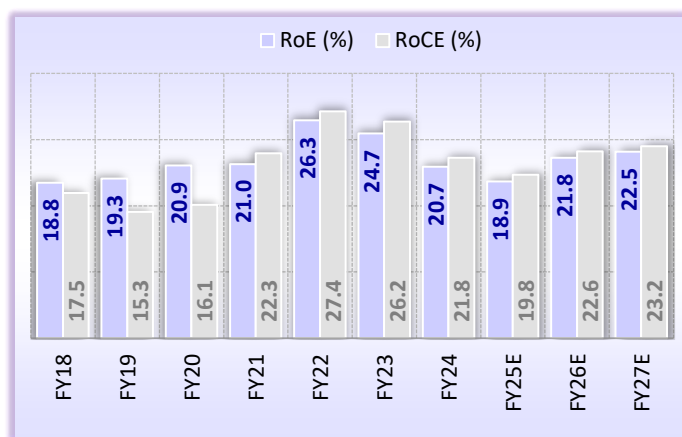
Working capital cycle likely to be at comfortable levels



We expect OCF and FCF to improve beyond FY25E (INR b)



RoE and RoCE to remain comfortable at 22-23%





## Market leader in aerospace defense

### Investment thesis

#### Potential beneficiary of modernization of the armed forces

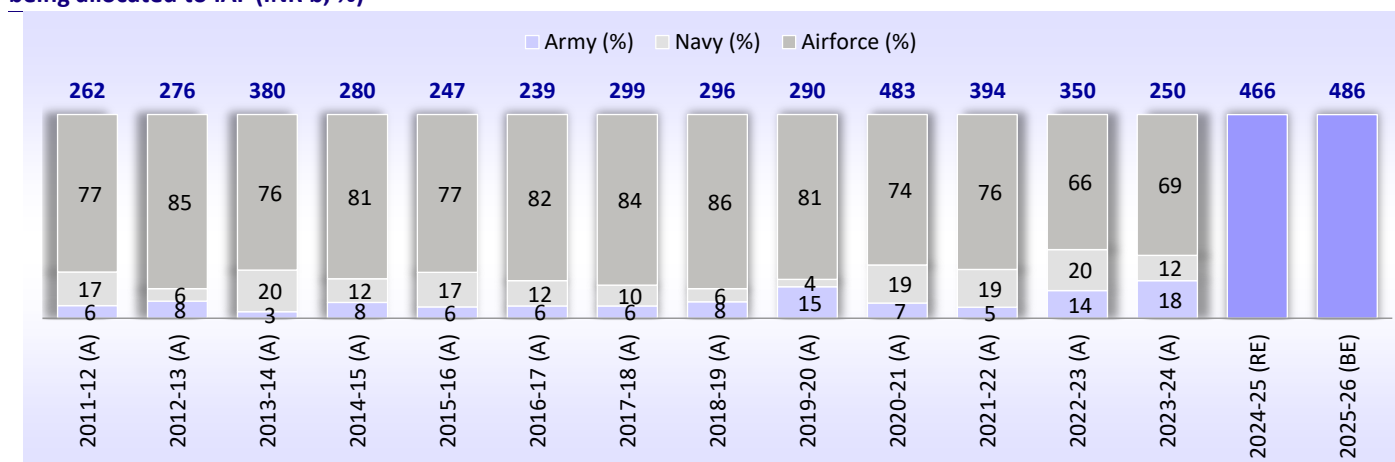
HAL is a potential beneficiary of increased defense budgetary allocations as well as increased focus on the finalization of larger platforms across aircraft defense. The overall defense budget for FY25-26 (BE) has grown 9% YoY to INR6.8t. Within this, the defense capex outlay is budgeted to grow 13% YoY to INR1.8t in FY26. Aircraft and Aero Engines' capex outlay has formed 27% of the overall defense capex outlay for the FY26 budget. We believe these will be used on some large platform orders anticipated during the year, such as Tejas Mk-1a, Tejas Mk-2, LCH Prachand, etc. Last year, new allocations were planned to be used across Su-30 and LCA Tejas MK-1a, C-295 transport aircraft, and new engines for MiG-29 fighters. Historically, the majority of the budget is allocated to the Air Force, with the remaining being split between the Army and Navy.

**Exhibit 1: Indian Defense – capital budget outlay for FY25-26 (INR b)**

Modernization head	2024-25 (BE)	2024-25 (RE)	2025-26 (BE)	2024-25 RE vs BE %	YoY %
<b>Aircraft and Aero Engines</b>	<b>402.8</b>	<b>465.9</b>	<b>486.1</b>	<b>15.7</b>	<b>4.3</b>
Heavy and Medium Vehicle	46.4	40.9	36.5	-11.8	-10.8
Other Equipment	622.0	465.9	631.0	-25.1	35.4
Rolling Stock	2.0	1.8	5.0	-12.0	184.1
Rashtriya Rifles	2.0	2.3	1.5	13.5	-33.9
Joint Staff	13.5	24.6	23.5	82.2	-4.6
Naval Fleet	238.0	256.1	243.9	7.6	-4.7
Naval Dockyard/ Projects	68.3	115.1	45.0	68.5	-60.9
Other	325.0	222.5	327.4	-31.6	47.2
<b>Total</b>	<b>1,720.0</b>	<b>1,595.0</b>	<b>1,800.0</b>	<b>-7.3</b>	<b>12.9</b>

Source: Union Budget, MOFSL

**Exhibit 2: Aircraft & Aero-engine's capital budget split between the Indian Armed Forces led by a majority of the budget being allocated to IAF (INR b, %)**



Source: Union Budget, MOFSL

### Positive industry tailwinds

IAF continues to remain committed to upgrading and modernizing the existing fleet and fortifying its capabilities along the borders. In a recent development, the IAF has prioritized acquiring radars, combat aircraft, helicopters, and mid-air refuelers for FY25-26, focusing on indigenous upgrades and self-reliance under Aatmanirbhar Bharat. IAF listed low-level radars, LCA, LUH, IMRH, and the leasing of mid-air refueler aircraft as its key priorities for acquisition for the coming financial year where HAL already is present. The IAF also plans to prioritize the indigenous upgrade of Russian-origin Sukhoi 30 fighter jets, along with acquiring signal intelligence and communication jamming aircraft and airborne early warning and control aircraft, which we believe again is positive for HAL.

### The need for modernization originates from the retiring fleet

#### Need for fleet replacement and modernization to benefit HAL in the long run

The IAF had long relied on the usage of MiG-21, MiG-23, and MiG-27, which formed the backbone of its fleet for a very long time. This premature retirement of MiG-23 and MiG-27, combined with the aging MiG-21 fleet, has created a shortfall in IAF's squadron fleet from its ideal requirement of 42 combat squadrons against the current 31 squadrons.

The IAF's dwindling squadron strength faces challenges due to the retirement of jets (MiGs) and the inability to ramp up the supply of Tejas Mk1A as a replacement for MiGs due to delays in supplies of engines from GE.

#### ■ Retirement of jets from the overall fleet

**MiGs:** There was a faster-than-expected aging and operational limitations of these fighter aircraft – 1) MiG-21 struggled to keep pace with air combat tactics and had operational mishaps, 2) MiG-23 suffered from limited agility and engine issues leading to its premature retirement in the early 2000s, and 3) MiG-27 suffered from engine reliability problems forcing its retirement by 2019. By the end of FY25, the remaining or final two squadrons of the MiG-21s too will be retired.

**Others:** A further 12 squadrons consisting of Mirage 2000, Mig-29, and Jaguar are due to be decommissioned in the mid-2030s.

#### ■ Inability to ramp up supply due to technological issues

Replacement of the MiG-21 with Tejas Mk1 is also delayed due to delays in supplies of the engine for Tejas Mk1. Further, the plummeting MiG-21 strength due to obsolescence and the inevitable retirement of its two remaining squadrons in about a year has compelled the IAF to fly its frontline combat aircraft, such as the Sukhoi-30 MKI. There is also a delay in upgrades of Sukhoi-30 MKI from Russia's Rosoboronexport.

### Benefits for HAL

To expedite the process, the government ordered 36 Rafale M fighter jets from Dassault Aviation in 2019, and it is in the process of finalizing a deal for another 26 jets. The government has also expedited the award of fighter aircraft to HAL, such as the award of 83 aircraft of Tejas Mk-1A. The government is pushing for a further 97 aircraft of Tejas Mk-1A, and the rapid development of Tejas Mk II, AMCA – HAL has been selected for all of these programs. The MoD has also placed orders for an additional 12 Sukhoi Su-30MKI multi-role fighter aircraft via the INR135b contract, offsetting retirements in the existing fleet while boosting domestic defense production.

**Exhibit 3: Current fleet strength of the Indian Armed Forces**

Aircraft	Origin	Type	Variant	In service	Current status
<b>IAF – Combat aircraft</b>					
MiG-21	Soviet Union	Fighter		36	❖ About to be retired
MiG-29	Russia	Multirole	MiG-29 UPG	65	❖ About to be retired
HAL Tejas	India	Multirole	Mk 1/1A	31	❖ Tejas Mark 1A deliveries to commence soon
Mirage 2000	France	Multirole	2000 H/I	44	❖ About to be retired and currently upgraded
Sukhoi Su-30MKI	Russia	Multirole		265	❖ Ordered 12 additional aircraft and is in discussion with Russia for an upgrade
Dassault Rafale	France	Multirole	EH/DH	36	
SEPECAT Jaguar	UK	Ground attack	IM/IS	130	❖ About to be retired and now upgraded
<b>IAF – Helicopters</b>					
MiL MI-17	Russia	Utility	Mi-17 V5	222	
MiL MI-24	Russia	Attack	Mi-24/25/35	15	
HAL Dhruv	India	Utility		107	
HAL Rudra	India	Attack		16	
Alouette III	France	Liaison	Chetak	79	
SA 315B Lama	India	Utility	Cheetah	18	
Boeing AH-64	USA	Attack	AH-64E	55	
CH-47 Chinook	USA	Transport	CH-47F	15	
<b>IAF - Trainer aircraft</b>					
BAE Hawk	United Kingdom	Jet Trainer	Hawk 132	102	
HAL Kiran	India	Jet Trainer		77	
HAL HTT-40	India	Basic Trainer		70 +36 on order	
HAL Tejas	India	Conversion Trainer	Mk. 1	1	❖ 7 on order
Pilatus PC-7	Switzerland	Trainer	Mk II	74	
Pipistrel Virus	Slovenia	Basic Trainer		NA	
<b>Indian Naval - Combat aircraft</b>					
HAL Tejas	India	Multirole	MK.1	NA	
MiG-29	Russia	Multirole	MiG-29K	36	
<b>Indian Naval - Helicopters</b>					
HAL Dhruv	India	Utility		24	❖ Eight on order
Kamov Ka-27	Russia	ASW	Ka-28	14	
Westland Sea King	United Kingdom	SAR / Utility	Mk.42B/C	25	❖ Six are UH-3H variants
HAL Chetak	France	Liaison / Utility		42	
SH-60 Seahawk	United States	ASW / SAR	MH-60R	12	❖ 18 on order
<b>Indian Naval - Trainer aircraft</b>					
BAE Hawk	United Kingdom	Jet Trainer	Hawk 132	17	
HAL Kiran	India	Jet Trainer		20	
UAV					
IAI Heron	Israel	Surveillance	Heron 1		
IAI Searcher	Israel	Surveillance	Mk. I / II		
MQ-9 Reaper	United States	Surveillance	Sea Guardian		
<b>Indian Coast Guard Helicopters</b>					
HAL Dhruv	India	Utility	Mk. I / Mk. III	4-16	
HAL Chetak	India	Utility		17	
<b>Indian Army - Helicopters</b>					
HAL Dhruv	India	Utility		225	❖ Dhruv and Rudra are 225. 63 on order

Aircraft	Origin	Type	Variant	In service	Current status
HAL Rudra	India	Attack			
Alouette III	France	Liaison/Utility	Chetak	4	❖ License-built by HAL
SA 315B Lama	France	Liaison/Utility	Cheetah	42	❖ License-built by HAL – 2 on order
HAL Prachand	India	Attack		5	❖ 109 +90* on order
Boeing AH-64	United States	Attack	AH-64E(I)		❖ 6+6 on order

Source: Industry, MOFSL

### HAL is working with multiple players to fast-track Tejas deliveries

Deliveries for Tejas Mk1A are expected to be complete by FY30-31. Tejas MK1A has 60% indigenous content and the participation of more than 40 different Indian companies in the project. The fuselage is the main body of an aircraft, housing the cockpit, passengers, and cargo. In a single-engine aircraft, the fuselage is directly connected to the engine. The rear fuselage, which supports tail protection and associated components, is a crucial structural element.

HAL has outsourced the production of key fuselage modules to several private companies, including L&T, Alpha Tocol, Tata Advanced Systems, and VEM Technologies. We list below various components of Tejas Mk1A and the scope of indigenization across components as well as imported components:

**Exhibit 4: Structure and component suppliers for Tejas Mk1A**



Source: Industry, MOFSL

- **Structure** – Tejas is one of the few aircraft in the world that is made largely from composite materials such as carbon fiber, titanium alloys, and various alloys of aluminum. More than 92% of the surface structure of TEJAS is made of

composites. This gives the aircraft greater stability, increased payload, and some amount of stealth capabilities.

- **Wings** – HAL intends to make use of L&T’s capabilities for making wings of the aircraft.
- **Front fuselage – Dynamatic Technologies** is anticipated to make the front fuselage or main body.
- **Rear fuselage – VEM Technologies** is projected to make the center fuselage, and **Alpha Doca** would make the rear fuselage.
- **Avionics** – Most of the avionics are manufactured/integrated by BEL, which includes Multi-Function Displays, a Smart Landing System, Helmet mounted Display, and a Secure Datalink-based Communication System. It also has various modern sensors and a state-of-the-art navigation system, which is also integrated with a satellite-based data link.
- **Radar** – The most important part of TEJAS MK-1A is its radar. The manually steered Planer Array radar is now replaced with a very advanced electronically scanned phased array radar ELM2052 (AESA) made by **Elta Systems, Israel**. It can give over 200-degree coverage without any threat of jamming. Since it is a phased array radar, it is difficult to detect too. At later stages, indigenously made Uttam radar will be used in these aircraft, and they are currently being tested also. This radar is also gallium arsenide radar.
- **Self-Protection Jammer (SPJ)** – Another upgrade over the existing Tejas is this self-protection jammer, which is made in Tejas MK-1A. This is an integrated system that is automatically controlled and saves an aircraft from various radar-guided weapons systems launched both from the air and the surface. It can detect and engage multiple targets at one time and create an electronic environment suitable for survival.
- **Engine** – The Tejas Mk1A, is powered by the **GE F404-IN20 engine**, with General Electric (GE) initially slated to begin engine deliveries in 2023, but faced delays and now expects to begin deliveries by Mar/Apr’25 for 12 engines for CY25.
- **Armament** – Tejas is capable of carrying a range of weapons such as air-to-air missiles, air-to-ground missiles, and precision-guided munitions such as **Russian R73, Israeli Python 5, and ASRAM** by MBDA for close air combat, **Russian R77, and DRDO-developed Astra Mk1A** for beyond visual range air combat.

This outsourcing strategy of getting a few important components from private players directly addresses the bottleneck in HAL’s production: the final assembly line (FAL) process. The Tejas Mk1A requires the integration of sophisticated systems. These include the ELTA ELM-2052 Active Electronically Scanned Array (AESA) radar, electronic warfare suites, and advanced weapon systems such as the Astra Mk1 and ASRAAM missiles. Thus, we believe that once supplies from GE resume for F404 engines, HAL will be able to scale up Tejas Mk1A deliveries.



### A promising pipeline and a robust order book augur well for HAL

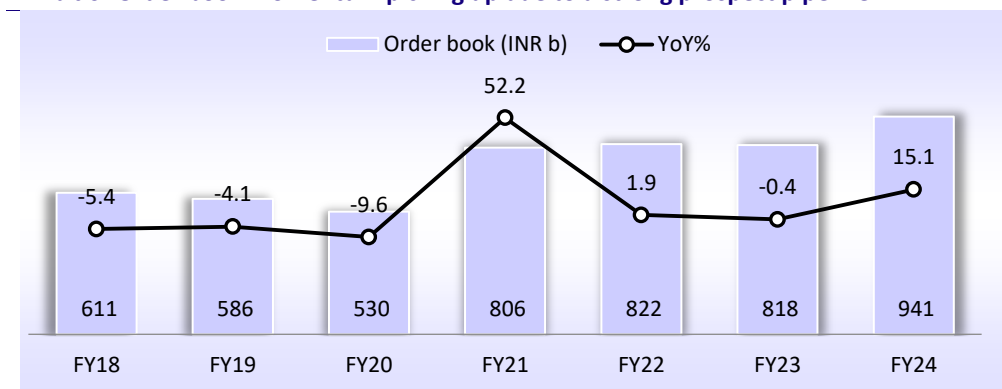
HAL has a strong prospect pipeline spread across 97 aircraft of Tejas Mk1A, Tejas Mk2, LCH Prachand, AMCA, IMRH, etc., totaling nearly INR6t. We expect these projects to be awarded over the next 3-4 years, as HAL has already received AoNs for some of these projects.

#### Exhibit 5: HAL's addressable market over the medium to long term until FY30

Aircraft already awarded	Amount (INR b)	Quantity	Comments
Tejas Mk1a	480	83	❖ IAF has already placed an order for 83 Tejas Mk1A aircraft, including 73 fighters and 10 trainers. Delivery is yet to commence for Tejas Mk1a.
Su30 upgrade	260	240	❖ Already awarded to HAL
ALH	81	34	❖ Already awarded to HAL
Dornier	29	25	❖ Already awarded to HAL
RD-33	52	100	❖ Already awarded to HAL
12 Su-30 Mk1 aircraft	135	12	❖ Already awarded to HAL
LCH - Prachand	630	156	❖ LCH Prachand was recently awarded to HAL
<b>Upcoming projects over 2-3 years</b>			
Tejas Mk1a	650	97	❖ IAF's proposal for 97 additional aircraft hinges on GE Aerospace's ability to deliver at least 24 F404 engines annually from FY26 onwards
Tejas Mk2	680	108	❖ Tejas Mk2 is designed to replace aging aircraft such as the Mirage 2000, MiG-29, and Jaguar in IAF.
LUH	95	187	❖ LUH will replace the army and the Indian Air Force's (IAF) aging fleets of Cheetah and Chetak helicopters.
LUH	97	197	
Su 30 Mk1	630	84	❖ IAF also plans to prioritize the Indigenous upgrade of Russian-origin Sukhoi 30 fighter jets during FY26.
NUH	217	111	❖ Naval utility helicopter prototype in development; first flight expected by May'25.
<b>Total</b>	<b>2,370</b>		
<b>Upcoming projects over 5-6 years</b>			
AMCA	1,200	120	❖ Prototype rollout by 2026-27, first flight in 2028, certification by 2032, and induction by 2034.
IMRH (multi-utility)	1,000	400	❖ Indian armed forces are expected to procure 400 units of Indian Multi-Role Helicopter (IMRH) to replace the aging Mi-17 helicopters.
TEDBF	1,450	145	❖ The Indian Navy has projected requirements for nearly 145 TEDBF aircraft. Each prototype will cost INR10b (USD110m). The prototype rollout is planned for late 2026 or early 2027, followed by the first flight in 2028, certification by 2032, and induction in 2034.
<b>Total</b>	<b>3,650</b>		
<b>Overall TAM</b>	<b>6,020</b>		

Source: Company, Industry, MOFSL

Given the historical underinvestment in fleet upgradation, and reliance on refurbishment of the existing Russian and western-origin fleet, the ROH order book has clocked in a steady CAGR of 11% over FY19-24, while the manufacturing order book has only seen a 10% CAGR over the same period. We believe the manufacturing order book had bottomed out in FY24 and is set for healthy growth as there is clear visibility for the various platforms manufactured by HAL. Consequently, over the last 1-2 years, orders have already been placed for LCA Tejas Mk-1A, LCH, ALH, and Su-30 aircraft, as well as the RD33 aero-engine, which will be retrofitted in the existing MiG-29 fleet to sustain the operational capability of the MiG-29 fleet for its residual service life. The aero-engines will be manufactured under a ToT license from the Russian OEM.

**Exhibit 6: Order book momentum picking up due to a strong prospect pipeline**


Source: Company, MOFSL

**Exhibit 7: Order inflows and awarded AoNs have been healthy for HAL during the last two years**

Date	Orders awarded / AON announced	Value (INR b)	Customer	Comments
<b>Orders awarded</b>				
28-Mar-25	156 LCH Prachand	627	MoD	❖ 90 for Indian Army, 56 for IAF
12-Dec-24	12 additional Su-30 MKI aircrafts	135	MoD	❖ Order placed. 62.6% indigenous content.
08-Nov-24	Avionics Upgrade of Dornier-228 Transport Aircraft		MoD	❖ Contract awarded.
03-Sep-24	240 aero-engines (AL-31FP) for Su-30 MKI aircraft	260	MoD	❖ Contract awarded. 30 aero-engines per annum for 8 years.
28-Mar-24	6 sets of LM2500 Gas Turbines (GT) and GT Auxiliaries (GTAE), Spares, Tools	12	Cochin Shipyard Limited	❖ Contract signed. Delivery between FY26-29.
22-Mar-24	2 Hindustan-228 commuter aircraft along with Manufacturer Recommended List of Spares (MRLS), Ground Handling/Support Equipment, Training, Hand-holding	2	Guyana Defence Force (GDF)	❖ Contract signed. Export order. Delivery by FY25.
15-Mar-24	Mid Life Upgrade (MLU) of 25 Dornier Aircraft	29	MoD	❖ Contract signed. Execution span of 6.5 years
13-Mar-24	34 Advanced Light Helicopters (ALH) Dhruv Mk III along with Operational Role Equipment (25 nos. for IA, and 9 nos. for ICG)	81	MoD - IA & ICG	❖ Contract signed.
01-Mar-24	RD-33 Aero Engines for MiG-29 aircrafts	52	MoD	❖ Contract signed. The aero-engines will be manufactured under TOT license from the Russian OEM.
07-Jul-23	2 Dornier-228 Aircraft with associated Engineering Support package	5	MoD - ICG	❖ Contract signed.
10-Mar-23	6 Dornier-228 aircrafts	7	MoD - IAF	❖ Contract signed.
07-Mar-23	70 HTT-40 Basic Trainer Aircraft	68	MoD - IAF	❖ Contract signed.
16-Feb-23	Supply of spares and engine repair of legacy two tonne class helicopters		Argentinian Air Force	❖ Contract signed.
<b>AONs announced</b>				
03-Dec-24	6 Advanced Light Helicopters (ALH)		ICG	❖ AON announced.
03-Sep-24	Procurement of Dornier-228 Aircraft		ICG	❖ AON announced.
17-Jun-24	156 Light Combat Helicopter (LUH) - 90 nos. for IA, and 66 nos. for IAF		MoD	❖ RFP issued.
30-Nov-23	Procurement of Light Combat Helicopter (LCH) for IAF & IA and Light Combat Aircraft (LCA) Mk 1A for IAF and, upgradation of Su-30 MKI Aircrafts		MoD	❖ AON announced. Minimum 50% of indigenous content.
15-Sep-23	Procurement of 12 Su-30 MKI Aircraft with associated equipment & avionics upgradation of Dornier Aircraft		MoD	❖ AON announced.
17-Mar-23	Procurement of Advance Light Helicopters (ALH) MK-III		MoD - ICG	❖ AON announced.

Source: Company, MOFSL

### The major programs of HAL at present

HAL is involved in the manufacturing of aircraft (trainers and fighters), helicopters (utility and weaponized), their accessories and spares, repair and overhaul of the aircraft and helicopters, design and development of new product upgrades, and manufacture of some of the important structures used in satellites. The company is actively looking for opportunities to add projects to its pipeline, as evident in its strong order book position of ~INR1.8t as of 31<sup>st</sup> Mar'25.

**Exhibit 8: Major programs at present**

Design & Development	Upgrade Programs	Overhaul Programs	Production
❖ 'TEJAS' Light Combat Aircraft (LCA) Single Seater, Trainer and Naval Variants.	❖ Fighter <ul style="list-style-type: none"> <li>➢ Mirage 2000 I /TI</li> <li>➢ Jaguar Darin III</li> <li>➢ Hawk-i</li> </ul>	❖ Su-30 MKI	❖ LCA
❖ Light Combat Helicopter - (LCH)	❖ Transport <ul style="list-style-type: none"> <li>➢ Do-228 Glass Cockpit</li> </ul>	❖ Hawk Mk132	❖ Su-30MKI
❖ Light Utility Helicopter - (LUH)		❖ Jaguar	❖ Do-228
❖ Basic Turboprop Trainer HTT - 40		❖ Mirage-2000 T /TH	❖ ALH Dhruv
❖ Unmanned Aerial Vehicle (UAV)		❖ Kiran HJT-16	❖ LCH
❖ Do - 228 Civil Variant		❖ Do-228	❖ Chetak / Cheetah
❖ HTFE-25 Turbo Fan Engine		❖ An-32	
❖ HTSE-1200 Turbo Shaft Engine		❖ HS-748	
		❖ ALH Dhruv	
		❖ Chetak / Cheetah / Lancer	
		❖ MiG-21 series	

Source: Industry, Company

### Government supports indigenization

In recent years, a significant impetus has been given by the government to develop and strengthen the A&D Industry in the country and indigenization of Defense equipment under the "Atmanirbhar Bharat Abhiyan" to reduce defense import bill and make the country self-reliant in defense. The defense procurements are guided by the Defence Acquisition Procedure (DAP-2020), which lays down emphasis on higher indigenous content. To propel indigenization, Five Positive Indigenization Lists (PIL) have been issued by the Department of Military Affairs (DMA), in which 21 items of HAL are listed.

**Exhibit 9: Major platforms of HAL included under PIL**

Aircraft	Helicopters	Engines	Other
Light Combat Aircraft (LCA) Mk1A	❖ Light Combat Helicopter (LCH)	❖ Small Jet Engines (PTAE)	❖ Long Range UAV (HALE)
Transport Aircraft (Do-228)	❖ Light Utility Helicopter (LUH)		❖ Medium Altitude Long Endurance UAV (MALE)
Basic Trainer Aircraft (HTT-40)	❖ NUH		❖ Expendable Aerial Targets (ABHYAS)
			❖ Combat Air Teaming System (CATS)

Source: Company, MOFSL

### Moving beyond the licensed model towards an indigenized model

With the government's support through schemes such as 'Atmanirbhar Bharat Abhiyan' and the introduction of various Positive Indigenization Lists (PIL), HAL is shifting its focus from a licensed business model to an indigenized model. Indigenized content in Tejas MK-1A will reach 65% by the end of its 180 deliverables, as compared to 59.7% in Tejas MK-1. Further, Russian company Rosoboronexport has also stated about the localization of the Su-57E at HAL facilities as early as CY25. The company's helicopters, such as Dhruv, Rudra, and Prachand, are other products that the company manufactures indigenously. The aging fleet of Cheetah and Chetak helicopters is soon to be retired and replaced with the Prachand Helicopter.

**Exhibit 10: HAL is increasing the Indigenous component in its products**

Licensed / JV Products	Indigenous Products
❖ Prentice	❖ HT-2
❖ Harlow PC-5A	❖ HF-24 Marut
❖ Gnat	❖ HJT-16 Kiran
❖ Mig-21	❖ Dhruv ALH
❖ Chetak	❖ Tejas LCA
❖ HD 748 Avro	❖ Rudra
❖ Cheetah	❖ LCH
❖ MiG-27	
❖ Jaguar	
❖ Su-30 MKI	
❖ Hawk Mk132	
❖ Dornier 228	

Source: Company

**Exhibit 11: Indigenization content across platforms being worked upon by HAL**

Platform	Indigenous content by value (%)
LCA Tejas Mk1/ Mk1A	53.6
Su-30 MKI	51.5
Do-228	44.2
ALH	55.9
LCH	54.1
LUH	52.0

Source: Company, MOFSL

**Future potential — AMCA and TEDBF**

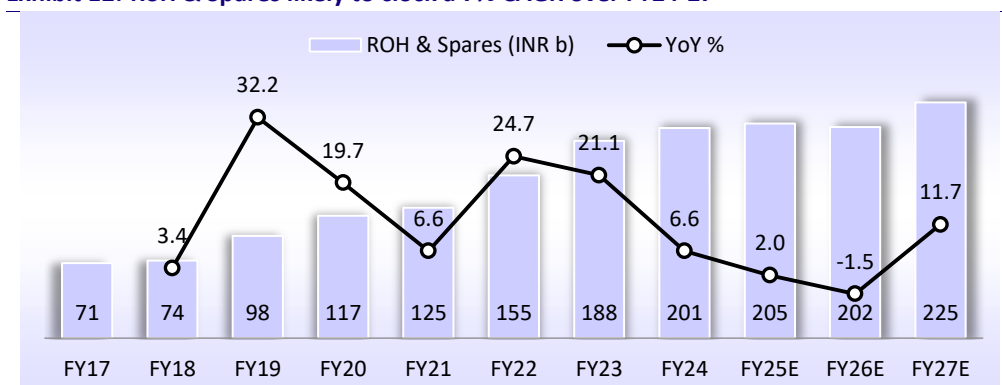
Once the production lines clear from Tejas Mk1A, the path for fifth-generation AMCA will clear out. AMCA is planned to be a single-seat, twin-engine, all-weather, fifth-generation stealth, multi-role combat aircraft being developed for the IAF and the Indian Navy. The Mark 1 variant of the aircraft will use the US-made GE-414 engine of the 90kN class, while the advanced AMCA Mk2 will have a more powerful 110kN engine. In 2015, the basic design configuration of AMCA was finalized, and it was accepted by IAF in 2016. The design work was completed in 2023, and Committee on Security (CCS) approval for the INR150b project for prototype development was received in March 2024. The first prototype is expected in 2028-29, and the first flight is anticipated to be in another two years. Once successfully tested, IAF plans to procure at least 125 of these jets.

The TEDBF is a canard delta-wing, twin-engine, carrier-based, multirole combat aircraft currently under development for the Indian Navy. The ADS is working diligently to complete the Critical Design Review for all TEDBF systems by early 2025. The first TEDBF jets are expected to roll out in four years in 2029-30 (the original target of 2026 was pushed back), and once approved by the Navy and Cabinet Committee on Security (CCS), the program will enter service by 2034.

### ROH offers a steady revenue stream

Over the years, given HAL's strong moat in terms of being the government's preferred domestic supplier of aircraft, a huge chunk of the existing fleet of the Defense Services is composed of aircraft manufactured by HAL (both under license from foreign OEMs and own-developed products). This provides the company with a steady revenue stream, as manufacturing orders tend to be chunky while the requirement for ROH is fairly smooth. ROH revenue has also helped make up for the shortfall in manufacturing revenue in FY22 and FY23 caused by the depletion of the order book. For perspective, while manufacturing revenues have delivered a negative CAGR of 7%, ROH has seen a 17% CAGR over FY16-24. Until manufacturing revenue ramps up, based on the delivery schedules of LCA Tejas Mk1A, LUH, ALH, AL-31FP, and RD-33, ROH will continue to provide secular growth visibility. Management has a stable growth guidance of 8-9% for this segment, with a higher uptick expected once the manufacturing segment ramps up.

**Exhibit 12: RoH & Spares likely to clock a 7% CAGR over FY24-27**



Source: Company, MOFSL

### MRO opportunities can unfold over time

The Indian MRO industry is projected to become a USD4b industry by 2030. In India, airlines spend around 12-15% of their overall revenues on maintenance, which becomes the second most expensive item after fuel (45% of operating expenses). In general, domestic airline operators perform on-tarmac inspections in-house and outsource engines, heavy maintenance, and modification work to third-party MROs. Engine and component repairs account for over 60-70% of MRO costs, and the remaining 30-40% is spent on airframe maintenance. Of the two, Indian MROs are competent in performing airframe maintenance, whereas engine and component MRO services are procured from abroad. Further, there is no major helicopter MRO facility in India except for Pawan Hans and HAL. Helicopter MRO services are therefore a significant business opportunity with considerable potential for the future.

To strengthen the aircraft MRO industry in India, HAL signed an MoU with Airbus on 9<sup>th</sup> Nov'23 to support its entry into servicing commercial aircraft. According to the MoU, Airbus will provide the A320 family tool package and offer specialized consulting services to HAL to set up an MRO in Nashik. HAL's Nashik division has capabilities in civil MRO, which include the Directorate General of Civil Aviation (DGCA)-approved three hangars and skilled manpower from their defense activities.

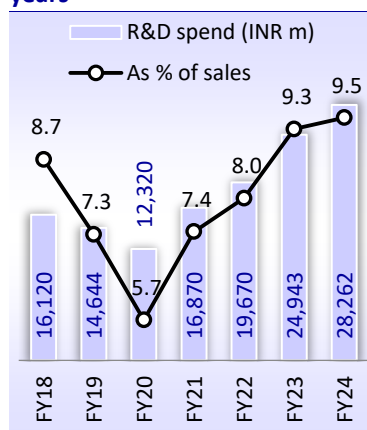


**Exhibit 13: HAL – MRO service portfolio**

Aircraft	Helicopters	Power Plant Services	Systems, Accessories and Avionics
AN-32	CHETAK	INDUSTRIAL 501K	Instrument
HS-748	CHEETAH	INDL. AVON	Fuel
DO-228	ALH	AL-31 FP	Mechanical
MiG-21 BISON		RD-33	Communication
MIRAGE		R-29B	Navigation
JAGUAR		R-25	Radar
KIRAN-II		TM 333-2B2	
KIRAN-I/IA		GARRETT	
		ARTOUSTE III B	
		GNOME	
		ORPHEUS	
		DART	
		ADOUR MK 804	
		ADOUR MK 811	

Source: Company, MOFSL

#### HAL's R&D spending as a % of sales likely to mount over the years



#### R&D spending continuously moving up

- Presently, HAL has 20 production and 10 R&D centers. These R&D centers are located at ten geographic locations in seven states across the country for current and future operations.
- During FY18-24, R&D expenses clocked a CAGR of 10%, and HAL hiked R&D expenses as a % of sales to 9.5% in FY24 from 6.0% in FY20. This has resulted in a quantum jump in the cumulative number of IPRs held by the company from 108 in FY18 to 1,026 in FY24. Along with in-house R&D, the company also has collaborations with reputed institutions such as DRDO, IITs, and IISc alongside partnerships with foreign OEMs for joint development of products and technology transfers. Key programs where major progress has been achieved include HTT-40, LUH, LCA Mk1A, IMRH, and the development of various engines (25kN Turbofan Engine and 1,200kW Turboshaft Engine). For FY25, the company has earmarked ~INR60b as R&D investments towards IMRH and other projects.

**Exhibit 14: MoUs signed by HAL over the years**

Date	MoU partner	Purpose
09-Nov-23	Airbus	❖ To establish an MRO facility for A-320 family aircraft in Nashik
06-Jun-23	General Electric	❖ For ToT and manufacturing of GE-414 aero-engine in India for LCA MK2 aircraft
Oct'22	Israel Aerospace Industries (IAI) Limited	❖ For leasing, operation, and maintenance of fixed-wing UAVs to the Indian Defense Forces
July'22	Honeywell International Inc.	❖ For 'High Power Generation Equipment Collaboration'
19-Jul-22	Heroux Devtek	❖ For design, development, and MRO of landing gears of C-295 aircraft
July'22	Rolls Royce	❖ To become an in-country partner supplier for the MT7 Marine Gas Turbine Package for sales within the Indian Market
08-Jul-22	Safran Helicopter Engines	❖ To create a new JV intended for the design, development, production, sales, and support of helicopter engines to meet the requirements of future helicopter programs of Indian Defense including the 13-ton IMRH
31-May-22	Air Mauritius Limited	❖ For undertaking a feasibility study for enhancing/setting up an MRO facility by Air Mauritius for maintenance of the Do-228 aircraft.
04-Apr-22	Israel Aerospace Industries (IAI) Limited	❖ To convert Civil (Passenger) aircraft to Multi-Mission Tanker Transport (MMTT) aircraft in India
14-Mar-22	Safran Helicopter Engines	❖ To explore business opportunities in Helicopter Engines, in line with the goals of the Government of India's "Atmanirbhar Bharat" / Make in India initiative
03-Mar-22	Uganda Peoples Defence	❖ Co-operation for MRO and supply of spares etc. for Su-30 Mk2 of UPDF

Date	MoU partner	Purpose
	Forces (UPDF)	
12-Jan-22	Max AeroSpace & Aviation Pvt. Ltd	❖ To explore business opportunities for MRO of civil aircraft with a focus on exploring the business for components and engine / Auxiliary Power Units (APUs), which are currently going outside India for maintenance
09-Nov-21	ZeroAvia	❖ development collaboration agreement for a hydrogen-electric powertrain capable of flying the 19-seat Dornier 228 aircraft up to 500 NM
14-Sep-21	Rolls-Royce	❖ For Make-in-India Adour engine parts to support Rolls-Royce's international defense customer base
09-Apr-21	Rolls-Royce	❖ To become a "Build to Print" supplier for the MT30 (Gas Turbine) package for sales within the Indian market

Source: Company; MOFSL

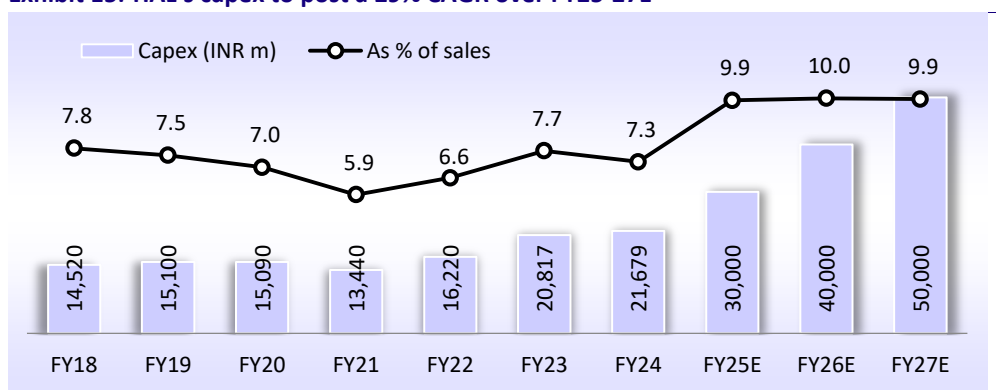
### Ramping up capacity to ensure timely execution

With a massive pipeline in the offing, coupled with the existing order book, HAL would need to continuously invest in additional capacity to ensure that deliveries aren't delayed. Accordingly, the company has decided:

- to augment its capacity from 16 aircraft per year to 24 aircraft to expedite the delivery of 83 LCA Mk1A and the expected follow-up order of 97 LCA Mk1A.
- that the third line, which is being set up in the Nashik division, will be in a position to operate at an optimum capacity of eight aircraft from FY26.
- to set up a line for HTT-40 and additional Su-30 MKI aircraft in the Nashik facility.

Over the next five years, HAL has announced a capex program of ~INR140-150b that translates into an annual outlay of ~INR30b. This investment has been envisaged keeping in mind the opportunities from current and upcoming projects such as LCA Mk2, GE 414 engine, IMRH engine, AMCA, additional Su-30 aircraft, etc. as well as the ROH opportunities on the civilian side where the company is trying to make inroads.

**Exhibit 15: HAL's capex to post a 29% CAGR over FY25-27E**



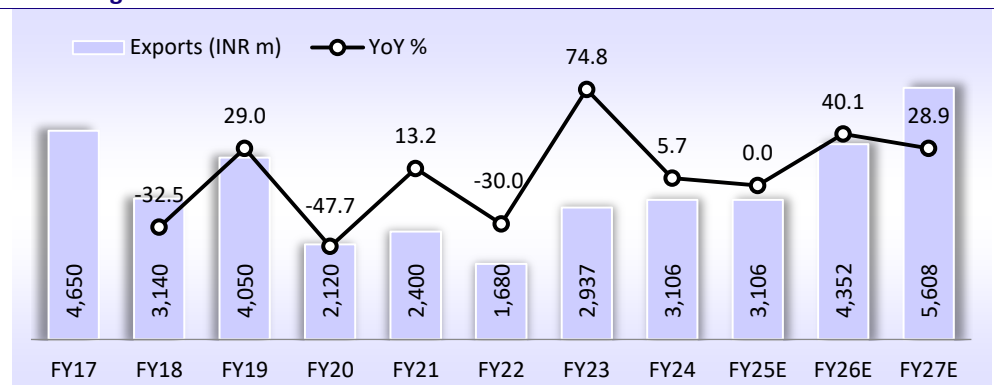
Source: Company, MOFSL

### Exports to improve gradually

Though the company has seen a 4% compounded decline in exports over FY16-24, there has been an uptick of late as the company desired to rely on its platforms (LCA, LCH, LUH, and HTT) rather than depending on products that it manufactures under license from foreign OEMs. Now that HAL has a credible lineup spanning trainer aircraft, fighter aircraft, helicopters, etc., it can explore a wider avenue of opportunities. The government has put forth an ambitious target of defense exports worth INR350b by FY25 and INR500b by FY29. In keeping with the same, it has set

up an office in Malaysia and aims to capitalize on ROH opportunities given that Malaysia has a sizeable fleet of Sukhoi-30MKMs in its arsenal. Other geographies where the company is looking to have a meaningful presence are Vietnam, the Philippines, Egypt, the US, and Indonesia. Notably, it has bagged a ~INR1.94b contract from the Guyana Defense Force and Guyana Government for the supply of two Hindustan-228 commuter aircraft along with spares, training, and hand-holding. Further, HAL is in talks with the governments of Nigeria, Egypt, and Argentina to explore the possibility of supplying LCA to these countries.

**Exhibit 16: HAL's exports likely to clock a 34% CAGR over FY25-27 led by increased inflows from foreign markets**



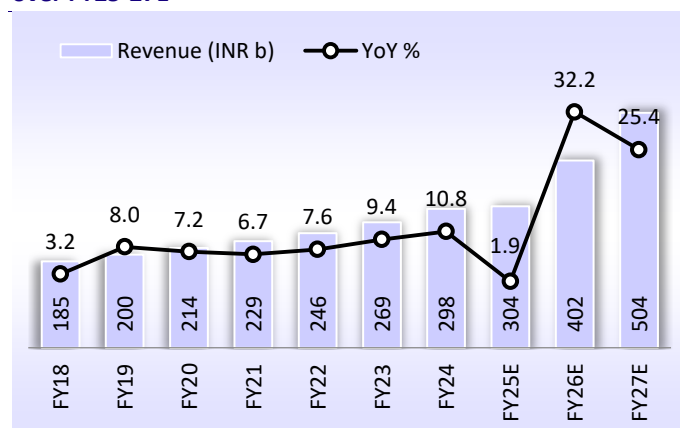
Source: Company, MOFSL

## Financial outlook

### Revenue growth to be led by Tejas Mk1A deliveries

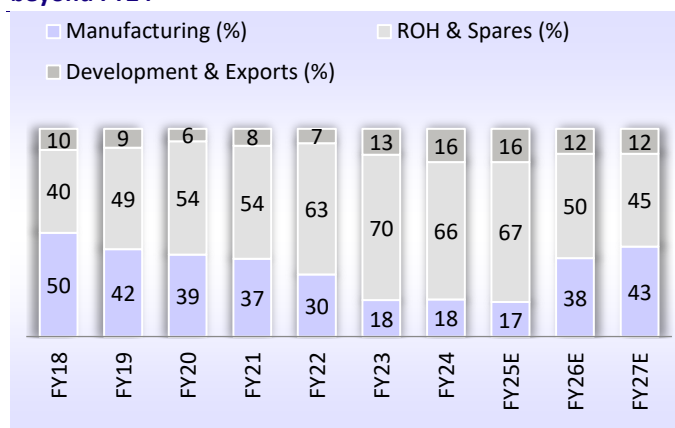
We expect HAL's revenue to clock a CAGR of 29% over FY24-27, driven by a sharp scale up in manufacturing revenue. This growth will be fueled by eight Tejas Mk1A deliveries in FY26 (scaling up to 12 by FY27), as well as the execution of other projects such as LUH (197 helicopters), ALH, RD-33, and HTT-40. We expect RoH & Spares revenue growth to remain at 5% over FY25-27. Going forward, the share of RoH revenue is expected to come down as manufacturing revenue improves.

**Exhibit 17: We expect HAL's revenue to record a 29% CAGR over FY25-27E**



Source: Company, MOFSL

**Exhibit 18: Share of manufacturing revenue likely to grow beyond FY24**

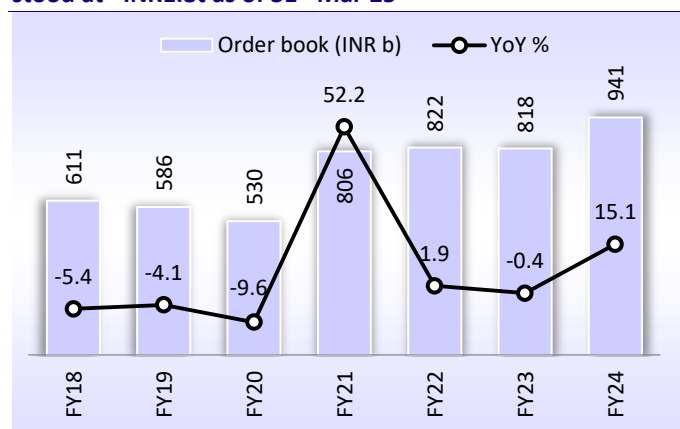


Source: Company, MOFSL

### Order book stands strong at INR1.8t

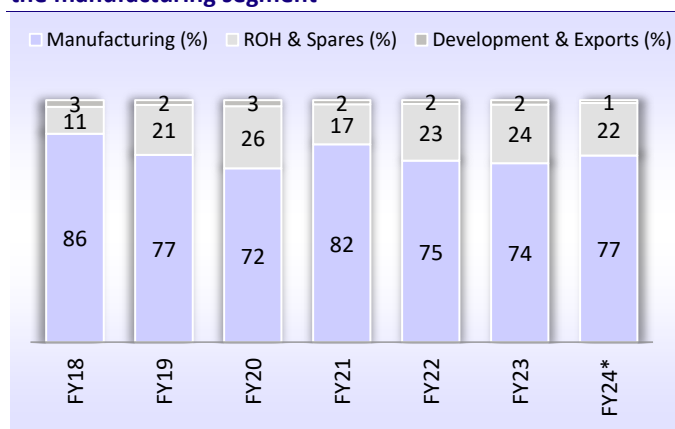
The order book of HAL stood at INR1.8t as of 31<sup>st</sup> Mar'25. We expect overall order inflows for manufacturing to come from the finalization of 97 Tejas Mk-1A and 156 helicopters for LCH Prachand, Tejas Mk-II, and 187 LUH helicopters over the next 2-3 years.

**Exhibit 19: Order book clocked a 5% CAGR over FY21-24 and stood at ~INR1.8t as of 31<sup>st</sup> Mar'25**



Source: Company, MOFSL

**Exhibit 20: Order book mix continues to remain strong for the manufacturing segment**

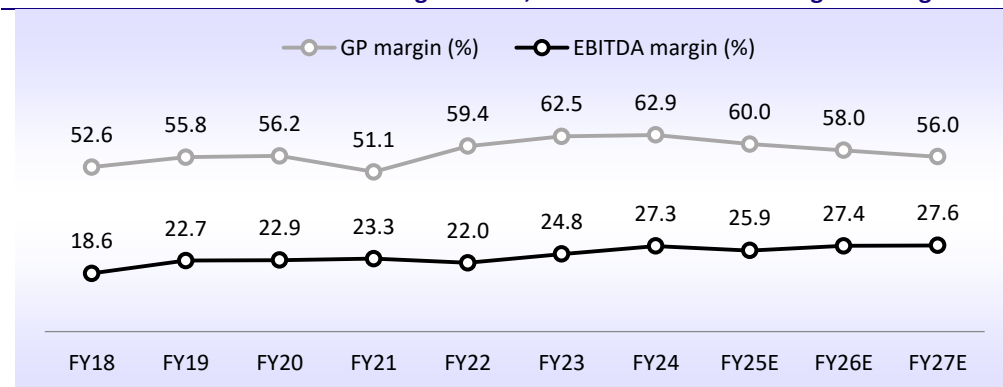


Source: Company, MOFSL

### EBITDA & gross margins will move according to revenue mix

We expect HAL's gross margin to come down gradually as the share of revenue from RoH to the total revenue declines and manufacturing revenue scales up. We expect company to benefit from improved operating leverage and hence expect EBITDA margin of ~25.9%/27.4%/27.6% for FY25/FY26/FY27.

**Exhibit 21: EBITDA margin likely to stabilize, while HAL will benefit from the anticipated increase in the share of manufacturing revenue, which would reduce the gross margin**

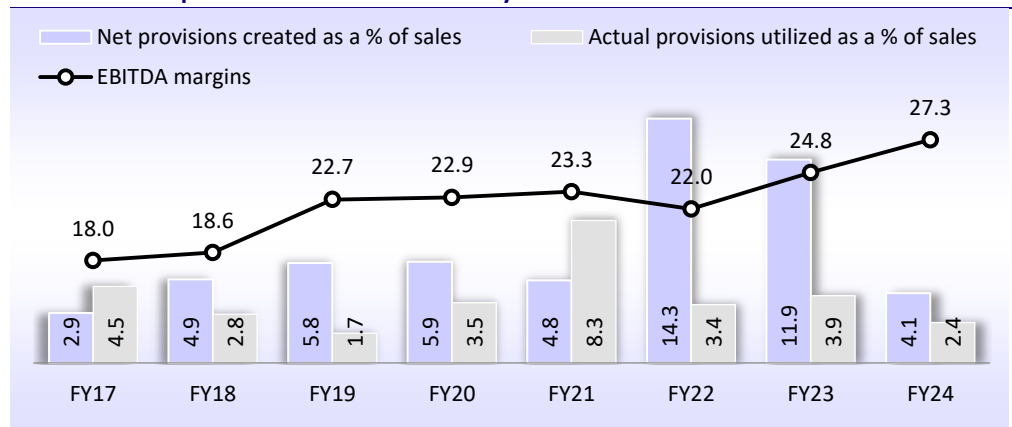


Source: Company, MOFSL

### Provisions made in past

The company had previously recognized revenue based on the estimated selling price of LCA aircraft, pending approval of the contract price amendment. However, as a prudent measure, the company later classified this amount as doubtful debt until approval was granted. Following the approval, the company reversed the provision of INR10.3b in FY24, which was made in earlier years.

**Exhibit 22: Net provisions created vs. actually utilized**



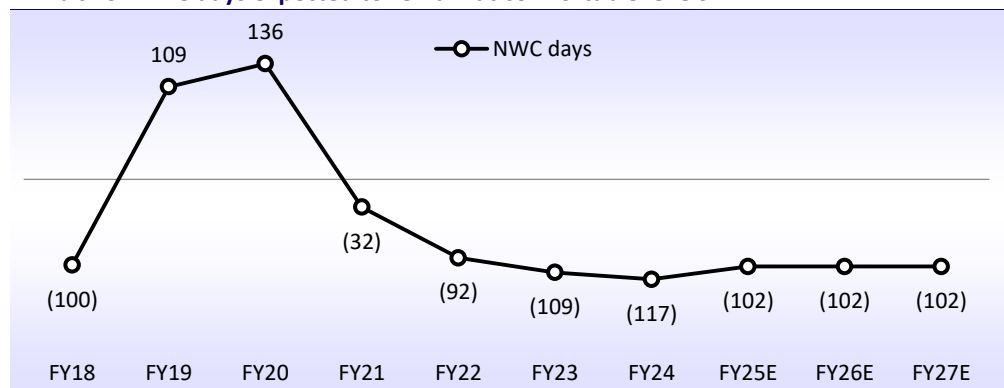
Source: Company, MOFSL



### NWC days are negative and supported by high customer advances

HAL's NWC days stood at -117 in FY24, and we expect it to remain comfortable owing to high customer advances despite higher inventory and receivable days.

**Exhibit 23: NWC days expected to remain at comfortable levels**

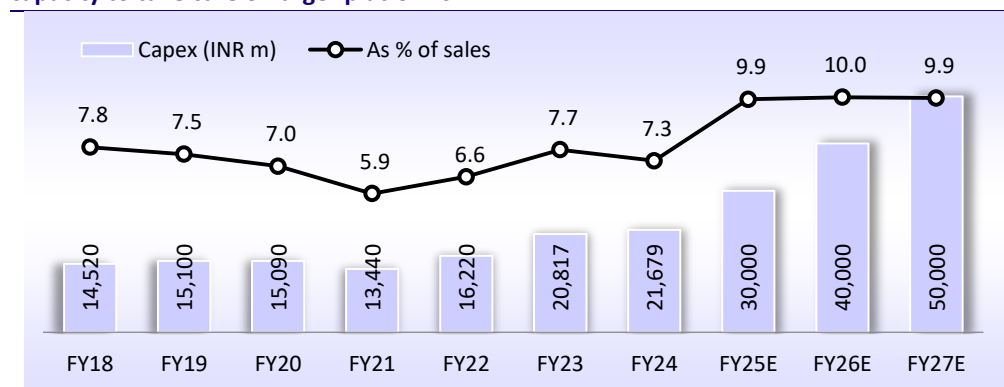


Source: Company, MOFSL

### Capex to remain high in coming years

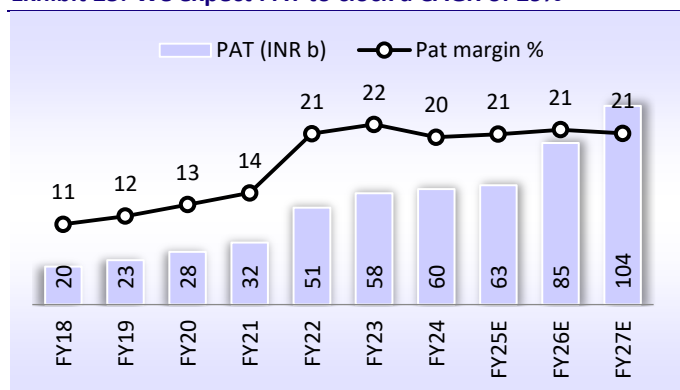
The company incurred a capex of INR22b in FY24. Further, it has announced a capex program of ~INR140-150b over the next five years, while we have factored in a capex of INR30b/INR40b/INR50b in FY25/FY26/FY27.

**Exhibit 24: Capex as a % of sales likely to reach 10% by FY26 as company is expanding capacity to take care of larger platforms**



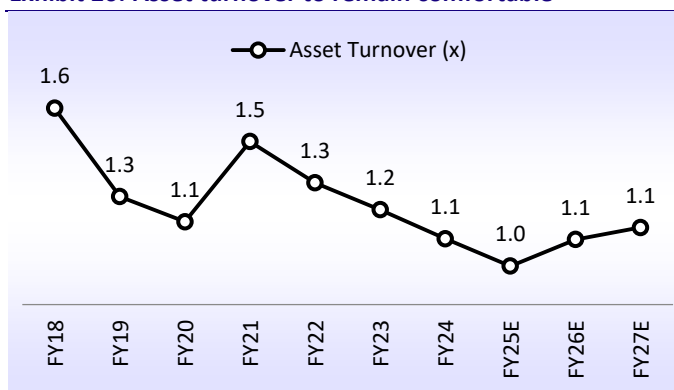
Source: Company, MOFSL

**Exhibit 25: We expect PAT to clock a CAGR of 29%**



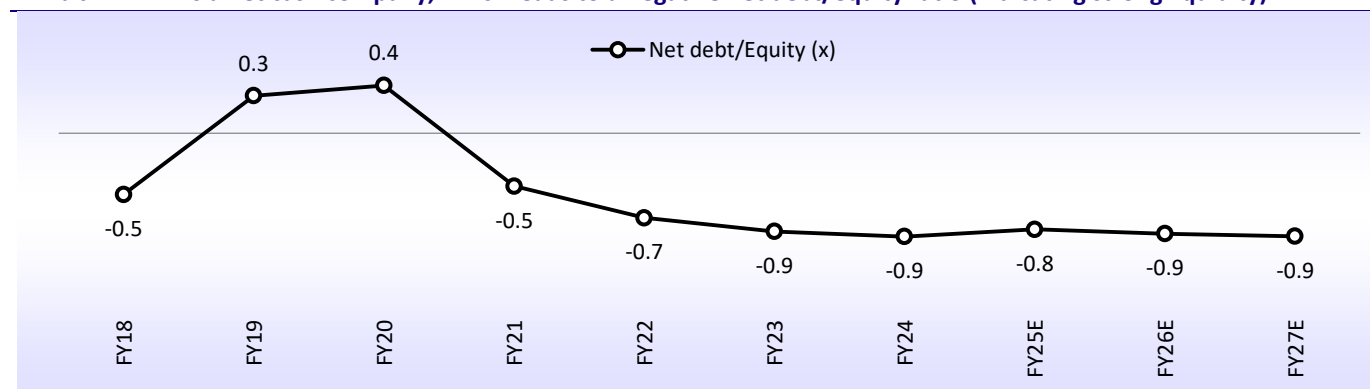
Source: Company, MOFSL

**Exhibit 26: Asset turnover to remain comfortable**



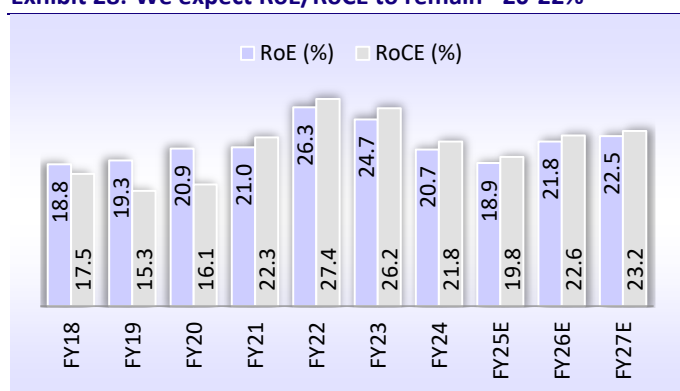
Source: Company, MOFSL

**Exhibit 27: HAL is a net cash company, which leads to a negative net debt/equity ratio (indicating strong liquidity)**



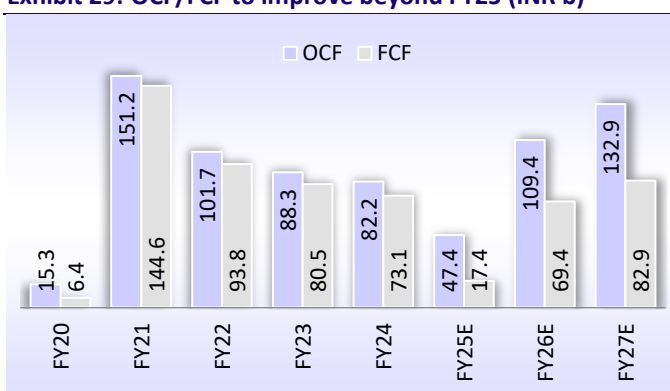
Source: Company, MOFSL

**Exhibit 28: We expect RoE/RoCE to remain ~20-22%**



Source: Company, MOFSL

**Exhibit 29: OCF/FCF to improve beyond FY25 (INR b)**



Source: Company, MOFSL

## Valuation and view: Initiate coverage with a BUY rating

HAL is currently trading at 31.9x/25.9x FY26E/FY27E EPS. We initiate coverage on the stock with a BUY rating and a TP of INR5,100 based on average of DCF and 32x P/E on Mar,27 earnings.

**Exhibit 30: Relative valuation comparison of domestic defense companies**

Companies	Mcap (INR b)	Rating	EPS (INR)			P/E (X)			RoE (%)		
			FY25E	FY26E	FY27E	FY25E	FY26E	FY27E	FY25E	FY26E	FY27E
HAL	2,696	Buy	93.5	126.5	155.7	43.2	31.9	25.9	18.9	21.8	22.5
BEL	682	Buy	6.7	7.8	9.4	41.8	35.9	29.7	24.1	22.6	22.2
BDL	470	N.A.	17.8	23.6	32.3	72.1	54.4	39.7	15.2	16.8	18.7
Astra Microwave	65	N.A.	14.5	16.7	21.6	47.3	41.1	31.8	13.2	13.3	14.9
Data Patterns	91	Neutral	36.1	48.6	62.2	45.1	33.5	26.2	14.2	16.4	17.8
MTAR	39	Buy	23.5	43.3	69.8	54.9	29.8	18.5	10.1	16.3	21.7

Source: Company, Bloomberg, MOFSL

**Exhibit 31: Relative valuation comparison of domestic and international defense companies**

Companies	Currency	CMP	EPS			P/E (X)			RoE (%)		
			FY25E	FY26E	FY27E	FY25E	FY26E	FY27E	FY25E	FY26E	FY27E
HAL	INR	4,040.0	93.5	126.5	155.7	43.2	31.9	25.9	18.9	21.8	22.5
BEL	INR	280.0	6.7	7.8	9.4	41.8	35.9	29.7	24.1	22.6	22.2
BDL	INR	1,282.0	17.8	23.6	32.3	72.1	54.4	39.7	15.2	16.8	18.7
Lockheed Martin	USD	463.9	27.3	29.7	31.7	17.0	15.6	14.6	95.1	96.1	92.8
Airbus	EUR	139.5	6.6	8.1	9.6	21.1	17.3	14.5	24.2	25.5	25.5
Boeing	USD	155.5	-1.6	3.7	7.0	NM	41.9	22.3	8.5	-14.3	148.0
Dassaul Aviation	EUR	290.6	13.6	16.6	19.4	21.4	17.5	15.0	16.2	17.6	17.5
Northorp	USD	516.0	28.1	29.0	31.0	18.4	17.8	16.7	25.7	25.0	25.1

Source: Company, Bloomberg, MOFSL

Note: On BBG, EPS is calculated using Adj. Net Income, while RoE is calculated using Net Income (GAAP)

### Sensitivity analysis assumptions

**Base case:** In our base case assumptions, we have assumed engine delivery from GE for Tejas Mk1A to scale up to 15 by FY27. GE has already commenced the delivery of engines and this will scale up from FY26 itself.

**Bear case:** In bear case assumptions, if delivery of engines from GE gets delayed and order inflows for future projects too get delayed then stock would witness a decline in earnings as well as valuation multiple de-rating.

**Bull case:** In bull case assumptions, further clarity on engine supplies for potential order for Tejas Mk2 and incremental order inflows will result in improved earnings and valuation re-rating for the stock.

**Exhibit 32: Sensitivity analysis: Bear, Base, and Bull case valuations**

	Bear case	Base case	Bull case	Rationale
Assuming GE engine delivery to scale up to 15-16 engines by FY27	Lower inflows and lower engine delivery	In line inflows and GE delivery of 15-16 engines by FY27	Further clarity on engines for Tejas Mk2	
PAT (INR b)	90	106	122	❖ 15 % sensitivity of March'27 earning
Valuation multiple (x)	29	32	35	❖ 10 % sensitivity of multiples
<b>Core business valuation (INR b)</b>	<b>2,598</b>	<b>3,396</b>	<b>4,295</b>	
<b>Price per share (INR)</b>	<b>3,900</b>	<b>5,100</b>	<b>6,500</b>	

Source: MOFSL

## Key risks and concerns

### Supply chain dependency

HAL depends highly on foreign OEMs for the supply of critical components and spares. Any delay on foreign OEMs can lead to delayed deliverables from HAL.

### Geopolitical challenges and instability can disrupt the supply chain

Mounting geopolitical issues (such as the Russia-Ukraine war) can disrupt the supply chain of components & spares on which HAL is highly dependent.

### Dependency on limited customers for new contracts

HAL's business is largely dependent on government contracts. Any change in the preference of defense customers – by moving from nomination to competitive procurement – can affect HAL's revenue growth trajectory.

### Competition from domestic and foreign players

The MoD and the GoI have formed defense-related policies such as the Defence Acquisition Procedure 2020 to promote private participation in defense contracts. This, along with Indian private companies with global OEMs, increases the level of market competition in the areas in which the company operates. Furthermore, the company faces competition for export orders from global market leaders such as Dassault Aviation, Rolls Royce, Airbus, Lockheed Martin Corp., etc.

## Company background

HAL is one of India's largest defense PSUs, which came into existence in 1964 as a result of the amalgamation of Hindustan Aircraft Ltd. and Aeronautics India Ltd. The company is the primary manufacturer of fighter aircraft in the country. The company is engaged in 1) the design, development, and manufacture of aircraft, helicopters, and engines and 2) the maintenance, repair, and overhaul (MRO) of aircraft, helicopters, engines, accessories, and avionics. Exports form a miniscule share of the business, with the primary customer being the Indian Armed Forces. Additionally, the company counts DRDO, ISRO, the Indian Coast Guard, BDL, BEL, MDL, GRSE, Cochin Shipyard, Airbus, Boeing, Honeywell, etc. as its major customers.

HAL's manufacturing operations are divided into four production complexes, which are further subdivided into 20 manufacturing divisions. In terms of R&D centers, the company has facilities in 10 locations.

### Production units

HAL's manufacturing operations are divided into four production complexes, which are further subdivided into 20 manufacturing divisions.

**Exhibit 33: HAL's production complexes**

Bangalore Complex	MiG Complex	Accessories Complex	Helicopter Complex
Aircraft Division Bangalore	Aircraft Manufacturing Division Nasik	TAD-Kanpur Division	Helicopter Division Bangalore
Engine Division Bangalore	Aircraft Overhaul Division Nasik	Accessories Division Lucknow	Helicopter MRO Division Bangalore
Overhaul Division Bangalore	Engine Division Koraput	Avionics Division Hyderabad	Barrackpore Division
Foundry & Forge Division Bangalore	Sukhoi Engine Division Koraput	Avionics Division Korwa	Aerospace Composites Division
Aerospace Division Bangalore			
IMGT Division Bangalore			
Airport Services Center Bangalore			
LCA-Tejas Division Bangalore			

Source: Company

### Product portfolio

HAL continued to boost the "Atmanirbhar Bharat Abhiyan" of the Government of India with its focused efforts towards the design and development of products, technologies, and capabilities to meet the future requirements of Indian defense forces and the non-military aerospace market in India. The company is engaged in the manufacturing of aircraft, and helicopters as well as their engines and accessories. The company also provides services such as repairs, overhaul & maintenance, and upgrades of aircraft, helicopters, and engines & accessories.

Exhibit 34: HAL – products &amp; services

Categories	Products			
Aircraft	LCA	HTT-40	DORNIER	IJT
	SU-30 MKI	HAWK		
Civil Aviation	Do-228 Aircraft (Civil)	DHRUV (ALH) - NG		
Helicopters	DHRUV	RUDRA	LCH	LUH
	CHEETAL	LANCER	CHETAK	CHEETAH
Space	Structures	Propellant Tank	Cryogenic Engines	
Systems	Flight Data Recorder	Laser range System	Head up Display	Auto Stabilizer
	Inertial Navigation System	Hydraulic Pumps	Fuel Management System	Oxygen System
	Gyroscopic/Barometric Instruments	Panel Instruments	Ejector Release Units	Flight Control System
	Wheels and Brake System	Ground Radars	Radar Computers	Missile Inertial Navigation
	Air Borne Secondary Radar	Radio Navigation Equipment	Communication Equipment	Rolled Rings
	Rubber Products	Powder Metallurgy	Forgings	Castings

Source: Company



## ESG initiatives



### Environment

#### Non-hazardous Waste Management

Municipal Solid Waste (MSW) generated from townships and factories of HAL is segregated at source (wet, dry, garden, sanitary, and rejects). For better utilization of biodegradable waste generated from HAL estates, the company has installed solid waste management units such as organic waste converters and biogas plants at select places. At Bangalore, 1.5 tons per day capacity of bio-gas plants are installed. The company has taken an initiative towards recycling and reusing the waste paper generated from various offices of HAL, Bangalore, by setting up a waste paper recycling unit (75kg per day).

#### Hazardous Waste Management

##### ■ Effluents

The divisions that use and generate hazardous effluents such as chrome, acid/alkali, cyanide, etc., have independent Effluent Treatment Plants (ETPs) from which effluent samples after treatment are periodically checked in the laboratories.

##### ■ E-waste

The e-waste generated & collected is stored in designated areas (under cover) and auctioned through MSTC (Central PSU) for disposal through authorized dismantlers/recyclers/refurbishers.

##### ■ Used Oil/Lubricants

Used oil and lubricants produced during testing and maintenance/overhauling of equipment, vehicles, and machinery are collected at source in leakproof containers and stored safely in demarcated areas inside salvage yards, and handed over to recyclers authorized by the respective Pollution Control Boards, through MSTC.

##### ■ Plastic

The non-biodegradable waste like polythene is being collected and sent to recycling agencies, and other hazardous wastes such as bio-medical waste, composite waste, etc. are collected, stored, and disposed of through authorized agencies as per Pollution Control Board (PCB) norms.

##### ■ Rain Water Harvesting (RWH)

The company has installed RWH systems at all its locations. The stored water is used for gardening and other non-potable uses.

##### ■ Air emissions

The emissions from process stacks and diesel generators are periodically monitored for compliance with the limits prescribed by PCB.

##### ■ Renewable Energy

- 7.57 MW capacity rooftop-based solar power plants installed to date.
- 26.50 MW capacity ground-mounted solar power plants installed to date.
- HAL has installed 14.7 MW capacity wind power plants in Karnataka.

## Social

- HAL is committed to the resolution of public grievances in an efficient and time-bound manner. The company has a robust grievance redressal system. Contracts with value chain partners that involve the deployment of labor include specific conditions towards health & safety, working hours, and remuneration. The company complies with applicable labor laws, and a compliance report is submitted by the Heads of divisions. The Deputy General Manager (HR) of the corporate office has been designated as the nodal officer (grievance) to facilitate the speedy resolution of public grievances received through the online portal from the President's Secretariat, the Prime Minister's Office, and the Ministry of Defence. All the public grievances filed are being resolved within the stipulated time frame.
- Necessary actions are taken by HAL to prevent sexual harassment of women in the workplace. The HAL CDA Rules applicable to officers and the Certified Standing Orders applicable to workmen have the required provisions in this regard.

## Governance

- HAL has an anti-corruption and anti-bribery policy set up for the conduct of the affairs of its constituents fairly and transparently by adopting the highest standards of professionalism, honesty, integrity, and ethical behavior. The company has adopted the Code of Conduct, which lays down the principles and standards that should govern the actions of the company and its employees. Accordingly, a whistleblower policy has been formulated to provide a mechanism for employees to approach the Chairman of the Audit Committee / Director (HR) / Head of Systems Audit of the company.

## SWOT analysis



### Strengths

- ❖ Capability to cater to a large spectrum of aerospace business
- ❖ Expertise in aircraft upgrades for defense customers
- ❖ Expertise in the absorption of Transfer of Technology (ToT) of fighter and transport aircraft
- ❖ Expertise in the Design & Development of a wide range of helicopters, including Utility and Combat helicopters
- ❖ Trusted partner of Indian Defence Forces
- ❖ Access to large-scale defense infrastructure



### Weaknesses

- ❖ Dependency on foreign OEMs for critical materials and LRUs
- ❖ Little presence outside India in the export market
- ❖ Dependency on limited customers for the contracts



### Opportunities

- ❖ Rising defense spending
- ❖ Government schemes and policies for indigenization such as Make in India, Offset Obligations, etc., provide a strong addressable market
- ❖ Active support from the Govt. of India for export promotion to friendly foreign countries
- ❖ Developing civil MRO opportunities in India



### Threats

- ❖ Increased competition
- ❖ A slowdown in defense spending
- ❖ Fluctuations in exchange rates and raw material prices can impact the supply chain

## Management Team



### **Dr. D. K. Sunil (Chairman & Managing Director with Additional Charge of Director–Engineering and R&D, and Director – HR)**

Before taking over as Chairman & Managing Director, Dr. D.K. Sunil was holding the post of Director (Engineering and R&D) of the company. He did his graduation in Electronics & Communication Engineering from Osmania University, Hyderabad, and M. Tech in Aircraft Production Engg from IIT, Madras. He also completed a Ph.D. in Electronics Science from the University of Hyderabad in the year 2019. Dr. Sunil joined HAL in 1987 as a management trainee and has about 37 years of experience in varied roles in the company, contributing significantly to design, production, quality enhancement, and customer support issues.



### **Shri Barenaya Senapati (Director – Finance, and CFO)**

Shri Barenaya Senapati is a Fellow Member of The Institute of Chartered Accountants of India and has 31 years of post-qualification experience in the field of finance. He joined HAL in 1995 and has a rich experience of 29 years in varied roles at the divisional level and in Corporate Finance. Before his present appointment as the Director (Finance) of the company, Shri Barenaya Senapati held the position of Executive Director (Finance) corporate office of the company and handled all finance & accounts-related functions of HAL. He has diverse experience in all areas of finance, encompassing the accounts, financial planning, treasury management, pricing, and taxation of the company.



### **Shri Ravi K (Director – Operations)**

Shri Ravi K is a Mechanical Engineering Graduate and is an alumnus of IIM, Ahmedabad & IAS, Toulouse-France, and has rich experience of over 30 years across various sectors. Before this role, he had rich and varied experience in various facets of the fixed-wing business of HAL and was responsible for the operationalization of the LCA Tejas fleet in the Indian Air Force. He is responsible for the formulation of strategic & functional plans and is responsible for optimizing the capacities and upgrading capabilities within the company while ensuring indigenization and implementation of a robust IT framework.



### **Shri M Satyanarayana (CEO, Accessories Complex)**

Shri M Satyanarayana did his B.Tech in Electronics & Communication Engineering from D.M.S.S.V.H. College of Engineering, Machilipatnam, Nagarjuna University, India, and M.Tech in Aircraft Production Engineering from IIT Madras in 1993. He started his career in HAL as a Management Trainee in the year 1989 after completing his B.Tech. Before taking over charge as CEO (Accessories Complex), he served as General Manager of HAL's Accessories Division at Lucknow & Avionics Division at Hyderabad. With over 30 years of experience in avionics and accessories development, Shri M Satyanarayana has worked extensively across Russian, Western, and Indigenous platforms, ranging from legacy fleets to cutting-edge advancements and future technologies.



### **Shri S Anbuvelan (CEO, Helicopter Complex)**

Shri S Anbuvelan is a Graduate in Mechanical Engineering from Algappa Chettiar College of Engineering, Karaikudi, Tamil Nadu, and also holds a Post Graduate Degree of M Tech in Aircraft Production Engineering from IIT Madras and Post Graduate Diploma in Business Management from XIME, Bangalore. He joined HAL as a Management Trainee (Technical)-21<sup>st</sup> Batch on 21<sup>st</sup> Jul'86, and has been associated with HAL for 34 years. Shri Anbuvelan has a vast amount of expertise in end-to-end process optimization, manufacturing, quality, and supply chain management.



### **Shri Saket Chaturvedi (CEO, MiG Complex)**

Shri Saket Chaturvedi is a graduate in Electronics Engineering from MITS Gwalior, M.Tech. in Digital Communication from MANIT Bhopal, MBA in Marketing, and is a Project Management IPMA Level-C Certified Professional. He is also a Certified Energy Manager cum Energy Auditor by the Bureau of Energy Efficiency. He has done a Leadership Development Program at IIM, Ahmedabad. He joined HAL in 2004 and has served in various capacities and departments in Nasik such as plant maintenance, outsourcing, MIG ROH, business development & projects. He also led the HAL joint venture, Indo Russian Aviation Limited (IRAL) as CEO (IRAL), and subsequently took over as the General Manager of the Aircraft Overhaul Division, Nasik in Jul'20.



### **Shri Jayakrishnan S (CEO, Bangalore Complex)**

Shri Jayakrishnan S started his career in HAL as a Management Trainee in the year 1989, after completing his B. Tech in Production Engineering from TKM College of Engineering, University of Kerala, India. He took over as the Chief Executive Officer of (Bangalore Complex) on 1st July 2024. Before that, he served as the General Manager of Aircraft, IJT (Intermediate Jet Trainer), and Airport Services Centre (ASC) Divisions at HAL. He has extensive experience in the aerospace & defense industry for 35 years, working in various functions, viz., production engineering, IT, supply chain, aircraft assembly, customer services, project management, marketing, and business development.

## Financials and valuations

### Consolidated Income Statement

(INR M)

Y/E March	2020	2021	2022	2023	2024	2025E	2026E	2027E
<b>Net Sales</b>	<b>2,14,452</b>	<b>2,28,823</b>	<b>2,46,200</b>	<b>2,69,275</b>	<b>2,98,321</b>	<b>3,03,884</b>	<b>4,01,584</b>	<b>5,03,646</b>
Change (%)	7.2	6.7	7.6	9.4	10.8	1.9	32.2	25.4
Raw Materials	93,874	1,11,914	1,00,012	1,01,021	1,10,591	1,21,554	1,68,665	2,21,604
<b>Gross Profit</b>	<b>1,20,578</b>	<b>1,16,909</b>	<b>1,46,188</b>	<b>1,68,254</b>	<b>1,87,731</b>	<b>1,82,331</b>	<b>2,32,919</b>	<b>2,82,042</b>
Employee Cost	47,776	43,052	46,044	49,104	52,907	56,965	61,334	66,038
Other Expenses	23,771	20,495	46,058	52,358	53,239	46,522	61,479	77,104
<b>Total Expenditure</b>	<b>1,65,421</b>	<b>1,75,461</b>	<b>1,92,115</b>	<b>2,02,483</b>	<b>2,16,737</b>	<b>2,25,041</b>	<b>2,91,479</b>	<b>3,64,747</b>
% of Net Sales	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
<b>EBITDA</b>	<b>49,031</b>	<b>53,363</b>	<b>54,086</b>	<b>66,792</b>	<b>81,585</b>	<b>78,843</b>	<b>1,10,106</b>	<b>1,38,899</b>
Margin (%)	22.9	23.3	22.0	24.8	27.3	25.9	27.4	27.6
Depreciation	9,985	11,579	11,105	17,847	14,072	15,908	18,891	22,726
<b>EBIT</b>	<b>39,046</b>	<b>41,784</b>	<b>42,980</b>	<b>48,945</b>	<b>67,513</b>	<b>62,935</b>	<b>91,215</b>	<b>1,16,173</b>
Interest	3,485	2,592	582	580	321	321	321	321
Other Income	2,966	3,575	9,849	16,701	18,966	20,633	21,748	22,821
<b>PBT Before EO Exp</b>	<b>38,527</b>	<b>42,767</b>	<b>52,248</b>	<b>65,066</b>	<b>86,158</b>	<b>83,247</b>	<b>1,12,641</b>	<b>1,38,673</b>
EO Items	1,189	20	0	0	15,826	0	0	0
<b>PBT After EO Exp</b>	<b>39,716</b>	<b>42,787</b>	<b>52,248</b>	<b>65,066</b>	<b>1,01,984</b>	<b>83,247</b>	<b>1,12,641</b>	<b>1,38,673</b>
Tax	10,960	10,379	1,447	6,818	26,039	21,072	28,498	35,080
Rate (%)	28.4	24.3	2.8	10.5	30.2	25.3	25.3	25.3
MI & P/L of Asso. Cos	72	52	-1	29	266	371	445	534
<b>Reported PAT</b>	<b>28,828</b>	<b>32,460</b>	<b>50,800</b>	<b>58,277</b>	<b>76,211</b>	<b>62,547</b>	<b>84,589</b>	<b>1,04,127</b>
Change (%)	23.8	12.6	56.5	14.7	30.8	-17.9	35.2	23.1
<b>Adjusted PAT</b>	<b>27,639</b>	<b>32,439</b>	<b>50,800</b>	<b>58,277</b>	<b>60,384</b>	<b>62,547</b>	<b>84,589</b>	<b>1,04,127</b>
Change (%)	18.7	17.4	56.6	14.7	3.6	3.6	35.2	23.1

### Consolidated Balance Sheet

(INR M)

Y/E March	2,020	2021	2022	2023	2024	2025E	2026E	2027E
Share Capital	3,344	3,344	3,344	3,344	3,344	3,344	3,344	3,344
Reserves	1,29,141	1,50,895	1,89,787	2,32,378	2,88,038	3,27,177	3,85,014	4,59,046
<b>Net Worth</b>	<b>1,32,485</b>	<b>1,54,239</b>	<b>1,93,131</b>	<b>2,35,722</b>	<b>2,91,382</b>	<b>3,30,521</b>	<b>3,88,358</b>	<b>4,62,390</b>
Minority Interest	43	39	38	37	36	36	36	36
Loans	58,865	91	0	0	0	0	0	0
Deffered Tax Liability	-4,701	-524	-5,656	-11,257	-14,543	-14,543	-14,543	-14,543
<b>Capital Employed</b>	<b>1,86,692</b>	<b>1,53,845</b>	<b>1,87,513</b>	<b>2,24,502</b>	<b>2,76,875</b>	<b>3,16,014</b>	<b>3,73,851</b>	<b>4,47,883</b>
Gross Fixed Assets	1,21,799	1,31,721	1,40,032	1,58,570	1,71,667	2,01,667	2,41,667	2,91,667
Less: Depreciation	48,225	60,062	72,373	90,226	1,04,298	1,20,206	1,39,097	1,61,823
<b>Net Fixed Assets</b>	<b>73,575</b>	<b>71,659</b>	<b>67,659</b>	<b>68,344</b>	<b>67,369</b>	<b>81,461</b>	<b>1,02,570</b>	<b>1,29,844</b>
Capital WIP	20,427	19,496	24,729	18,850	24,934	24,934	24,934	24,934
Investments	9,908	11,214	13,627	14,580	15,914	15,914	15,914	15,914
<b>Curr. Assets</b>	<b>4,24,163</b>	<b>4,14,749</b>	<b>4,72,249</b>	<b>5,59,008</b>	<b>6,58,192</b>	<b>6,92,368</b>	<b>8,89,418</b>	<b>11,03,655</b>
Inventory	1,94,359	1,66,730	1,43,473	1,21,487	1,32,175	1,42,966	1,88,930	2,36,946
Debtors	1,90,765	1,41,157	1,24,502	1,40,955	1,65,108	1,72,350	2,27,761	2,85,646
Cash & Bank Balance	3,166	71,774	1,43,477	2,03,166	2,64,316	2,78,659	3,42,700	4,17,990
Loans & Advances	674	153	144	140	164	167	220	277
Other Current Assets	35,200	34,935	60,653	93,260	96,429	98,227	1,29,807	1,62,797
<b>Current Liab. &amp; Prov.</b>	<b>3,41,381</b>	<b>3,63,271</b>	<b>3,90,751</b>	<b>4,36,279</b>	<b>4,89,534</b>	<b>4,98,662</b>	<b>6,58,984</b>	<b>8,26,463</b>
Creditors	40,837	22,556	25,576	31,350	34,129	34,765	45,942	57,618
Other Liabilities	2,37,237	3,28,155	3,01,975	3,23,675	3,63,515	3,70,293	4,89,344	6,13,709
Provisions	63,307	12,560	63,200	81,254	91,891	93,604	1,23,698	1,55,136
<b>Net Current Assets</b>	<b>82,782</b>	<b>51,477</b>	<b>81,498</b>	<b>1,22,729</b>	<b>1,68,658</b>	<b>1,93,706</b>	<b>2,30,434</b>	<b>2,77,192</b>
<b>Application of Funds</b>	<b>1,86,692</b>	<b>1,53,845</b>	<b>1,87,513</b>	<b>2,24,502</b>	<b>2,76,875</b>	<b>3,16,014</b>	<b>3,73,851</b>	<b>4,47,883</b>

E: MOFSL Estimates



## Financials and valuations

### Ratios

Y/E March	2,020	2021	2022	2023	2024	2025E	2026E	2027E
Basic (INR)	43.1	48.5	76.0	87.1	114.0	93.5	126.5	155.7
<b>Adjusted EPS</b>	<b>41.3</b>	<b>48.5</b>	<b>76.0</b>	<b>87.1</b>	<b>90.3</b>	<b>93.5</b>	<b>126.5</b>	<b>155.7</b>
Growth (%)	18.7	17.4	56.6	14.7	3.6	3.6	35.2	23.1
Cash EPS	56.3	65.8	92.6	113.8	111.3	117.3	154.7	189.7
Book Value	198.1	230.6	288.8	352.5	435.7	494.2	580.7	691.4
DPS	20.0	15.0	20.0	25.0	29.5	35.0	40.0	45.0
Payout (incl. Div. Tax.)	48.5	30.9	26.3	28.7	32.7	37.4	31.6	28.9
<b>Valuation (x)</b>								
P/E	97.8	83.3	53.2	46.4	44.7	43.2	31.9	25.9
Cash P/E	71.8	61.4	43.6	35.5	36.3	34.4	26.1	21.3
EV/EBITDA	56.2	49.3	47.3	37.4	29.9	30.7	21.4	16.4
EV/Sales	12.9	11.5	10.4	9.3	8.2	8.0	5.9	4.5
Price/Book Value	20.4	17.5	14.0	11.5	9.3	8.2	7.0	5.8
Dividend Yield (%)	0.5	0.4	0.5	0.6	0.7	0.9	1.0	1.1
<b>Profitability Ratios (%)</b>								
RoE	20.9	21.0	26.3	24.7	20.7	18.9	21.8	22.5
RoCE	16.1	22.3	27.4	26.2	21.8	19.8	22.6	23.2
RoIC	16.1	44.7	137.4	648.5	NA	219.2	447.2	620.8
<b>Turnover Ratios</b>								
Debtors (Days)	325	225	185	191	202	207	207	207
Inventory (Days)	331	266	213	165	162	172	172	172
Creditors. (Days)	70	36	38	42	42	42	42	42
Asset Turnover (x)	1.1	1.5	1.3	1.2	1.1	1.0	1.1	1.1
<b>Leverage Ratio</b>								
Net Debt/Equity (x)	0.4	-0.5	-0.7	-0.9	-0.9	-0.8	-0.9	-0.9

### Consolidated Cash Flow Statement

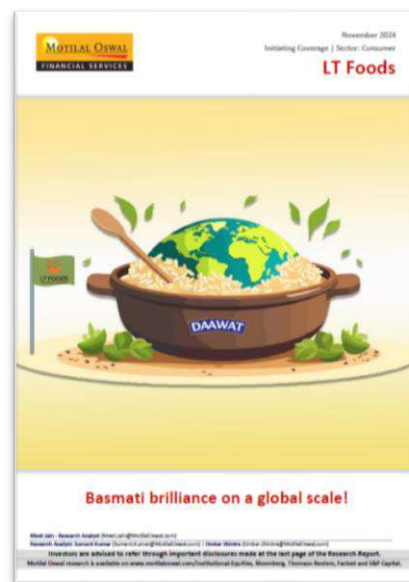
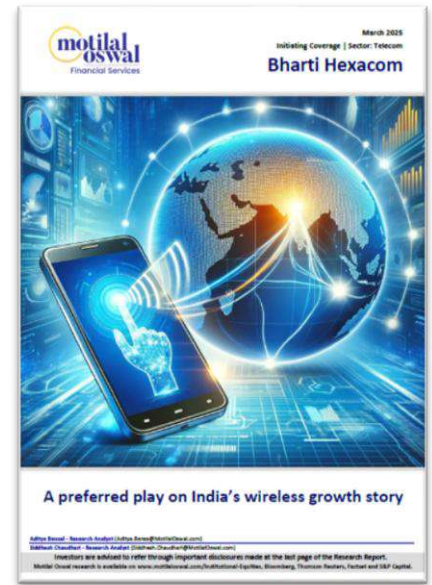
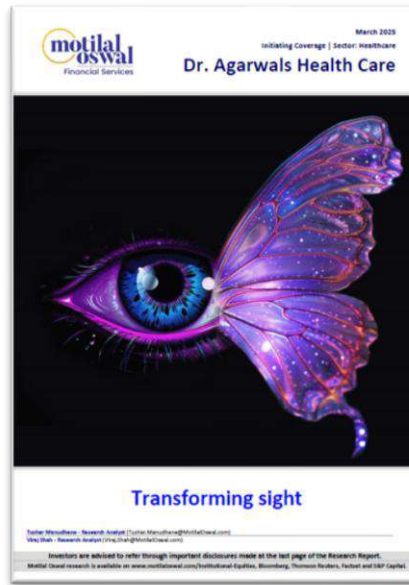
(INR M)

Y/E March	2020	2021	2022	2023	2024	2025E	2026E	2027E
PBT before EO Items	39,786	42,835	52,245	65,095	1,02,249	83,618	1,13,086	1,39,207
Add : Depreciation	10,303	12,217	12,870	23,821	14,221	15,908	18,891	22,726
Interest	3,485	2,044	559	258	314	321	321	321
Less : Direct Taxes Paid	18,199	8,755	10,275	27,557	19,693	21,072	28,498	35,080
(Inc)/Dec in WC	31,832	-92,481	-15,894	-4,515	31,251	10,705	-27,313	-28,532
Others	11,731	10,348	30,438	22,165	16,389	-20,633	-21,748	-22,821
<b>CF from Operations</b>	<b>15,274</b>	<b>1,51,170</b>	<b>1,01,731</b>	<b>88,297</b>	<b>82,228</b>	<b>47,438</b>	<b>1,09,366</b>	<b>1,32,885</b>
(Inc)/Dec in FA	-8,887	-6,531	-7,961	-7,774	-9,085	-30,000	-40,000	-50,000
<b>Free Cash Flow</b>	<b>6,387</b>	<b>1,44,639</b>	<b>93,770</b>	<b>80,524</b>	<b>73,144</b>	<b>17,438</b>	<b>69,366</b>	<b>82,885</b>
(Pur)/Sale of Investments	-759	-606	-1,14,907	-46,932	-64,117	0	0	0
Others	-3,743	-4,663	-4,984	-2,575	9,101	20,633	21,748	22,821
<b>CF from Investments</b>	<b>-13,389</b>	<b>-11,800</b>	<b>-1,27,852</b>	<b>-57,280</b>	<b>-64,101</b>	<b>-9,367</b>	<b>-18,252</b>	<b>-27,179</b>
(Inc)/Dec in Debt	17,527	-58,598	-91	0	0	0	0	0
Less : Interest Paid	3,483	2,043	1,170	557	257	321	321	321
Dividend Paid	13,404	10,032	13,376	16,719	19,729	23,407	26,751	30,095
Others	-1	-30	-1	-37	-3	0	0	0
<b>CF from Fin. Activity</b>	<b>639</b>	<b>-70,702</b>	<b>-14,637</b>	<b>-17,313</b>	<b>-19,989</b>	<b>-23,728</b>	<b>-27,072</b>	<b>-30,416</b>
<b>Inc/Dec of Cash</b>	<b>2,525</b>	<b>68,668</b>	<b>-40,758</b>	<b>13,704</b>	<b>-1,861</b>	<b>14,343</b>	<b>64,041</b>	<b>75,290</b>
Add: Beginning Balance	269	2,793	71,462	30,704	44,408	2,64,316	2,78,659	3,42,700
Other Bank Balances	372	312	1,12,774	1,58,758	2,21,769	0	0	0
<b>Closing Balance</b>	<b>3,166</b>	<b>71,774</b>	<b>1,43,477</b>	<b>2,03,166</b>	<b>2,64,316</b>	<b>2,78,659</b>	<b>3,42,700</b>	<b>4,17,990</b>

E: MOFSL Estimates

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

# RECENT INITIATING COVERAGE REPORTS



## 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](http://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](http://www.nseindia.com), [www.bseindia.com](http://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](mailto:grievances@motilaloswal.com).

Nainesh Rajani

Email: [nainesh.rajani@motilaloswal.com](mailto:nainesh.rajani@motilaloswal.com)

Contact: (+65) 8328 0276

#### Specific Disclosures

- Research Analyst and/or his/her relatives do not have a financial interest in the subject company(ies), as they do not have equity holdings in the subject company(ies).  
MOFSL has financial interest in the subject company(ies) at the end of the week immediately preceding the date of publication of the Research Report: Yes.  
Nature of Financial interest is holding equity shares or derivatives of the subject company
- Research Analyst and/or his/her relatives do not have actual/beneficial ownership of 1% or more securities in the subject company(ies) at the end of the month immediately preceding the date of publication of Research Report.  
MOFSL has actual/beneficial ownership of 1% or more securities of the subject company(ies) at the end of the month immediately preceding the date of publication of Research Report: No
- Research Analyst and/or his/her relatives have not received compensation/other benefits from the subject company(ies) in the past 12 months.  
MOFSL may have received compensation from the subject company(ies) in the past 12 months.
- Research Analyst and/or his/her relatives do not have material conflict of interest in the subject company at the time of publication of research report.  
MOFSL does not have material conflict of interest in the subject company at the time of publication of research report.
- Research Analyst has not served as an officer, director or employee of subject company(ies).
- 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(ies) in the past 12 months.

8. MOFSL may have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company(ies) in the past 12 months.
9. MOFSL may have received compensation or other benefits from the subject company(ies) or 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/NCDX); 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.