

# Bharat Dynamics



## Lock, Load, Succeed!

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

**Prerit Jain - Research Analyst** (Prerit.Jain@MotilalOswal.com)

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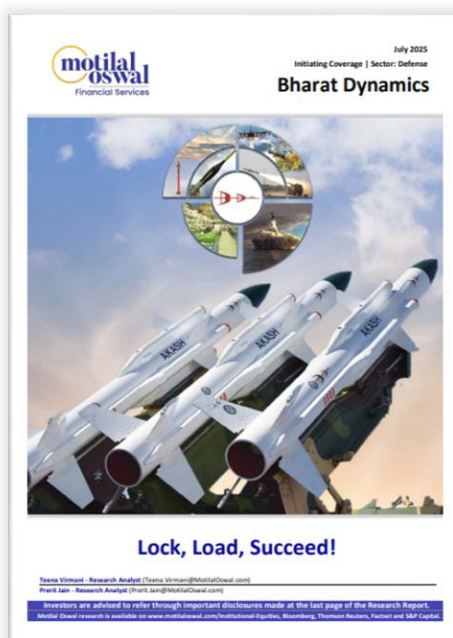
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## Lock, Load, Succeed!

- ❖ Bharat Dynamics (BDL) is a prominent player in missile technology within the defense sector and has established itself as a leading integrator for various missile platforms. With a focus on developing advanced guided missiles, underwater weapons, and airborne products, BDL currently holds an order book of ~INR227b and a prospect pipeline of INR500b. In recent years, BDL's revenue has been adversely impacted by supply chain disruptions and difficulties in procuring essential components through imports from Russia and Israel. However, these issues are beginning to resolve, and we anticipate a rebound in revenue growth. Along with this, we also expect company to benefit from upcoming emergency procurement pipeline as well as large orders such as QRSAM.
- ❖ We estimate BDL's revenue CAGR at 35% over FY25-28. With ongoing investments in backward integration and an improved share of indigenized products, we expect BDL's EBITDA margin to remain strong at ~24-26%. This is anticipated to drive an EBITDA/PAT CAGR of 64%/51% over FY25-28. The stock currently trades at 70x/52x/38x P/E on FY26/FY27/FY28 estimates.
- ❖ We initiate coverage on the stock with a Neutral rating and a TP of INR1,900 based on 42x Sep'27E P/E. We like the business model of BDL and its ability to scale up its revenues and order book in current scenario, however, with fair valuations, we would look for lower price points to enter the stock.

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Financials and valuation

# Bharat Dynamics

BSE SENSEX  
83,536

S&P CNX  
25,476



भारत डायनामिक्स लिमिटेड  
**BHARAT DYNAMICS LIMITED**

## Stock Info

Bloomberg	BDL IN
Equity Shares (m)	367
M.Cap.(INRb)/(USDb)	727.7 / 8.5
52-Week Range (INR)	2097 / 890
1,6,12 Rel. Per (%)	0/57/14
12M Avg Val (INR M)	3016

## Financials Snapshot (INR b)

Y/E MARCH	FY26E	FY27E	FY28E
Net Sales	45.8	61.0	81.5
EBITDA	10.9	15.1	20.8
PAT	10.4	13.9	19.1
EPS (INR)	28.2	37.8	52.0
GR. (%)	88.4	34.0	37.4
BV/Sh (INR)	131.6	162.5	206.5

## Ratios

ROE (%)	21.5	23.3	25.2
RoCE (%)	22.1	23.8	25.6
Payout (%)	21.4	18.4	15.4

## Valuations

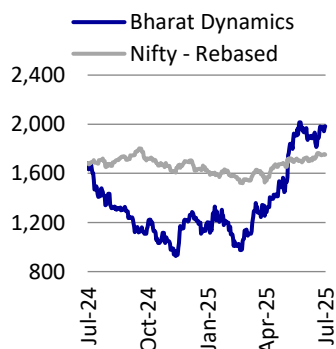
P/E (X)	70.3	52.4	38.2
P/BV (X)	15.1	12.2	9.6
EV/EBITDA (X)	61.4	43.2	30.2
Div Yield (%)	0.3	0.4	0.4

## Shareholding pattern (%)

As On	Mar-25	Dec-24	Mar-24
Promoter	74.9	74.9	74.9
DII	9.5	8.7	12.4
FII	3.3	3.1	3.0
Others	12.4	13.3	9.7

FII Includes depository receipts

## Stock's performance (one-year)



**CMP: INR1,985**

**TP: INR1,900 (-4%)**

**Neutral**

## Lock, Load, Succeed!

### Securing the skies, expanding the base

Bharat Dynamics (BDL) is a prominent player in missile technology within the defense sector and has established itself as a leading integrator for various missile platforms. With a focus on developing advanced guided missiles, underwater weapons, and airborne products, BDL currently holds an order book of ~INR227b and a prospect pipeline of INR500b. In recent years, BDL's revenue has been adversely impacted by supply chain disruptions and difficulties in procuring essential components through imports from Russia and Israel. However, these issues are beginning to resolve, and we anticipate a rebound in revenue growth. Along with this, we also expect company to benefit from upcoming emergency procurement pipeline as well as large orders such as QRSAM. We estimate BDL's revenue CAGR at 35% over FY25-28. With ongoing investments in backward integration and an improved share of indigenized products, we expect BDL's EBITDA margin to remain strong at ~24-26%. This is anticipated to drive an EBITDA/PAT CAGR of 64%/51% over FY25-28. The stock currently trades at 70x/52x/38x P/E on FY26/FY27/FY28 estimates. We initiate coverage on the stock with a Neutral rating and a TP of INR1,900 based on 42x Sep'27E P/E. We like the business model of BDL and its ability to scale up its revenues and order book in current scenario, however, with fair valuations, we would look for lower price points to enter the stock.

### Increased global spending augurs well for Indian defense sector

Nato's recent announcement to increase defence spending of member countries from historic ~2% to 5% of GDP by CY35 will open up possibilities of 1) India too increasing the defence spend, and 2) export opportunities for defense players. Further, emergency procurement and recent DAC's approval worth INR1t bodes well for opening up addressable market for players.

### Positive industry tailwinds to benefit BDL

We expect BDL's total addressable market size of ~INR500b. The growth of the missile market in India will be driven by several factors: 1) missile procurements for new naval, airborne, and army platforms such as Project 75I Submarines, LCA Tejas Mk1A, Su30-Mk1, LCH Prachand, ALH Dhruv, QRSAM, MRSAM, NAG, and VSHORAD; 2) ongoing contracted missile procurements, such as S-400 Triumph Advanced Air Defense Systems, Barak-8 Surface to Air Missiles (SAMs), and heavyweight torpedoes; 3) modernization and refurbishment of in-service systems; and 4) export demand, particularly for Akash missile systems.

### Emerging as a leading integrator of missile platforms

BDL is a multi-product, multi-location organization that caters to the needs of the Army, Navy, and Air Force. It has evolved from being solely a missile manufacturer to a comprehensive weapon system integrator, working on various missile platforms. BDL is also expanding into new areas, including drone-delivered payloads such as bombs and missiles, as well as mines, guided bombs, warhead manufacturing, engines for cruise missiles, propellants, rockets, et al. The company is also pursuing partnerships with foreign OEMs for new weapons and potential Transfer of Technology (ToT), alongside its collaborations with DRDO programs.



### **Strong order book and easing supply chain issues to scale up revenue**

BDL's order book stood at ~INR227b at the end of FY25. It experienced remarkable growth, achieving a CAGR of 27% over FY20-24, primarily driven by large-sized order inflows related to the Akash missile, Konkur anti-tank missile, and exports in FY23. Despite maintaining a robust order book, BDL's revenue growth over the past two years was adversely affected by supply chain disruptions stemming from the Russia-Ukraine conflict and issues related to Israel. However, based on our discussions with the management, these challenges have subsided to some extent. Consequently, we anticipate that the current order book will be executed over the next 4-5 years, driving a sharp revenue CAGR of 35% over FY25-28.

### **Focus remains on indigenization**

BDL has, over time, reduced the proportion of imports in its overall raw material requirements. Simultaneously, the company is working on indigenizing several platforms, achieving indigenization levels of 80-90% across these platforms. This progress will enable the company to bid directly for projects. BDL is also a development partner with DRDO for nearly 40 products and will benefit product as development matures.

### **Continuous capacity expansion and investment in R&D to reduce import dependence**

BDL is continuously expanding its capacities for backward integration and the development of new products. The company has established an integrated Radio Frequency (RF) Seeker Facility at its Kanchanbagh Unit for the production and testing of RF seekers. Additionally, BDL is increasing its capacity to manufacture Surface-to-Air Missiles (SAMs), including next-generation missiles, Very Short Range Air Defense (VSHORAD) rockets, and propellants for various Anti-Tank Guided Missiles (ATGMs). Over the past two years, the company has significantly increased its R&D expenditure. BDL is actively engaged in new product development and the enhancement of existing products to meet customer requirements. The company is also investing in R&D activities both in-house and in collaboration with DRDO for various development and production programs.

### **Ramping up exports**

With the Cabinet Committee on Security's (CCS) approval for the export of the Akash Weapon System to nine countries, BDL is scaling up the export orders. The company has already secured export contracts from several allied nations, and already scaled up export revenues to INR12b in FY25 from INR1.6b in FY24. The company offers a range of products, including the Akash Weapon System (Surface-to-Air Missile), Astra Weapon System (Air-to-Air Missile), Smart Anti-Airfield Weapon, Helina (Air-to-Surface Weapon), Lightweight and Heavyweight Torpedoes, Counter Measures Dispensing Systems, and Anti-Tank Guided Missiles such as Nag, Konkurs-M, and Milan-2T. BDL has successfully exported lightweight torpedoes and is attracting interest from multiple countries for its other offerings.

### Financial outlook

We expect an overall revenue CAGR of 35% over FY25-28, primarily driven by a sharp scale-up in execution due to moderating supply chain issues. We expect BDL's EBITDA margin to remain strong at 23.8%/24.7%/25.5% for FY26/FY27/FY28, fueled by the various indigenization efforts taken by the company as well as lower provisions. With an estimated annual capex of INR2.0b/2.5b/3.0b in FY26/FY27/FY28 and comfortable working capital, we expect PAT to register a 51% CAGR over FY25-28. With improving revenue and stable margins, we expect its RoE/RoCE to remain comfortable, reaching 25.2%/25.6% by FY28.

### Valuation and recommendation

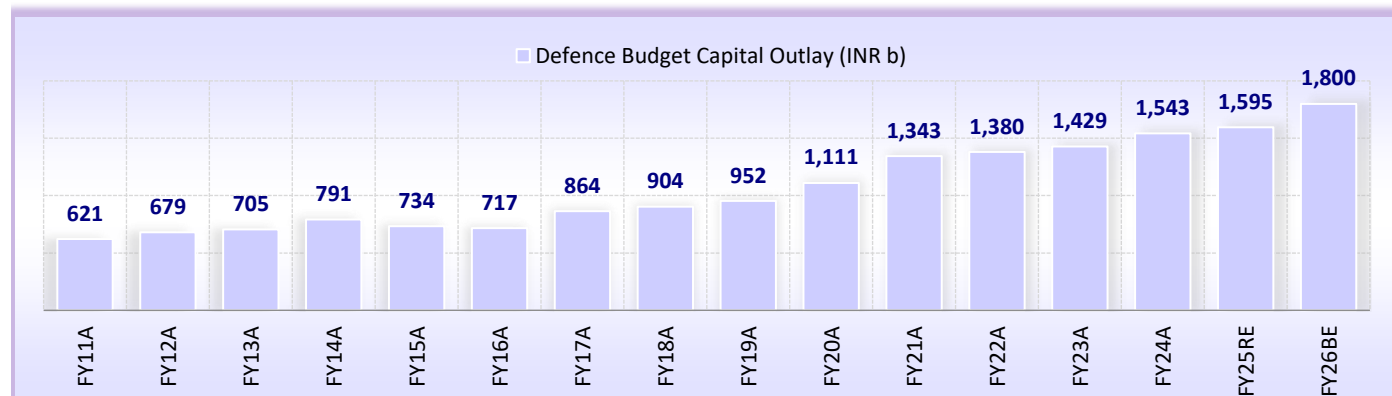
The stock currently trades at 70x/52x/38x P/E on FY26/27/FY28 estimates. We initiate coverage on the stock with a **NEUTRAL** rating and a TP of **INR1900** based on 42x Sep'27E P/E. We like the business model of BDL and its ability to scale up its revenues and order book in current scenario, however, with fair valuations, we would look for lower price points to enter the stock.

### Key risks and concerns

Key risks for the company include a decline or reprioritization of the Indian defense budget, termination of existing contracts or failure to succeed in tendering projects, changes in procurement rules and regulations of the MoD and the government, and supply-chain-related issues.

## Story in Charts

Defense capex budget trend improves and is likely to increase at a faster pace going forward



Source: Union Budget, MOFSL

We expect an addressable market for BDL over the next few years at ~INR500b

Future programs expected	Category	Amount (INR b)	Expected year of order	Comments
<b>In association with DRDO</b>				
Base orders	Base orders	120	FY26-29	❖ Run rate of INR30b every year for the next 3-4 years
MRSAM	Surface-to-air	30	FY24-25	❖ Order received in Jan'25
Astra Mk1	Air-to-air	29		❖ Production clearance for 200 missiles to BDL has been given by the IAF
QRSAM	Surface-to-air	113	FY25-26	❖ Expected by 4QFY26 or 1QFY27.
Akash NG SAM	Surface-to-air		FY26-27	❖ Testing done on 12th Jan'24. High-altitude testing to be carried out soon.
Long Range Land Attack Cruise Missile (LRLACM)	Surface-to-surface	140	FY27-28	❖ Flight test done on 12th Nov'24, second test to be conducted soon. IAF/IA to procure missiles worth INR100b/40b once developed
VSHORAD	Very short-range air defense system	19	FY25-26	❖ Three consecutive flight tests done by DRDO on 1st Feb'25
VLSRSAM	Surface-to-air		FY26-27	❖ Testing done on 26th Mar'25
Dhruvastra/Helina ATGM	Air-to-surface	43	FY25-26	
NAG ATGM	Surface-to-air	18	FY25-26	
Torpedoes			FY26-28	❖ In Mar'25, the DAC accorded AoN for the procurement of Varunastra Torpedoes (Combat) to be used by the Indian Navy; the cost is not disclosed.
<b>Overall TAM</b>		<b>511</b>		

Source: Industry, MOFSL

### Order inflows for BDL over the last 4-5 years

Date	Order	Size (INR b)	Customer	Comments
26-Mar-25	Armaments	44	Indian Armed Forces	Domestic
16-Jan-25	MRSAM	30	Indian Navy	Domestic
19-Sep-23	SAM	3	Indian Air Force	Domestic
30-Mar-23	Akash Weapon System	82	Indian Army	Domestic
30-Mar-23	Counter Measures Dispensing System	3	Indian Army	Domestic
20-Feb-23	ATGM	21	NA	Export
31-May-22	ASTRA MK-I Beyond Visual Range (BVR) Air to Air Missile	30	IAF and IA	Domestic
03-Feb-22	Konkurs-M ATGM	31	IHQ, MoD	Domestic
02-Dec-21	Refurbishment of IGLA-1 M missiles.	5	Indian Army	10Y contract
17-Nov-21	Counter Measures Dispensing System	2	Indian Army	Domestic
08-Jul-21	Akash SAM	5	Indian Air Force	Domestic
19-Mar-21	Milan-2T Anti-Tank Guided Missiles	12	MoD	Domestic
01-Mar-21	MRSAM Missile Rear Sections	4	Indian Air Force	To be executed before 30 Nov'23
06-Jan-21	Konkurs-M ATGM	6	NA	Along with launchers & test equipment
06-May-20	MRSAM	3	Indian Air Force	To be executed in the next 24M
31-Mar-20	Akash SAM	17	Indian Air Force	Domestic
12-Jul-19	Light-Weight Torpedo (LWT-XP)	0.4	Through PPP	To be executed in FY21
12-Jul-19	Light-Weight Torpedo (LWT-XP)	1	Through PPP	To be executed in FY21
01-Jun-19	Heavyweight torpedoes - Varunsatra	12	Indian Navy	To be executed in the next 42M
<b>Total orders announced by BDL in the past five years</b>		<b>309</b>		

Source: Company, MOFSL

### Collaborations of Indian players with foreign players on key missile systems

Company	Brief
Tata Advanced Systems Ltd. (Private)	❖ TASL has partnered with Raytheon to produce components for Stinger missile systems. These missile systems will be deployed at platoon levels and also onboard AH-64 Apaches, which are being procured by India.
Kalyani Strategic Systems (Private)	❖ Kalyani Strategic Systems, Bharat Forge's defense subsidiary, has also formed a JV with Rafael Advanced Systems to manufacture high-technology defense components in India. An MoU has also been signed with IAI for a JV company to build air defense, ground-to-ground, and ground-to-sea munitions in India.
L&T (Private)	❖ L&T has entered into a JV with MBDA to produce 5 <sup>th</sup> -generation ATGMs in India. BDL and L&T have also agreed to export light torpedo solutions. BDL manufactures light torpedoes, while L&T has expertise in tube torpedo launchers.
BDL (DPSU)	❖ BDL is the key missile manufacturing firm in India. It produces all classes including Akash SAM systems, light torpedoes, launching equipment, countermeasures, ATGMs, test equipment, and others. The company also manufactures Medium Range Surface to Air Missile (MRSAM) missiles in India. BDL is also exploring possibilities of technology transfer with Thales for the Star STREAK missile system and is looking to enter cruise missile too.
BrahMos Aerospace Private Limited (BAPL)	❖ BAPL is a joint venture between India's Defence Research and Development Organisation (DRDO) and Russia's NPO Mashinostroyeniya (NPOM). It is an aerospace and defense company that designs, develops, produces, and markets supersonic cruise missiles for the Indian Armed Forces. It produces a range of missile systems, including the BrahMos missile, an air-launched cruise missile, and submarine-launched missiles.

Source: Industry, Company, MOFSL

### Key missile systems in India

Missile Systems	Description
Agni	❖ Agni-1 to Agni-5 missiles designed and developed by DRDO, have been inducted into service. ❖ Short-range surface-to-air missile system.
Akash	❖ Simultaneously engages multiple targets in the group or autonomous modes. ❖ Inducted and operational with the Indian Air Force as well as the Indian Army
Astra	❖ An air-to-air missile system designed to be mounted on fighter aircraft ❖ Designed to engage and destroy highly maneuverable supersonic aircraft ❖ All-weather day and night capability ❖ Developed with multiple variants to meet specific requirements ❖ The Astra Mk-I weapon system integrated with Su-30 Mk-I aircraft is being inducted into the Indian Air Force
NGARM	❖ The new generation anti-radiation missile (NGARM) is used to target and destroy enemy-based radars on the ground. ❖ Range of 100-250 km ❖ Uses Sukhoi-30 as its launch platform
QRSAM	❖ Short-range surface-to-air missile system designed to protect moving armored columns from aerial attacks. ❖ Configured on highly mobile platforms and provides air defence on the move. ❖ Inducted into the Indian Army.
MRSAM	❖ High-response, quick-reaction, vertically launched supersonic missile designed to neutralize enemy aerial threats – missiles, aircraft, guided bombs, and helicopters. ❖ Used by the Army, Navy, and Air Force in different variants.
BrahMos	❖ Supersonic and hypersonic (in development) cruise missiles. ❖ Travels at a speed of 2-3 Mach and 5 Mach. ❖ Flight range of 290 km, with a cruising altitude of up to 15km and a terminal altitude of 10m. ❖ The missile is in service in ship-based, land-based, and air-launched versions.
Helina	❖ Third-generation fire-and-forget class anti-tank guided missile (ATGM) system mounted on the advanced light helicopter (ALH)

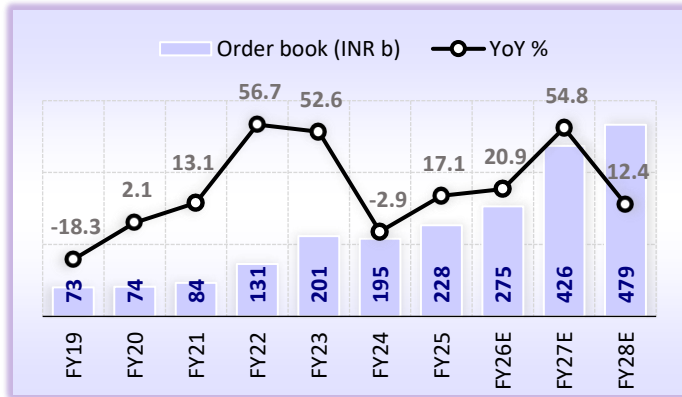
Source: Industry, MOFSL

### Key positives for BDL

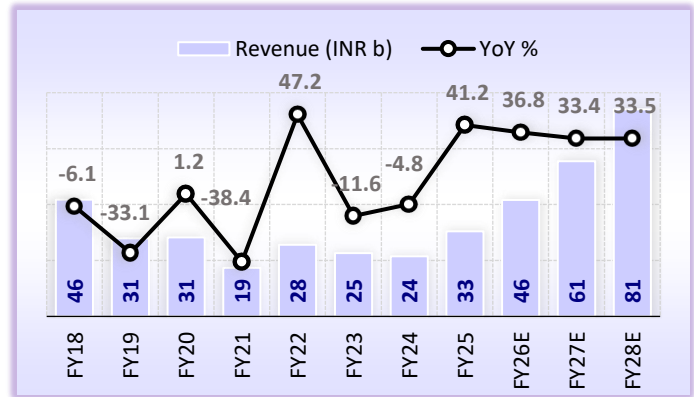




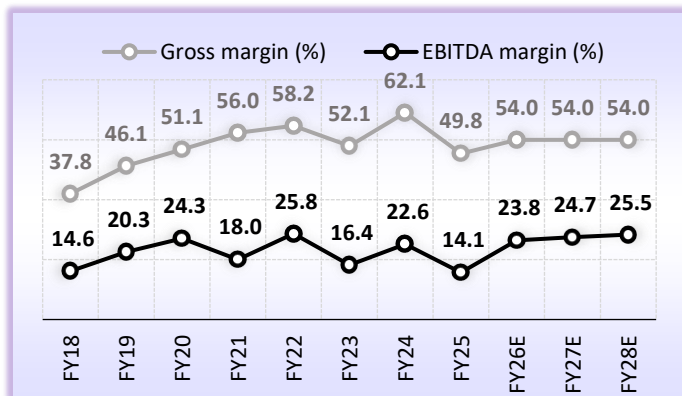
We expect order book to clock a CAGR of 28% over FY25-28E



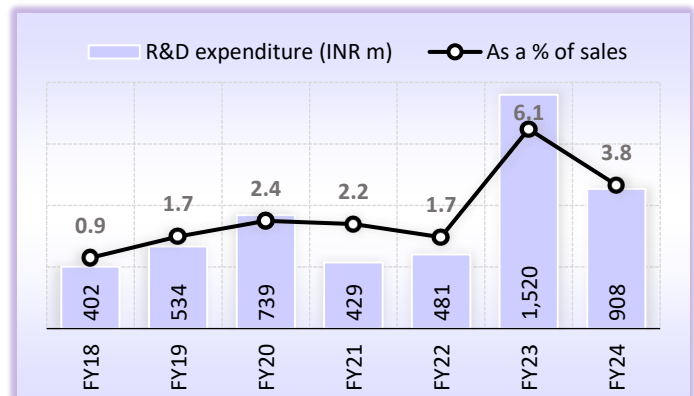
We expect revenue to clock a CAGR of 35% over FY25-28E



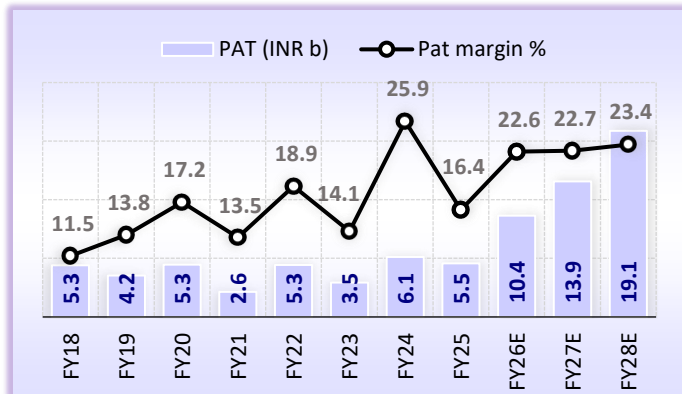
We expect gross margin of around 54%, while EBITDA margin is expected to be in 24-26% range



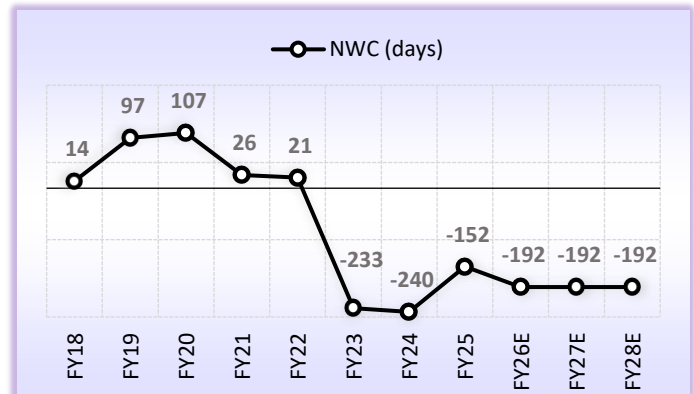
R&D expenses as a % of sales likely to exceed the historical range of 2-4% amid a strategic focus on innovation



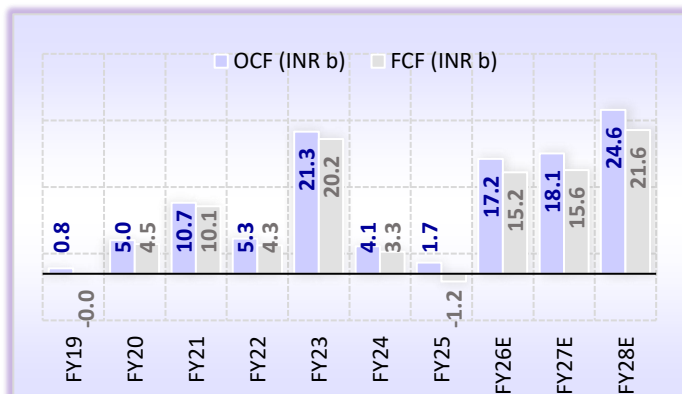
We expect PAT to clock a CAGR of 51% over FY25-28



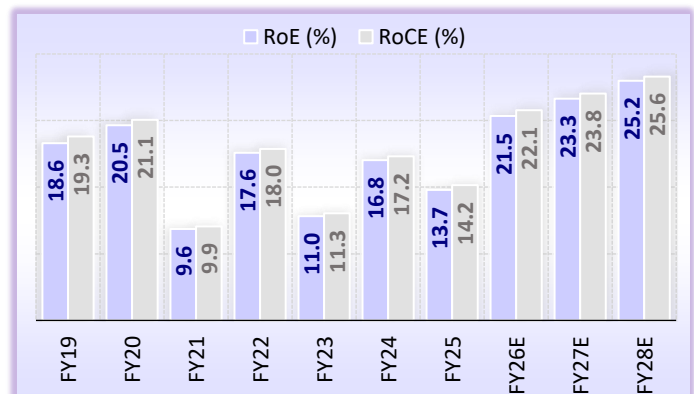
We expect working capital cycle to be at comfortable levels



OCF and FCF to improve going forward



RoE and RoCE to remain comfortable at 22-25%

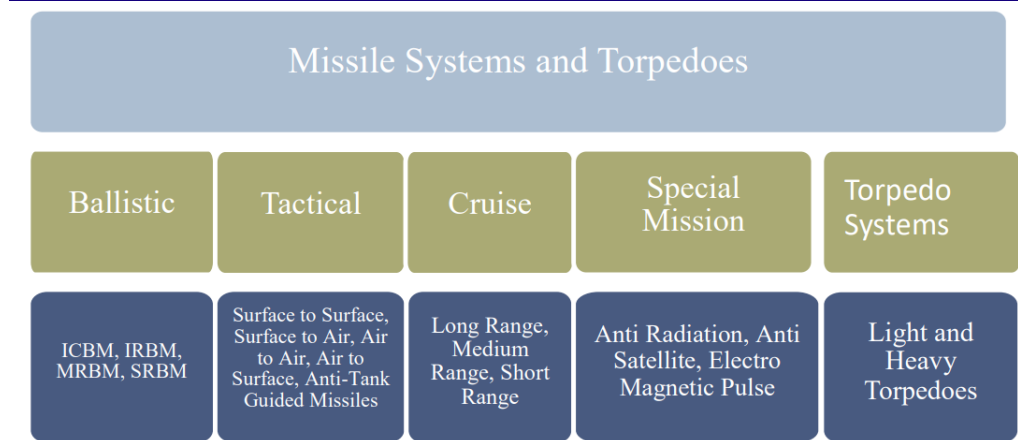


## Indian missile market and the positioning of players

According to industry estimates, the Indian missile market growth will be driven by 1) missile procurements for new naval, airborne, and army platforms such as Project 75I Submarines, Project 28A Corvettes, Project 17A Frigates, LCA Tejas Mk1A, Su30-Mk1, LCH Prachand, ALH Dhruv, QRSAM, MRSAM, NAG, and VSHORAD; 2) contracted missile procurements that are underway, such as S-400 Triumf Advanced Air Defense Systems (3 squadrons delivered, the remaining 2 squadrons are expected to be delivered by CY26-27 from Russia), Barak-8 Surface to Air Missiles (SAMs), and Heavy Weight Torpedoes c) modernization and refurbishment of in-service systems on existing land, airborne, and naval platforms, such as ATGM upgrades and missile system upgrades in existing ships. Extensive modernization efforts, such as the addition of new fighter squadrons, improving weapons systems mix at the platoon level, and adding new warships and submarines, will all in turn be drivers for missile demand and d) export demand, particularly for Akash missile systems.

India's missile arsenal includes a variety of systems, such as air-to-air, surface-to-air, and ballistic missiles. Key missiles include the Agni series (700-8,000 km), BrahMos (290 km), and Astra (80-110 km). These missiles enhance India's strategic deterrence and defense capabilities.

### Exhibit 1: Missile systems and the torpedo market




Source: MoD, MOFSL

**Exhibit 2: We expect an addressable market for BDL over the next few years at ~INR500b**

Future programs expected	Category	Amount (INR b)	Expected year of the order	Comments
<b>In association with DRDO</b>				
Base orders	Base orders	120	FY26-29	❖ Run rate of INR30b every year for the next 3-4 years
MRSAM	Surface-to-air	30	FY24-25	❖ Order received in Jan'25
Astra Mk1	Air-to-air	29		❖ Production clearance for 200 missiles to BDL has been given by the IAF
QRSAM	Surface-to-air	113	FY25-26	❖ Expected by 4QFY26 or 1QFY27
Akash NG SAM	Surface-to-air		FY26-27	❖ Testing done on 12th Jan'24. High-altitude testing to be carried out soon.
Long Range Land Attack Cruise Missile (LRLACM)	Surface-to-surface	140	FY27-28	❖ First Flight test done on 12th Nov'24, second test to be conducted soon. IAF/IA to procure missiles worth INR100b/40b once developed
VSHORAD	Very short-range air defense system	19	FY25-26	❖ Three consecutive flight tests done by DRDO on 1st Feb'25
VLSRSAM	Surface-to-air		FY26-27	❖ Testing done on 26th Mar'25
Dhruvastra/Helina ATGM	Air-to-surface	43	FY25-26	
NAG ATGM	Surface-to-air	18	FY25-26	
Torpedoes			FY26-28	❖ In Mar'25, the DAC accorded AoN for the procurement of Varunastra Torpedoes (Combat) to be used by the Indian Navy; the cost is not disclosed.
<b>Overall TAM</b>		<b>511</b>		

Source: Industry, MOFSL

**Exhibit 3: Positioning of players in the global missile & torpedo market**

	SRBM	IRBM	ICBM	ATGM	AAM	Cruise Missile	SSM Medium Range	SSM Long Range	ASM	Anti-Ship Missile	SAM, Man Portable	SAM, Platform-Based	Light Torpedo	Heavy Torpedo
 Bharat Dynamics	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
Raytheon				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lockheed Martin	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		
MBDA				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Denel Dynamics				✓	✓			✓	✓	✓		✓		
Boeing	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
SAAB				✓	✓		✓		✓	✓	✓	✓		✓
BrahMos					✓	✓	✓						✓	
Rafael				✓	✓		✓		✓	✓		✓		
IAI	✓			✓	✓		✓		✓	✓		✓		
LIG-NEX1				✓			✓			✓	✓	✓		
CASIC														
Norinco				✓	✓		✓		✓	✓		✓		
Safran									✓					
Tactical Missiles Co.					✓				✓	✓			✓	✓
Mitsubishi Heavy Ind.				✓	✓		✓		✓	✓		✓	✓	
Roketsan				✓			✓	✓	✓			✓		
Kongsberg						✓		✓	✓	✓	✓			
Leonardo													✓	✓
Diehl Defence				✓	✓		✓		✓	✓		✓		
Thales				✓		✓					✓	✓		
BAE Systems				✓						✓		✓	✓	✓

Source: Company (✓ Indicates presence of capability in the present or past), MOFSL

Key players present in the missile market are BDL, Tata Advanced Systems, Kalyani Strategic Systems, L&T, BrahMos Aerospace Private Limited, Adani Defense, etc. However, the leadership in the missile market is held by Bharat Dynamics and foreign countries like Israel, Russia, Europe, and North America.

Indian private players are rushing to secure licenses for manufacturing missiles and to partner with foreign players to field products for the extensive emerging opportunities in the Indian guided missile market space. However, it is to be noted that most of these private players lack manufacturing experience for the same. In this light, DPSUs like BDL, which have proven guided missile, SAM, and torpedo manufacturing capabilities, stand to benefit. They also have the added advantage that missile systems produced are already inducted into the Indian Armed Forces, thereby bettering market perception for export.

#### Exhibit 4: Collaborations of Indian players with foreign players on key missile systems

Company	Brief
Tata Advanced Systems Ltd. (Private)	❖ TASL has partnered with Raytheon to produce components for Stinger missile systems. These missile systems will be deployed at platoon levels and also on board AH-64 Apaches, which are being procured by India.
Kalyani Strategic Systems (Private)	❖ Kalyani Strategic Systems, Bharat Forge's defense subsidiary, has also formed a JV with Rafael Advanced Systems to manufacture high-technology defense components in India. An MoU has also been signed with IAI for a JV company to build air defense, ground-to-ground, and ground-to-sea munitions in India.
L&T (Private)	❖ L&T has entered into a JV with MBDA to produce 5th-generation ATGMs in India. BDL and L&T have also agreed to export light torpedo solutions. BDL manufactures light torpedoes, while L&T has expertise in tube torpedo launchers.
BDL (DPSU)	❖ BDL is the chief missile manufacturing firm in India. It produces all classes except cruise missiles, including Akash SAM systems, light torpedoes, launching equipment, countermeasures, ATGMs, test equipment, and others. The company also manufactures Medium Range Surface to Air Missile (MRSAM) missiles in India. BDL is also exploring possibilities of technology transfer with Thales for the Star STREAK missile system.
BrahMos Aerospace Private Limited (BAPL)	❖ BAPL is a joint venture between India's Defence Research and Development Organisation (DRDO) and Russia's NPO Mashinostroyeniya (NPOM). It is an aerospace and defense company that designs, develops, produces, and markets supersonic cruise missiles for the Indian Armed Forces. It produces a range of missile systems, including the BrahMos missile, an air-launched cruise missile, and submarine-launched missiles.

Source: Company, Industry, MOFSL

#### Indian guided missiles and torpedoes missile market positioning

Solutions from Russia, Israel, Europe, and the US are well entrenched in the Indian market. At present, indigenous development and manufacturing are carried out by three DPSUs – DRDO, BDL, and BEL. Among the three, BDL is the main player in manufacturing and is the sole manufacturer in India for SAMs, torpedoes, and ATGMs.

**Exhibit 5: Key players and their products catering to the Indian guided missile & torpedo systems market**

Country	Missile	Manufacturer
Russia	Igla	❖ Manufactured by Russia's Rosoboronexport. Assembled by Adani Defence Systems and Technologies Limited (ADSTL) in India.
	Strela	❖ Kalashnikov Concern
	S-400 Triumf	❖ Almaz Central Design Bureau
	2K12 Kub/Kvadrat	❖ Ulyanovsk Mechanical Plant (SURNs) and ZiK (TEs)
	APR 3-E	❖ Tactical Missiles Corporation (TMC)
Israel	Barak 1	❖ Israel Aerospace Industries (IAI) & Rafael Advanced Defense Systems
	Arrow 2	❖ Israel Aerospace Industries (IAI) & Boeing
	Spike	❖ Rafael Advanced Defense Systems
	Python 5	❖ Rafael Advanced Defense Systems
	Spyder	❖ Rafael Advanced Defense Systems with the assistance of IAI
India	Invar	❖ BDL post ToT
	Konkurs	❖ BDL post ToT
	Milan 2T	❖ BDL post ToT
	Light-weight Torpedo	❖ BDL, BEL, NSTL
Europe	MICA	❖ MBDA
	BlackShark	❖ Leonardo
	Exocet	❖ MBDA
	Sea Eagle	❖ MBDA
North America	HellFire	❖ Lockheed Martin, Boeing, Northrop Grumman
	Harpoon	❖ Boeing
	Stinger	❖ Raytheon Missiles & Defense
	Hydra	❖ General Dynamics Ordnance and Tactical Systems (OTS) and BAE Systems

Source: Industry, MOFSL

**Exhibit 6: Key missile systems in India**

Missile Systems	Description
Agni	❖ Agni-1 to Agni-5 missiles designed and developed by DRDO, have been inducted into service. ❖ Short-range surface-to-air missile system.
Akash	❖ Simultaneously engages multiple targets in the group or autonomous modes. ❖ Inducted and operational with the Indian Air Force as well as the Indian Army
Astra	❖ An air-to-air missile system designed to be mounted on fighter aircraft ❖ Designed to engage and destroy highly maneuverable supersonic aircraft ❖ All-weather day and night capability ❖ Developed with multiple variants to meet specific requirements ❖ The Astra Mk-I weapon system integrated with Su-30 Mk-I aircraft is being inducted into the Indian Air Force
NGRAM	❖ The new generation anti-radiation missile (NGARM) is used to target and destroy enemy-based radars on the ground. ❖ Range of 100-250 km ❖ Uses Sukhoi-30 as its launch platform
QRSAM	❖ Short-range surface-to-air missile system designed to protect moving armored columns from aerial attacks. ❖ Configured on highly mobile platforms and provides air defence on the move. ❖ Inducted into the Indian Army.
MRSAM	❖ High-response, quick-reaction, vertically launched supersonic missile designed to neutralize enemy aerial threats – missiles, aircraft, guided bombs, and helicopters. ❖ Used by the Army, Navy, and Air Force in different variants.
BrahMos	❖ Supersonic and hypersonic (in development) cruise missiles. ❖ Travels at a speed of 2-3 Mach and 5 Mach. ❖ Flight range of 290 km, with a cruising altitude of up to 15km and a terminal altitude of 10m. ❖ The missile is in service in ship-based, land-based, and air-launched versions.
Helina	❖ Third-generation fire-and-forget class anti-tank guided missile (ATGM) system mounted on the advanced light helicopter (ALH)

Source: Industry, MOFSL



## Status of the ongoing indigenous weapon systems in India, where BDL has presence

### Exhibit 7: Status of the ongoing indigenous weapons systems in India

Weapon systems	Status
New Generation Anti-Radiation Missile	❖ NGARM is a technology demonstration project for the development of the country's first indigenous air-launched air-to-surface Anti-Radiation Missile System. The development of this weapon system is spearheaded by DRDL, Hyderabad, and is likely to be completed soon.
Astra Mk-I & Mk-II BVR AA Missile	❖ To cater to the deficiency in air-to-air missiles, the D&D of the Astra BVR missile has been initiated by DRDO. The delivery of the Astra Mk-I missile is in progress, and the procurement of additional Astra Mk-I missiles is in progress. Procurement of the Astra Mk-II missile is also being processed.
Pralay	❖ Pralay is a surface-to-surface missile with a range of ~400km and can strike different types of targets using different types of warheads. The project is under D&D by RCI, and DRDO, and is likely to be completed soon.
LR-LACM	❖ The design and development of LR-LACM is underway by the DRDO, ADE. The project is likely to be completed soon.
LR-SOW	❖ D&D by DRDO on Long-Range Stand-Off Weapons with ranges >300km and higher payloads are under progress to have enhanced capability of indigenous weapons. The project is likely to be completed soon.
Tactical Advance Range Augmentation Kit	❖ D&D by RCI on the TARA kit is in progress and is likely to be completed soon. The IAF is planning to procure a significant number of TARA Kits.
Long Range Glide Bomb	❖ D&D by RCI for LRGB is in progress and likely to be completed soon. The IAF is planning to procure 300 LRGB.
SAAV Weapon System	❖ SAT-SAAW weapon systems are being procured for the Indian Air Force and Indian Navy, which are co-developed by RCI with BDL as the production agency.

Source: Standing Committee Report On Defence

## Major programs where BDL is a lead integrator or a key player, and the corresponding supply chain network

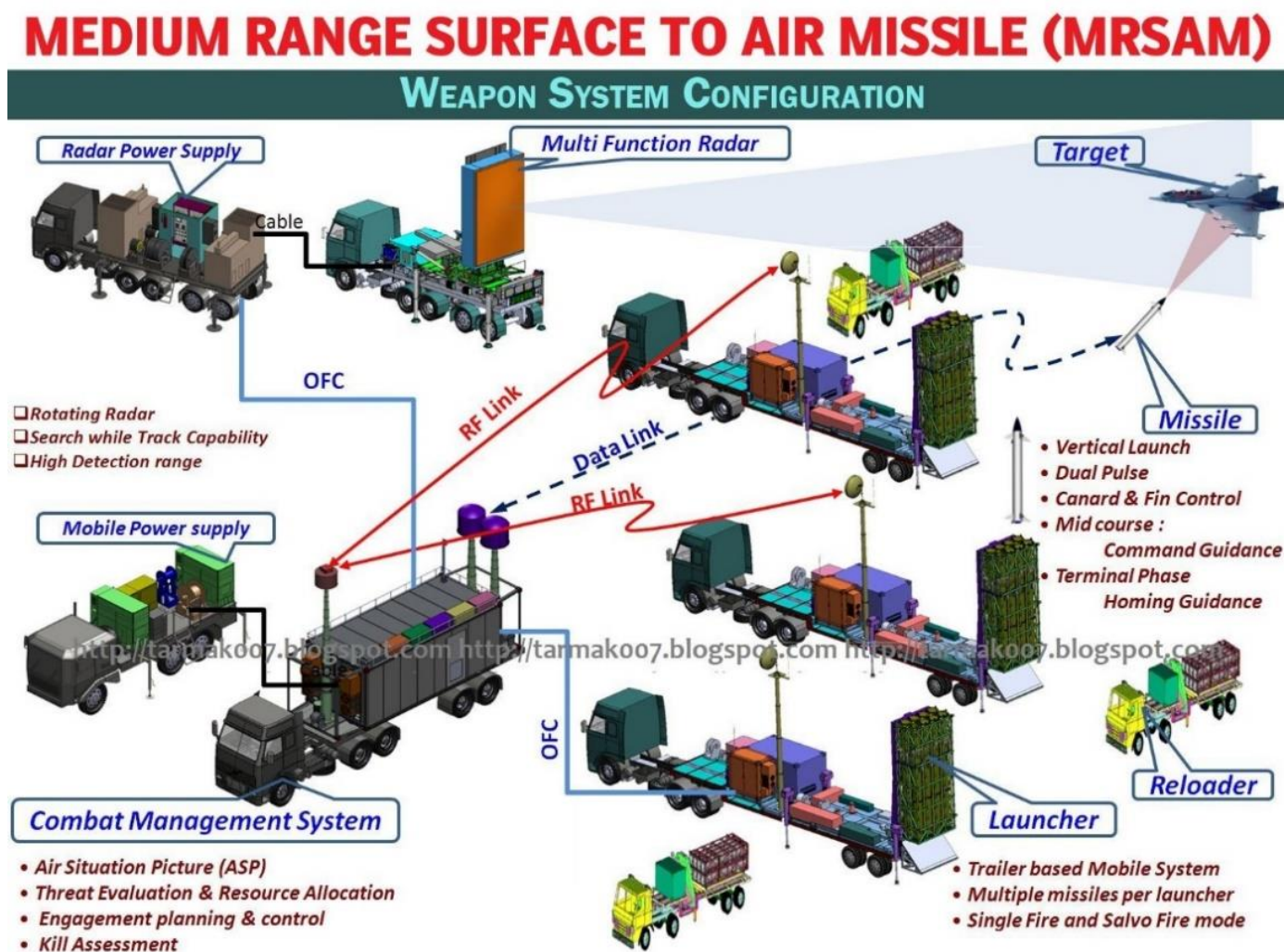
### Medium Range Surface to Air Missile (MRSAM)

This weapon system, also called the 'Abhra' Weapon System, is a state-of-the-art medium-range air defense weapon system. It is a joint venture of DRDO and Israeli Aerospace Industries (IAI) and is produced at Bharat Dynamics Limited (BDL). It is designed to destroy hostile aircraft, helicopters, cruise missiles, and drones at a 70km range. **For the missiles meant for the Indian Armed Forces, Bharat Dynamics Limited (BDL) is the lead integrator of the missile.**

#### Components of MRSAM:

- **Mobile Launcher System (MLS):** A vehicle-mounted platform carrying the Launch Control System (LCS), missiles, and communication equipment.
- **Combat Management System (CMS):** A system that manages the entire process, from threat identification to missile launch.
- **Multi-Function Surveillance and Threat Alert (MFSTAR) Radar:** A radar system that detects and tracks aerial targets.
- **Vertical Launcher Unit (VLU):** The unit that launches the missile vertically.
- **Active Radar Seeker (RF):** A radar-based system embedded in the missile for guidance during the final phase of the flight.

Exhibit 8: MRSAM – system configuration



Source: Industry, MOFSL

- For the missiles meant for the Indian Armed Forces, BDL is the lead integrator.
- Components of the missile are manufactured by Kalyani Rafael Advanced Systems (KRAS), a joint venture between the Kalyani Group and Rafael, at Kalyani Rafael's plant in Hyderabad, Telangana, before being sent to Bharat Dynamics Limited for further integration.
- The Combat Management System is designed and manufactured by Tata Advanced Systems.
- Rafael, Elta, L&T, Bharat Electronics (BEL), and other private companies are among the other contractors working on the MRSAM.
- Israeli Aerospace Industries (IAI) and Rafael Advanced Defense Systems are prominent Israeli companies involved in missile technology, including seeker systems. These seekers are crucial for guiding missiles to their targets, with technologies like electro-optical and imaging infrared homing being utilized.

**Delays in implementation of the MRSAM project:** Due to geopolitical issues, there were delays in the supply of key components such as seekers from Israel, coupled with delays in the import of key electronic items. This has adversely impacted the revenue growth of BDL over the last 1-2 years.

### Quick Reaction Surface to Air Missile (QRSAM)

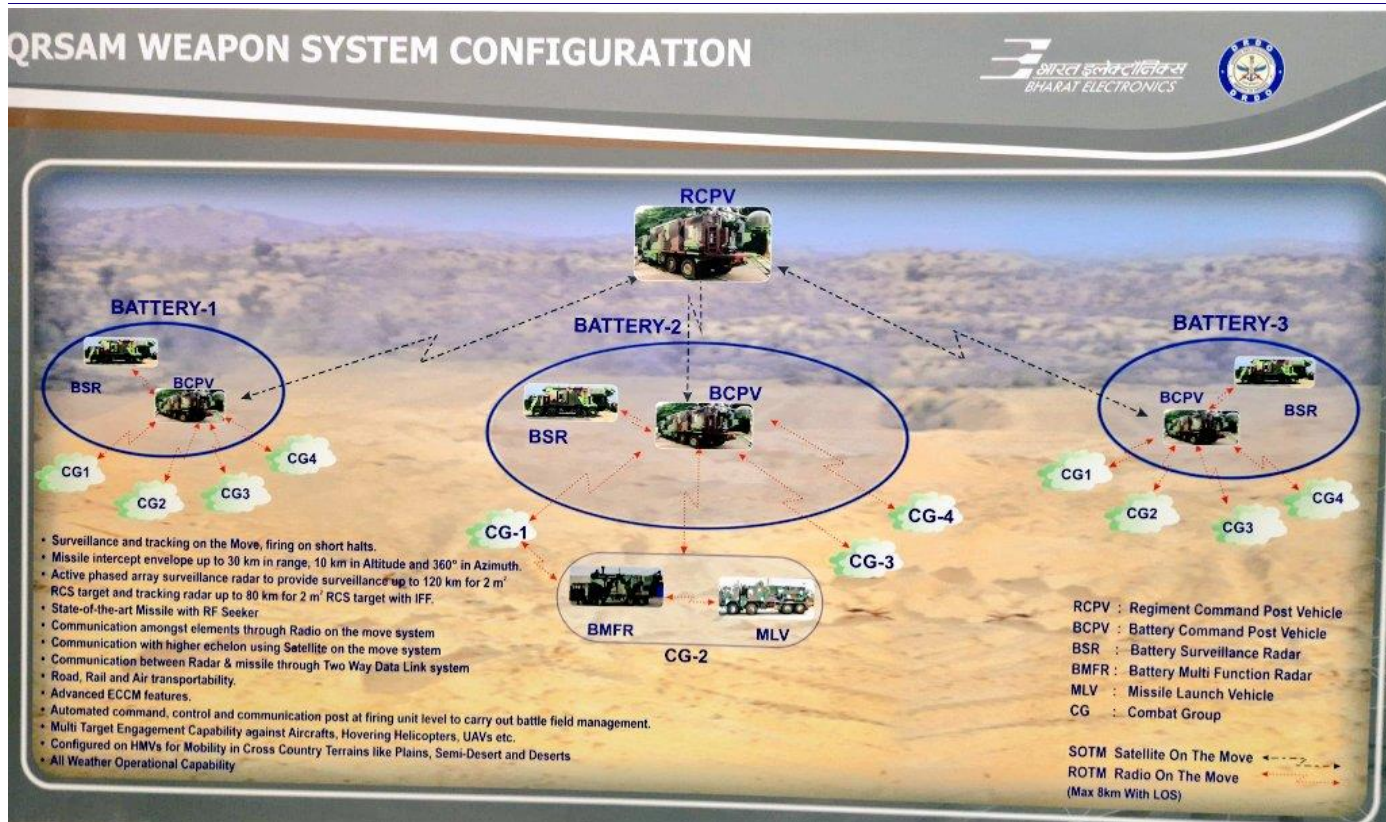
The QRSAM is a short-range, mobile air defense system developed by India's DRDO in association with BEL and **BDL**, with both firms participating in development and manufacturing. The QRSAM system has a high level of indigenization, with a current level of 90% indigenous components. It is designed to protect the moving armored columns from aerial threats, offering a rapid response against aircraft, helicopters, UAVs, and cruise missiles. The QRSAM system is highly mobile, capable of searching, tracking, and firing on the move or with short halts.

#### Components of QRSAM:

- **Regiment Command Post Vehicle (RCPV):** A QRSAM weapon system comprises one RCPV, which acts as the central system controlling **three guided weapon batteries** via SOTM (Satellite on the Move).
- **Battery Command Post Vehicle (BCPV):** The heart of the battery system is the BCP, which is capable of commanding up to six Combat Groups (CG).
- **Battery Multi-Function Radar (BMFR):** Each CG, in its two-vehicle configuration, consists of one Battery Multi-Functional Radar Vehicle (BMFRV), which can track 64 targets simultaneously at a distance of up to 80km.
- **Battery Surveillance Radar (BSR):** BCP also receives target data from Battery Surveillance Radar Vehicle (BSRV) with a tracking range of 120km.
- **Missile Launch Vehicle:** The vehicle to which the launchers are attached.



**Exhibit 9: QRSAM – system configuration**



Source: Industry, MOFSL

- **Missile:** For the missiles meant for the Indian Armed Forces, **BDL** is the lead integrator of the missile.
- **Mobile Launcher Vehicle:** The transporter erector launcher (TEL) of the system of QRSAM is developed by **Larsen & Toubro**. It is a six-tube canisterized launcher mounted on 8 x 8 Ashok **Leyland** or **Tata Motors** heavy mobility vehicles. Each launcher has 6 missiles and can target 6 different targets. The launcher has all-round firing capability, 10-16 degrees in elevation, and 360 degrees azimuth.
- **BMFR and BSR:** The BMFR & BSR, developed by **BEL**, are four-walled and configured to provide 360-degree coverage. The radar uses Quad TR modules based on gallium nitride.
- **RF Seeker:** QRSAM uses an indigenous RF seeker developed by **RCI**, which is also used in the Astra BVR air-to-air missile and Akash 1s SAM. DRDO has also developed a ceramic radome for QRSAM.
- **Laser proximity fuze:** The missile has a laser proximity fuze developed by the **Instruments Research and Development Establishment (IRDE)** to enhance accuracy and reduce its susceptibility to jamming.
- **Avionics:** The IRDE has developed a stabilized electro-optical sight (SEOS) with two-axis stabilization and an integrated automatic video tracker facility. The indigenous SEOS has three electro-optical sensors, a third-generation 3-5  $\mu\text{m}$  (640 x 512 FPA) thermal imager (TI) with optical zoom, a color day TV with optical zoom camera, and an eye-safe laser range finder (ELRF).

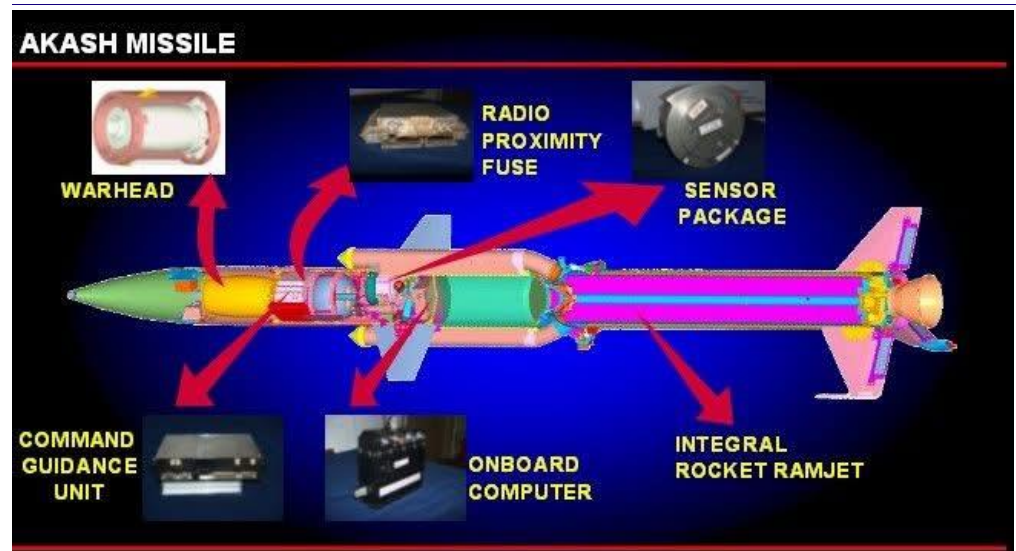
## AKASH Missile

AKASH is a short-range surface-to-air missile system to protect vulnerable areas and points from air attacks. The Akash Weapon System (AWS) can simultaneously engage multiple targets in group mode or autonomous mode. It has built-in Electronic Counter-Counter Measures (ECCM) features. The entire weapon system has been configured on mobile platforms.

### Components of the Akash NG missile system

- **Command and Control Unit (CCU):** It is the automated command and control center for the Akash-NG. It performs the command and control functions for the Akash-NG weapon system.
- **Multi-Functional Radar (MFR):** The CCU receives and processes target data from MFR, neighboring FUs, and IACCS, and provides an integrated air situation picture for combat operations and to the Deployment Planning Module of QRSAM, the commander. The CCU then performs target classification, identification, threat evaluation, engagement, and kill assessment for neutralizing the threat.
- **Air Situation Monitor (ASM):** ASM provides an interactive display of tracks captured by various sensors on the map background, enabling situational awareness for field commanders.
- **Deployment Planning Module (DPM) software:** The DPM is used for deployment planning of the Akash-NG weapon system elements, such as CCU, MLV, and MFR.
- **Missile Launcher Vehicles (MLV):** The vehicle to which the launchers are attached.

**Exhibit 10: AKASH missile and its components**



Source: DRDO, MOFSL



- BDL for missiles.
- LRDE Bangalore manufactured the Rajendra radar.
- BEL, Tata Power Strategic Engineering Division, and Larsen & Toubro for radars, control centers, and launchers.
- Tracked vehicles were manufactured by Combat Vehicles Research & Development Establishment (CVRDE).
- The detachable trailer used to carry the launcher is towed by a Tata truck, which can be positioned autonomously.
- Nuclear warheads were manufactured by the Armament Research & Development Establishment (ARDE).
- Propellants were built by the High Energy Materials Research Laboratory (HEMRL).

### History of the Akash missile system

- **Mark-I:** It was the first test flight of the **Akash missile**, which was conducted in 1990. Two Akash missiles intercepted two fast-moving targets in simultaneous engagement mode in 2005.
- **Akash-1S:** Later, the Indian Armed Forces demanded a missile that could destroy inbound targets more properly. For this, the DRDO offered the Akash-1S, which is an upgraded version of the Akash missile. It was tested by DRDO on 25 May and 27 May 2019. It had a strike range of 30 km with a capability to carry a warhead of 60 kg from the Integrated Test Range (ITR), Chandipur, Odisha. This missile can strike down fighter jets as well as drones from a distance of around 18 to 30 km and can be fired from both tracked and wheeled platforms for greater mobility.
- **Akash Prime:** The next version after Akash-1 was Akash Prime, whose test launch was done on 27<sup>th</sup> Sep'21. This missile intercepted and destroyed an unmanned mimicking aircraft aurally. It is equipped with active radio frequencies, which increase the missile's accuracy. It is used during low temperatures and high-altitude operations.
- **Akash-NG:** This Akash missile is known as a successor missile with a newly implemented design. Approved in September 2016 along with funding of INR4.7b, it has an improved reaction time with a high level of protection against aerial attacks. The work on Akash-NG is progressing well. The company has completed development trials with DRDO, and user trials are expected to begin soon. Additionally, there is a new initiative called KUSHA, based on the Akash-NG platform, which is designed for ranges exceeding 300 km. This will be one of the key air defense missile systems in the future. The complete missile is indigenously made, and the seeker is being manufactured by BDL, along with DRDO. Presently, it is an Air Force project, and multiple versions of this will meet various requirements of all three services.

## BDL could further benefit from opportunities arising from Project Kusha

Project Kusha is India's indigenous development of a long-range surface-to-air missile (SAM) system, similar to the Russian S-400, aimed at bolstering air defense capabilities. It's a collaborative project between DRDO and BEL, with BEL playing a key role in developing and integrating subsystems like radars and control systems. The project is expected to be operational by FY29. The defence PSU is hoping for a potential order of up to INR400b under this project.

In 2018, India bought the S-400 Triumf air defence system units for USD5.4b (roughly INR350b). Three squadrons of these systems have already been delivered to the Indian armed forces, and the remaining two more are expected to be delivered by CY26-27. The fourth is expected to arrive in the country by the end of this year, followed by the fifth one next year.

### Development timeline

- **Prototype Development:** BEL, in collaboration with DRDO, is expected to complete the prototype within 12-18 months from May'25.
- **User Trials:** Following prototype completion, user trials are anticipated to span 12-36 months.
- **Operational Deployment:** Projected to be operationally deployed by FY29.

**Exhibit 11: Comparative analysis of Project Kusha**

Parameter	Project Kusha	S-400 (Russia)	Barak 8 (India/Israel)	Iron Dome (Israel)
<b>Type</b>	Long-range, multi-layered SAM	Long-range SAM	Medium/Long-range SAM	Short-range air defence
<b>Developer</b>	DRDO (India)	Almaz-Antey (Russia)	DRDO/IAI (India/Israel)	Rafael/IAI (Israel)
<b>Deployment (India)</b>	Planned: 2028-29	Operational	Operational	Not in Indian service
<b>Max Interceptor Range</b>	Up to 350 km (M1: 150 km, M2: 200/250 km, M3: 350 km)	Up to 400 km	70–100 km (Barak 8 ER: up to 150 km)	70 km (typically 4–70 km)
<b>Target Types</b>	Aircraft, stealth fighters, drones, cruise & ballistic missiles, PGMs, AWACS	Aircraft, cruise & ballistic missiles, UAVs	Aircraft, helicopters, UAVs, anti-ship missiles	Rockets, artillery, mortars, UAVs
<b>Guidance System</b>	RF datalink, advanced radars	Active radar, command guidance	Active radar homing	Radar and electro-optical tracking
<b>Kill Probability</b>	80% (single shot), 90% (two missiles)	High (varies by missile)	High (exact figures classified)	Over 90% (for short-range threats)
<b>Warhead</b>	Fragmentation	High-explosive fragmentation	Blast-fragmentation	Blast-fragmentation
<b>Detonation Mechanism</b>	Optical proximity fuze	Proximity fuze	Proximity fuze	Proximity fuze
<b>System Architecture</b>	Three-tiered, multi-interceptor	Multi-layered, four missile types	Single/interceptor-based	Battery-based, mobile
<b>Integration</b>	IAF air command/control, mobile TEL	Mobile, networked	Naval/land-based, networked	Highly mobile, networked
<b>Estimated Cost</b>	~INR400b	~USD5.5B (for 5 regiments to India)	Varies (less than S-400)	~USD50M per battery
<b>Indigenous Content</b>	Fully indigenous	Imported	Jointly developed (India/Israel)	Indigenous (Israel)
<b>Operational Role</b>	Strategic & tactical, supplement S-400, Barak 8, BMD	Strategic, area defence	Area & point defence	Point defence (short-range)

Source: Industry, MOFSL

## Key thesis for BDL

BDL is a key player in missile technology in the defense sector. The company collaborated with foreign players initially and then emerged as a prime production agency for DRDO. With a focus on developing advanced guided missiles, underwater weapons, and airborne products, BDL has an order book of INR227b. The company's revenues were impacted by supply chain issues, which are gradually easing. We expect BDL revenue visibility to remain strong on a healthy order book as well as a strong prospect pipeline. The company's focus on indigenization will aid margin improvement. We expect BDL to benefit from both domestic and export pipelines over the next couple of years.

### Key positives for BDL



## Investment thesis

### Strong product portfolio

BDL is a multi-product and multi-location player catering to the needs of the Army, Navy, and Air Force. It has evolved from being just a missile manufacturer to a weapon system integrator and has worked on various platforms. The company is engaged in the manufacturing of surface-to-air missiles, air-to-air missiles, air-to-surface weapons, launchers, test equipment, underwater weapons, countermeasure systems, and anti-tank guided missiles. BDL is also expanding across new areas such as drone-delivered payloads, including bombs and missiles, and mines, guided bombs, warhead manufacturing, engines for cruise missiles, propellants, rockets, etc. The company is also pursuing partnerships with foreign OEMs for new weapons and potential Transfer of Technology (ToT), in addition to DRDO programs.

**Exhibit 12: Product mix**

Category	Products		
SAM /AAM			
	Akash Weapon System (SAM)	Astra Weapon System (AAM)	Medium Range SAM (MRSAM)
			
	Smart Anti-Airfield Weapon (SAAW)	Helina (DHRUVA STRA)	Quick Reaction SAM (QRSAM)
ATGMs			
	Man Portable ATGM	Amogha – III ATGM	NAG ATGM
			
	Konkurs-M ATGM	Milan-2T ATGM	INVAR ATGM
Torpedoes			
	Lightweight Torpedoes (TAL - XP)	Heavyweight Torpedoes (Varunastra)	
Launchers			
	Unified Launcher		
Counter-measures			
	Counter Measures Dispensing Systems (CMDS)	Anti-Submarine Warfare Suite (ASW Suite)	
Test Equipment	❖ Functional monitoring equipment for ATGMs & SAMs		

Source: Company

## Strong order book and easing supply chain issues to yield healthy revenue growth

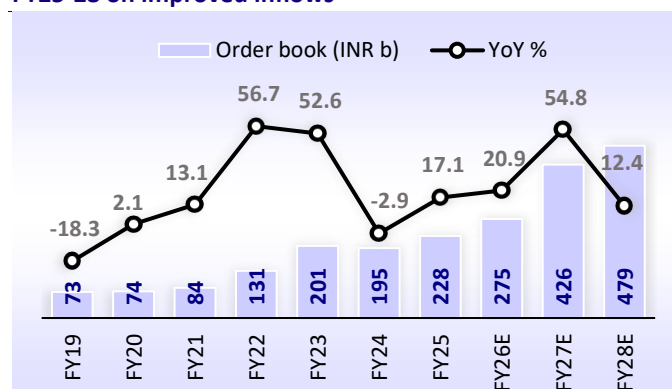
BDL's order book, which currently stands at INR227b, saw a strong 27% CAGR during FY20-24, particularly boosted by inflows of large orders related to Akash missiles, Konkurs anti-tank missiles and exports during FY23. Despite a strong order book, BDL's revenue growth in the last two years was impacted by supply chain issues. BDL was unable to bill most of its order book due to the ongoing geopolitical situations in Europe and the Middle East, causing delays in receipt of input materials from foreign OEMs such as seekers, warhead, critical electronic components. However, the company had started indigenizing 98 critical components, which were earlier imported. Based on our discussions with management, these issues have eased out to some extent. We thus expect the current order book to be executed over the next 4-5 years and expect a revenue CAGR of 35% over FY25-28.

**Exhibit 13: Key orders won by BDL in the past 4-5 years**

Date	Order	Size (INR b)	Customer	Comments
26-Mar-25	❖ Armaments	44	Indian Armed Forces	Domestic
16-Jan-25	❖ MRSAM	30	Indian Navy	Domestic
19-Sep-23	❖ SAM	3	Indian Air Force	Domestic
30-Mar-23	❖ Akash Weapon System	82	Indian Army	Domestic
30-Mar-23	❖ Counter Measures Dispensing System	3	Indian Army	Domestic
20-Feb-23	❖ ATGM	21	NA	Export
31-May-22	❖ ASTRA MK-I Beyond Visual Range (BVR) Air to Air Missile	30	IAF and IA	Domestic
03-Feb-22	❖ Konkurs-M ATGM	31	IHQ, MoD	Domestic
02-Dec-21	❖ Refurbishment of IGLA - 1M missiles.	5	Indian Army	10Y contract
17-Nov-21	❖ Counter Measures Dispensing System	2	Indian Army	Domestic
08-Jul-21	❖ Akash SAM	5	Indian Air Force	Domestic
19-Mar-21	❖ Milan-2T Anti-Tank Guided Missiles	12	MoD	Domestic
01-Mar-21	❖ MRSAM Missile Rear Sections	4	Indian Air Force	To be executed before 30 Nov'23
06-Jan-21	❖ Konkurs-M ATGM	6	NA	Along with launchers & test equipments
06-May-20	❖ MRSAM	3	Indian Air Force	To be executed in next 24 months
31-Mar-20	❖ Akash SAM	17	Indian Air Force	Domestic
12-Jul-19	❖ Light-Weight Torpedo (LWT-XP)	0.4	Through PPP	To be executed in FY21
12-Jul-19	❖ Light-Weight Torpedo (LWT-XP)	1	Through PPP	To be executed in FY21
01-Jun-19	❖ Heavy weight torpedoes - Varunsatra	12	Indian Navy	To be executed in next 42 months
<b>Total Orders announced by BDL in past 5 years</b>		<b>309</b>		

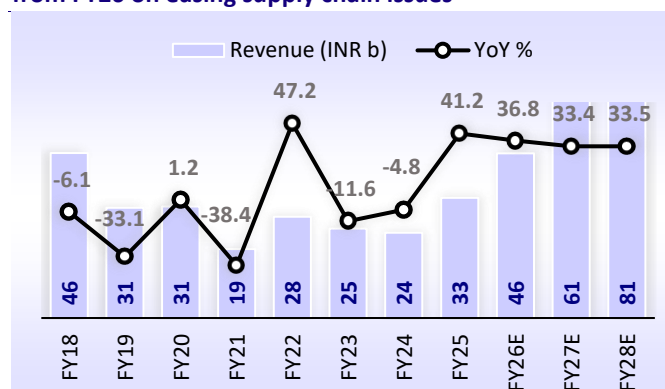
Source: Company, MOFSL

**Exhibit 14: We expect a 28% CAGR in order book over FY25-28 on improved inflows**



Source: Company, MOFSL

**Exhibit 15: We expect revenue growth to start improving from FY26 on easing supply chain issues**



Source: Company, MOFSL



**Exhibit 16: Import embargoes to benefit BDL**

PIL List Number	With effect from	BDL Products benefited by the PIL
<b>1st PIL</b>	Dec'20	❖ Short Range surface to Air Missile (Land variant)
	Dec'20	❖ Shipborne Cruise Missiles
	Dec'20	❖ Multi Barrel Rocket Launcher (MBRL) (Pinaka Variant)
	Dec'20	❖ Anti-Submarine Rocket Launchers
	Dec'20	❖ Torpedo Tube Launcher for Light Weight Torpedoes
	Dec'20	❖ Anti-Submarine Rocket
	Dec'20	❖ Anti-Submarine Rocket Launchers
	Dec'20	❖ Chaff Rockets
	Dec'20	❖ Chaff Rocket Launcher
	Dec'21	❖ Mine Fragmentation
	Dec'21	❖ Mine Anti-tank
	Dec'21	❖ Mine Anti-Personnel Blast
	Dec'22	❖ Lightweight Rocket Launcher
	Dec'23	❖ ASTRA-MK I Beyond Visual Range Air to Air Missile (BVR AAM)
	Dec'24	❖ Bi- Modular Charge System (BMCS )
	Dec'25	❖ Long Range – Land Attack Cruise Missile
<b>2nd PIL</b>	Dec'21	❖ Helicopter Launched ATGM up to 7 KM
	Dec'21	❖ Processor Based Ground Mine (PBGM)
	Dec'21	❖ Processor Based Moored Mine (PBMM)
	Dec'21	❖ Land Based MRSAM Weapon System
	Dec'22	❖ 80 MM Tandem Warhead Rocket
	Dec'23	❖ Smart Anti- Airfield Weapon (SAAW) Mk-I
	Dec'23	❖ Laser Ordnance Disposal System
	Dec'24	❖ Long Range Glide Bomb (250 Kg & 450 Kg)
<b>3rd PIL</b>	Dec'24	❖ 125 Kg General Purpose Bomb (NATO Standard)
	Dec'22	❖ Heavy Weight Torpedo Launchers for Ships
	Dec'22	❖ Mobile Autonomous Launcher (Brahmos)
	Dec'22	❖ Advance Light Weight Torpedo (Ship Launch)
	Dec'22	❖ Ship Based Medium Range Surface to Air Missile (MRSAM)
	Dec'22	❖ Air to Ground Rocket 68mm
	Dec'24	❖ Long Range Weapon with IR Seeker (70-100KM)
	Dec'24	❖ Chaff (1"x1"x8") & Flares (1"x1"x8") for Fighter Aircraft
	Dec'24	❖ Flares (2"x1"x8") for Fighter Aircraft
	Dec'25	❖ Ship Based Vertical Launched Short Range Surface to Air Missile (VL SRSAM)
	Dec'26	❖ Twin Store Rack for Smart Anti Airfield Weapon (SAAW)
	Dec'26	❖ Long Range Beyond Visual Range Missile (LR BVR) up to 250 Km
	Dec'26	❖ Launcher for ASTRA Air to Air Missile
	Dec'27	❖ Aircraft Launched Naval Anti-Ship Missiles - Medium Range
	Dec'27	❖ Medium Range Anti-Ship Missile (Ship Launched)
	Dec'27	❖ Submarine Launched Cruise Missile (Anti-Ship)
<b>4th PIL</b>	Dec'26	❖ Surface to Surface Missile (Pralay) and Associated System for Air Force
<b>5th PIL</b>	Dec'25	❖ Nag Missile System (NAMIS) Tracked (Limited Series Production)
	Dec'25	❖ Medium Range Precision Kill System (MRPKS) for Artillery
	Dec'26	❖ Heavy Weight Torpedo (HWT)
	Dec'27	❖ Quick Range Surface to Air Missile (QRSAM)
	Dec'27	❖ Launcher for Rudram Missile for Navy

Source: DRDO, MOFSL

### Indigenization efforts on the right track

The Ministry of Defence (MoD) has taken several steps to make India self-dependent in the defense sector, and 'Positive Indigenization Lists' (PIL) is one of the most important transformative reforms in pursuit of indigenization.

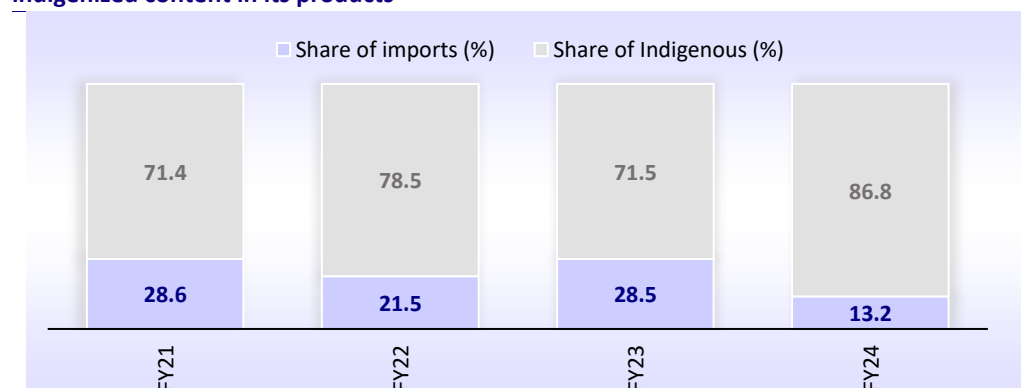
- From the first four PILs, 56 items belong to BDL that will be procured from the Indian industry within specified timelines. From these 56 items, BDL has achieved indigenization for 44 items and the remaining items are under various stages of indigenization.
- On 4th Oct'23, the MoD released the fifth PIL of 98 defense products of highly complex systems, sensors, weapons, and ammunition for indigenization by Defence PSUs, with an embargo on imports beyond the indicated timelines. From these 98 products, three belong to BDL, providing an opportunity for the company to scale up its operations.

BDL is designing and developing indigenous 2.5 and 3rd generation ATGMs, which are equivalent to foreign missiles and presently not being manufactured in India. These products are being developed under the Indian Indigenously Designed Developed and Manufactured (India IDDM) category of Defence Procurement Procedure. The successful completion of these products will make India "Atma Nirbhar" in the manufacturing of 2.5 and 3rd generation ATGMs.

The company's focus is on indigenizing the technology, particularly in the manufacturing of missiles under the technology of transfer (ToT) agreements with DRDO and foreign OEMs.

- ToT from foreign OEMs is only 60% of the process; however, the company has managed to indigenize more than 80-90% of the majority of the products.
- For DRDO-designed products, the indigenization level exceeds 90%, showcasing the company's commitment to increasing self-reliance.
- Further, BDL procured 27.7% of goods and services amounting to ~INR4.5b from Indian MSMEs.
- The company has developed an RF seeker facility, which will help it to be self-dependent with 50% supply and the balance would be sourced from BEL.

### Exhibit 17: BDL has been continuously investing in R&D and capex to increase the share of indigenized content in its products



Source: Company, MOFSL

**Exhibit 18: BDL indigenization level across products**

Product	Level of indigenization (%)
Konkurs-M	96.3
INVAR	87.9
Milan 2T	71.0
Akash	96.0
TAL-XP	91.0
Varunastra	86.0

Source: Company, MOFSL

**Capex across facilities for diversification, productivity and quality improvement**

BDL has six manufacturing units and is in the process of upgrading the quality standards across facilities. The company's three production units (Kanchanbagh, Bhanur and Vizag) have been re-certified with ISO 14001:2015 w.e.f Apr'23 by the certification body, International Certification Services Pvt. Ltd, with a validity of three years. BDL has established an integrated RF seeker facility at its Kanchanbagh unit for the production and testing of RF seekers, a critical and technology-intensive subsystem for target tracking in future missiles. BDL is also –

- Setting up additional manufacturing facilities at Ibrahimpatnam (near Hyderabad), Amravati (Maharashtra) and Jhansi (UP), which will be used to manufacture SAMs (including new generation Missiles), VSHORADs rockets and propellants for various ATGMs.
- Constantly upgrading its manufacturing technologies and processes to the state-of-the-art level, including 'Industry 4.0', robotics-operated workshops, and latest surface mounted device assembly lines. This pursuit results in lower production cost, benchmarking of productivity norms, modernization of management system, and less dependence on imported technology.

**Exhibit 19: BDL's manufacturing units**

Location	Status	Products Manufactured	Certifications
Hyderabad	Active	❖ SAMs, Milan 2T ATGMs, countermeasures, launchers and test equipment	❖ AS 9100D, ISO 14001:2015, ISO/IEC 17025:2017
Bhanur	Active	❖ Konkurs – M ATGMs, the INVAR (3 UBK 20) ATGMs, launchers and spares.	❖ AS 9100D, ISO 14001:2015
Vishakapatnam	Active	❖ Light weight torpedoes, the C-303 anti-torpedo system, countermeasures and spares	❖ AS 9100D, ISO 14001:2015
Ibrahimpatnam	Upcoming	❖ SAMs	
Amravati	Upcoming	❖ Very Short Range Air Defence Missiles (VSHORADMs)	
Jhansi	Upcoming	❖ Propellants for various ATGMs	

Source: Company, MOFSL

Over last two years, BDL has spent a capex of nearly INR3.8b for –

- Establishing a propellant plant at Jhansi
- Infrastructure work for Phase-II at Ibrahimpatnam
- An integration facility at Vizag
- Commissioning of a warhead facility

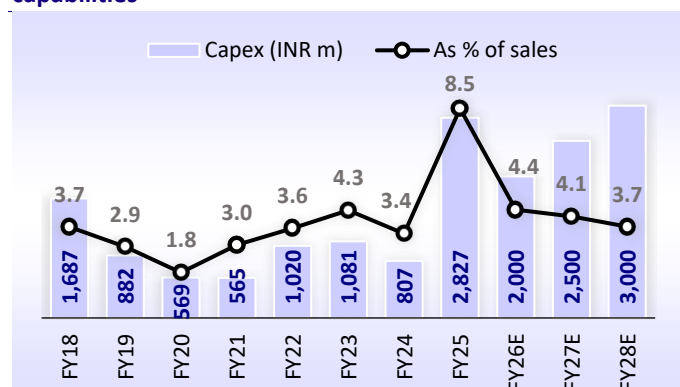
BDL is making determined efforts to increase the indigenization content in the manufacturing of ATGMs, SAMs, air-to-air missiles, and torpedoes. This objective aims to enhance self-reliance and reduce dependence on imports.

**Exhibit 20: Modernization efforts undertaken by BDL**

BDL Unit	Specifications
Kanchanbagh Unit	The surface-mount technology & 'high-performance computing facility'
Visakhapatnam Unit	Environmental testing facility for large systems like complete heavy weight torpedoes
Bhanur Unit	"Warhead" manufacturing facility with the capability and capacity to manufacture all warheads required for BDL products
Kanchanbagh Unit	State-of-the-art RF Seeker facility for assembly and testing of RF seekers for all modern missiles
Ibrahimpatnam Unit - Phase II	Capacity augmentation infrastructure for assembly and testing of larger missiles and a warhead testing facility
UP Defence corridor	State-of-art propellant plant
-	Constantly upgrading its manufacturing technologies and processes to the state-of-the-art level, including industry 4.0 and robotics-operated workshops

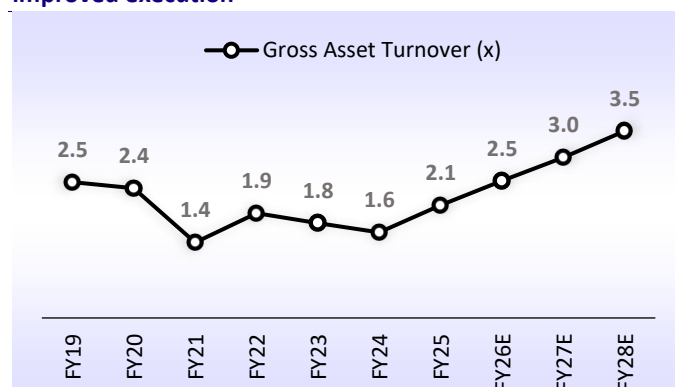
Source: Company, MOFSL

**Exhibit 21: BDL is continuously investing in capex to build capabilities**



Source: Company, MOFSL

**Exhibit 22: BDL's gross asset turnover is likely to improve on improved execution**

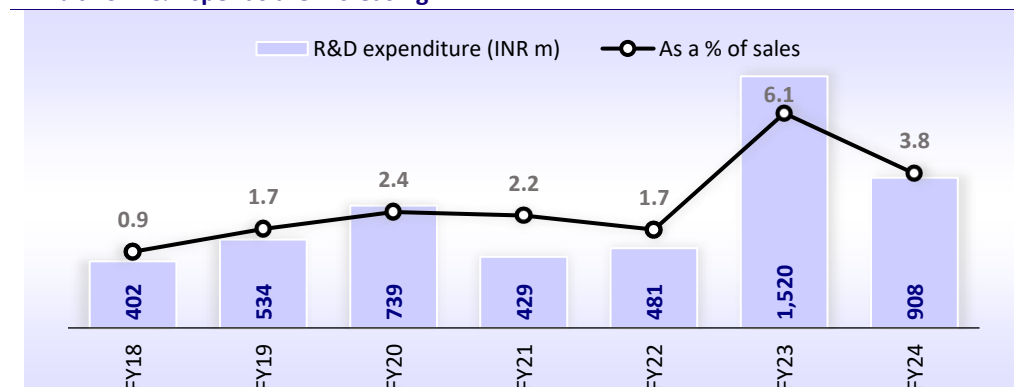


Source: Company, MOFSL

**Increasing R&D spend**

BDL intends to increase its R&D activities to develop innovative products for its customers. The company has increased its R&D expenses in absolute terms in the last two years. It is continuously engaged in new product development and upgrading existing products to meet customer requirements. BDL is also investing in R&D activities both in-house and in association with DRDO for various development and production programs. BDL is also entering into various agreements with foreign OEMs, both for manufacturing in India and joint development programs.

**Exhibit 23: R&D spends are increasing**



Source: Company, MOFSL

### MoUs with other players aimed at technology upgrade

BDL is actively dealing with the Indian defense industry to build long-term relationships and synergize the Indian defense Industry. The government of India's policy of 'Ease of Doing Business' has opened opportunities for BDL to explore tie-ups with foreign OEMs for ToT. This aligns with BDL's goal of self-reliance in developing cutting-edge missile systems and becoming a partner in the global missile system supply chain.

**Exhibit 24: Key MoUs signed by BDL over the years**

Year	Strategic Partner	Area of Cooperation
FY22	❖ Tawazun Holding Company	❖ Identifying different business opportunities and jointly implementing business opportunities by way of definitive agreements
	❖ Newspace Research and Technologies Pvt. Ltd	❖ Product development including integration of BO Ls payload(s) onto the NRTs platforms for military application, Technical support, Armament support & Infrastructure support.
	❖ MBDA	❖ Establishment of Final Assembly Integration and Testing in India of ASRAAM & Mistral Missiles
	❖ ROXEL	❖ Setting up a facility to manufacture EOB propellants for missiles and rockets
	❖ RAFAEL	❖ Developing and manufacturing an anti-torpedo decoy system for Indian Navy under the make II; working to conclude a teaming agreement.
FY23	❖ MBDA	❖ Manufacturing of Mistral missiles in India for supply to the IAF
	❖ M/s New Space Technologies	❖ Product development, including integration of BDL payloads onto the UAV platforms of NRT for military applications, technical support, armament support, and infrastructure support
	❖ BHEL	❖ Work on emerging opportunities in the Indian defense and aerospace market, especially the space sector
	❖ Raphe mPhibr Private Limited	❖ UAVs and launch systems for the ULPGM project
	❖ Dassault Aviation Pvt. Ltd.	❖ Integration of weapon systems like Astra and SAAW on Rafale aircraft for the Indian Armed Forces and future export markets
	❖ Thales Belgium S.A. and Thales India Private Limited	❖ Setting up manufacturing facilities for the laser-guided rocket and its major components in India, to be a part of Thales global supply chain for future requirements of Thales export markets and also for the India market.
	❖ BARIJ Dynamics LLC (AL TARIQ)	❖ Manufacturing of PGM kits in India, both for India and export markets
	❖ BULTEXPRO LTD.	❖ Setting up manufacturing facilities for 122mm GRAD BM ER and non-ER rockets in India, including ToT
	❖ Research Centre Imarat (RCI, DRDO Lab)	❖ A Licencing Agreement for Transfer of Technology (LAToT) for manufacturing of Ceramic Radomes (GELCAST Process).
FY24	❖ Godrej & Boyce Manufacturing Company Limited	❖ Current and future weapon programs for domestic as well as exports
	❖ VEM Technologies Private Limited	❖ Programs for indigenization of components
	❖ Undersea Sensor Systems Inc (Ultra)	❖ A manufacturing capability at BDL in India
	❖ Tetra Radio Systems Private Limited	❖ Design and develop various RF components
	❖ Bharat Electronics Limited	❖ Commitments to synergize strengths to jointly work in fields of R&D, export and indigenization & other areas of mutual interest, contributing to 'Atmanirbhar India' in defense
	❖ Idea Forge	❖ Design and development of an integrated offering of weaponized UAVs in the territory of India
	❖ Terminal Ballistics Research Laboratory (TBRL)	❖ Licensing Agreement for Transfer of Technology (LAToT)

Source: Company, MOFSL



### Diversification beyond missiles

As a part of BDL's plan for diversification, BDL has identified new verticals, like guided bombs, drone-delivered payloads, warhead manufacturing, engines for cruise missiles, products for space applications, propellants, and rockets, which are expected to create new business opportunities for the company. The company has been venturing into space technology.

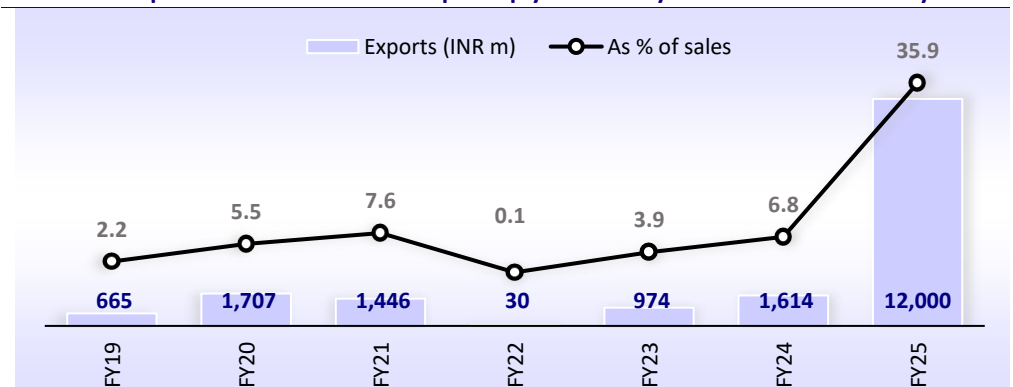
BDL intends to leverage its experience to develop weapons such as new generation SAMs, ATGMs, air-to-air missile system, heavyweight torpedoes and drone-delivered bombs, which will enable the company to further increase its revenue. BDL is also the joint development partner-cum production agency with the DRDO for the next generation of ATGMs, air-to-air missile and SAMs. BDL has also entered into several MoUs and non-disclosure agreements with various companies for developing new products and ToT.

### Building up exports

The main customers of BDL are the Indian Armed Forces, though with the encouragement from the Government of India, the company is actively exploring export markets. Further, with the Cabinet Committee on Security's (CCS) clearance on exports of Akash Weapon System to nine countries, BDL is scaling up the export orders. The company has already received export orders from few friendly countries and already scaled up export revenues to INR12b in FY25 from INR1.6b in FY24. It offers products like Akash Weapon System (surface-to-air missile), Astra Weapon System (air-to-air missile), smart anti-airfield weapon, Helina (air-to-surface weapon), light- and heavy-weight torpedoes, counter measures dispensing systems, and anti-tank guided missiles like Nag, Konkurs-M, and Milan-2T. BDL has already exported Light-Weight Torpedoes and is receiving interest from several countries for other products.

BDL is therefore set to expand its customer base in the international market. The company has adequate production facilities to cater to the domestic as well as export demand for its products.

**Exhibit 25: Export revenue has moved up sharply on healthy order wins in last few years**



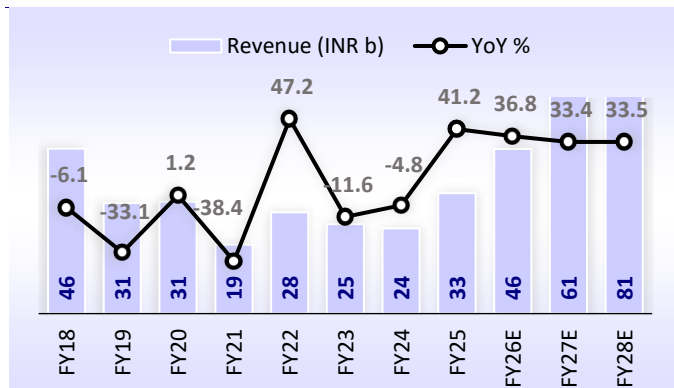
Source: Company, MOFSL

## Financial Outlook

### Revenue growth to be led by stronger execution

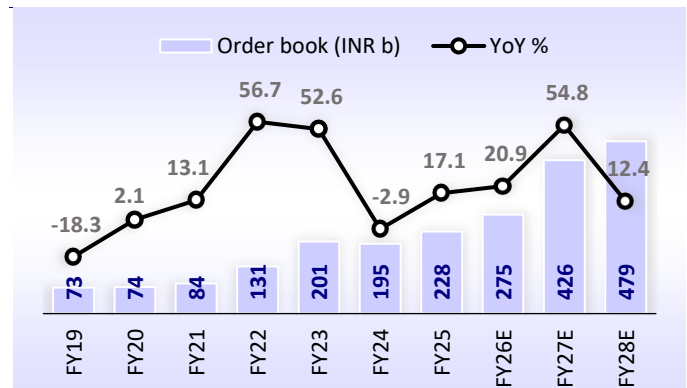
We expect BDL to deliver a CAGR of 35% in revenue over FY25-28, driven by stronger execution of orders as supply chain-related issues start to ease out. The order book is expected to see a CAGR of 28% over FY25-28 on the back of a strong prospect pipeline. Key orders received in FY25 include armaments for the Indian Armed Forces worth INR43.6b and MRSAM for the Indian Navy worth INR29.6b. Moreover, its tie-ups with foreign entities to jointly develop and manufacture products such as Sonobuoy, MISTRAL, LGR, ASRAAM, LBRM, etc. are expected to further support our order book estimates.

**Exhibit 26: We expect a revenue CAGR of 35% over FY25-28E**



Source: Company, MOFSL

**Exhibit 27: We expect order book to clock 28% CAGR over FY25-28E**

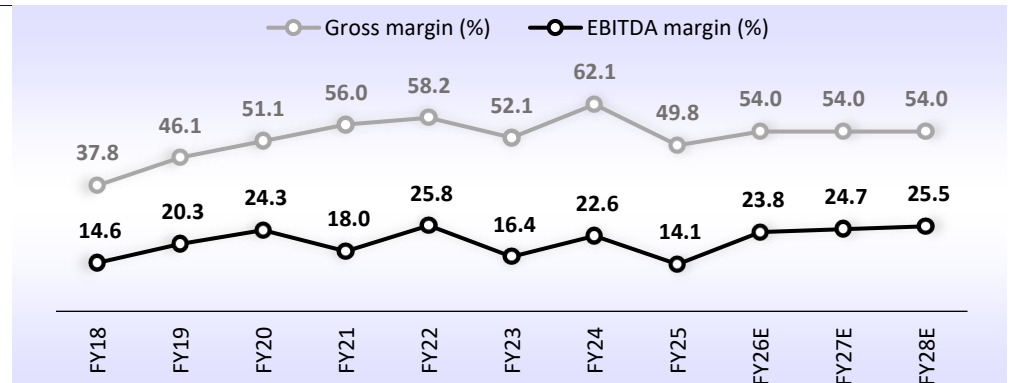


Source: Company, MOFSL

### Gross margins and EBITDA margins to remain healthy

We expect gross margins to remain healthy and expand going forward thanks to the MoD's focus on indigenization. BDL is continuously investing in R&D to further increase the share of indigenized content in its products. EBITDA margins are expected to remain healthy due to improved operating leverage as well as on lower provisions.

**Exhibit 28: Gross margins and EBITDA margins to remain healthy in coming years**

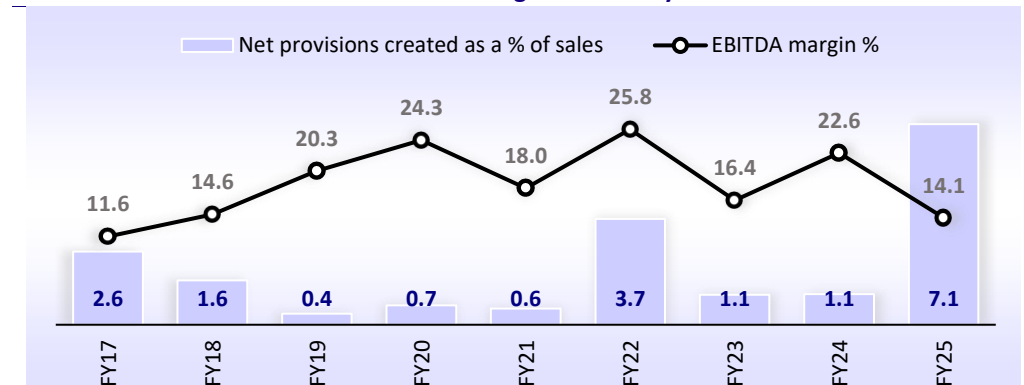


Source: Company, MOFSL

### Provisions made vs. EBITDA margins

The provisions made in FY24 were mainly for warranty charges. During FY25, provisions as a percentage of sales had moved up as company created provisions for a contract which was aimed at gaining exposure to niche technology in the global defence industry. This resulted in a spike in provision to 7% of sales in FY25 which may not be repeated in future. However, R&D expenditure will continue to remain high in FY26 too for the company. We thus expect lower provisions in future to help aid EBITDA margin improvement despite higher overall R&D expenditure.

**Exhibit 29: Provisions created vs. EBITDA margins over the years**

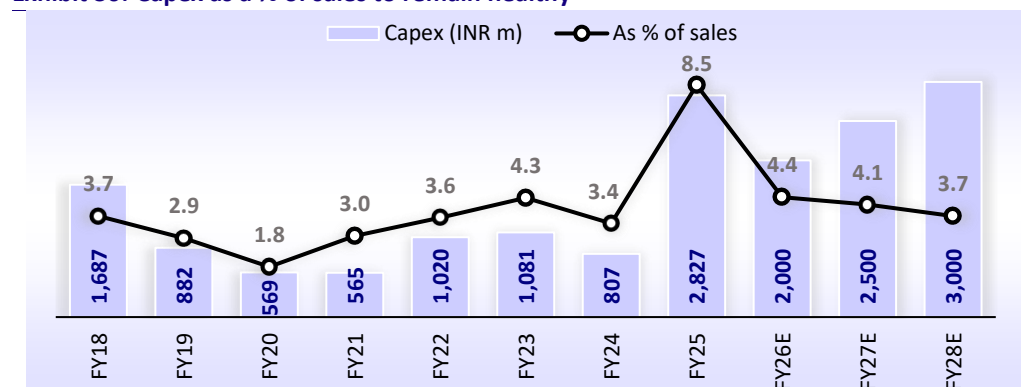


Source: Company, MOFSL

### Capex to increase

BDL incurred a capex of INR2.9b in FY25 and plans to maintain current high level in capex over the years. In the near term, capex will be incurred for the construction of Jhansi Unit and Phase-II infrastructure development at Ibrahimpatnam. The company also has plans to further increase the indigenized component in the manufacturing of ATGMs, SAMs, air-to-air missiles, and torpedoes. Hence, we expect BDL to keep investing in building future capabilities. We have factored in a capex of INR2.0b/2.5b/3.0b in FY26/FY27/FY28.

**Exhibit 30: Capex as a % of sales to remain healthy**

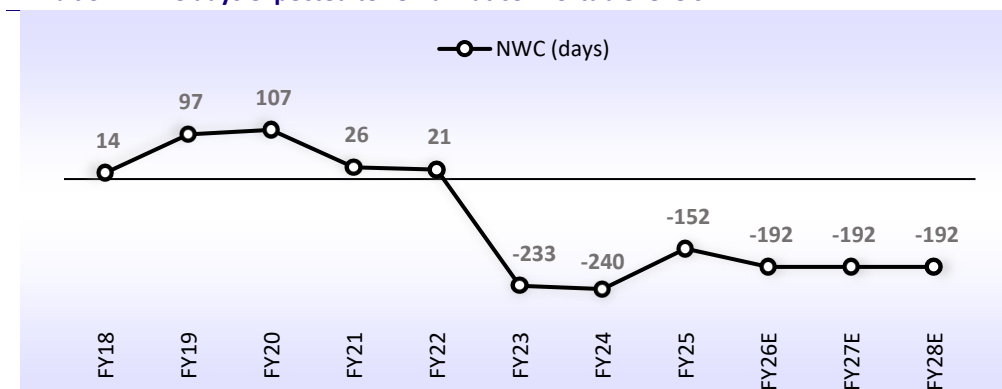


Source: Company, MOFSL

## NWC days are negative supported by high customer advances over the years

BDL's NWC days stood at -240 days in FY24. Other current assets increased in FY24 due to a sharp increase in advances to vendors in the year. This was more than offset by the increasing customer advances over the years and further normalized to -152 days in FY25. Going forward, we expect NWC days to remain at these comfortable levels of -192 days.

**Exhibit 31: NWC days expected to remain at comfortable levels**



Source: Company, MOFSL

**Exhibit 32: Higher customer advances offsetting the increased advances to vendors, leading to comfortable NWC days levels**

<u>Other current assets (MOFSL)</u>			<u>Other Current Assets (Reported)</u>		
	FY23	FY24		FY23	FY24
Other Financial Assets	1,060.3	1,082.9	Advances to vendors		
Other Non-current Assets	252.2	238.3	- Secured, considered good	41.3	1,300.9
Other Financial Assets	13,241.2	10,616.3	- Unsecured, considered good	2,416.7	14,150.8
Current tax Assets (net)	1,194.9	467.1	Prepaid expenses	31.0	29.8
Other Current Assets	2,886.4	16,072.7	Deposits@	354.8	161.0
<b>Total Other current assets</b>	<b>18,634.9</b>	<b>28,477.2</b>	Deferred Expense	13.9	13.9
			Earmarked balances with banks for unpaid dividend	18.0	408.2
			CSR Expenditure available for setoff #	10.7	8.1
			<b>Total other current assets</b>	<b>2,886.4</b>	<b>16,072.7</b>

<u>Other current Liabilities (MOFSL)</u>			<u>Other Current Liabilities (Reported)</u>		
	FY23	FY24		FY23	FY24
Lease Liabilities	37.4	21.2	Advances from Customers:		
Other Financial Liabilities	455.7	464.0	- Ministry of Defence (MoD)	8,695.7	6,646.1
Other Non-current Liabilities	32,052.8	36,485.6	- Others	2,281.3	7,243.6
Lease Liabilities	14.7	16.3	Deferred Income	14.3	17.3
Other Financial Liabilities	1,676.2	2,904.0	Deferred Revenue	82.9	0.0
Other Current Liabilities	12,207.9	15,154.2	Statutory remittances	1,133.7	1,250.3
<b>Total Other current liabilities</b>	<b>46,444.7</b>	<b>55,045.2</b>	<b>Total other current liabilities</b>	<b>12,207.9</b>	<b>15,157.2</b>

<u>Other non-current Liabilities</u>			<u>Other non-current Liabilities</u>		
	FY23	FY24		FY23	FY24
Advances from Customers:			Advances from Customers:		
- Ministry of Defence (MoD)	27,062.5	26,568.8	- Ministry of Defence (MoD)	27,062.5	26,568.8
- Others	4,527.5	9,474.4	- Others	4,527.5	9,474.4
Deferred Income	185.9	171.6	Deferred Income	185.9	171.6
Deferred Revenue	276.9	270.8	Deferred Revenue	276.9	270.8
<b>Total Other non-current Liabilities</b>	<b>32,052.8</b>	<b>36,485.6</b>	<b>Total Other non-current Liabilities</b>	<b>32,052.8</b>	<b>36,485.6</b>

<u>Other Current Financial Liabilities (Reported)</u>			<u>Other Current Financial Liabilities (Reported)</u>		
	FY23	FY24		FY23	FY24
Current maturities of Deferred credit	40.6	43.4	Current maturities of Deferred credit	40.6	43.4
Deposits	127.4	143.3	Deposits	127.4	143.3
Creditors for expenses	771.6	2,013.6	Creditors for expenses	771.6	2,013.6
Employee benefits payable	683.5	620.9	Employee benefits payable	683.5	620.9
Capital works	25.6	68.2	Capital works	25.6	68.2
Others	27.4	14.7	Others	27.4	14.7
<b>Total Current other Financial Liabilities</b>	<b>1,676.2</b>	<b>2,904.0</b>	<b>Total Current other Financial Liabilities</b>	<b>1,676.2</b>	<b>2,904.0</b>

Source: Company, MOFSL

## Valuation and view

BDL is currently trading at 70x/52x/38x P/E on FY26/FY27/FY28 estimates. We initiate coverage on the stock with a **Neutral** rating and a TP of **INR1,900**, based on 42x P/E on Sep'27 estimates. We like the business model of BDL and its ability to scale up its revenues and order book in current scenario, however, with fair valuations, we would look for lower price points to enter the stock.

**Exhibit 33: Relative valuation comparison of domestic defense companies**

Companies	CMP	Mcap (INR b)	Rating	EPS (INR)			P/E (x)			RoE (%)			FY25-27E CAGR	
				FY25	FY26E	FY27E	FY25	FY26E	FY27E	FY25	FY26E	FY27E	Revenue	PAT
<b>BDL</b>	<b>1,985</b>	<b>728</b>	<b>Neutral</b>	<b>15.0</b>	<b>28.2</b>	<b>37.8</b>	<b>132.4</b>	<b>70.3</b>	<b>52.4</b>	<b>13.7</b>	<b>21.5</b>	<b>23.3</b>	<b>35.1</b>	<b>58.9</b>
HAL	5,007	3,348	Buy	125.0	141.2	161.2	40.1	35.5	31.0	23.9	22.6	21.8	21.0	13.6
BEL	418	3,054	Buy	7.2	8.2	9.9	57.8	50.9	42.1	26.8	24.0	23.1	17.3	17.1
Astra Microwave	1,052	99	N.A.	16.3	20.5	26.8	64.5	51.4	39.3	14.9	16.1	17.8	24.3	28.7
Zen Technologies	1,954	176	Neutral	29.1	37.9	57.1	67.1	51.5	34.2	24.6	18.4	22.5	34.1	40.0
Data Patterns	3,026	169	Neutral	39.6	49.7	64.5	76.4	60.8	46.9	15.7	16.9	18.4	25.9	27.6
MTAR	1,576	48	Buy	17.2	32.7	53.7	91.7	48.2	29.3	7.5	12.9	18.1	28.1	76.8

Source: Company, MOFSL

**Exhibit 34: Relative valuation comparison of domestic and international defense companies**

Companies	Currency	CMP	EPS (INR)			P/E (x)			RoE(%)		
			FY25E	FY26E	FY27E	FY25E	FY26E	FY27E	FY25E	FY26E	FY27E
<b>BDL</b>	<b>INR</b>	<b>1,985</b>	<b>15.0</b>	<b>28.2</b>	<b>37.8</b>	<b>132.4</b>	<b>70.3</b>	<b>52.4</b>	<b>13.7</b>	<b>21.5</b>	<b>23.3</b>
HAL	INR	5,007	125.0	141.2	161.2	40.1	35.5	31.0	23.9	22.6	21.8
BEL	INR	418	7.2	8.2	9.9	57.8	50.9	42.1	26.8	24.0	23.1
Lockheed Martin	USD	463	28.0	27.5	29.9	16.5	16.9	15.5	81.0	96.0	94.9
Boeing	USD	227	-20.4	-1.3	3.4	NA	NA	66.2	NA	0.8	64.9
SAAB AB	SEK	493	7.7	10.3	12.6	63.8	47.9	39.1	12.4	14.6	15.7
Kongsberg Gruppen	NOK	325	5.8	7.7	9.1	55.7	42.4	35.7	29.6	33.3	31.7
Mitsubishi Heavy Industries	JPY	3,379	73.0	88.8	107.6	46.3	38.1	31.4	10.7	11.9	13.1
Safran S.A.	EUR	280	7.3	8.0	10.0	38.3	34.8	27.9	-6.1	29.2	31.5
Leonardo S.p.A.	EUR	47	1.9	1.9	2.2	25.1	24.9	21.0	12.8	11.0	12.1
Thales Group	EUR	247	9.2	9.5	11.0	26.7	26.0	22.4	19.8	24.0	24.6
BAE Systems	GBP	1,877	68.5	75.1	83.9	27.4	25.0	22.4	17.6	18.3	18.6

Source: Company, Bloomberg, MOFSL



## Bull and Bear cases

### Sensitivity analysis assumptions

#### Base case

- ✓ In our base case assumptions, we have assumed an execution CAGR of 35% for the next three years and EBITDA margin improving to 24.7% by FY27, resulting in a PAT CAGR of 51% over FY25-28.



#### Bull case

- ✓ In bull case assumptions, if the global economic issues ease out, it will lead to faster and better execution of the current order book. This results in 41%/61% revenue/PAT CAGR over FY25-28 assuming similar margins as base case.



#### Bear case

- ✓ In bear case assumptions, if the supply chain issues persist, the execution is expected to slow down as compared to our estimates. Due to this, EBITDA margin will also get impacted and can remain between 18-21% over FY25-28. With lower earnings growth, valuation multiple will see a de-rating.

**Exhibit 35: Sensitivity analysis: Bear, Base and Bull case valuations**

	Bear case	Base case	Bull case	Rationale
Assuming order book execution to scale up	Revenue CAGR: 31% FY25-28 EBITDA margin 21%/22.6% for FY26/27 PAT CAGR : 42% FY25-28	Revenue CAGR: 35% FY25-28 EBITDA margin 24.7%/25.5% for FY26/27 PAT CAGR : 51% FY25-28	Revenue CAGR: 41% FY25-28 EBITDA margin 24%/25.8% for FY26/27 PAT CAGR : 61% FY25-28	
Sep'27 EPS (INR)	36.5	45	51.5	❖ Average of FY27 and FY28 EPS
Valuation multiple (x)	35x	42x	50x	❖ Valuation multiple takes into consideration growth metrics, return ratios as well as relative comparison
Price per share (INR)	1,275	1,900	2,500	

Source: MOFSL

## Key risks and concerns

- **Business risk:** BDL is largely dependent on a single customer, i.e. the Indian Armed Forces through the MoD. A decline or reprioritization of the Indian defense budget or any changes in the policies of MoD or the Indian Armed Forces can have a large impact on BDL's business. To counter that, BDL, with active encouragement from the Government of India, is exploring export markets. BDL is also looking for diversification opportunities, such as entering the space technology sector.
- **Policy risk:** The company is also subject to a number of procurement rules and regulations of the MoD and government regulations. BDL's business could be adversely affected in case of any sudden and unforeseen changes in the applicable rules. Restrictions on the current and future exports of the products and other regulations could adversely affect BDL's business.
- **Operational and labor risk:** The loss of, or shutdown of, BDL's operations at any of its units will have a material adverse effect on BDL's business, financial condition and results of operations. Some of the company's workforce is represented by labor unions, so the company's business could be harmed in the event of a protest. To counter that, lately BDL has been in the process of automating its production wherever feasible to ensure efficiency and increase productivity.
- **Supply chain management risk:** BDL was unable to bill part of its order book in FY24 and FY25 due to the current geopolitical situation in Europe and the Middle East, causing delays in receipt of input materials from foreign OEMs. The company is dependent on multiple OEMs for subassemblies/components, single-source suppliers and sub-contractors. Any failure in the performance of any of them could have a material impact on the company's operations. BDL is resorting to indigenization and is expanding its vendor base, where single-source suppliers currently exist across its programs, to reduce its dependence and continuity in the program.

## Company background

Established in 1970, BDL is a Government of India enterprise under the Ministry of Defence and a manufacturer of surface-to-air missiles (SAM), air-to-air missiles (AAM), anti-tank guided missiles (ATGMs), torpedoes, and allied defense equipment. The company, headquartered in Hyderabad, currently has three manufacturing units located at Kanchanbagh (Hyderabad) and Bhanur (Sangareddy District) in Telangana and Visakhapatnam in Andhra Pradesh. The company is in the process of setting up additional facilities at Amaravati (Maharashtra), Ibrahimpatnam (Telangana) and Jhansi (Uttar Pradesh). Over the years, BDL has evolved as one of the few industries in the world with state-of-the-art facilities to manufacture and supply guided missiles, underwater weapons, air-borne products and allied defense equipment for the Indian Armed Forces. The company also provides product life cycle support for all equipment supplied and also refurbishment / life extension of vintage missiles already available in the inventory of the Indian Armed Forces. While fulfilling its basic role as a guided weapon system manufacturer, BDL has also built in-house R&D capabilities, primarily focused on design and engineering activities.

BDL is constantly working to contribute toward the creation of a self-reliant India or “Atmanirbhar Bharat” in the area of defense. The company is undertaking steps to forge alliances with foreign companies to take the ‘Make in India’ mission further. The company’s focus is on engaging with OEMs for new missiles and underwater weapons with a potential transfer of technology. BDL has entered international markets by offering its products to foreign countries.

## ESG Initiatives



### Environment

- **Waste management practices:** All the biomedical, hazardous waste and e-waste are disposed of through the agency registered with the Pollution Control Board. The lead-acid batteries are given to the authorized recyclers/dealers on a buy-back basis. Sewage is treated in a sewage treatment plant and the treated water from the plant is reused for gardening purposes.
- **Steps to reduce greenhouse gas emission:** BDL has undertaken projects towards sustenance and conservation of resources. Initially, 100 KW roof-top solar photo voltaic plants were installed over the canteen and D&E building roofs. Furthermore, BDL has installed 5 MW solar panels each at Bhanur & Ibrahimpatnam Units to reduce greenhouse gas emissions.
- **Certified ISO 14001:2015:** All units are recertified with ISO 14001:2015 (EMS) to assess pollution levels and ensure compliance with legal requirements.
- **Audits and Monitoring:** Internal and surveillance audits are conducted at regular intervals by certification bodies for BDL's all three manufacturing units to evaluate the effectiveness of the Environmental Management System. This systematic review process helps BDL identify areas for improvement and ensures compliance with environmental regulations and standards.

### Social

- BDL undertakes necessary actions to prevent sexual harassment at workplace. The BDL CDA rules that are applicable to officers and the certified standing orders applicable to workmen have all the required provisions in this regard. The Internal Complaints Committee has been put in place by the company to handle all cases. In FY24, BDL received one sexual harassment complaint, for which the Internal Complaints Committee conducted the inquiry and resolved in the same year.
- Key training programs and initiatives taken by BDL to enhance skills and knowledge
- Mid-Career Development Programme (MCDP)
- Vigilance Awareness Week Trainings
- Effective Workplace Communication Workshop
- In-house Workshops on Financial Wellness and Diversity Inclusion

### Governance

- BDL has a well-established, transparent and fair administrative setup to ensure professionalism and accountability. BDL's activities are monitored by several external agencies like the Statutory Auditors, Comptroller and Auditor General of India, CVC, MoD (Dept. of Defence Production), etc. The company conducts business with the highest ethical standards and prohibits all forms of bribery and corruption across all units of the organization. No instances of bribery or corruption were reported in FY24.

## SWOT Analysis

- ✓ 50+ years of expertise in creating high-quality defense products
- ✓ Experienced senior management and staff having vast experience in defense equipment manufacturing
- ✓ Debt-free company

**S**

**STRENGTH**



- ✓ Business is largely dependent on orders from MoD
- ✓ Dependent upon critical RM imports too
- ✓ Continuous capex to upgrade facilities

**W**

**WEAKNESS**



- ✓ Rising defense spends
- ✓ Government schemes and policies for indigenization such as Make in India, Offset obligations, etc. provide a strong addressable market
- ✓ Opening up of export market and 'ease of doing business' leading to orders from foreign entities

**O**

**OPPORTUNITY**



- ✓ Increased competition
- ✓ Slowdown in defense spending
- ✓ Supply chain issues
- ✓ Cancellation of orders weakening the order book
- ✓ Fluctuations in exchange rates and raw material prices can impact the supply chain

**T**

**THREATS**





## Management Profile



### **Commodore A Madhavarao (Retd.) - Chairman and Managing Director**

Mr. Madhavarao joined BDL in Mar'20 as Executive Director. He was appointed Chairman and Managing Director of BDL in Jul'23. He has done B. Tech in Electrical Engineering, ME in Electronics & Telecommunication, MSc in Defense Studies, MBA in Finance, and Master of Management Studies. Apart from his current experience in BDL, he has had an illustrious career spanning over three decades in the Indian Navy.



### **Shri U Raja Babu - Director General, Missiles and Strategic Systems (MSS)**

As a fellow of the Institution of Engineers (IE) and life member of many professional societies, Mr. Babu is widely known for his significant contributions in the design, development and successful demonstration of India's ballistic missile defense capabilities. He started his career with the Indian Air Force in 1988 and subsequently joined DRDO in 1995. During his 35+ years of professional aerospace career, he worked on aircrafts, helicopters and development of many missile systems. As Programme Director, AD at RCI, he provided necessary thrust to the design, development and successful demonstration of ballistic missile defense system. Under his leadership, "Mission Shakti," India's first anti-satellite missile test (A-SAT) has been successfully demonstrated.



### **Shri Amit Satija - Joint Secretary (DIP)**

Mr. Satija is an IAS officer of 2008 batch from AGMUT cadre. He is a graduate in Economics and has done Masters of Management studies from JBIMS, Mumbai, before joining IAS. Prior to joining the Government of India, he has served in various positions in different states and UTs in the country, including Delhi, Goa, Andaman Nicobar Islands, and Lakshadweep Islands.



### **Shri P V Raja Ram - Director (Production)**

Mr. Raja Ram joined BDL in Aug'23. He is a Mechanical Engineer from Osmania University with 34 years of experience in various areas of missile production. Prior to his new appointment, Mr. Raja Ram has served as Executive Director, head of Kanchanbagh unit. He played a key role in establishing facilities and streamlining production of MRSAM Missiles and was instrumental in establishing flexible manufacturing lines for Akash Missile and its variants as head of Akash Weapon System.



### **Shri D V Srinivas Rao - Director (Technical)**

Mr. Rao has done BTech in Electronics & Instrumentation from Kakatiya University and MTech in Digital Systems, Computer Engineering from JNTU, Hyderabad. He has pursued his MBA in Human Resources from Osmania University and is a certified Project Management Professional. He has three decades of extensive experience in the defense sector and played a pivotal role in spearheading numerous defense projects, many of which are now deployed and extensively used by the Indian Armed Forces.



### **Shri G. Gayatri Prasad – Director (Finance)**

Shri. G. Gayatri Prasad assumed charge as Director (Finance) of M/s Bharat Dynamics Limited (BDL) with effect from 18 Dec 2024 (A/N). Prior to the assumption of charge, he was working as General Manager (Finance) & CFO in BDL. Shri. G. Gayatri Prasad is a Commerce Graduate from Nagarjuna University and an Associate Member of Institute of Cost Accountants of India. He joined BDL in 1997 as Management Trainee and in a career spanning over 27 years, served the company in various capacities with wide exposure in all aspects of Accounting and Financial Management, Taxation, Analyzing investment proposals for their viability, Working Capital Management, Budgeting and Costing.

## Financials and valuations

### Income Statement (Standalone)

(INR m)

Y/E March	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E
<b>Net Sales</b>	<b>31,049</b>	<b>19,138</b>	<b>28,174</b>	<b>24,894</b>	<b>23,693</b>	<b>33,451</b>	<b>45,773</b>	<b>61,040</b>	<b>81,458</b>
Change (%)	1.2	-38.4	47.2	-11.6	-4.8	41.2	36.8	33.4	33.5
Raw Materials	15,178	8,412	11,790	11,913	8,973	16,779	21,056	28,078	37,471
Staff Cost	5,340	5,011	5,707	5,325	6,000	5,488	5,935	7,665	9,900
Other Expenses	2,976	2,268	3,417	3,574	3,354	6,460	7,899	10,229	13,325
<b>EBITDA</b>	<b>7,555</b>	<b>3,447</b>	<b>7,261</b>	<b>4,082</b>	<b>5,366</b>	<b>4,724</b>	<b>10,883</b>	<b>15,067</b>	<b>20,763</b>
Margin %	24.3	18.0	25.8	16.4	22.6	14.1	23.8	24.7	25.5
Depreciation	964	945	904	773	670	707	776	879	1,005
Interest	47	39	34	45	31	33	33	33	33
Other Income	881	946	1,112	1,554	3,618	3,504	4,033	4,744	6,235
<b>PBT</b>	<b>7,425</b>	<b>3,409</b>	<b>7,435</b>	<b>4,818</b>	<b>8,282</b>	<b>7,488</b>	<b>14,106</b>	<b>18,899</b>	<b>25,960</b>
Tax	2,076	831	2,100	1,296	2,155	1,991	3,751	5,026	6,903
Tax Rate (%)	28.0	24.4	28.2	26.9	26.0	26.6	26.6	26.6	26.6
Extra-ordinary Inc.(net)	0	0	-336	0	0	0	0	0	0
<b>Reported PAT</b>	<b>5,349</b>	<b>2,578</b>	<b>4,999</b>	<b>3,522</b>	<b>6,127</b>	<b>5,496</b>	<b>10,355</b>	<b>13,873</b>	<b>19,056</b>
Change (%)	26.6	-51.8	93.9	-29.6	74.0	-10.3	88.4	34.0	37.4
<b>Adjusted PAT</b>	<b>5,349</b>	<b>2,578</b>	<b>5,335</b>	<b>3,522</b>	<b>6,127</b>	<b>5,496</b>	<b>10,355</b>	<b>13,873</b>	<b>19,056</b>
Change (%)	26.6	-51.8	107.0	-34.0	74.0	-10.3	88.4	34.0	37.4
Margin %	17.2	13.5	18.9	14.1	25.9	16.4	22.6	22.7	23.4

### Balance Sheet (Standalone)

(INR m)

Y/E March	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E
Share Capital	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833
Reserves	24,235	25,015	28,473	30,282	34,535	38,257	46,396	57,721	73,846
<b>Net Worth</b>	<b>26,068</b>	<b>26,847</b>	<b>30,306</b>	<b>32,115</b>	<b>36,368</b>	<b>40,090</b>	<b>48,228</b>	<b>59,554</b>	<b>75,679</b>
Loans	22	0	0	0	0	0	0	0	0
Deffered Tax Liability	-542	-477	-571	-564	-707	-1,227	-1,227	-1,227	-1,227
<b>Capital Employed</b>	<b>25,547</b>	<b>26,370</b>	<b>29,735</b>	<b>31,551</b>	<b>35,661</b>	<b>38,862</b>	<b>47,001</b>	<b>58,326</b>	<b>74,452</b>
Gross Fixed Assets	12,914	13,685	14,511	14,157	14,965	16,007	18,007	20,507	23,507
Less: Depreciation	3,590	4,535	5,772	6,071	6,729	7,436	8,212	9,092	10,096
<b>Net Fixed Assets</b>	<b>9,324</b>	<b>9,150</b>	<b>8,738</b>	<b>8,085</b>	<b>8,236</b>	<b>8,571</b>	<b>9,794</b>	<b>11,415</b>	<b>13,411</b>
Capital WIP	421	215	407	743	729	2,303	2,303	2,303	2,303
Investments	39	45	0	0	0	39	39	39	39
<b>Curr. Assets</b>	<b>46,527</b>	<b>49,730</b>	<b>55,922</b>	<b>77,331</b>	<b>93,728</b>	<b>1,05,284</b>	<b>1,40,798</b>	<b>1,85,833</b>	<b>2,47,217</b>
Inventory	8,565	13,970	16,545	18,224	19,825	26,451	31,352	41,808	55,793
Debtors	3,384	3,227	3,042	1,846	3,104	8,264	11,308	15,079	20,123
Cash & Bank Balance	6,635	15,610	18,995	38,589	42,285	41,904	58,912	76,637	1,01,494
Loans & Advances	54	45	39	38	37	57	78	104	138
Other Current Assets	27,889	16,879	17,302	18,635	28,477	28,609	39,149	52,206	69,669
<b>Current Liab. &amp; Prov.</b>	<b>30,763</b>	<b>32,770</b>	<b>35,333</b>	<b>54,609</b>	<b>67,032</b>	<b>77,335</b>	<b>1,05,933</b>	<b>1,41,265</b>	<b>1,88,518</b>
Creditors	3,455	7,426	5,525	4,644	7,984	15,056	20,602	27,473	36,663
Other Liabilities	24,042	22,754	26,269	46,445	55,045	57,199	78,379	1,04,520	1,39,483
Provisions	3,265	2,590	3,540	3,521	4,003	5,081	6,952	9,271	12,372
<b>Net Current Assets</b>	<b>15,764</b>	<b>16,960</b>	<b>20,589</b>	<b>22,722</b>	<b>26,696</b>	<b>27,949</b>	<b>34,864</b>	<b>44,569</b>	<b>58,699</b>
<b>Application of Funds</b>	<b>25,547</b>	<b>26,370</b>	<b>29,735</b>	<b>31,551</b>	<b>35,661</b>	<b>38,862</b>	<b>47,001</b>	<b>58,326</b>	<b>74,452</b>

## Financials and valuations

### Ratios

Y/E March	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E
<b>Basic (INR)</b>	14.6	7.0	13.6	9.6	16.7	15.0	28.2	37.8	52.0
<b>Adjusted EPS</b>	14.6	7.0	14.6	9.6	16.7	15.0	28.2	37.8	52.0
Growth (%)	26.6	-51.8	107.0	-34.0	74.0	-10.3	88.4	34.0	37.4
Cash EPS	17.2	9.6	17.0	11.7	18.5	16.9	30.4	40.2	54.7
Book Value	71.1	73.2	82.7	87.6	99.2	109.4	131.6	162.5	206.5
DPS	4.2	4.6	4.0	4.6	4.0	5.9	6.0	7.0	8.0
Payout (incl. Div. Tax.)	34.9	65.6	27.2	47.4	23.7	39.4	21.4	18.4	15.4
<b>Valuation (x)</b>									
P/Sales	23.4	38.0	25.8	29.2	30.7	21.8	15.9	11.9	8.9
<b>P/E (standalone)</b>	136.0	282.3	136.4	206.6	118.8	132.4	70.3	52.4	38.2
Cash P/E	115.3	206.5	116.6	169.4	107.0	117.3	65.4	49.3	36.3
EV/EBITDA	95.4	206.6	97.6	168.8	127.7	145.2	61.4	43.2	30.2
EV/Sales	23.2	37.2	25.2	27.7	28.9	20.5	14.6	10.7	7.7
Price/Book Value	27.9	27.1	24.0	22.7	20.0	18.2	15.1	12.2	9.6
Dividend Yield (%)	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4
<b>Profitability Ratios (%)</b>									
RoE	20.5	9.6	17.6	11.0	16.8	13.7	21.5	23.3	25.2
RoCE	21.1	9.9	18.0	11.3	17.2	14.2	22.1	23.8	25.6
RoIC	25.2	17.7	42.5	-34.4	-52.4	-95.7	-62.1	-56.8	-53.6
<b>Turnover Ratios</b>									
Debtors (Days)	40	62	39	27	48	90	90	90	90
Inventory (Days)	101	266	214	267	305	289	250	250	250
Creditors. (Days)	41	142	72	68	123	164	164	164	164
Asset Turnover (x)	1.2	0.7	0.9	0.8	0.7	0.9	1.0	1.0	1.1
Gross Asset Turnover (x)	2.4	1.4	1.9	1.8	1.6	2.1	2.5	3.0	3.5
<b>Leverage Ratio</b>									
Net Debt/Equity (x)	-0.3	-0.6	-0.6	-1.2	-1.2	-1.0	-1.2	-1.3	-1.3

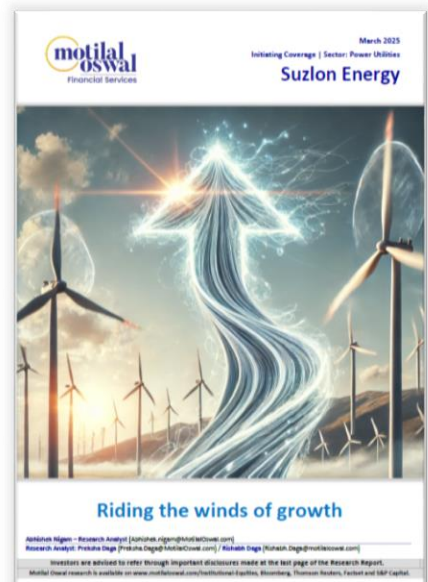
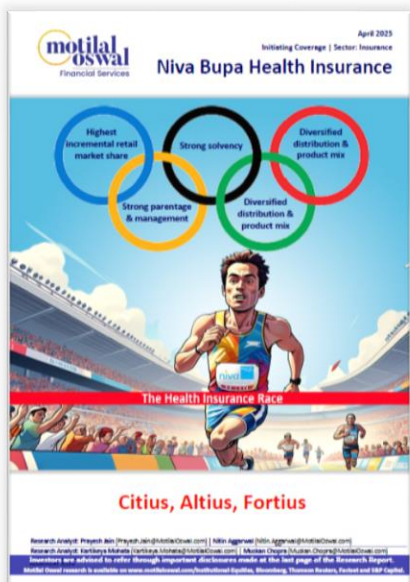
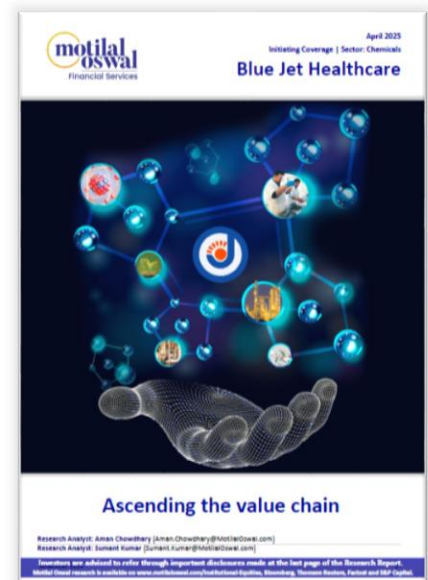
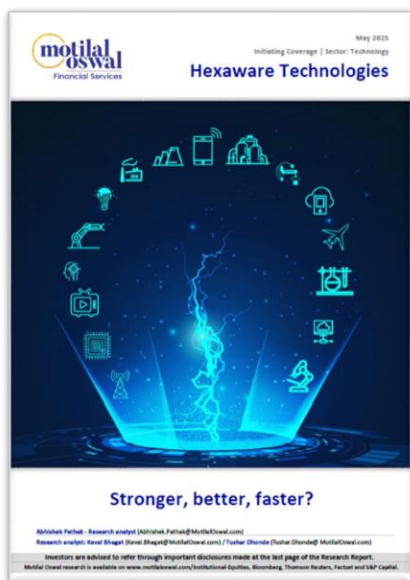
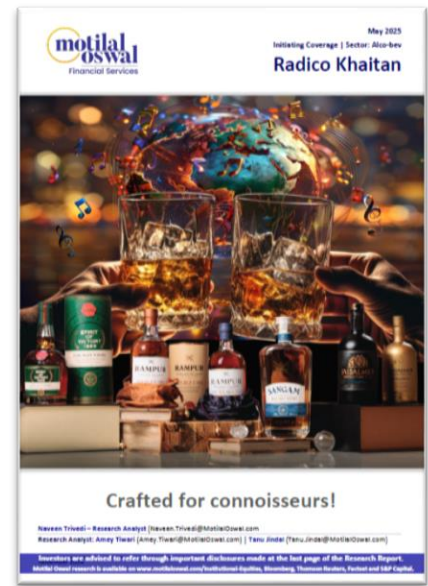
### Cash Flow Statement (Standalone)

Y/E March	2020	2021	2022	2023	2024	2025	2026E	2027E	2028E
PBT before EO Items	7,425	3,409	7,435	4,818	8,282	7,488	14,106	18,899	25,960
Add : Depreciation	964	945	904	773	670	707	776	879	1,005
Interest	47	39	34	45	31	33	33	33	33
Less : Direct Taxes Paid	1,736	778	2,034	2,181	1,560	2,031	3,751	5,026	6,903
(Inc)/Dec in WC	1,096	-7,756	983	-18,915	274	3,701	-10,093	-8,020	-10,727
Others	-560	-691	-59	-1,068	-3,033	-821	-4,033	-4,744	-6,235
<b>CF from Operations</b>	5,042	10,680	5,297	21,303	4,117	1,674	17,225	18,062	24,586
(Inc)/Dec in FA	-569	-565	-1,020	-1,081	-807	-2,827	-2,000	-2,500	-3,000
<b>Free Cash Flow</b>	4,473	10,115	4,276	20,222	3,310	-1,153	15,225	15,562	21,586
(Pur)/Sale of Investments	-117	-7,380	-5,305	-11,715	-8,287	-4,258	0	0	0
Others	354	608	595	1,085	1,870	3,014	4,033	4,744	6,235
<b>CF from Investments</b>	-332	-7,338	-5,730	-11,710	-7,224	-4,071	2,033	2,244	3,235
(Inc)/Dec in Net Worth	0	-11	-12	-13	-15	-16	0	0	0
(Inc)/Dec in Debt	0	0	0	0	0	0	0	0	0
Less : Interest Paid	33	25	20	31	17	19	33	33	33
Dividend Paid	1,867	1,691	1,453	1,669	1,452	2,167	2,216	2,548	2,930
Others	-9	0	0	0	0	0	0	0	0
<b>CF from Fin. Activity</b>	-1,909	-1,726	-1,485	-1,714	-1,484	-2,202	-2,249	-2,581	-2,964
<b>Inc/Dec of Cash</b>	2,802	1,616	-1,919	7,878	-4,590	-4,600	17,008	17,725	24,857
Add: Beginning Balance	3,833	13,994	20,914	30,710	46,875	46,504	41,904	58,912	76,637
<b>Closing Balance</b>	6,635	15,610	18,995	38,589	42,285	41,904	58,912	76,637	1,01,494

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



## RECENT INITIATING COVERAGE REPORTS



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

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Nainesh Rajani

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

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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

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