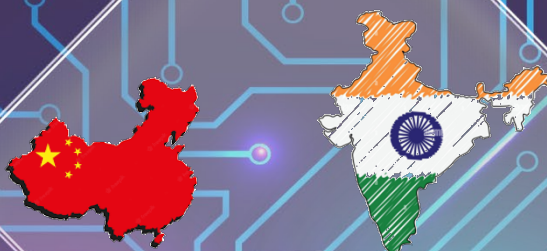


Electronic Manufacturing Services

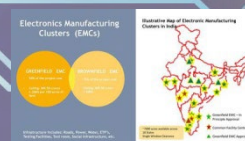
Shift towards India



Growing domestic market



Government Push



Electronic Ecosystem

Transforming Dreams into Devices

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

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

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EMS – An emerging
sector!

Initiating Coverage

Kaynes Technologies
Redefining possibilities with
technology & innovation

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Avalon Technologies
Built on Precision, driven by Innovation!

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Syrma SGS Technology
Designing solutions; shaping
futures

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Cyient DLM
Banking on strong parentage;
tapping the niche verticals

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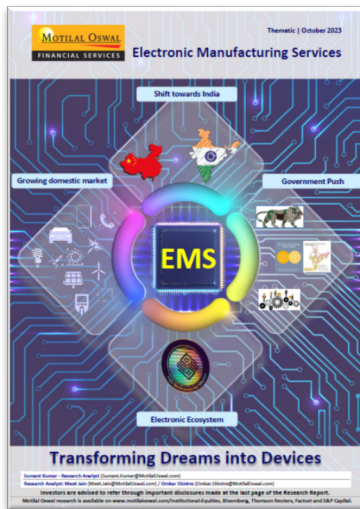


Data Patterns (India)
Following the patterns of profitable growth
trajectory

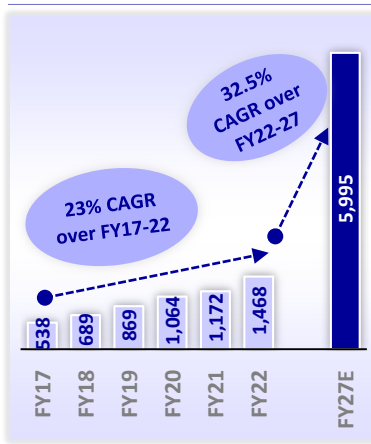
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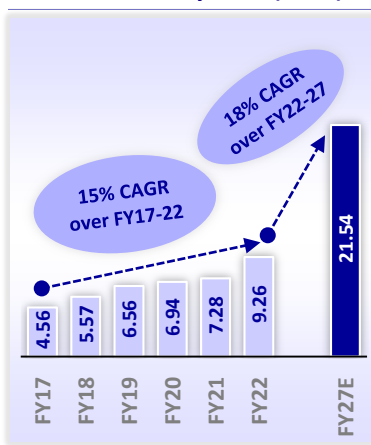
Electronics Manufacturing Service Industry



Indian EMS industry CAGR of 32.5% over FY22-27 (INR b)



Indian Electronics market to touch INR21.5t by FY27 (INR t)



Transforming Dreams into Devices

Initiating coverage on Kaynes/Avalon/Syrma/Cyient DLM with a BUY rating; Data Patterns with a Neutral rating

- **Focus shifting towards EMS...** The Electronics Manufacturing Service (EMS) industry has evolved over the years, aided by increased outsourcing of manufacturing activities by OEMs. However, still a lion's share of the total electronics market globally/in India (~65%/77%) is manufactured in-house. Nevertheless, the shift towards EMS has been taking place at a faster rate.
- **...with more emphasis on value-added services:** Further, the EMS companies – having achieved manufacturing expertise – are climbing the value chain by offering design (ODM), testing and component sourcing services that are high-margin segments.
- **Newer/advanced technology plays the role of a catalyst:** Simultaneously, the electronics market is also evolving rapidly with the onset of new technologies such as Electric Vehicles (EVs), 5G, clean energy, Artificial Intelligence (AI), virtual/augmented reality and Internet of Things (IoT). Newer the technology, higher is the electronics content per devices along with increased complexities. This accentuates the need for EMS companies.
- **Domestic electronics industry at an inflection point:** Further, India is witnessing a strong growth in the domestic electronics industry with an expected CAGR of ~18% during FY21-26. The growth will be fueled by a shift of electronics market from China, govt.'s thrust on making India a global electronics hub and rising export market.
- **India offers huge headroom for growth...** The global electronics market size was ~USD2.5t in CY21; of this the global EMS market was valued at ~USD880b. India formed a small part of the global EMS space with ~2.2% (USD20b) share, but it is expected to grow the fastest (at 32% CAGR over CY21-26).
- **...backed by indigenization of raw materials and low-cost labor:** The Indian EMS industry has been at a nascent stage at only 0.6% of GDP in FY22. However, it is likely to catapult to a massive INR6t by FY27, replicating the success stories of other key sectors such as IT, specialty chemical, auto ancillary and textile. Two key factors that will contribute to this colossal growth are: creation of electronics ecosystem (indigenizing of raw materials) in India and easy availability of low-cost labor.
- **Our initiating coverage universe:** We initiate coverage on: a) Kaynes Technologies (Kaynes), Avalon Technologies (Avalon), Syrma SGS (Syrma) and Cyient DLM (CYIENTDL) with a BUY rating; and b) Data Patterns (DATAPATT) with a Neutral rating. These companies are some of the key players operating in the Indian EMS space. We believe that these EMS companies are well positioned to gain market share further and deliver robust earnings.
- **Cherry-picking the Unlisted gems:** Among the unlisted EMS companies, there are several sizable players that have demonstrated strong growth and some are leaders in their respective EMS space too. Notable ones among them are Bharat FIH, VVDN and SFO Technologies.

EMS – An emerging sector!

The Indian EMS industry was minuscule at only ~2% of global EMS space in CY21 but it offers a huge growth potential (~32% CAGR over CY21-26E i.e. the fastest among other major economies) fueled by its expanding magnitude and scale of demand. These drivers would catapult India's EMS share to ~7% of global EMS by CY26E. The country has all the right ingredients in place (such as low-cost labor and increasing availability of raw materials) to reinforce our conviction for exponential growth. We strongly believe EMS to be a sunrise sector in India propelled by growing electronics market (~18% CAGR), government's support (PLI), evolving electronics ecosystem

(Semiconductor mission) and global shift such as China+1. Our belief is further underpinned by the healthy growth witnessed in key Indian sectors over the last two decades – such as IT, Specialty Chemicals, Textiles and Autos– which have similar industry dynamics.

EMS – the backbone of global electronics market!

EMS industry has played a vital role in the electronics market with ~35%/23% share of global/Indian electronics as of CY21/FY22. The Indian EMS industry has gained momentum over the years with its share in total Indian electronics market rising to 23% in FY22 from 17% in FY17, propelled by an increase in outsourcing by OEMs and larger shift of global manufacturing base to India. With the growing domestic electronics market, we expect the Indian EMS share to improve further to ~31% by FY27. Further, EMS companies are now diversifying their business from just being a contract manufacturer to an entire EMS services provider by offering value-added services such as ODM.

It's India's turn! – replicating China's story but at a faster pace

Over the last half a century, there has been a regular shift in the EMS industry from one country to other led by two main factors: conducive government policies and low labor costs. The recent shift is happening from China to economies such as India and Vietnam. This can be visible from the highest growth recorded by the Indian EMS industry (at 20% CAGR over CY16-21) vs. other major economies such as China/US/South East Asia (5.0%/4.4%/6.7%). India is better placed aided by its growing domestic electronics market (at a CAGR of ~18% over FY21-26E), government's thrust on building an electronics hub (PLI scheme, electronics manufacturing clusters, SPECS etc.) and low-cost labor (~USD6 in India vs. USD10.48 in Vietnam and USD35.5 in China). The Indian EMS industry is expected to record a CAGR of 32% over CY21-26 and continue to outpace other economies.

Domestic EMS industry: multiple tailwinds in place!

India's domestic electronics market is poised to grow at a strong pace fueled by flourishing end-user industries. Each of the end-user industry is expected to report over 20% CAGR during FY22-27 aided by growing number of electronic devices (such as wearables, 5G modems, BLDC fans etc.), evolving technologies (such as EVs, AI, IOT, etc.), and increasing consumption of electronic components per device. Among the end-user industries, mobile phone commanded the highest share of 62% in FY22. It is expected to grow at 31.5% over F22-27 but is a high-volume, low-margin business. The companies covered in this report hold expertise in industries characterized as high-mix, high-margin and low-volume businesses requiring higher precision and expertise. Among these industries, Aerospace & Defense (38% CAGR over FY22-27E) and Medtech (40.9%) are anticipated to lead the growth followed by Automotive (29.5%), Industrials (21.7%) and Telecom (20.5%).

Leaders in the Making!

Our EMS coverage universe includes KAYNES, AVALON, SYRMA, DATAPATT and CYIENTDL, which hold very unique position individually. However, on an aggregate basis too, the combined revenue of these five companies outpaced the expected industry growth of ~26% in FY23. The combined revenue in FY23 was INR54b (up 41% YoY) and is poised to register a 36% CAGR over FY23-26E aided by strong industry tailwinds. The combined EBITDA margin has improved to 13.5% in FY23

INITIATING COVERAGE



TP of INR3,100



TP of INR730



TP of INR775



TP of INR870



TP of INR2,270

from 11.8% in FY20 and is likely to expand a few percentage points more to reach ~15.0% by FY26. The growth will be fueled by an improvement in high-value product mix (box builds) and increasing order flows from high-margin industries such as A&D, Clean Energies, Industrials etc. Consequently, this will lead to an EBITDA CAGR of ~41% to reach INR20.4b over FY23-26 from INR7.3b only in FY23. The combined net profit margin in FY23 was ~7.8% and it is projected to be ~10% by FY26 led by improved margin profile and lower interest cost across companies. The combined net profit is likely to post ~49% CAGR over FY23-26 to ~INR14b vs. INR4.2b in FY23.

Initiating coverage on KAYNES, AVALON, SYRMA and CYIENTDL with a BUY rating and DATAPATT with a Neutral rating

KAYNES, AVALON, SYRMA, DATAPATT and CYIENTDL are some of the key players operating in the Indian EMS space. We believe these EMS companies are well placed to gain market share further and deliver robust earnings. **We initiate coverage on KAYNES, AVALON, SYRMA, DATAPATT and CYIENTDL.**

- **KAYNES:** It is a prominent end-to-end and IoT-enabled integrated electronics manufacturer with strong order book growth (at 96% CAGR over FY20-23) and having a higher share of Box Build (~30% in FY23) and PCBA (62%). Its revenue/EBITDA/ Adj. PAT is estimated to report a robust CAGR of 37%/43%/52% over FY23-FY26, driven by strong order book growth (at 32% CAGR) and improving margin profile. **We initiate coverage on the stock with a BUY rating and a TP of INR3,100 (premised on 50x FY26E P/E).**
- **AVALON:** It is one of the leading vertically-integrated EMS players in India and the only Indian company with a full-fledged manufacturing facility in the US. It has the highest Box Build share (47%) within the industry and it is expected to further increase with recent order wins. Its revenue/EBITDA/Adj. PAT is estimated to clock a CAGR of 23%/27%/45% over FY23-FY26, driven by strong order book growth (24% CAGR). **We initiate coverage on the stock with a BUY rating and a TP of INR730 (premised on 30x FY26E P/E).**
- **SYRMA:** It is a technology-focused engineering & design company serving diverse end-use industries like automotive, healthcare, consumer products, Industrial, IT and Railways. Its revenue/EBITDA/ Adj. PAT would report a robust CAGR of 37%/45%/42% over FY23-FY26E, driven by strong order book, traction in end-user industries and improving margin profile. **We initiate coverage on the stock with a BUY rating and a TP of INR775 (premised on 40x FY26E P/E).**
- **CYIENTDL:** It is an integrated EMS company with a focus on the entire life cycle of a product. The company has over three decades of rich experience in developing high-mix, low-to-medium volume of highly complex systems and services. The company's strong parentage (promoter – Cyient Ltd) with global presence provides an edge over its peers. Its revenue/EBITDA/Adj. PAT are estimated to report a robust CAGR of 40%/46%/83% over FY23-FY26, driven by a healthy order book to bill ratio of ~2.6-2.9x over FY26 and improving margin profile. **We initiate coverage on the stock with a BUY rating and a TP of INR870 (premised on 35x FY26E P/E).**
- **DATAPATT:** It is one of the fastest-growing (~36% revenue CAGR over FY19-23) end-to-end integrated electronics solutions providers in the defense and aerospace sector with a wide presence across the spectrum (land, air, sea & space). Its revenue/EBITDA/Adj. PAT is estimated to report a robust CAGR of 33%/37%/40% over FY23-FY26, driven by a strong order book growth (at 27% CAGR) and improving margin profile. **We initiate coverage on the stock with a Neutral rating and a TP of INR2,270 (premised on 37x FY26E P/E).**

Exhibit 1: Valuation metrics for EMS players

Peers	CMP	TP	Rating	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
	(INR)	(INR)			FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Kaynes	2,669	3,100	Buy	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	Buy	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	Buy	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	Buy	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	Neutral	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon	5,336	NA	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber	2,972	NA	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Exhibit 2: Key financial metrics of EMS players

Y/E March (INR m)	Kaynes			Avalon			Syrma SGS			Data Pattern			Cyient DLM		
	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Revenue	17,116	23,962	31,630	11,387	14,461	17,643	28,678	39,288	53,039	5,866	7,994	10,877	12,064	16,890	22,802
As a % of Sales															
Raw Material cost	69.2	69.0	68.4	64.7	64.7	64.5	75.7	74.8	74.8	36.4	36.0	36.0	77.5	77.3	77.0
Employee expenses	6.8	6.7	6.6	16.5	16.3	16.0	5.0	5.0	5.0	17.2	16.9	16.7	7.2	7.0	6.8
Other expenses	8.8	8.6	8.5	6.5	6.3	6.3	9.7	9.6	9.5	6.7	6.5	6.3	4.5	4.2	4.2
EBITDA	2,602	3,762	5,219	1,401	1,837	2,329	2,746	4,175	5,675	2,324	3,245	4,460	1,303	1,942	2,736
<i>Margin (%)</i>	<i>15.2</i>	<i>15.7</i>	<i>16.5</i>	<i>12.3</i>	<i>12.7</i>	<i>13.2</i>	<i>9.6</i>	<i>10.6</i>	<i>10.7</i>	<i>39.6</i>	<i>40.6</i>	<i>41.0</i>	<i>10.8</i>	<i>11.5</i>	<i>12.0</i>
PAT	1,684	2,545	3,575	766	1,199	1,591	1,618	2,419	3,420	1,720	2,454	3,430	714	1,300	1,957
<i>Margin (%)</i>	<i>9.8</i>	<i>10.6</i>	<i>11.3</i>	<i>6.7</i>	<i>8.3</i>	<i>9.0</i>	<i>5.6</i>	<i>6.2</i>	<i>6.4</i>	<i>29.3</i>	<i>30.7</i>	<i>31.5</i>	<i>5.9</i>	<i>7.7</i>	<i>8.6</i>
RoE (%)	16.1	20.3	22.9	13.3	17.8	19.5	10.0	13.3	16.2	13.8	16.9	19.7	12.2	12.6	16.3
RoCE (%)	16.0	20.0	22.7	12.1	16.7	19.1	9.7	13.5	16.4	14.3	17.3	20.1	10.3	11.9	15.9
Net debt/Equity (x)	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	0.1	0.1	0.0	-0.5	-0.5	-0.5	-0.6	-0.5	-0.6

Exhibit 3: Key business verticals of EMS players (%)

EMS Companies	Clean energy	Automotive/Mobility	Railways	A&D	Industrial	Telecom/Comms.	Medical/Healthcare	CEA	Others	Company Focus
Avalon	✓ 25	✓ 21	✓	✓	✓ 29	✓ 11	✓ 7		✓ 6	B2B
Data Pattern				✓ 100						B2B
Syrma SGS		✓ 20			✓ 31		✓ 8	✓ 32	✓ 9	B2B
Kaynes		✓ 38	✓ 12	✓ 2	✓ 27		✓ 6	✓ 9	✓ 6	B2C/B2B
Cyient DLM				✓ 58	✓ 25		✓ 16		✓ 1	B2B
Dixon							✓	✓	✓	B2C
Amber		✓	✓					✓	✓	B2C/B2B
Elin Electronics		✓					✓	✓	✓	B2C
Bharat FIH	✓	✓				✓		✓	✓	B2C
SFO Technologies		✓		✓	✓	✓	✓		✓	B2B
VVDN Technologies					✓	✓			✓	B2B

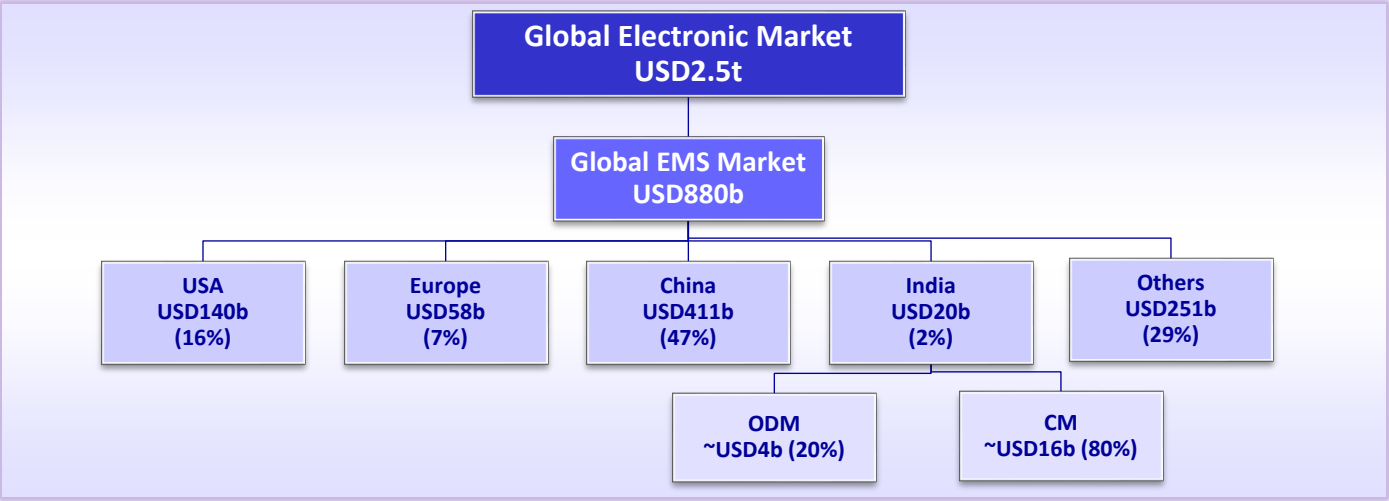
Exhibit 4: Key Business Segments of EMS players

Name of EMS Company	Design	Testing	PCB Assembly	Box Build	Vertical Integration	Aftermarket
Avalon	✓	✓	✓	✓	✓	✓
Data Pattern	✓	✓	✓	✓	✓	✓
Syrma SGS	✓	✓	✓	✓	✓	✓
Kaynes	✓	✓	✓	✓	✓	✓
Cyient DLM	✓	✓	✓	✓	✓	✓
Dixon	✓	✓	✓	✓		✓
Amber	✓	✓	✓	✓		✓
Elin Electronics	✓	✓	✓	✓		
Bharat FIH	✓	✓	✓	✓	✓	✓
SFO Technologies	✓	✓	✓	✓	✓	✓
VVDN Technologies	✓	✓	✓			

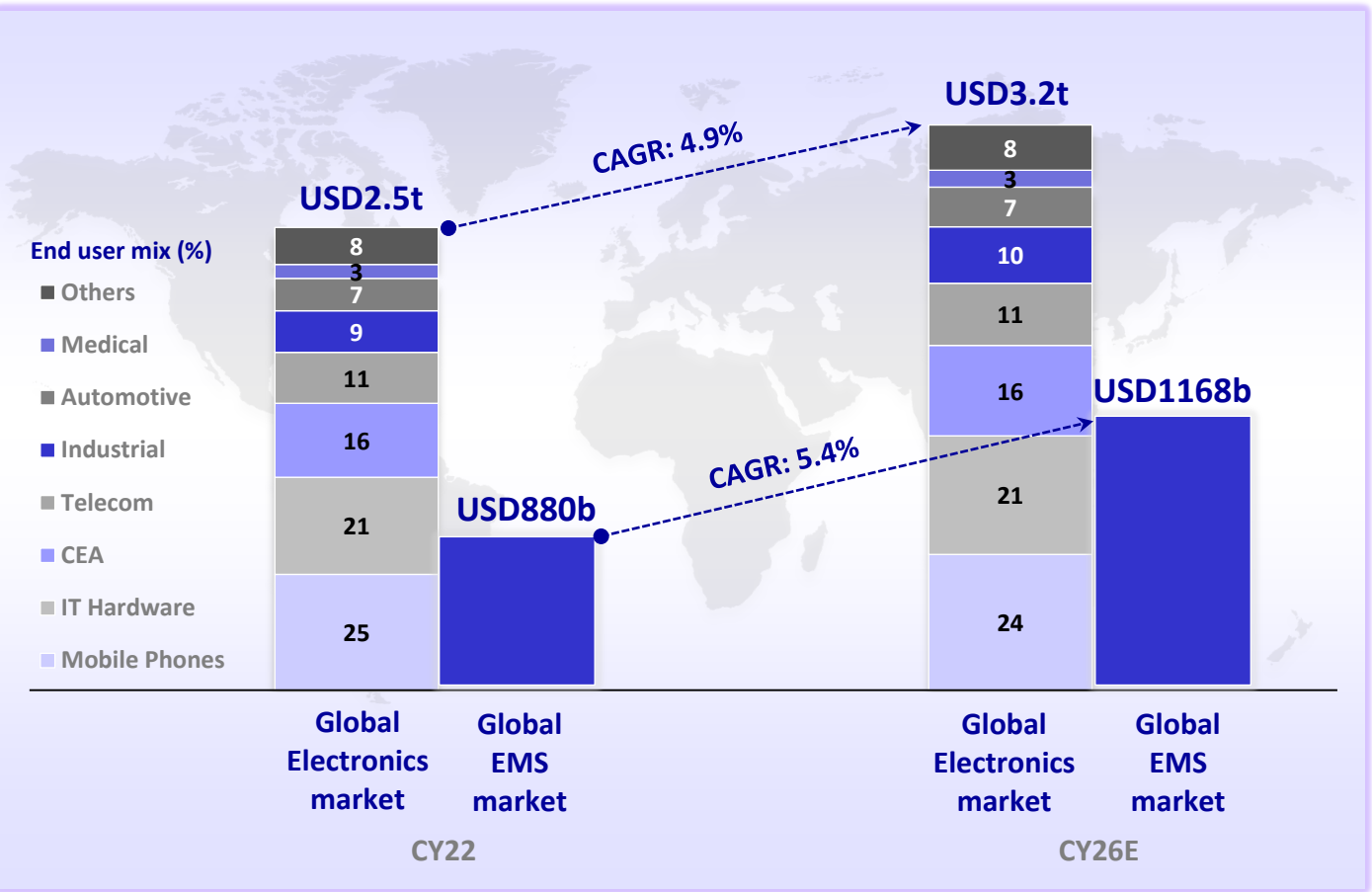
Source: MOFSL, Company

STORY IN CHARTS

Global electronics market structure (CY21)

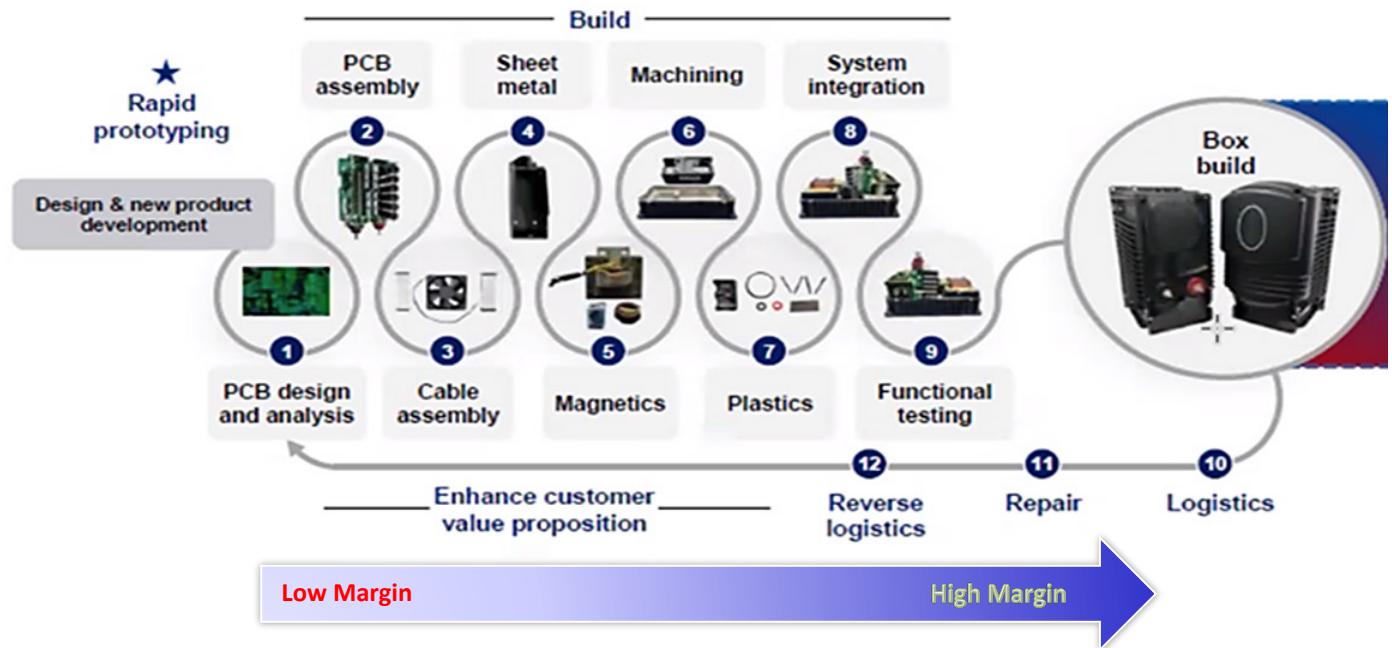


Growth in global electronics market to bode well for the EMS industry



The global electronics market would clock **4.9% CAGR** over CY21-26E and retain the end-user mix. The global EMS market, however, is likely to register a higher **CAGR of 5.4%** over the same period led by improving mix of EMS (vs. in-house), as OEMs are outsourcing a higher share of the manufacturing pie.

EMS players – value chain



Source: F&S, MOFSL

THE HISTORY OF EMS

WAVE 1: Shift of manufacturing from USA to Japan, post WW II

Wave I: Post-World War II, electronics manufacturing shifted to Japan from the US, driven by factors such as the Japanese government's focus on technology, skilled labor availability, and strong economic ties with the US. Japan's electronics industry experienced rapid growth in the post-war period, making it a major player in the global electronics market by the seventies.

WAVE 2: Shift of manufacturing from Japan and Europe to SE Asia, in the 1970s and 1980s

Wave II: The flourishing electronics market led to rising labor costs in Japan during 1970 to 1980. As a result, the industry shifted to other economies with lower labor costs, such as Europe and South East Asia. These countries offered attractive benefits and incentives to attract electronics manufacturers.

WAVE 3: Shift of manufacturing from SE Asia to China in the late 1990s and 2000s

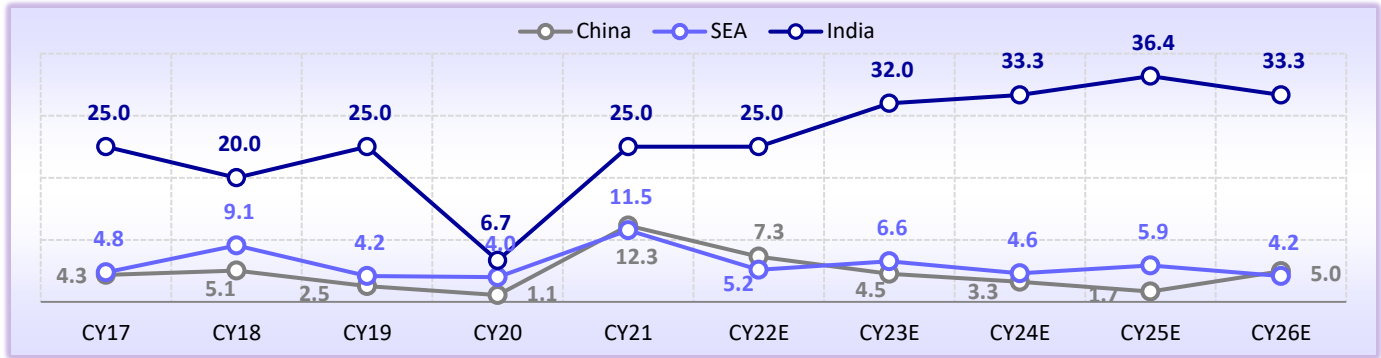
Wave III: Later in the eighties, the electronics industry started shifting towards China due to its lower labor costs, favorable government policies, growing economy, and improved infrastructure. In the 2000-2010s, the industry witnessed the fastest growth, with China moving up the value chain and offering more sophisticated services like design and testing.

WAVE 4: Shift of manufacturing from China to India - NOW

Wave IV: The trend is now shifting towards INDIA!!!

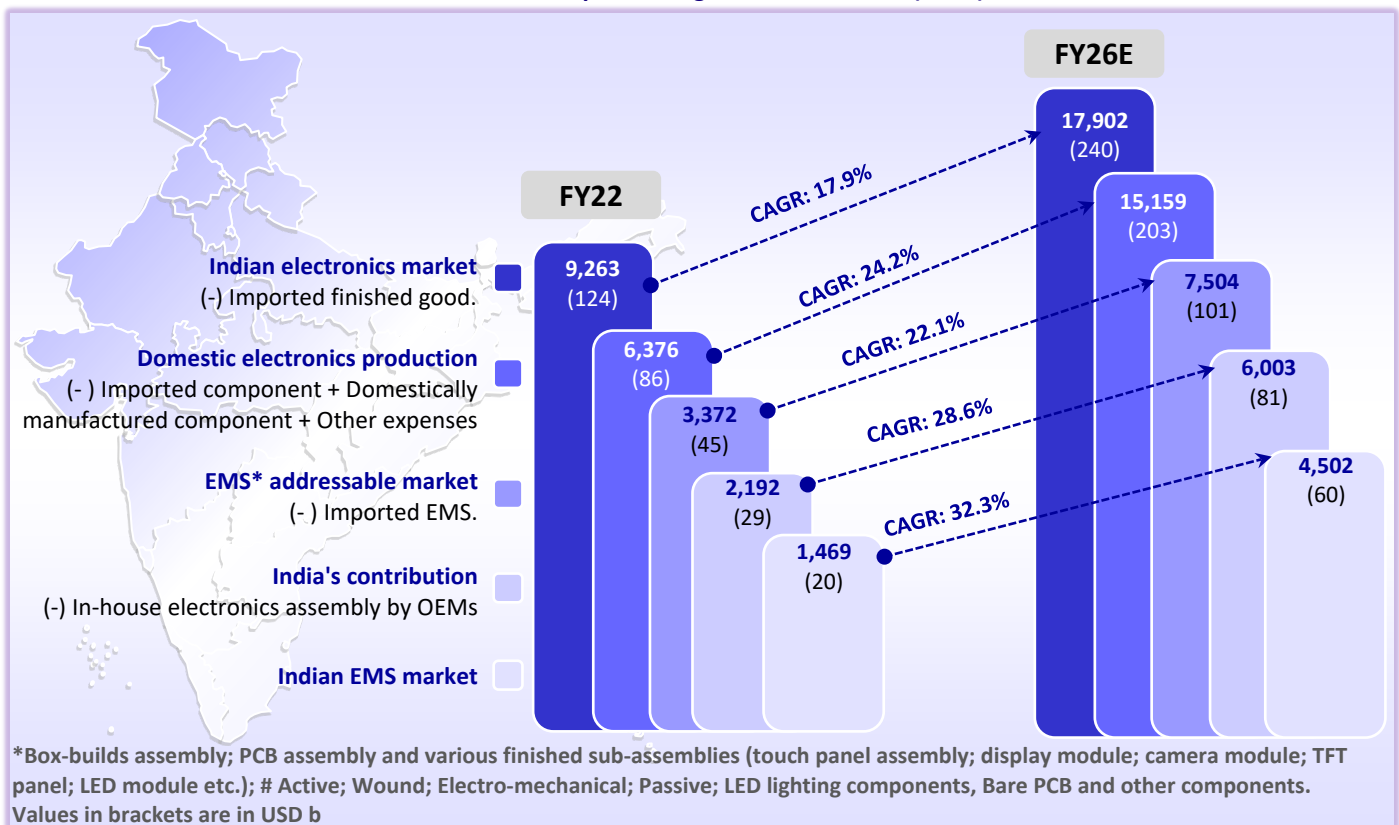


India's EMS industry to clock the highest growth (%) among other economies (at ~32% CAGR over CY21-26)



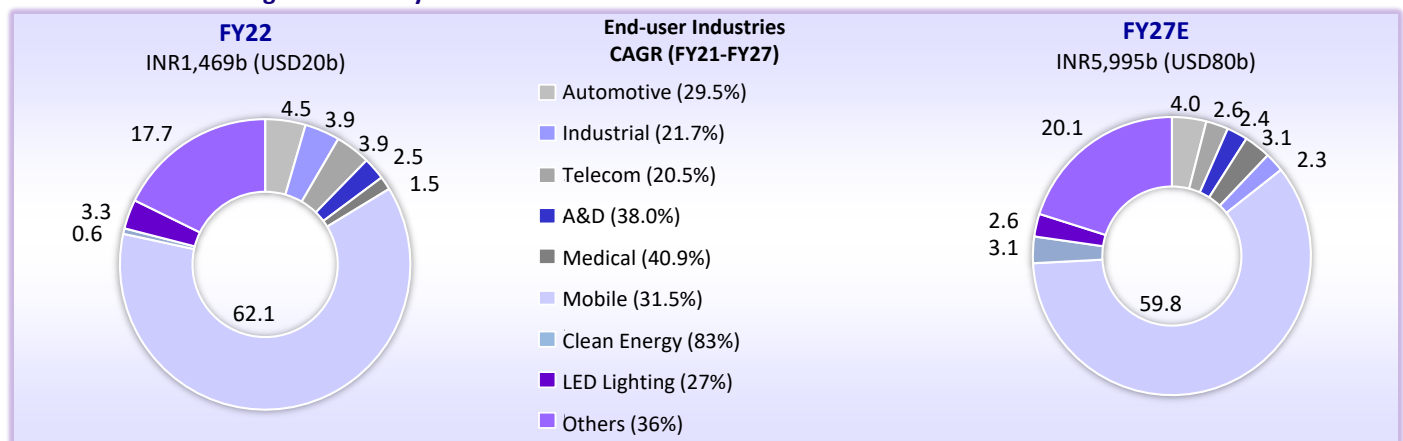
Source: F&S, MOFSL

EMS' addressable market vs. contribution of EMS companies for goods made in India (INR b)



Source: MeitY, F&S, MOFSL

Indian EMS market – Segmentation by end-user industries



*Others include: CEA (Consumer electronics and appliances), IT (Information Technology products), etc.
Values In brackets are in USD b; Note: E refers to Estimates; Source: MeitY, ELCINA, and Frost & Sullivan Analysis

EMS industry landscape

	KAYNES	AVALON TECH	SYRMA SGS	DATA PATTERN	CYIENT DLM	IKIO LIGHTINGS	ELIN ELECTRONICS	DCX	CENTUM ELECTRONICS
Operational metrics									
Application	Automotive (38%), Industrial (28%), Railways (11%), Consumers (9%), Medical (6%) and Others (8%).	Industrials (29%), Clean Energy (25%), Mobility/Transport (21%), Communication (11%), Medical & Others (13%)	Industrial (31%), Consumer (32%), Automotive (20%), IT & Railway (9%) and Healthcare (8%).	Defense & Aerospace	Defense (38%), Industrial (25%), Aerospace (20%), Medical Technology (16%), Others (1%)	Consumer Electricals	Consumer Electricals	Defense & Aerospace	Defense, Space and Aerospace (42%), Transport (24%), Industrial & Energy (25%), Healthcare (9%)
Product portfolio	OEM PCB Assemblies (64%), OEM Box Build (27%), Product Engineering and IoT solutions (5%) and ODM (4%)	End-to-end Box Build (47%), Injection molded plastic, PCBA, Cable Assembly, Metal fabrication and Magnetics	PCBA (80%), RFID (19%) and Electromagnetic & Electromechanical Parts (1%)	Radar, Satellites, Electronics Surveillance & Monitoring (ESM) and Communication	PCBA (63%), Box Build (32%), Cable Harness (1%) and Others (4%)	Home Decorative LED (62%), Retail Sore LED (17%), Fan Regulator and switches (6%) and Refrigerator products (4%),	Lighting, Fans & Switches, small appliances & FHP motors	PCBA, Cable & Wire Harness, System Integration	Industrial Circuit breaker, distributed control system, medical electronics board, Railway automation system, etc.
Key clients	Siemens, Hitachi, IIL, Agappe, Honeywell, Canyon (350+ Customers in 26 Countries)	Kyosan, Honeywell, Lunar	TVS Motor, A. O. Smith India, Robert Bosch, Eureka Forbes, Atomberg, HUL	Ministry of Defense, DRDO, HAL, BEL, BrahMos	ABB Inc, BEL, Honeywell, Thales Global, Molbio Diagnostic	Signify Innovations (Philips Electronics), Panasonic, Honeywell Electricals	Signify Innovations, Eveready Industries	BEL, Israel Aerospace, ELTA Systems, Alpha Design, Astra Microwave	ISRO
No. and Location of manufacturing facilities	10 Himachal, Haryana, Maharashtra, Karnataka, Kerala, Tamil Nadu	14 Karnataka, Chennai, US (Atlanta, Fremont)	11 Himachal, Haryana, UP, Karnataka and Tamil Nadu	1 Tamil Nadu	3 Karnataka and Telangana	4 Uttarakhand and Delhi	3 Himachal, UP, Goa	1 Karnataka	3 Karnataka, France, Canada
Exports revenue share (%)	15	59	31	16	60	8	0.3		
Expansion update	Haryana, Pune, and Karnataka facilities to be operationalized in coming months	Two more facilities in MEPZ -Chennai (160,000sqft) ; to be operationalize in six months	Acquired a 16-acre plot in Tamil Nadu. Also signed an agreement to acquire a 6-acre plot in Chennai for the domestic business.	Expansion and Facility enhancement of Chennai Plant completed in FY23					

EMS – An emerging sector!

Set to become a huge INR6t market by FY27E

EMS market was 0.6% of India's GDP in FY22; it is set to catapult to an INR6t market by FY27E i.e. 1.6% of GDP

- EMS is an emerging sector in the landscape of India Inc.
- Though it had a miniscule 0.6% share to India's GDP in FY22, the sector is set to catapult to an INR6t market by FY27E i.e. ~1.6% of India's GDP.
- Currently, the EMS industry is passing through a transition phase with evolution of ecosystem in India. The two key drivers for building this ecosystem are: creation of electronics ecosystem (indigenizing of raw material) in India and easy availability of low-cost labor.
- Semiconductor, being the backbone of modern electronics industry, plays a pivotal role in any electronics evolution. The govt. has realized the potential of semiconductor and is pushing hard to build India as a strong electronics manufacturing hub.
- In the recently concluded SemiconIndia 2023 conference, India has seen notable announcements for setting up semiconductor manufacturing and allied units by some global electronics giants.

Exhibit 5: Recent investment announcements in India's EMS landscape

Companies	Investment	Comment
Foxconn	❖ USD2b over the next five years	❖ To build the largest semiconductor plant in India
	❖ USD1.2b in Karnataka	❖ Plant is likely to assemble iPhones and expected to create about 100,000 jobs.
Micron technology	❖ INR225b MoU / USD825m	❖ Establish an advanced semiconductor Assembly, Testing, Marking, and Packaging (ATMP) facility in Gujarat
AMD	❖ USD400m in the next five years	❖ New AMD campus in Bengaluru, Karnataka that will serve as the company's largest design center as well as the addition of ~3,000 new engineering roles by the end of 2028.
Vedanta	❖ USD5b initially – total USD20b	❖ To manufacture 'Made in India' chip in two and a half years.
Applied Materials	❖ USD400m	❖ Engineering collaborative center
Silicon Power group	❖ INR10b (USD121.73m)	❖ Establish a facility in India's Odisha state for manufacturing 150 millimeter of silicon carbide, a semiconductor component, within 18 to 24 months
SRAM & MRAM Technologies	❖ INR300b in first phase	❖ To establish a semiconductor fabrication unit in Ganjam district, Odisha
	❖ INR2t by 2027	❖ Plans to expand the unit in subsequent phases

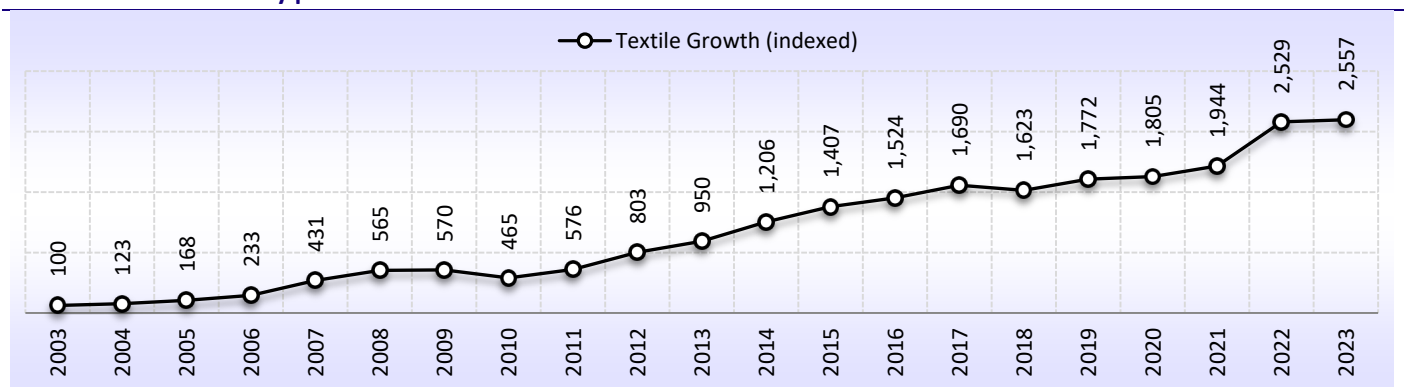
Source: Company, MOFSL

- We believe India's EMS industry is on the cusp where other major domestic industries were at the beginning of their evolution such as IT software, Textile, Auto Ancillaries, Specialty Chemicals, etc.
- India has witnessed exponential growth in some of the key industries such as Textiles, IT, Auto Ancillaries and Specialty Chemicals over the last two decades (refer to Exhibits 6–13).
- The textile industry flourished on the back of ample availability of key raw materials i.e. cotton (raw material is ~55-60% of sales) and low-cost labor (~10%) vs. other economies. The textile industry has witnessed a CAGR of ~18% over the last two decades.
- The Indian IT industry also witnessed similar growth rate (at 20% CAGR over the last two decades) because of low-cost labor (average employee cost is ~55-60% of revenue). The labor cost in India is among the cheapest and India also has the highest skilled manpower. These benefits helped the Indian IT sector to contribute ~7.4% of GDP in FY22.

Sectors such as IT/Textile/
Auto Ancillaries/Spec Chem
posted 20%/18%/12%/
17% growth over the last
two decades. Indian EMS at
the starting point of this
growth story

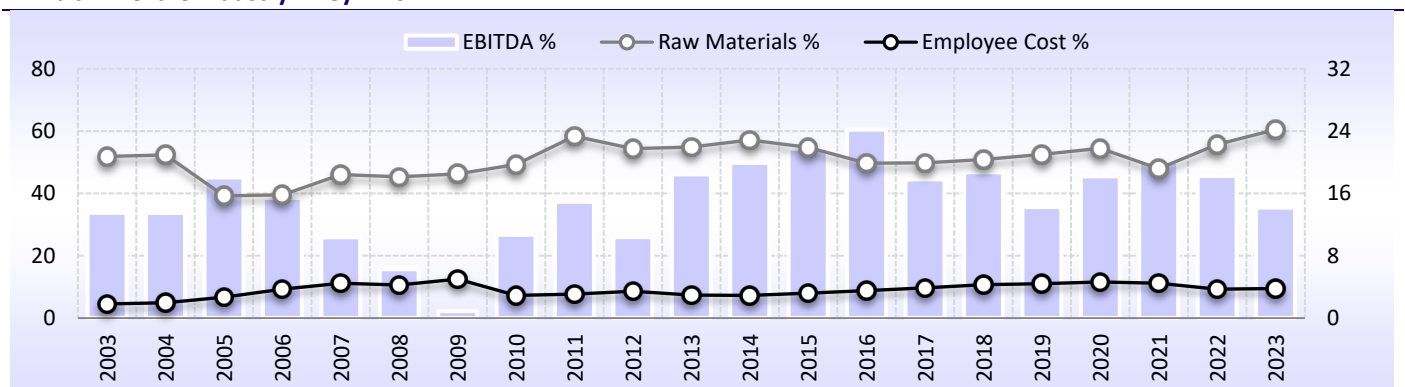
- The auto ancillary industry flourished on the back of growing domestic automotive industry to 326.3m cars operational in India in 2020 from 55m cars only in 2001. The auto ancillary industry registered a CAGR of 12% over the last two decades where the labor cost has been ~13-14% of sales and raw materials contributed ~48-50%.
- The specialty chemicals industry witnessed a similar CAGR of 17% over the last two decades led by China+1 trend and low labor cost that made India one of the global hubs for specialty chemicals manufacturers.
- These industries have also witnessed robust growth led by export opportunities created overtime in addition to the growing domestic market.
- The EMS industry is somewhat similar to the aforementioned industries, such as Textile and auto ancillaries, with similar levels of labor cost (~10-15% of sales) and raw material cost (~60%). In Textile, Specialty Chemicals, and Auto Ancillary sectors, India's key benefits are cheap labor and availability of raw material. Similarly, for EMS industry, India has cheap labor and for raw material, the government is pushing hard on creating a strong ecosystem for electronics industry where raw materials can be indigenously sourced.
- Likewise, we believe that EMS is on track to witness similar or even better growth vs. other sectors aided by lower labor cost (~USD6 per hour vs. USD10.48/ USD35.5 per hour of Vietnam/China), skilled human resource, and growing domestic market (Indian electronics market CAGR of 25% over FY21-26E) along with creation of electronics ecosystem and rise in export share (22% CAGR during FY17-FY22).

Exhibit 6: Textile industry posted a CAGR of 18% over FY03-23

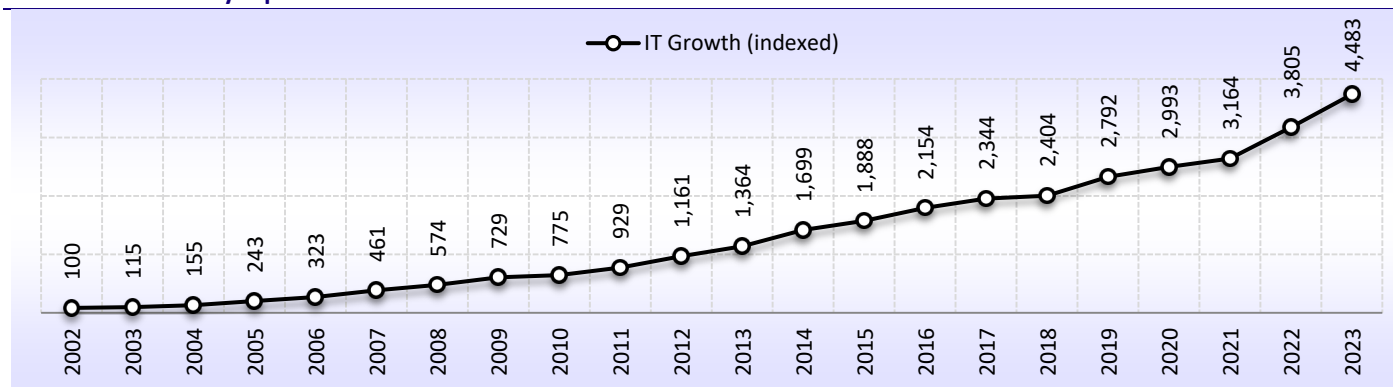


Note: base year indexed to 100; Sample Companies: Welpsun India and KPR Mills

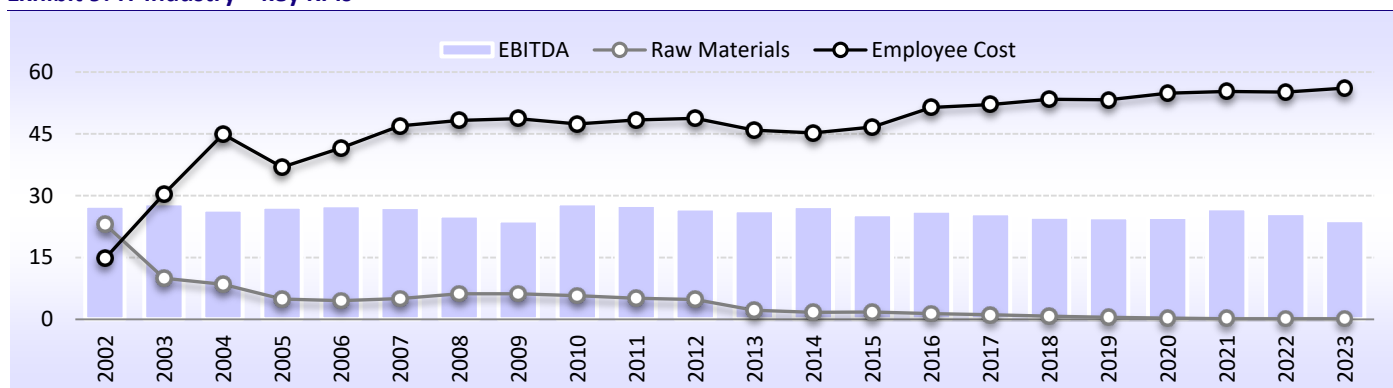
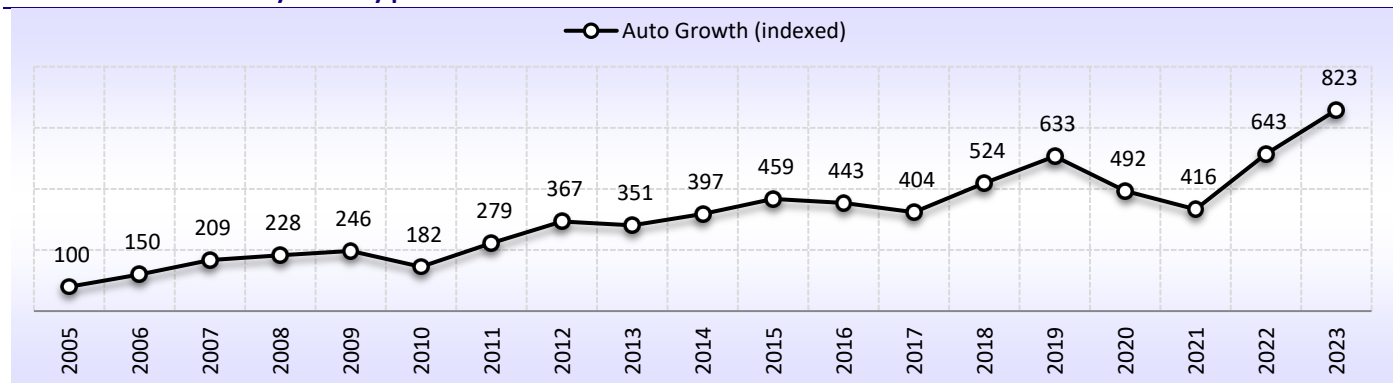
Exhibit 7: Textile Industry – key KPIs



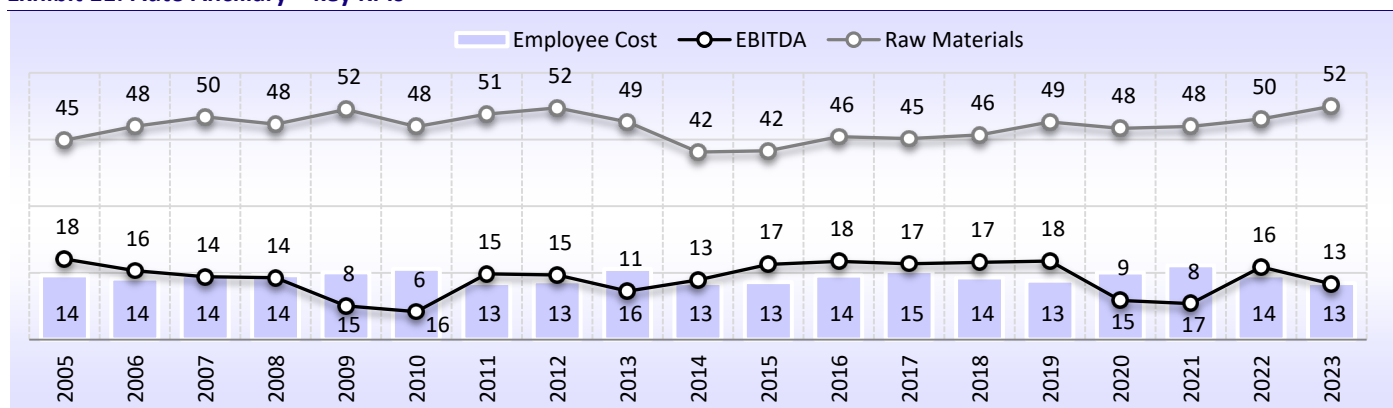
Source: Companies, MOFSL

Exhibit 8: IT industry reported 20% CAGR over FY02-23

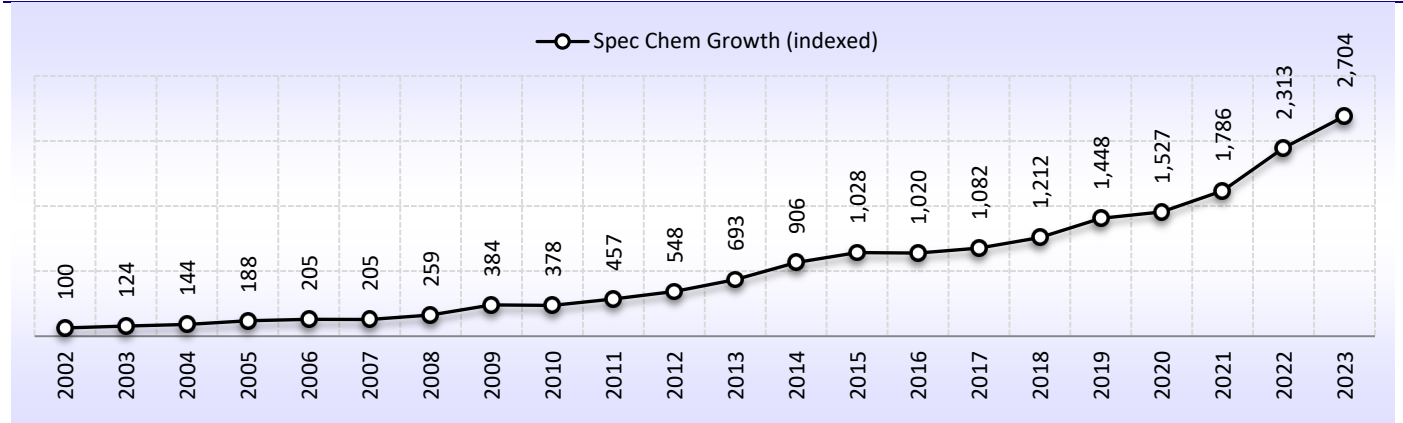
Note: base year indexed to 100; Samples Companies: Infosys, Wipro and TCS

Exhibit 9: IT Industry – key KPIs**Exhibit 10: Auto Ancillary industry posted 12% CAGR over FY05-23**

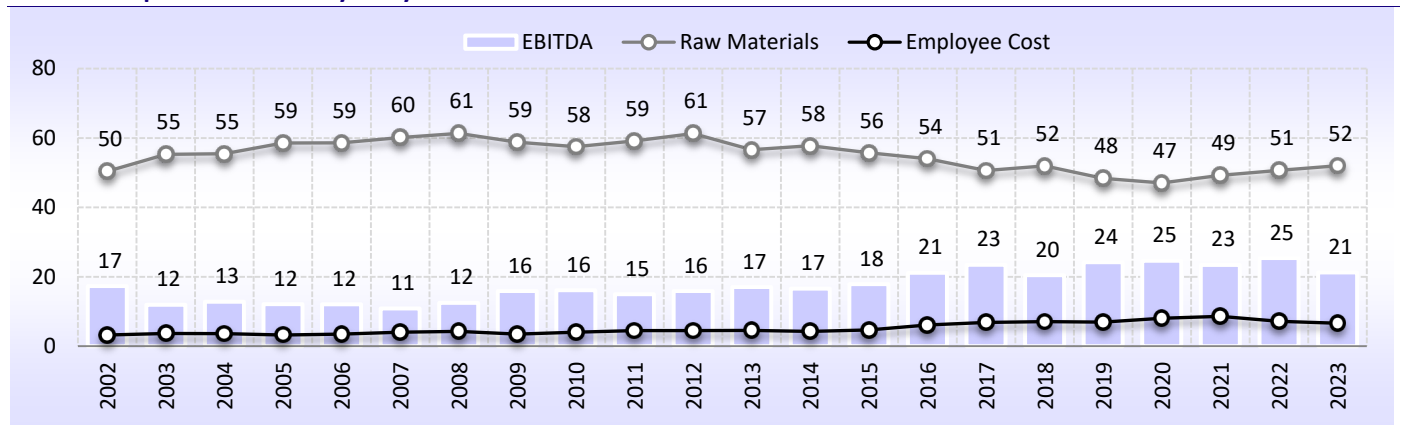
Note: base year indexed to 100; Samples Companies: Bharat Forge and Minda Corp

Exhibit 11: Auto Ancillary – key KPIs

Source: Companies, MOFSL

Exhibit 12: Spec Chem industry clocked 17% CAGR over FY02-23

Note: base year indexed to 100; Sample Companies: Aarti Industries, PI Industries and Vinati Organics

Exhibit 13: Spec Chem industry – key KPIs

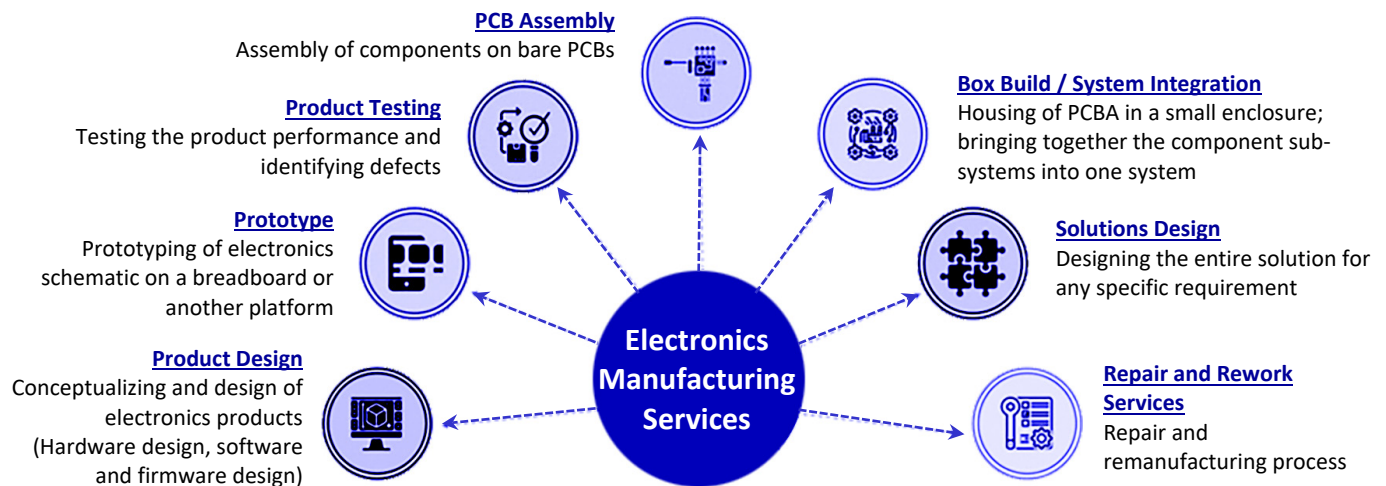
Source: Companies, MOFSL

EMS – the backbone of global electronics market!

An emerging industry in India

- Electronics Manufacturing Services (EMS) refers to the outsourcing of the manufacturing processes of electronics components (e.g. PCBs), devices (e.g. Box Builds), and equipment to specialized companies by OEMs.
- EMS providers offer a range of services, including designing, prototyping, assembling, testing, and logistics support for electronics products.

Exhibit 14: Gamut of services offered by EMS companies



Source: Company, MOFSL

Business model of the EMS industry

- The business model of EMS players is categorized into four parts: Original Design Manufacturers (ODM), Contract Manufacturer (CM), Job Work, and After-sales Services.
- ODM companies design products based on OEM specifications, while CM companies manage component sourcing, fabrication, assembly, testing, logistics, and after-sales services. The ODM model fosters stronger partnerships between EMS companies and OEMs, leading to high-profit margins and premium pricing for outstanding designs.
- Companies in the ODM space possess a moat as they design products (solely or jointly with OEMs), ensuring production through them, leading to strong revenue visibility. ODM business commands higher margins than CM.
- However, CM formed the majority of the EMS industry with ~90% global share valued at USD794b while ODM is a smaller part valued at USD86b as of CY21. However, EMS players are moving further into the value chain i.e. ODM. During CY21-26, global ODM is expected to report a CAGR of 11.8% vs. CM CAGR of 3.3%. While in India, the share of CM/ODM was ~80%/20% valued at INR1,176b/ INR292b as of FY22.

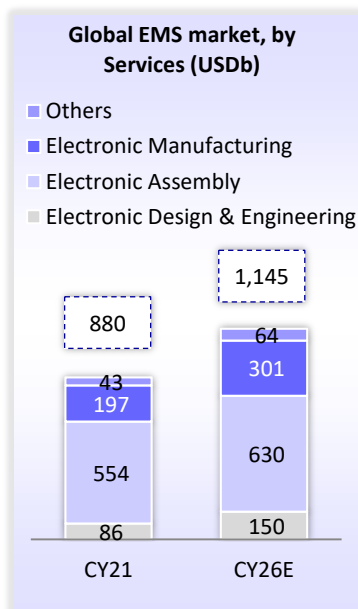
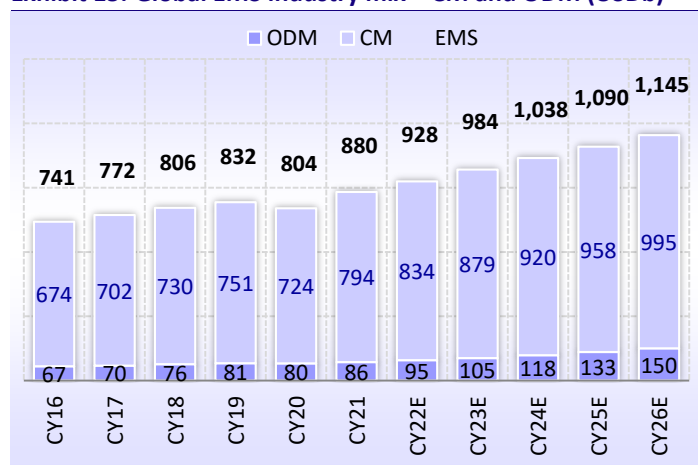
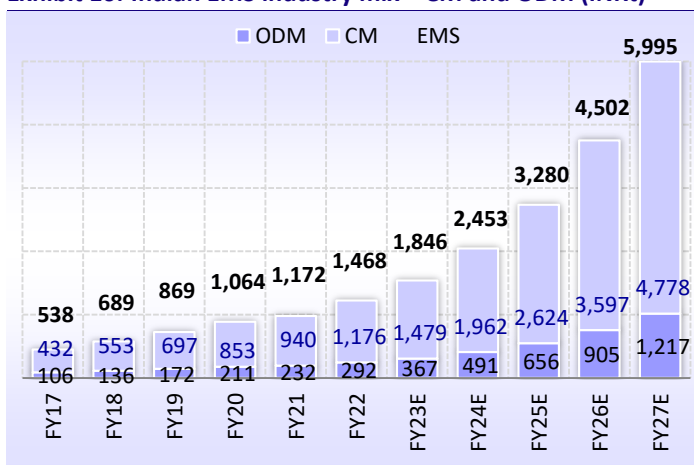


Exhibit 15: Global EMS industry mix – CM and ODM (USDb)



Source: Frost & Sullivan (F&S), MOFSL

Exhibit 16: Indian EMS industry mix – CM and ODM (INRt)



Source: F&S, MOFSL

Exhibit 17: Comparison between ODM and CM

Original Design Manufacturing (ODM)		Contract Manufacturing (CM)	
✓	ODM retains IP rights to their design, giving them better negotiating power	✓	CM helps in quicker production time
✓	ODMs may produce client products themselves or through subcontract; also, into final assembly of products	✓	OEMs save on their capital costs by involving EMS providers for CM
✓	ODMs will manage the technical resources required for the successful completion of the production process	✓	Better economies of scale when the business grows, when CMs produce for multiple customers.
✓	It is difficult for OEMs to switch suppliers since ODM players hold the rights for the design	✗	OEMs gain complete ownership of all IP rights, including product specifications. EMS providers do not have negotiating power.
✗	Product development costs will be high	✗	Lack expertise in producing their own sets of products; development starts from the scratch.
✗	Minimum order quantity requirements are quite high.	✗	OEMs can easily move to other providers, as they own rights for the design.

✓ Advantages ✗ Disadvantages

Source: Company DRHP, MOFSL

- Leading EMS companies, having achieved expertise in manufacturing and assembly, are currently striving to ascend the value chain by expanding their offerings to include design, testing, and component sourcing services. In essence, the **global industry is transitioning to ODM from OEM**. It is projected that the proportion of ODM will rise to 13.1% in CY26 from 9.8% in CY21.

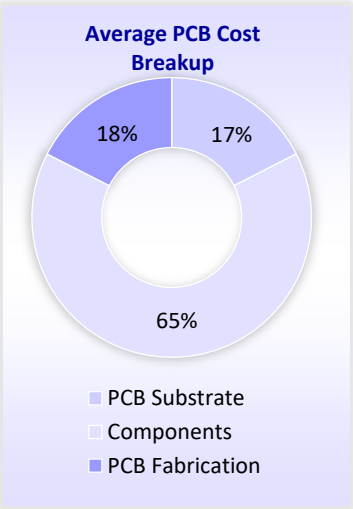
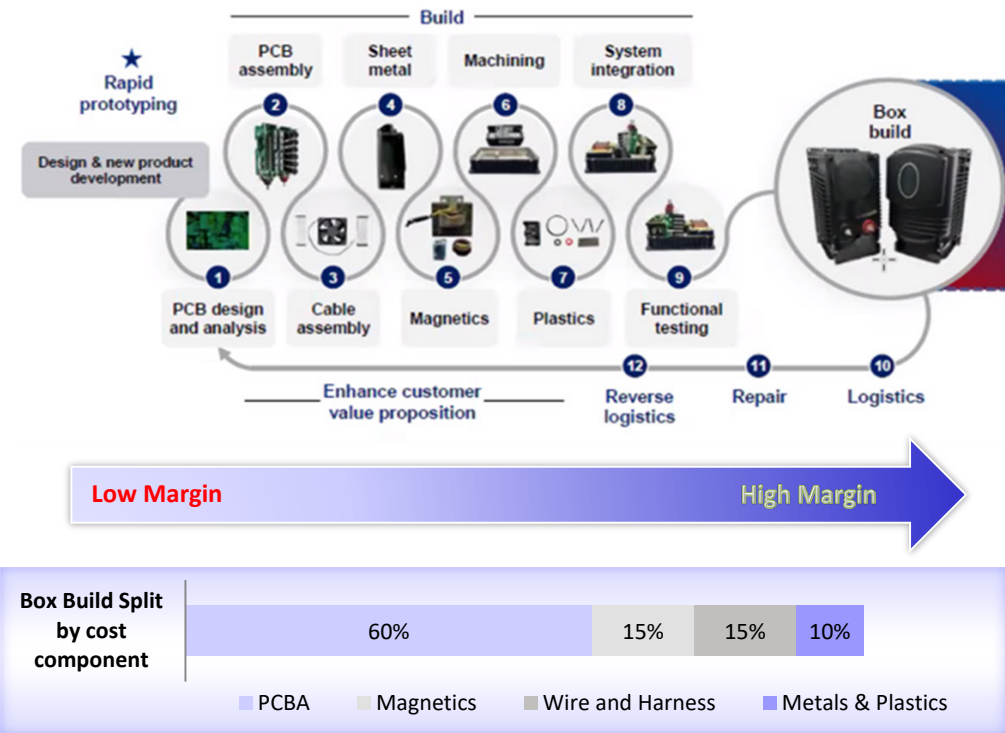
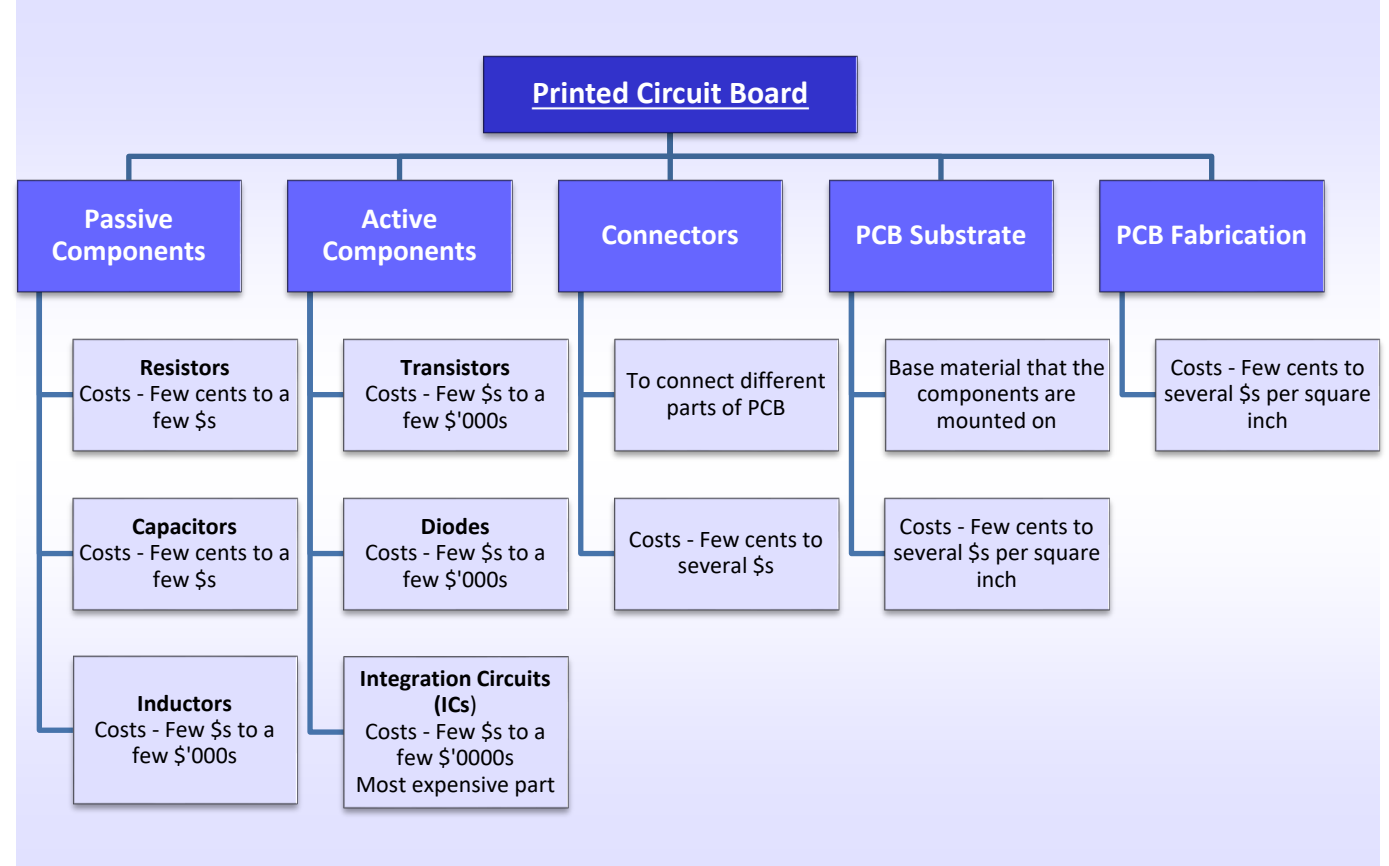


Exhibit 18: EMS players – value chain



Source: Industry reports, MOFSL

Exhibit 19: Key components within PCB



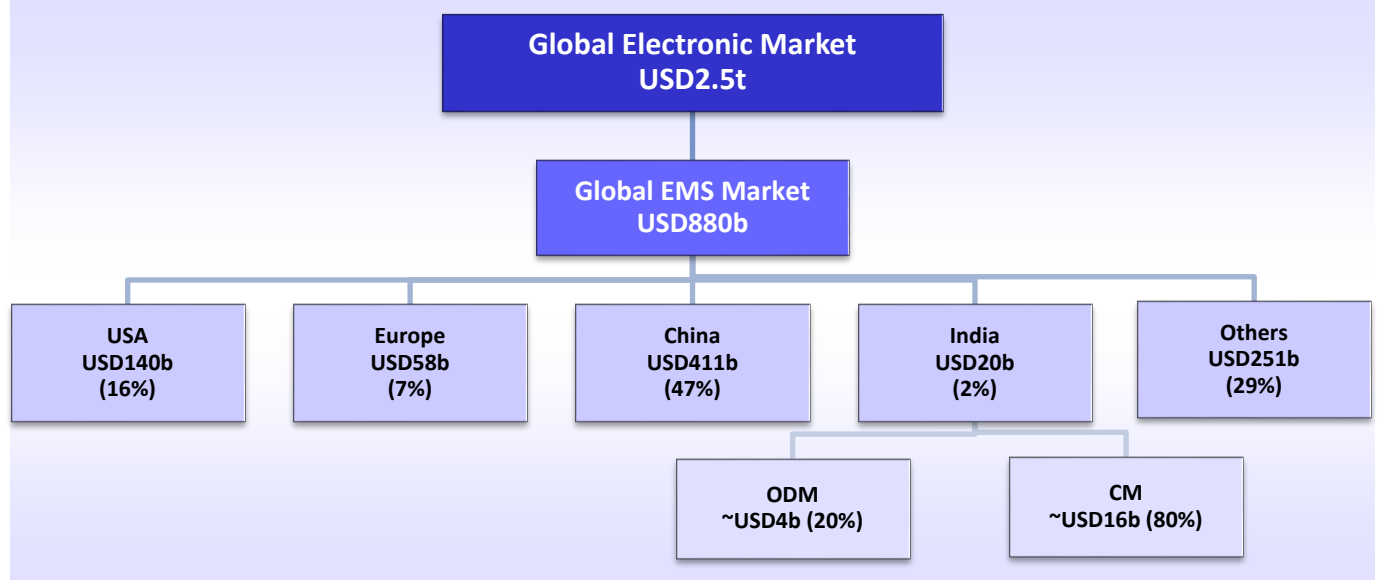
Source: Industry Reports, MOFSL

New technologies such as EVs, alternate energy, AI, Virtual Reality, Ecommerce boost electronics demand

Global electronics market growth to augur well for the EMS industry

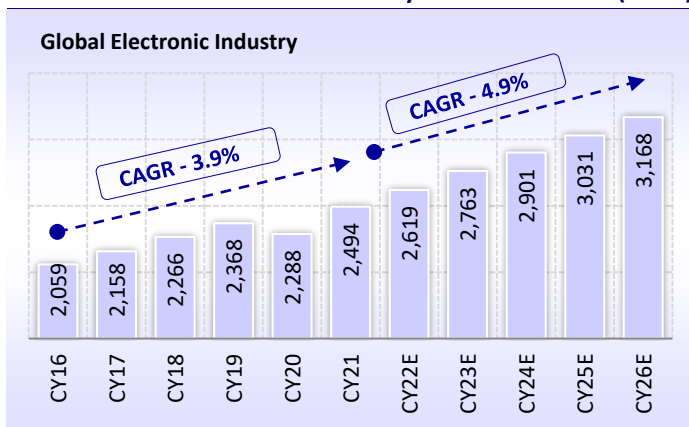
- The global electronics market registered a 3.9% CAGR over CY16-21 to USD2,494b and is further likely to report a CAGR of 4.9% during CY21-CY26 to USD3,168b. This will mainly be fueled by increasing disposable income, improved acceptability of audio and video broadcasting, higher broadband penetration, and the inclination of youth towards next-gen technologies such as electric vehicles, alternate energy, virtual & augmented reality, emergence of e-commerce, rising demand from rural markets, etc.
- Of the global electronics industry, the global EMS sector clocked a CAGR of 3.5% over CY16-21 with a market size of USD880b in CY21. However, going forward, the sector is anticipated to grow at a higher rate of 5.4% to reach USD1,145b during CY21-26. This will primarily be driven by rising mix of EMS vs. in-house, as OEMs are outsourcing a higher share of the manufacturing pie.

Exhibit 20: Global electronics market structure (CY21)



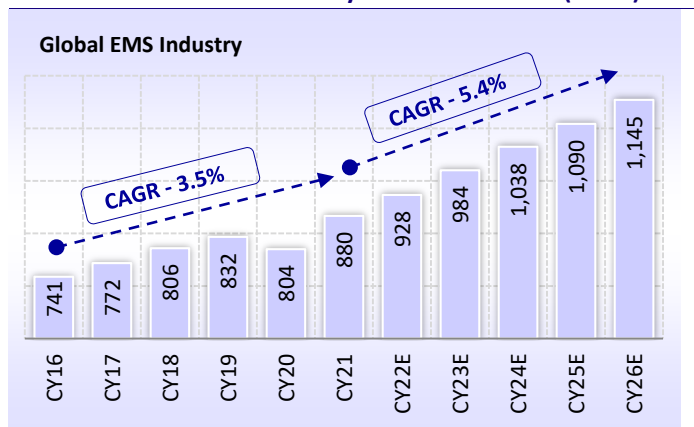
Source: F&S, MOFSL

Exhibit 21: Global electronics industry market size trend (USDb)



Source: F&S, MOFSL

Exhibit 22: Global EMS industry market size trend (USDb)

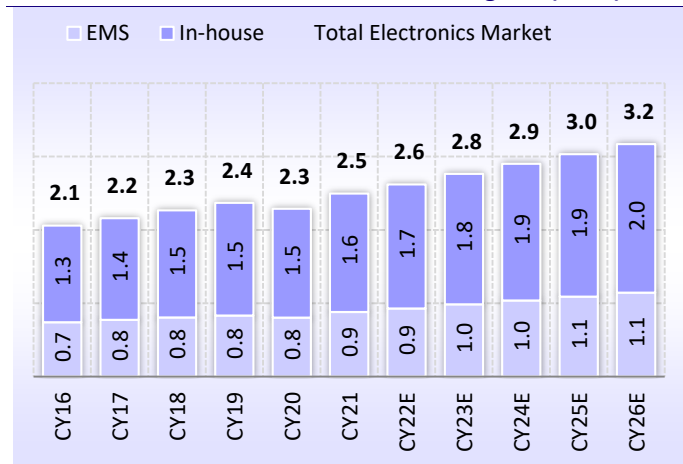


Source: ELCINA, F&S, MOFSL

EMS players can handle large production volumes efficiently, and reduce costs and time-to-market of electronics products for OEMs

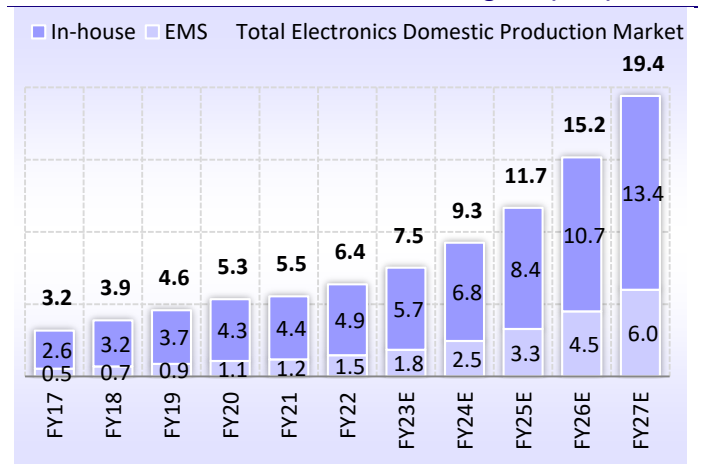
- OEMs are gaining competitive edge by engaging with EMS companies, allowing them to focus on their core competencies, such as product development, marketing, and sales, while leveraging the expertise and resources of specialized manufacturers.
- EMS providers often have the infrastructure, experience, and scalability to handle large **production volumes efficiently, reducing costs and time-to-market** electronics products.
- Earlier, large OEMs were used to manufacture a majority of the electronics components in-house. Even today, ~65% and 77% of the total electronics components globally and in India are manufactured in-house, respectively. However, with evolving EMS industry, the shift from in-house manufacturing to the EMS players is happening at a faster pace.

Exhibit 23: Global electronics manufacturing mix (USDt)



Source: Statista, F&S, MOFSL

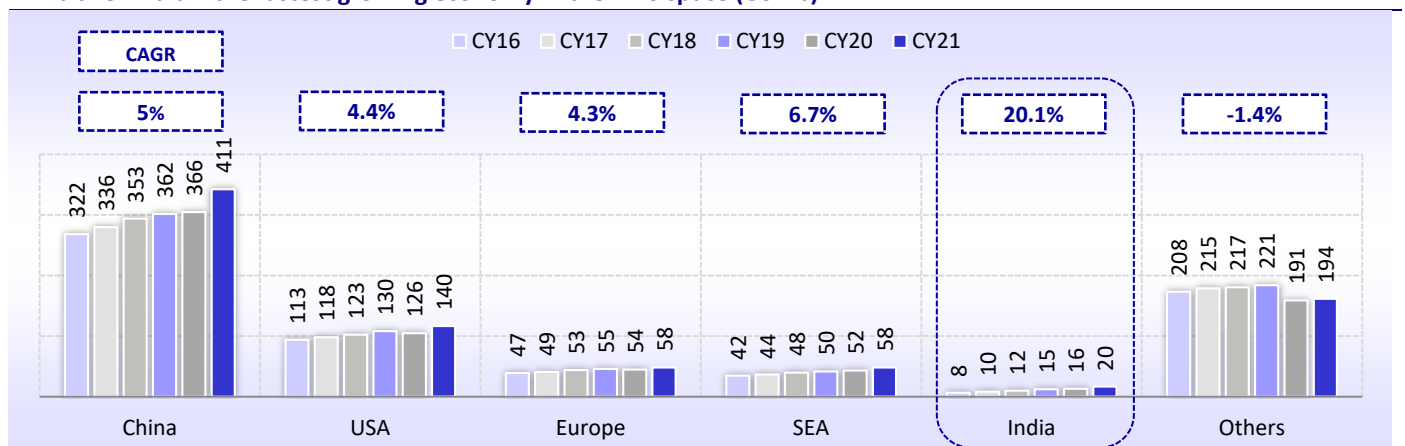
Exhibit 24: Indian electronics manufacturing mix (INRt)



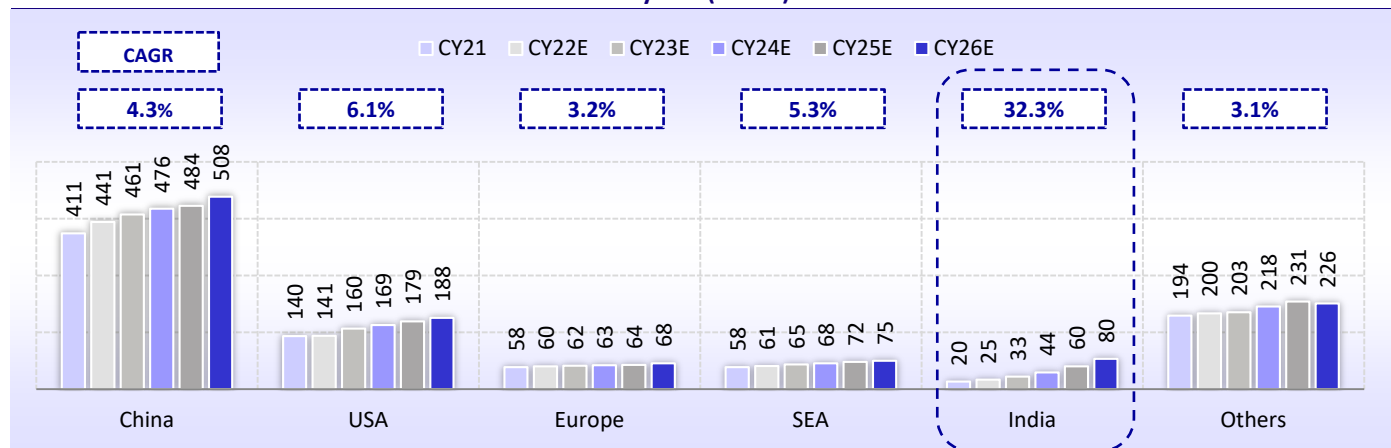
Source: Statista, F&S, MOFSL

- The Indian EMS industry is the fastest growing among other major economies and emerging markets. The industry reported a 20.1% CAGR during CY16-21 and is expected to register a robust 32.3% CAGR over CY21-26.

Exhibit 25: India – the fastest growing economy in the EMS space (USD b)...



Source: F&S, MOFSL

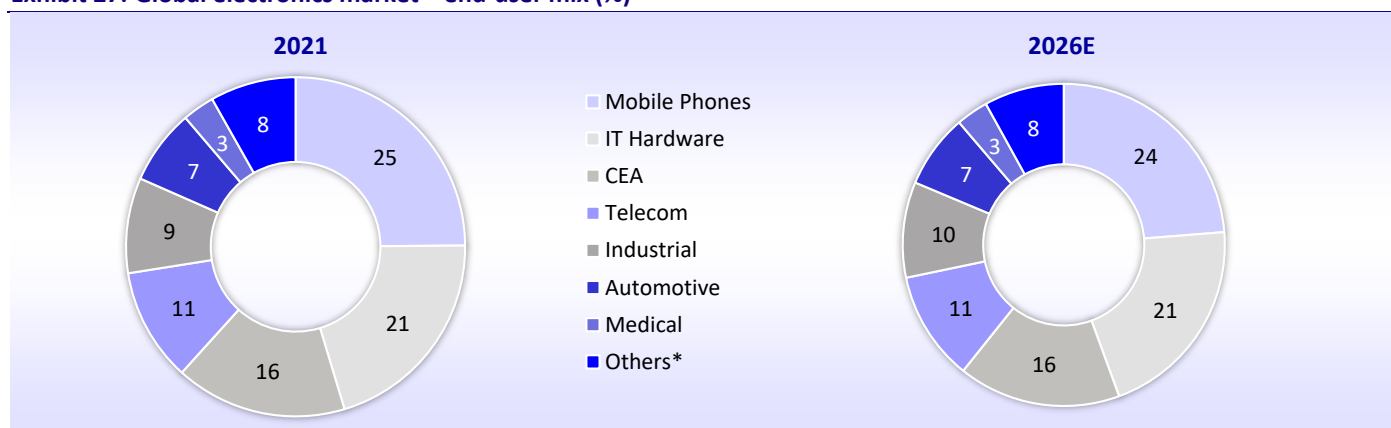
Exhibit 26: ...and will remain the same over the next five years (USD b)

SEA – South East Asia; Others – Rest of Asia, LATAM, MEA

Source: F&S, MOFSL

Emerging electronics market and applications boosting the EMS industry

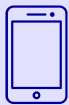
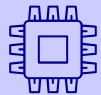








- The global electronics market has evolved significantly over the past two decades from the dominance of a few companies in early 2000s to the current scenario of numerous companies thriving concurrently and developing new products.
- At present a plethora of electronics device manufacturers produce a wide range of products such as smartphones, tablets, laptops, wearables, smart home devices (such as AC, Refrigerators, etc.) and EVs. This evolution has been driven by a number of factors, including the rise of the internet, growth of the mobile computing market, and increasing popularity of wearable devices.
- The industry is further anticipated to grow backed by innovation and new technologies such as artificial intelligence, the Internet of Things (IoT), as well as augmented and virtual reality.

Exhibit 27: Global electronics market – end-user mix (%)

* includes Lighting, A&D and Energy etc.

Source: F&S, MOFSL

Exhibit 28: Electronics market end-user industries

Applications	Indian EMS market size in FY22/27E in INR b (CAGR)		Products	Description
Mobile Phones		912/2,723* (31.5%)	Smart Phones, Features Phones	❖ Key application with a market worth over USD600b in CY21. Growing internet access and global economic expansion have fueled smartphone usage. Emerging economies are projected to be the future growth drivers, seeking entry-level and affordable smartphones.
Consumer Electronics and Appliances (CEA)		137^/568* (32.9%)	Television, AC, Washing Machines, etc.	❖ This is the second-largest segment. The upward trend in demand for consumer electronics is expected to continue going forward, fueled by the strong demand for devices with better features, advanced and innovative technologies in this category
Automotive		66/240 (29.5%)	ABS, AMT body, Body control unit	❖ Increase in electronics content per vehicle coupled with growing EV market will be the key catalyst for EMS
Aerospace & Defense (A&D)		37/186 (38%)	Radars, ATE & Test Systems, Electronic warfare	❖ Rising military spending and geopolitical tensions among countries are the two major market trends driving demand for this market. Defense OEMs are aware of the upward trend and are expanding their product offerings through in-house development or strategic partnerships.
Industrials		58/155 (21.7%)	Energy meters, inverter, HMS, PLC	❖ Increase in automation and digitization has led to growth in the industrial electronics market to a great extent.
Telecom		57/145 (20.5%)	BTS, ONT, modems, routers, servers, GPON, etc.	❖ The advancement of 5G is anticipated to drive the market in the future. Further, the work-from-home market has created a dependency for the telecom industry necessitating higher spending on its improvement
Clean Energy		9/99* (83%)	Battery management systems, solar chargers, trackers, fuel cell	❖ Increasing threat of global warming has led to growing need for the development of safer alternative and efficient energy solutions. Electronics manufacturers are providing customized solutions to clean energy (solar, wind and other renewables), especially in products such as battery management systems, solar inverters and chargers, etc.
IT Hardware		25^/359* (70.9%)	Computers, laptop, tablets printers etc.	❖ The IT hardware market encompasses all physical components that include computing hardware (desktop PCs, notebook PCs, tablets, adaptors, and workstations), which are all substantially produced in China.
Medical		23/125 (40.9%)	Smart glucometer, VAPcare, ventilator & respirators.	❖ The digitalization of medical devices will continue, and OEMs are digitalizing their devices and operations. This trend is also making a mark by pushing medtech to deliver value for providers and patients with devices and digital data.
LED Lighting		48/125* (27%)	CFL, LED and LCU	❖ The gaining traction from IoT, lighting companies are focusing on offering smart lighting.

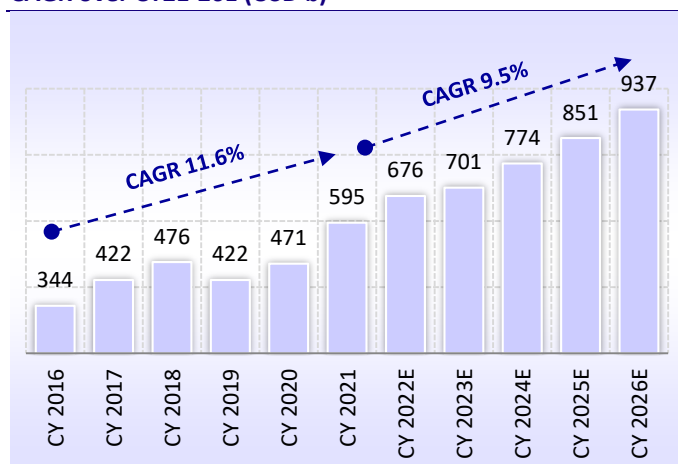
^FY21 Figures; *FY26E figures

Source: Industry Reports, MOFSL

Key components/raw materials for EMS companies

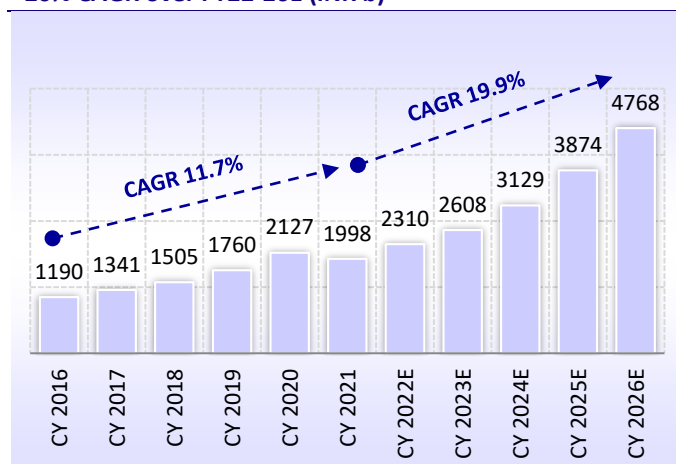
- The electronics manufacturing industry relies on various key raw materials to produce electronics components and devices. Some of the essential raw materials include: Integrated Chips (ICs)/ Semiconductors, PCBs, Sheet Metal, Plastics, Chemicals, etc.
- Of these, **Semiconductors** are the foundation of all electronics devices. They are made from silicon, which is a natural element.
- The semiconductor industry stands as the largest and the most influential sector within the broader components market. Semiconductors play a critical role in modern electronics, serving as the **indispensable components** in a wide range of daily-use devices, such as smartphones, tablets, laptops, and personal computers.
- Revenue from the global semiconductor industry amounted to USD595b in CY21 and is expected to clock a CAGR of 9.5% during CY21-26.

Exhibit 29: Global semiconductor market to register 9.5% CAGR over CY21-26E (USD b)



Source: Statista, F&S, MOFSL

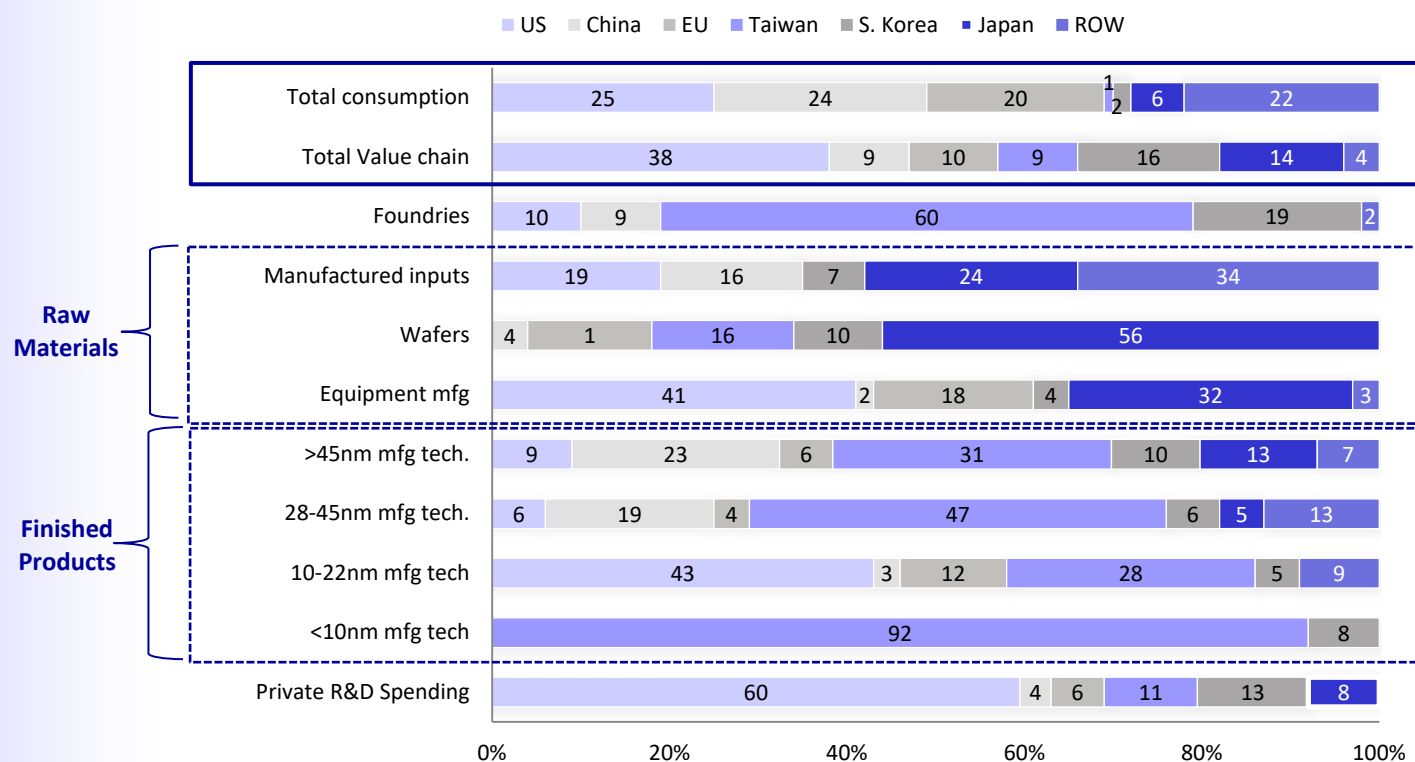
Exhibit 30: Indian semiconductor market to report a strong ~20% CAGR over FY22-26E (INR b)



Source: Statista, F&S, MOFSL

- Further, semiconductor manufacturers are concentrated in a few geographies such as Taiwan, South Korea, China, Japan and Singapore. Taiwan and South Korea account for **~79% of the semiconductor contract manufacturing (foundries)**.
- Taiwan Semiconductor Manufacturing Company (TSMC) is the largest semiconductor manufacturer in the world with ~50% market share.

Exhibit 31: Global semiconductor market share (%)

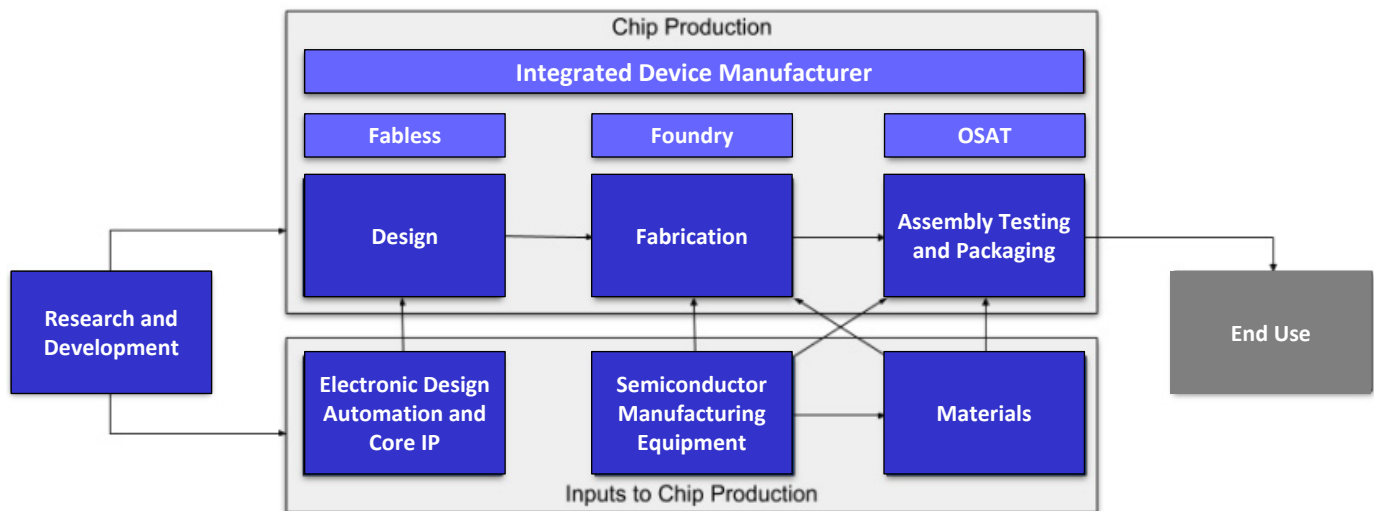


Note:

Foundry companies are companies that manufacture semiconductor devices for other companies.

Wafers serve as the substrate for ICs and other semiconductor devices.

Manufactured Inputs are chemicals and other key raw materials used in building semiconductors

Exhibit 32: Semiconductor supply chain

Note: ■ Supply chain segment; ■ Business model for production

Source: Center for Security and Emerging Technology, MOFSL

Indian Government introduced incentives amounting to INR2.3t for the EMS sector including Semiconductor Mission

- During the last few years, semiconductor supply chain was hit severely by the pandemic leading to a global shortage of microchips. The key chip production plants in Asia and ports became overwhelmed, and the ripple effect was felt across the globe.
- After that, the European Union, the US and China have all committed to expand their semiconductor fabricating capacities to avoid shortages and intensify national security.
- India too stepped up to secure its semiconductor supply by launching the 'Semiconductor Mission' in CY20 with a goal of making India a global semiconductor hub. **The mission has a budget of USD10b.**
- The Indian government has further introduced incentives amounting to INR2.3t for companies operating in this sector. As of 22nd Feb'22, companies have submitted proposals worth INR1.53t in response to these incentives, indicating a strong interest and potential for India's growth in this industry on the global stage.
- There are other key electronics components required in an EMS industry, which are mostly imported i.e. ~60% of the raw materials such as PCB, power devices and other electronics components are currently being imported.
- However, of this 60%, there is scope for ~31% of the raw materials i.e. PCB and power devices to be indigenized. This would increase the local content and availability to 71% from current 40%. (refer to exhibit 33)
- Other key raw materials such as metals and plastics are abundantly available to the companies, thereby, having minimal hindrance to their supplies.

Exhibit 33: Raw material breakup

Unit Cost Metrics	INR	%	Comments
Raw material	70	100%	
Imports	42	60%	
PCB	10	14%	can be indigenized
Power devices	12	17%	can be indigenized
Other Electronics Components	20	29%	will remain imported
Indigenous Sourcing	24	34%	
Plastics	4	6%	

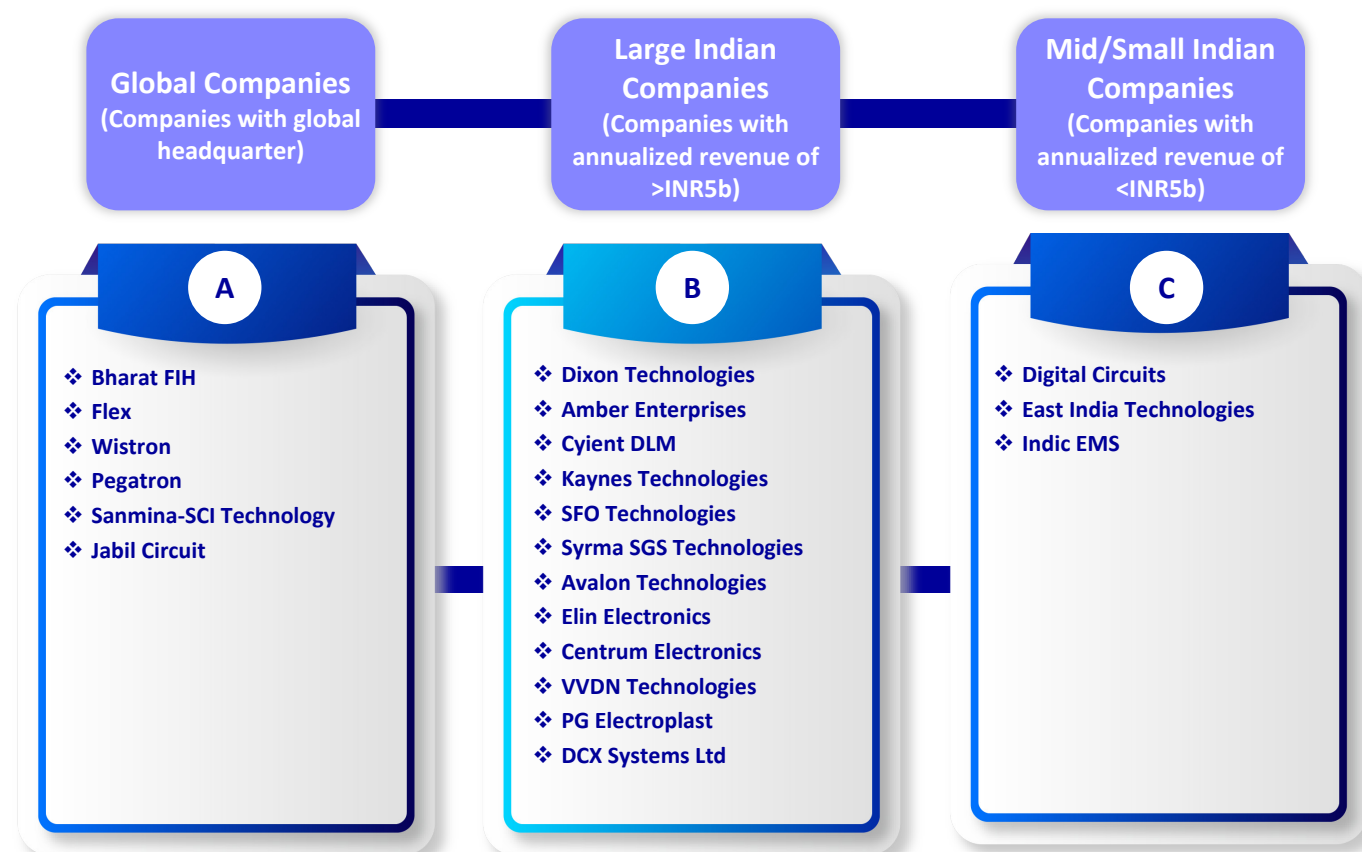
Source: Companies, MOFSL

Key EMS players

Exhibit 34: Top 12 global EMS companies

	Country	M Cap. (USDb)	Revenue (USDb)				Operating Profit Margins (%)				ROE (%)			
			CY19	CY20	CY21	CY22	CY19	CY20	CY21	CY22	CY19	CY20	CY21	CY22
Hon Hai Precision Industry	Taiwan	46.1	172.9	182.0	214.6	222.4	4.0	4.0	4.0	4.0	9.4	8.0	10.4	10.0
Pegatron Corp	Taiwan	6.5	44.2	47.5	45.2	44.2	3.3	3.5	3.7	4.3	12.6	12.6	12.5	8.6
Compal Electronics	Taiwan	4.4	31.7	35.6	44.2	36.0	1.1	1.1	1.1	0.9	6.6	8.8	11.6	6.4
Quanta Computers	Taiwan	28.2	33.3	33.3	33.3	33.3	1.8	3.0	3.3	2.4	11.8	18.1	22.0	17.5
Wistron Corp	Taiwan	9.5	28.4	28.7	30.9	33.0	1.5	1.7	1.9	2.8	9.5	11.9	14.0	12.8
Jabil Inc	US	14.2	25.3	27.3	29.3	33.5	3.1	2.8	3.8	4.3	15.0	2.9	35.3	43.4
Flex Ltd	US	11.8	26.2	24.2	24.1	26.0	2.8	2.8	4.0	3.9	3.1	3.0	19.6	24.7
Inventec Corp	S. Africa	5.5	16.2	17.3	18.6	18.2	1.3	0.9	0.9	1.2	10.0	13.3	11.4	10.5
BYD Electronics	China	10.8	7.7	10.6	13.8	15.9	3.1	8.6	2.8	1.9	9.7	27.7	10.0	7.5
Universal Scientific Industrial (Shanghai) Co.	China	4.4	5.4	6.9	8.6	10.2	3.4	4.1	3.9	4.9	12.8	15.6	14.8	21.2
Sanmina Corp	US	3.0	7.3	6.4	6.2	7.6	3.7	3.9	4.4	4.7	9.1	8.5	15.3	13.9
Plexus Corp	US	2.5	2.8	3.1	3.1	3.7	4.5	5.2	5.3	4.8	12.2	12.7	13.9	13.0

Exhibit 35: Indian EMS companies (FY22)

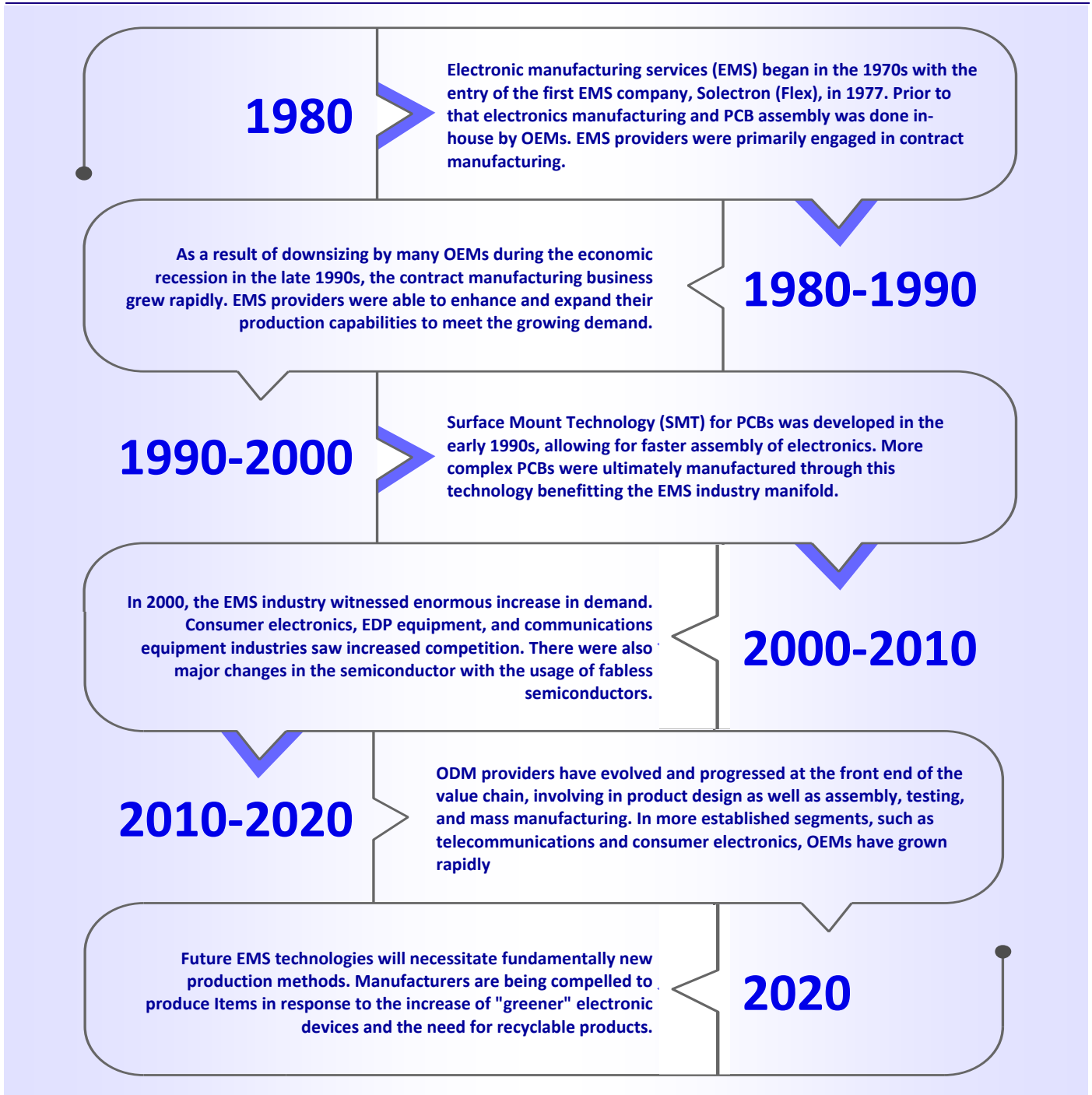


Source: Frost & Sullivan

It's India's turn! – replicating China's story but at a faster pace

- The EMS market emerged five decades ago to meet government, defense, and research institutions' manufacturing needs. As demand surged, OEMs outsourced PCB assembling. In the late 1990s and early 2000s, OEMs sold assembly plants to EMS players, leading to market consolidation.
- Presently, EMS outsourcing offers efficiency, cost reduction, and faster product introductions for OEMs.

Exhibit 36: Evolution of the global EMS industry



Source: Company DRHP, MOFSL

THE HISTORY OF EMS

WAVE 1: Shift of manufacturing from the US to Japan, post WW II

Wave I: Post-World War II, electronics manufacturing shifted to Japan from the US, driven by factors such as the Japanese government's focus on technology, skilled labor availability, and strong economic ties with the US. Japan's electronics industry experienced rapid growth in the post-war period, making it a major player in the global electronics market by the seventies.

WAVE 2: Shift of manufacturing from Japan and Europe to SE Asia, in the 1970s and 1980s

Wave II: The flourishing electronics market led to rising labor costs in Japan during 1970 to 1980. As a result, the industry shifted to other economies with lower labor costs, such as Europe and South East Asia. These countries offered attractive benefits and incentives to attract electronics manufacturers.

WAVE 3: Shift of manufacturing from SE Asia to China in the late 1990s and 2000s

Wave III: Later in the eighties, the electronics industry started shifting towards China due to its lower labor costs, favorable government policies, growing economy, and improved infrastructure. In the 2000-2010s, the industry witnessed the fastest growth, with China moving up the value chain and offering more sophisticated services like design and testing.

WAVE 4: Shift of manufacturing from China to India - NOW

Wave IV: The trend is NOW shifting towards INDIA!!!

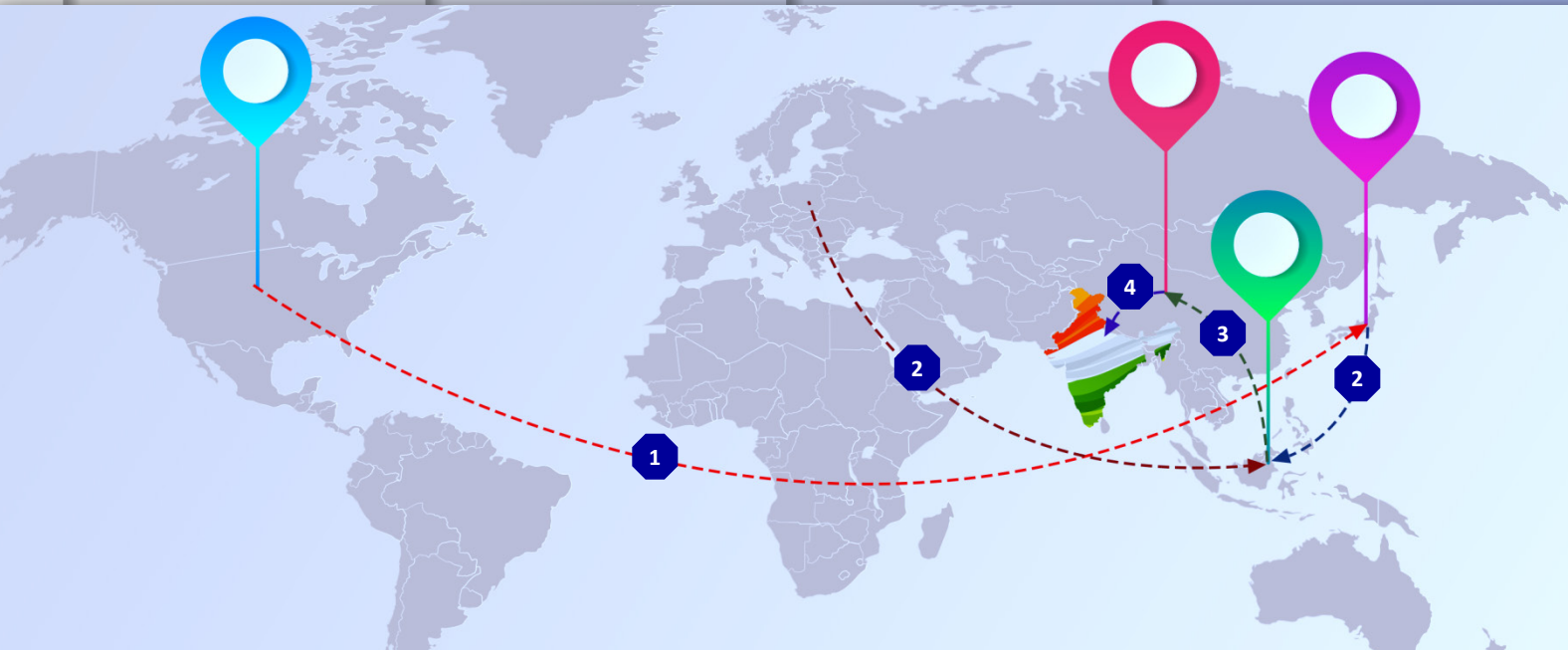
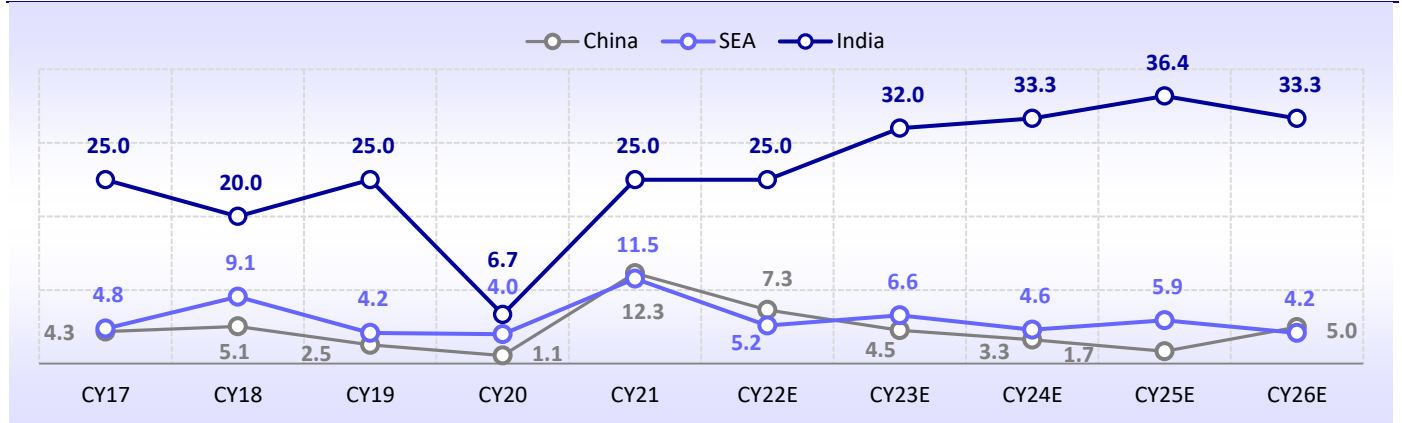
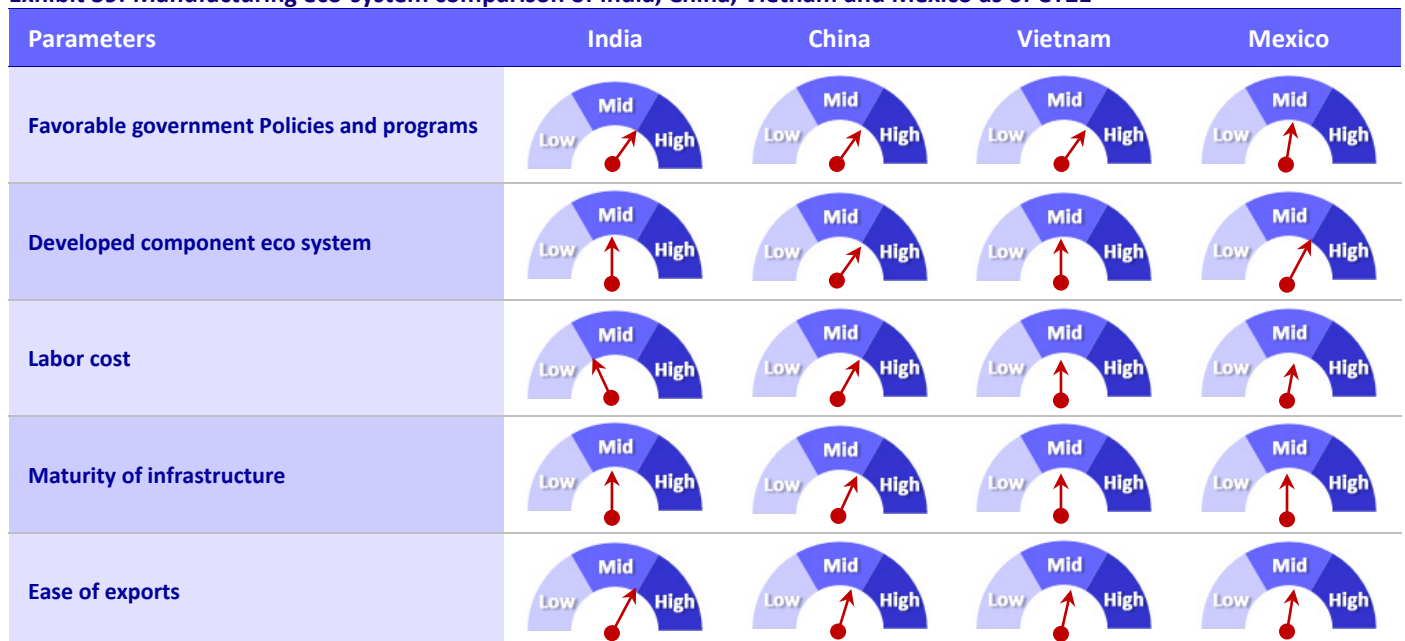


Exhibit 37: India's EMS industry to post the highest growth (%) among other economies (~32% CAGR over CY21-26)

Source: F&S, MOFSL

Exhibit 38: India's advantage within the EMS Industry

Source: Companies, MOFSL

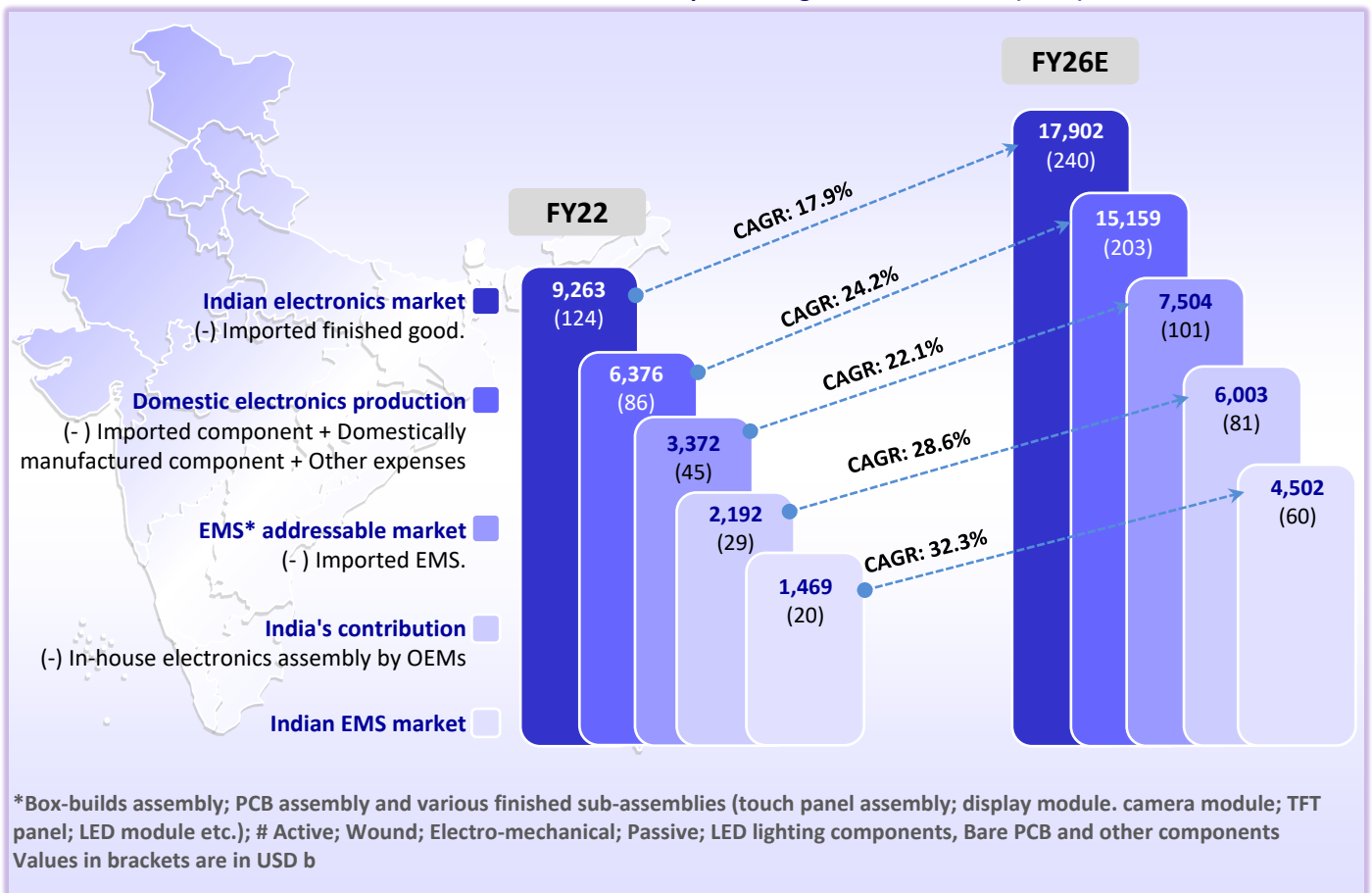
Exhibit 39: Manufacturing eco-system comparison of India, China, Vietnam and Mexico as of CY21

Source: Frost & Sullivan

Indian EMS industry

- The domestic EMS industry holds significant prominence, accounting for 2.2% (USD20b) of the global EMS market in CY21. India's EMS sector is the fastest-growing among all nations, with an expected CAGR of 32% during CY21-CY26. It is projected that by CY26, India's EMS industry will contribute 7% (USD80b) to the global EMS market.
- In FY22, the Indian EMS industry was very small (at INR1,469b) compared to the Indian TAM of INR9,263b. This is likely to improve to INR4,502b by FY26E at a CAGR of 32.3% vs. TAM CAGR of 17.9%.

Exhibit 40: EMS' addressable market vs. contribution of EMS companies for goods made in India (INR b)

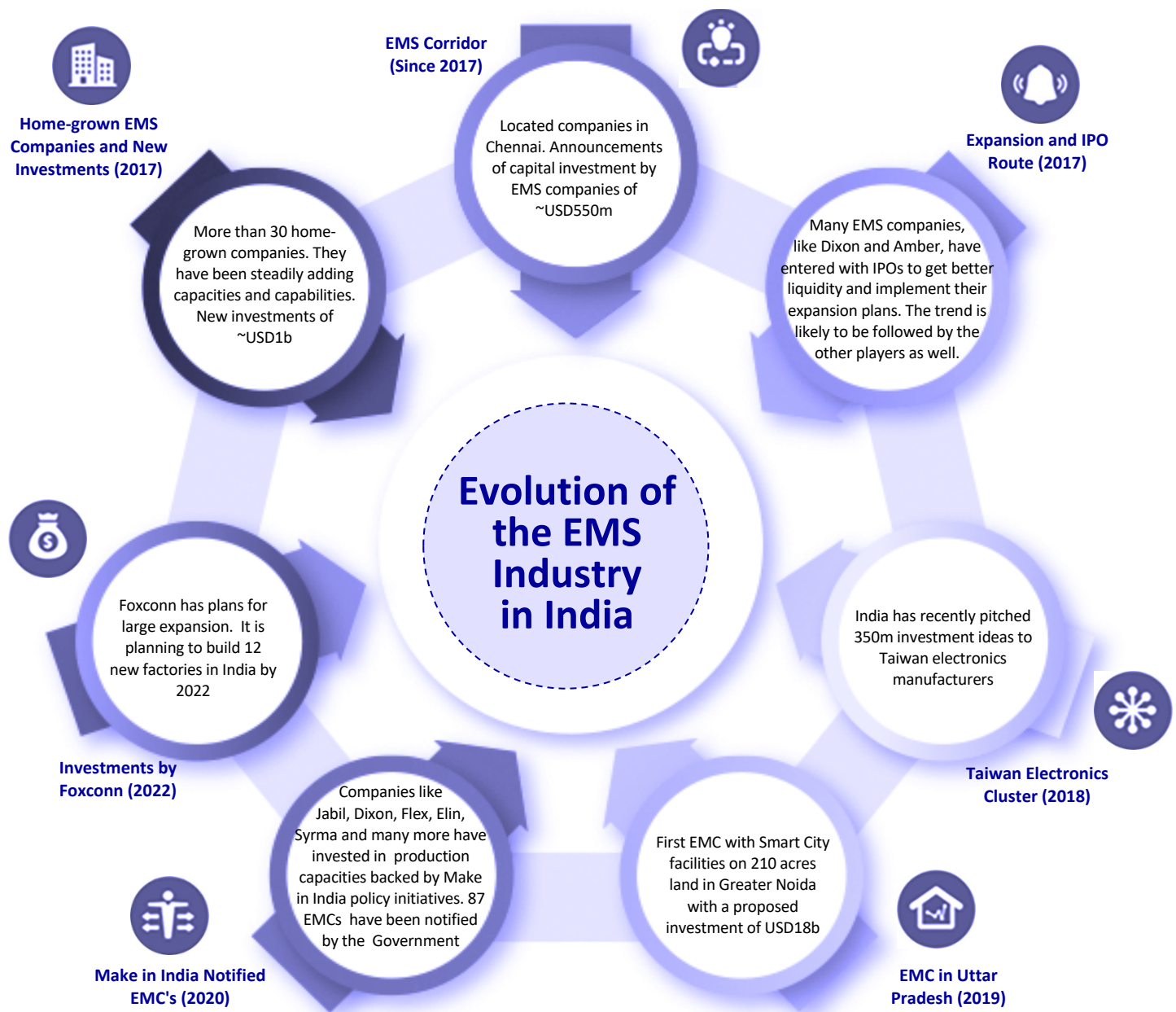


Source F&S, MOFSL

- India's current advantages resemble the key factors that led to the shift of manufacturing over the last half of a century:
 - **Young and skilled work force:** India has the world's largest workforce ([over 500m](#)) with a median age of 28.2 years (youngest globally) vs. 32.8/39 years of Vietnam/China. Majority of the population in India falls under the skilled and semi-skilled categories.
 - **Low-cost labor:** The labor cost in India is only ~USD6.0/day vs. USD10.48/day of Vietnam and USD35.5/day of China.
 - **Growing domestic market:** The Indian electronics market is likely to report an 18.4% CAGR to reach INR21.5t by FY27 from INR9.3t in FY22. The growth will mainly be aided by increase in domestic consumption and growing exports.

- The domestic electronics consumption is expected to post a CAGR of 10.6% to INR13.5t during FY22-27 fueled by rising electronics penetration in semi-urban and rural markets, a shift in lifestyle among the Gen Y and Z population, and adoption of smart gadgets.
- Electronics exports from India were minimal at INR1,146b in FY22 which is likely to spike over the next five years to INR8,078b by FY27E at a CAGR of 47.8%. The growth will be aided by rise in exports of three major products (mobile phones/engine control units (ECU)/industrial machinery).
- **Government's focus on electronics manufacturing:** The Indian government has made a concerted effort to promote electronics manufacturing in the country. This includes investing in infrastructure, providing tax breaks, and offering other incentives to businesses that are involved in the electronics industry.

Exhibit 41: Evolution of EMS industry in India



Domestic EMS industry: multiple tailwinds in place!

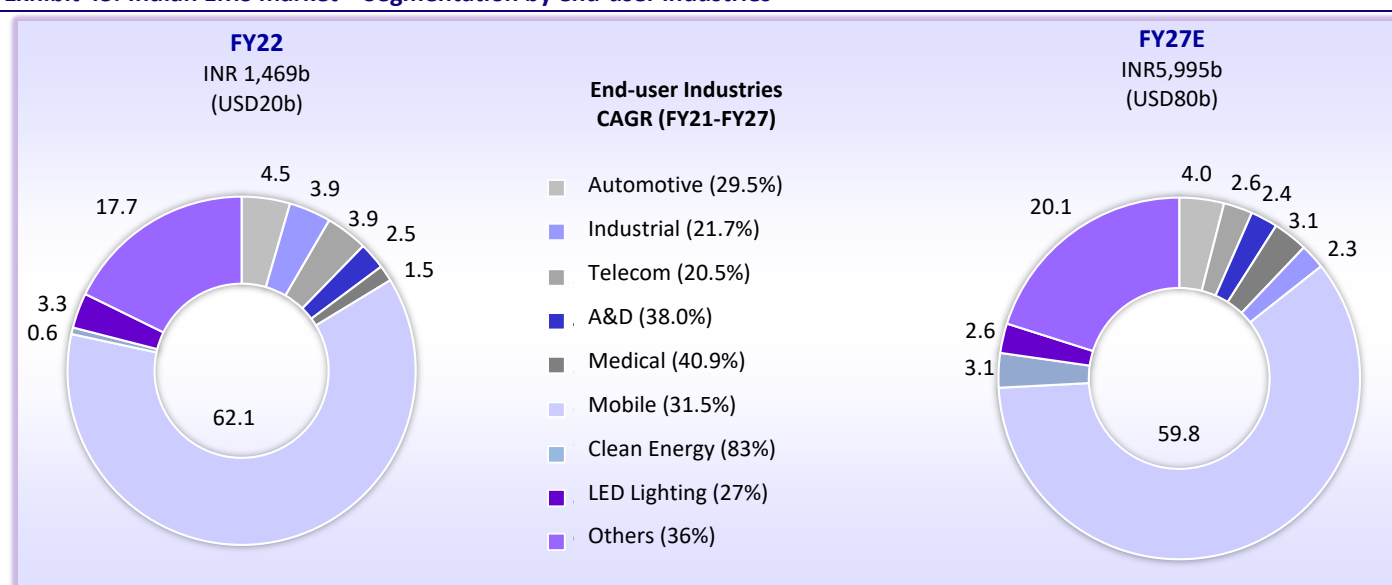
Key growth drivers

Exhibit 42: Indian EMS industry applications to grow at a much faster pace than global applications

Industry	Global EMS Market size (USD b)			Indian EMS Market size (INR b)		
	2021	2026	CAGR (%)	FY22	FY27E	CAGR (%)
A&D	34	45	6.0	37	186	38.0
Medical	27	37	6.0	23	125	40.9
Industrial	80	110	6.5	58	155	21.7
Telecom	95	126	5.7	57	145	20.5
Automotive	63	85	6.3	66	240	29.5

Source: F&S, MOFSL

Exhibit 43: Indian EMS market – Segmentation by end-user industries



*Others include: Mobile Phones, CEA (Consumer electronics and appliances), IT (Information Technology products), Lighting, Energy, etc.

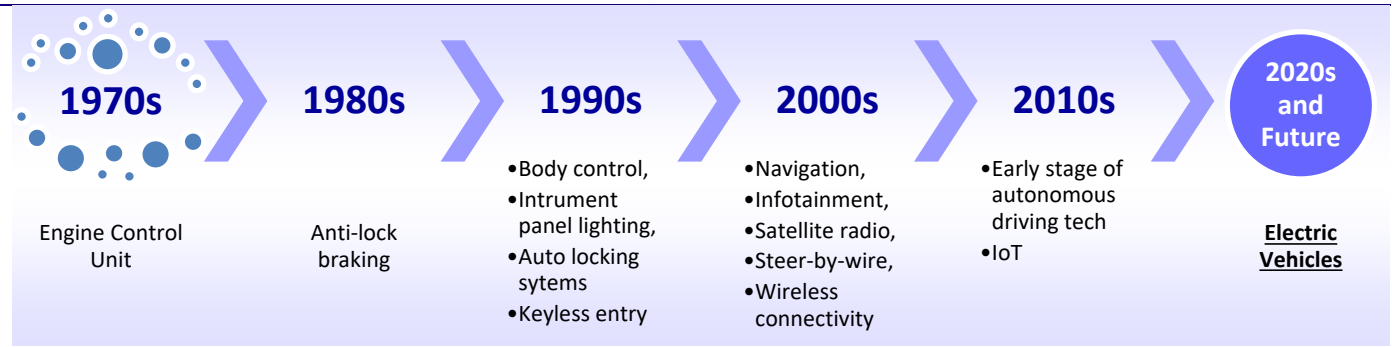
Values In brackets are In USD b

Note: E refers to Estimates

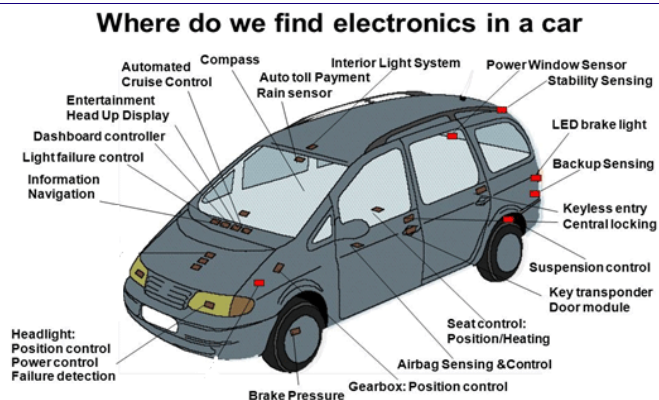
Source: MeitY, ELCINA, and Frost & Sullivan Analysis

Improving electronics consumption and new-age applications

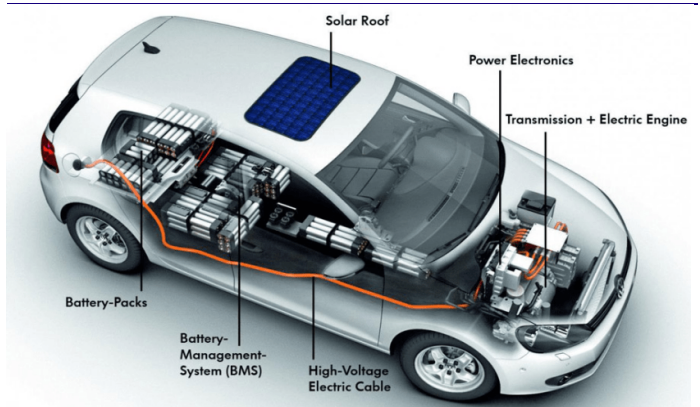
- **Automotive:** Automobiles sector has evolved since the time when it was all mechanical and from 1970s, only a few electronics components were available in the cars. These included voltage regulators, electronic fuel injection, wipers, lamp and wiper controls, etc. The scenario has changed gradually and the vehicles now are equipped with multiple electronics components ranging from engine electronics to passenger comfort. On an average, a 2020s' car has 50 to 150 installed chips. Further with the onset of EVs, the number of electronics per car will increase significantly.
- The current Indian EMS market for automotive is INR66b, which is expected to report a CAGR of 29.5% to reach INR240b by FY27.

Exhibit 44: Evolution of the automotive electronics industry

Source: MOFSL

Exhibit 45: Electronics in a traditional vehicle and...








Source: MOFSL

Exhibit 46: ...additional electronics in an EV

Source: MOFSL

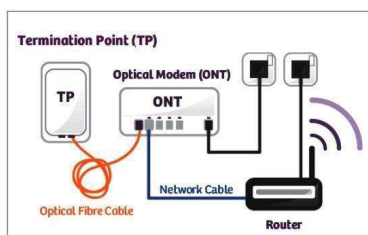
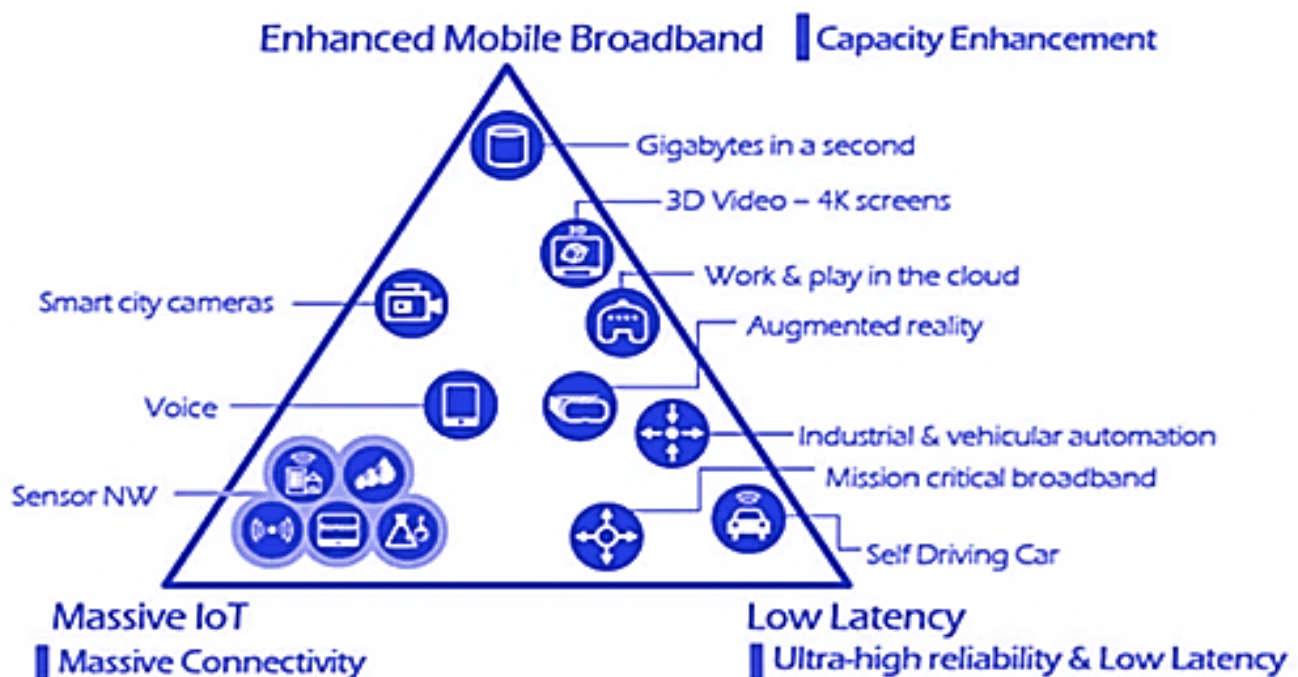
- **Consumer Electronics Appliances (CEA):** The major growth driver for electronics was the evolution of CEA (including mobile phones). From the first television invented in 1927 using vacuum tubes as its electronics component, the world has witnessed numerous inventions such as personal computers, portable audio playback, Macintosh by Apple, Iphone (1997), first android (2007) and first smart watch (2015) among others.
 - As the basket of CEA expanded, the need for higher, compact and more powerful electronics components increased.
 - In India, penetration of CEA has been lower (mainly in rural areas) than the developed nations (refer Exhibit 47). However, increase in electricity access and improved rural consumption (83% in CY15 to 96% in CY20), along with better rural connectivity and higher disposable income, should lead to a higher penetration of CEAs in the country.
 - In FY21, CEA (including mobile phones) had the largest share in the domestic electronics industry (at ~77.2%), which is likely to inch up to ~78.9% by FY26.

Exhibit 47: CEA's penetration in India vs. other developed economies (%)

% of Household	 India	 USA	 Germany	 Japan	 Australia	 China	 Brazil
Colour Televisions	50	98 – 100	96 – 98	96 – 98	98 – 100	96 – 98	95 – 97
Refrigerator	40	98 – 100	98 – 100	97-99	98 – 100	95 – 97	97-99
Mobile	40	94 – 96	97-99	96 – 98	98 – 100	96 – 98	93 – 95
Washing Machine	20	85 – 87	95 – 97	96 – 98	97-99	93 – 95	66 – 68
Air Conditioner	16	91 – 93	25 – 27	93 – 95	79 – 81	92 – 94	19 – 21
Personal Computer	13	91 - 93	91-93	79 - 81	84 - 86	59 - 61	44 - 46

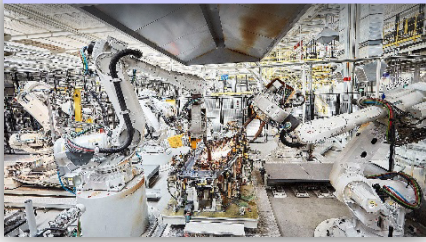
Source: MOFSL

- **Telecom:** The Communication segment, which includes Telecom & Satellite, and Digital Infrastructure, was valued at INR57b in FY22, and is expected to register a CAGR of 20.5%, to reach INR145b by FY27 in India.
- India has the world's second-largest telecommunications market, boasting of a vast subscriber base of ~1.16b users. To ensure sustained growth in this sector, India has ambitious plans to introduce cutting-edge 5G telecom services. The deployment of 5G connectivity will be pivotal in supporting emerging technologies and technology-enabled markets like the Internet of Things (IoT), augmented reality, smart cities, and smart agriculture.
- Further, with augmented requirement of high-speed and continuous data, Optical network terminals (ONT) are used. The number of electronics components used in ONTs is likely to increase in the future as ONTs become more sophisticated. For example, as ONTs become more integrated with other devices, they may require additional components, such as a Bluetooth module or a Zigbee module.

**Exhibit 48: 5G to transform the electronics component markets**

Source: ITU-R IMT 2020 Requirements, MOFSL

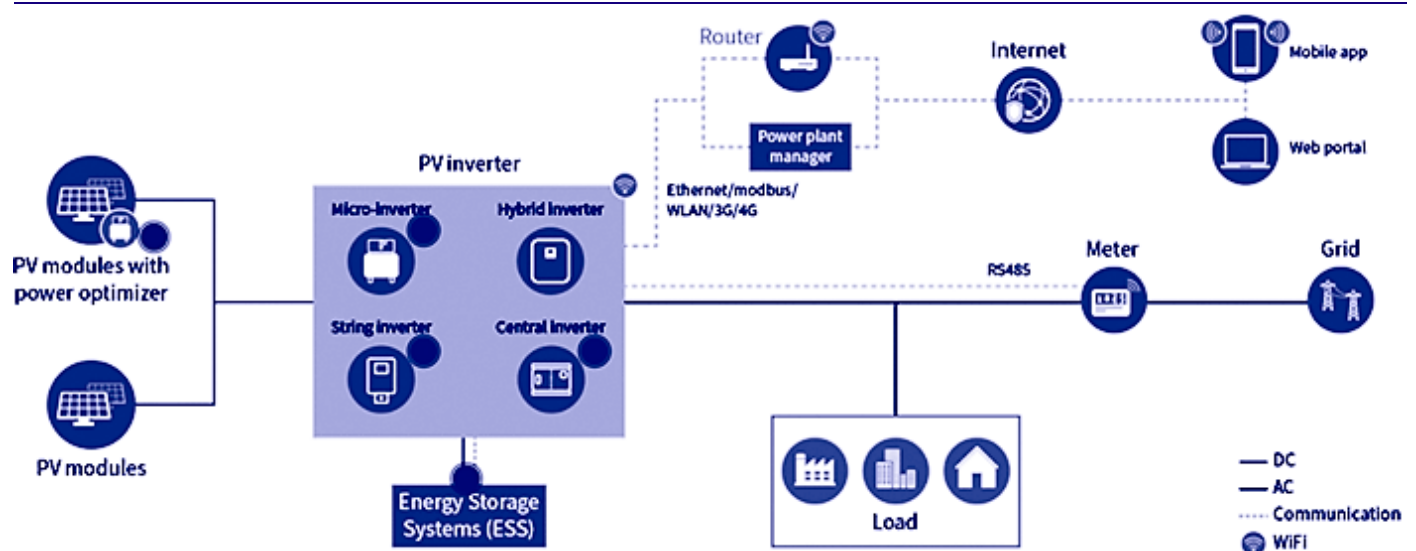
ROBOTICS



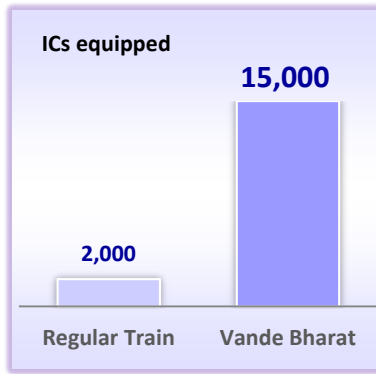
India is initially targeting production of ~1MT of annual green hydrogen by CY30

- **Industrials EMS** was valued at INR58b in FY22, and is expected to clock a CAGR of 21.7%, to reach INR155b by FY27.
- Industrial machines are being automated to improve productivity, reduce costs, and enhance quality and safety. Some of the ways that automation is being used in industrial machinery are Robotics, machine vision, supervisory control & data acquisition (SCADA), programmable logic controllers (PLCs), etc.
- Most of the large manufacturing companies are investing heavily in the technological upgrade of their facilities by adopting digitization and industry 4.0 concepts. Some key EMS players operating in industrial space include Kaynes, Amber, SFO Technologies, Syrma SGS, Avalon Technologies, and VVDN Technologies.
- **Clean Energy and Renewables:** The clean energy EMS market is currently very small estimated at ~INR6b; however, with adoption of clean energy such as solar, green hydrogen and EV, this sector is poised to report an exponential CAGR of 87.3% to reach INR76b by FY26.
- India has set a target of achieving 500GW of installed solar power capacity by 2030. This target is part of India's National Electricity Plan (NEP), which was unveiled in 2021.
- The growth of the solar industry will lead to an increased demand for solar equipment, such as solar panels, inverters, and batteries thereby creating new opportunities for EMS providers to supply and install solar equipment.
- Other emerging alternate energy is **Green hydrogen** and India is initially targeting production of ~1MT of annual green hydrogen by CY30. The growth of the green hydrogen industry will lead to an increased demand for hydrogen equipment, such as electrolyzers, fuel cells, and storage tanks. This will create new opportunities for EMS providers to supply and install hydrogen equipment.

Exhibit 49: Components of a Solar Power system



Source: Infineon, MOFSL



The Vande Bharat train project incorporates ~18PCBs per coach and the Indian govt. plans to manufacture ~400 such trains in the coming years

■ Mobility (Railways)

- Contents of electronics components are catapulting in the **Railways** in the form of signal safety-related electronics system, as well as safe communication and processing system. Indian Railways is planning to add more coaches in the future, to provide comfort to maximum number of passengers.
- The Vande Bharat project, India's first engine-less trains initiative, is now running at full pace, with 23 trains being flagged off in different parts of the country. Vande Bharat is practically a computer on wheels equipped with over 15,000 ICs while a regular train has ~2,000 ICs.
- The Vande Bharat train project incorporates ~18PCBs per coach to manage various functionalities, including AC control, automatic doors, sensors, GPS-based passenger information system, CCTV, and infotainment systems. Additionally, PCBs are used in crucial aspects such as propulsion, braking systems, and the train control management system (TCMS). **With plans to manufacture around 400 such trains in the coming years, this presents a substantial opportunity for EMS players going forward.**

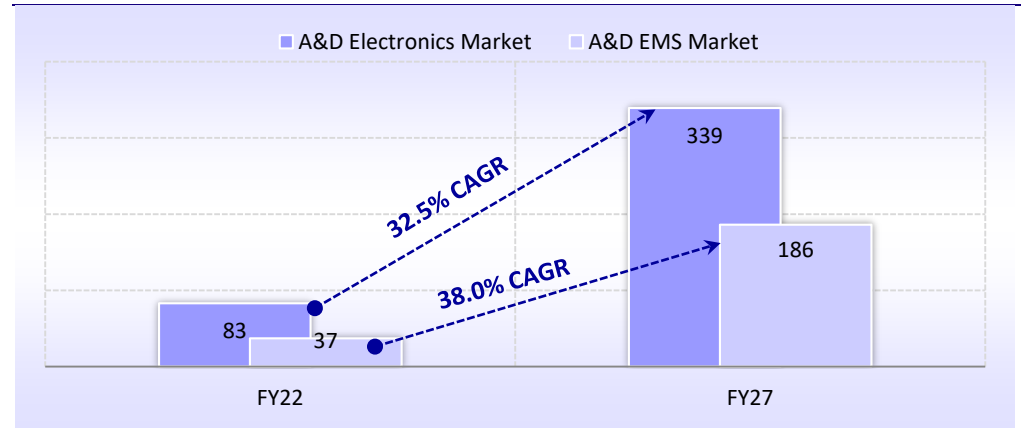
Exhibit 50: Electronics usage comparison

Feature	Regular Trains	Vande Bharat Express
Lighting	Fluorescent lamps	LED lamps
Air conditioning	Conventional air conditioning	Inverter-based air conditioning
Infotainment system	None	Touchscreen infotainment system
Biometric scanners	None	Biometric scanners for passenger verification
Toilets	Non-wheelchair accessible	Wheelchair accessible

Source: MOFSL

A&D electronic market is expected to record a CAGR of 32.5% to reach INR339b by FY27. A&D Electronics segment accounts for 2.5% of the Indian EMS

- The **Aerospace & Defense (A&D)** industry typically encompasses civil aviation, defense aviation and defense equipment.
- India's defense capital expenditure is on a constant rise, with the annual defense budget increasing to INR5.25t in FY23 from INR4.78t in FY22.
- Moreover, there is a growing demand for large aircraft from Indian carriers such as Indigo, and Tata, presenting opportunities for both startups and existing players. This has been further driven by government initiatives promoting foreign investment in the sector.
- Sophisticated equipment like avionic systems, radar systems, flight management systems (FMS), cockpit control units, electronic warfare etc., will be significant drivers for the A&D electronics market in India. Valued at INR83b as of FY22 (~1.1% of the global market), it is expected to record a CAGR of 32.5% to reach INR339b by FY27 (~3.4% of the global A&D electronics production).
- In FY22, the Indian EMS market for the A&D Electronics segment was valued at INR37b. It is likely to report a rapid CAGR of 38%, reaching INR186b by FY27.
- The A&D Electronics segment currently accounts for 2.5% of the Indian EMS market. Most of the orders are in the low-volume high-margin (LVHM) category because of the critical nature of the products, which requires a high degree of technical expertise.

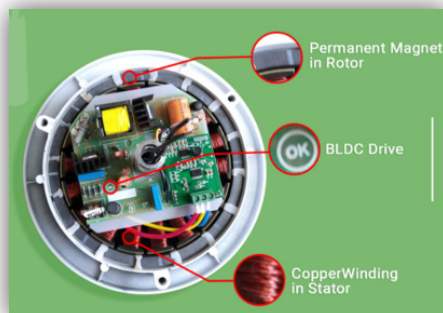
Exhibit 51: A&D EMS and electronics to witness strong growth over the next five years (INR b)

Source: Company, MOFSL

- The **healthcare** sector is undergoing significant changes due to the pandemic, with technology adoption, new product development, and care delivery approaches transforming the industry. Global Medtech OEMs are heavily investing in R&D and launching devices to meet post-pandemic demands, particularly in medical imaging (MRI, X-Ray, Ultrasounds) and patient aids (hearing aids, pacemakers, etc.)
- The Medical Devices EMS industry was valued at INR23b in FY22, and is expected to post a CAGR of ~41%, to reach INR125b by FY27 in India.

■ Other emerging applications:

- **BLDC Fans** first found its application in the consumer electronics space such as cooling fans for computers and other industrial applications due to their high speed and low noise. Today, this technology is gradually replacing the existing fans as it is 80% more energy efficient and possesses a long lifespan. These fans are now being used across homes, offices, industries and transportations.
- The **Internet of Things (IoT)** is a network of physical devices that are connected to the internet and can collect and exchange data. EMS providers are helping manufacturers develop IoT devices that can be used in a variety of applications, such as smart homes, connected cars, and industrial automation.
- **AI** is a rapidly developing field that is having a major impact on the electronics industry. OEMs are developing AI-powered products, such as self-driving cars and facial recognition systems.
- **Wearables** refer to electronics devices designed to be worn on the body. Their popularity is on the rise; further, EMS providers play a crucial role in assisting the manufacturers develop wearables with diverse applications. These wearable devices can be utilized for fitness tracking, health monitoring, and even payment processing, among other functionalities.
- **3D printing** is a rapidly growing technology that is having a major impact on the electronics industry. OEMs, through their EMS partners, develop 3D-printed electronics that can be used in a variety of applications, such as medical devices and consumer electronics.



Favorable government policies to benefit the Indian EMS industry

- The Indian government has implemented various measures to bolster EMS, diminish import reliance, and promote exports.
- Initiatives such as Make in India, the National Policy on Electronics (2019), Production Linked Incentive Scheme (PLI), Modified Special Incentives Scheme, and Electronics Manufacturing Clusters (EMCs) Scheme are designed to incentivize domestic production, encourage local manufacturing, attract foreign direct investment, and enhance export opportunities in the electronics sector.
- **Production-Linked Incentive (PLI) Scheme:** Under this scheme, EMS companies can receive financial incentives based on their production performance, which can help attract investments and boost their manufacturing capabilities.

Exhibit 52: PLI Scheme announced in FY21-FY22 under Atmanirbhar Bharat

Sectors	Implementing Ministry/ Department	Approved financial outlay over 5-year period (INR b)
Mobile Manufacturing and Specified Electronics Components	Ministry of Electronics and Information Technology	409.5
Manufacturing of medical devices	Department of Pharmaceuticals	34.2
Advance Chemistry Cell ACC Battery	NITI Aayog and Department of Heavy Industries	181.0
Electronics/Technology Products	Ministry of Electronics and Information Technology	50.0
Automobiles & Auto Components	Department of Heavy Industries	259.4
Telecom & Networking Products	Department of Telecom	122.0
High Efficiency Solar PV Modules	Ministry of New and Renewables Energy	45.0
White Goods (ACS & LED)	Department of Promotion of Industry and Internal Trade	62.4

Source: MeitY, MOFSL



- **Make in India Initiative:** The Make in India campaign aims to encourage local manufacturing and reduce dependence on imports. By promoting domestic production, the government can create a conducive environment for the EMS industry to thrive and contribute to the country's economic growth.
- **Export Promotion:** Merchandise Exports from India Scheme (MEIS) provides **benefits of up to 4%** depending on the country of export and the products exported. Rewards under the scheme are payable as a percentage of realized free-on-board value.
- **SPECS:** The Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) notified on 1st Apr'20 provides financial **incentive of 25%** on capex for the identified list of electronics goods that comprise **downstream value chain of electronics products** such as electronics components, semiconductor/display fabrication units, ATMP units, specialized sub-assemblies and capital goods for manufacturing of the aforesaid products.
- **Electronics Manufacturing Clusters (EMCs):** The EMCs were introduced on 22nd Oct'12 to facilitate the development of top-notch infrastructure, common facilities, and amenities to attract investments in the electronics sector. Under this scheme, 19 Greenfield EMCs and 3 Common Facility Centers (CFCs) covering an area of 3,464 acres with a total project cost of INR37.4b (including Government Grant-in-Aid of INR15.3b), have been approved.

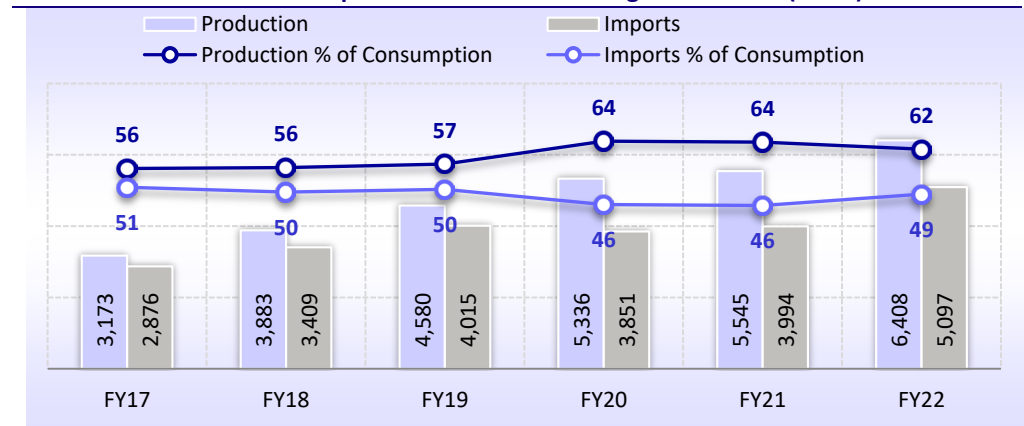
Exhibit 53: List of approved Greenfield EMCs

State	Location/City
Andhra Pradesh	❖ Village-Cherivi, Satyavedu Mandal, Chittoor District
	❖ Vikruthamala Village, Yerpedu Mandal, Chittoor District
	❖ Renigunta and Yerpedu Mandal, Chittoor District, Near Airport Tirupati
Assam	❖ Bongora (Village), Chayani (Mouza), Palasbari (Revenue Circle), Kamrup (R) (District)
Chhattisgarh	❖ Village-Tuta, Sector-22, Naya Raipur
Gujarat	❖ Village-Tunda, Taluka- Mundra, District-Kutch
Goa	❖ Village-Tuem, Taluka- Pernem, North Goa District
Jharkhand	❖ Adityapur, Saraikela-Kharsawan District
Kerala	❖ Kakkannad Village, Kanayannur Taluk, Ernakulam District
Madhya Pradesh	❖ Badwai-Bhopal
	❖ Purva-Jabalpur
Odisha	❖ Infovalley, Bhubaneswar Industrial Area, Khurda District
Rajasthan	❖ Salarpur Industrial Area, Khushkhhera, Bhiwadi
	❖ Karoli Industrial Area, Bhiwadi, Alwar District
Telangana	❖ city, Fab City, Hyderabad
	❖ Maheshwaram, Ranga Reddy District
Uttar Pradesh	❖ Ecotech-VI Industrial Area, Greater Noida
West Bengal	❖ Falta Industrial Centre, P.S. Ramnagar, South 24 Parganas District
	❖ Naihati town, North 24 Parganas District

Source: MeitY, MOFSL

Import substitution

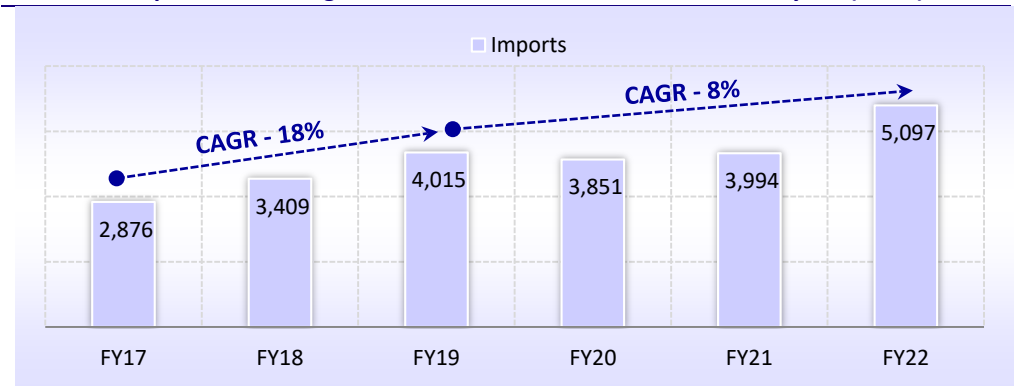
- Electronics goods import bill is second only to the country's oil import bill. The electronics goods imports were roughly 38% of the oil imports.
- According to DGCI&S data, the import of electronics goods jumped to INR5.1t (USD67.9b) in FY22 from ~INR4.0t (USD54b) in FY21, showcasing an increase of 27% YoY.
- Moreover, it is observed that the growth rate of imports for finished electronics goods has decreased, while that of electronics components has surged, indicating an increase in the establishment of manufacturing units for electronics within the country.

Exhibit 54: Production and Import trends of electronics goods in India (INR b)

Source: MeitY, MOFSL

- Major electronics items that have started replacing imports are smartphones, laptops, televisions and tablets, et al.

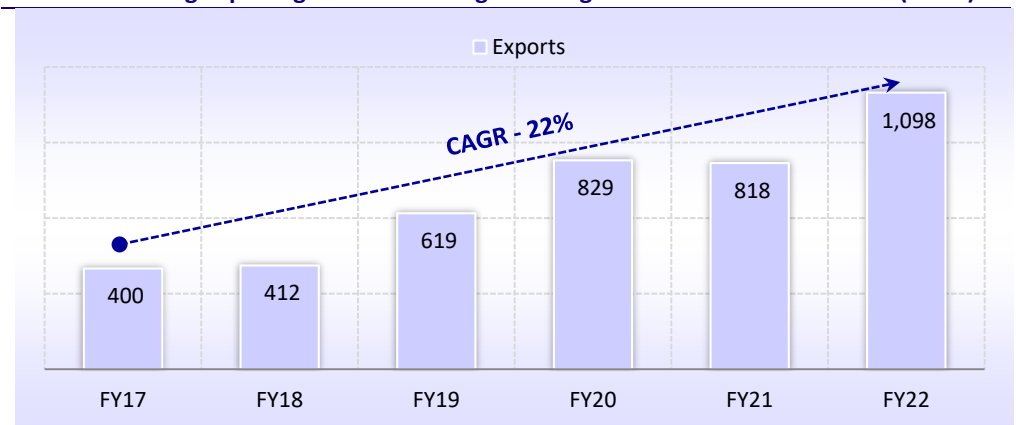
Exhibit 55: Imports witnessing slowdown since FY19 with a CAGR of only 8% (INR b)



Source: MeitY, MOFSL

- This can be seen from a substantial growth in the exports of electronics goods to INR1,097.9b (USD14.6b) in FY22 from INR818.22b (USD11b) in FY21, recording 34% YoY growth.

Exhibit 56: Strong exports growth indicating booming electronics market in India (INR b)



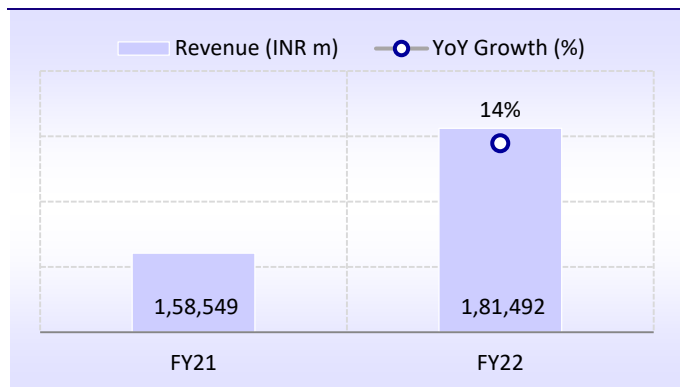
Source: MeitY, MOFSL



BHARAT FIH: A trusted partner poised for growth

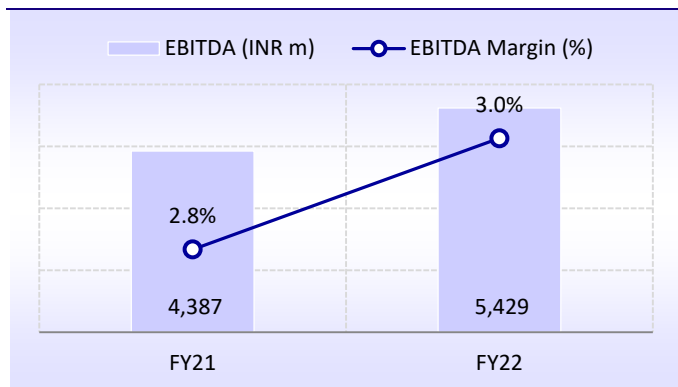
- Bharat FIH (a subsidiary of FIH Mobile Ltd. under the Foxconn Technology Group umbrella) is one of the leaders within India's handset & wireless communications manufacturing and services industry.
- Serving as a prominent EMS provider, Bharat FIH caters to a spectrum of domestic and international brands
- The company is headed by Mr. Yu Yang Chih (Chairman and Non-executive Director), as well as Clement Joshua Foulger (Managing Director). The top management includes Mr. Kannan Krishnan (Head of Engineering & Operations – SBU) and Mr. Muppala, with a vision of 'Championing Atmanirbhar Bharat', and aims to emerge as a global integrated design manufacturer of electronics in India.
- The company commenced its India operations in 2015. It operates through three large manufacturing facilities in India, two at Sriperumbudur (Tamil Nadu) and one at Sri City (Andhra Pradesh). It employs over 25,000 people, out of which ~85% are women employees.
- The company possesses one of the largest capacities in the region with over 50 mobile assembly lines and ~29 SMT lines. The quality infrastructure along with the highly experienced team enables Bharat FIH to act as a trusted manufacturing partner delivering end-to-end solutions catering to various customer needs.
- The company is a pioneer in automated in-line assembly process where various pieces of equipment are joined directly or on a conveyor belt. This automation supersedes batch production and enhances production efficiencies thereby leading to faster and more quality-controlled manufacturing.
- The company has enabled its customers to remote-access its systems in order to monitor real-time yields, inventory positions, work-in-process status and vendor quality data of their products.
- Bharat FIH is looking ahead to capitalize on its manufacturing strengths and collaborate with global teams under the Foxconn Technology Group to work on areas such as product design, cost optimization, customer experience, sourcing, tooling and manufacturing.

Exhibit 57: Revenue trend



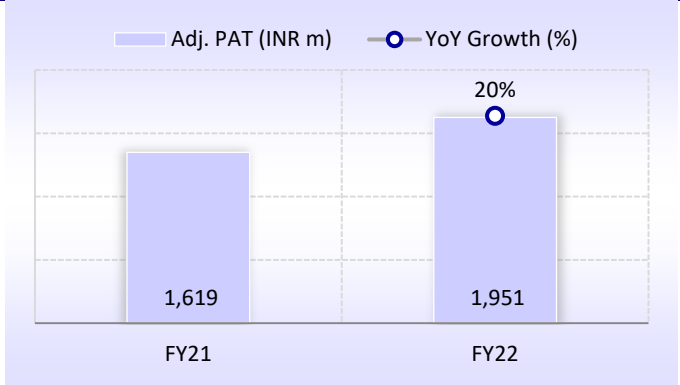
Source: MOFSL, Company

Exhibit 58: EBITDA trend



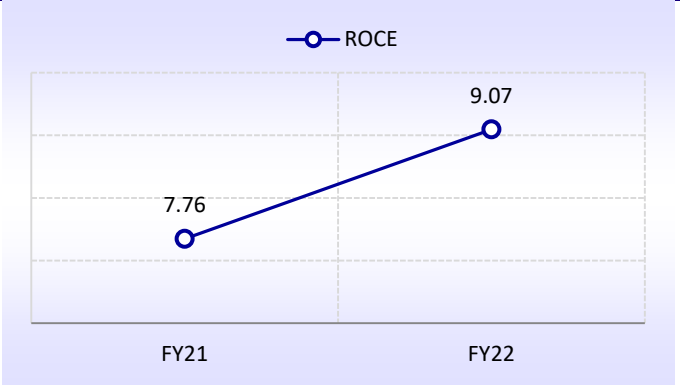
Source: MOFSL, Company

Exhibit 59: Adj. PAT trend



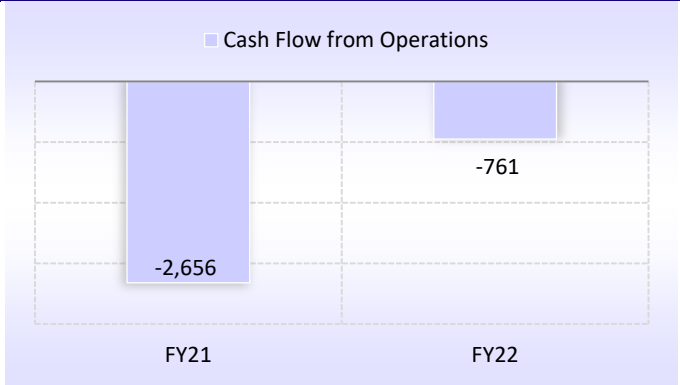
Source: MOFSL, Company

Exhibit 60: RoCE trend



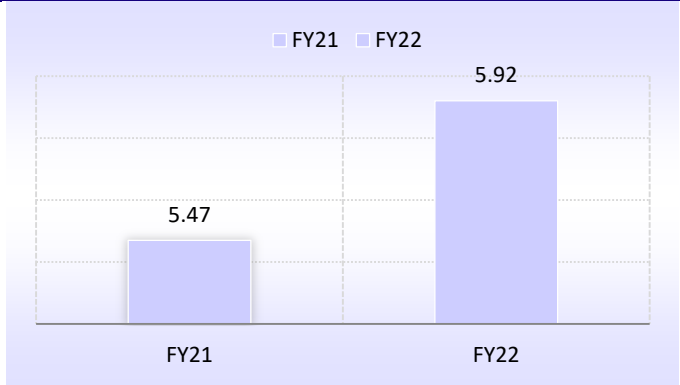
Source: MOFSL, Company

Exhibit 61: Cash flow from operations trend



Source: MOFSL, Company

Exhibit 62: Working capital ratio trend



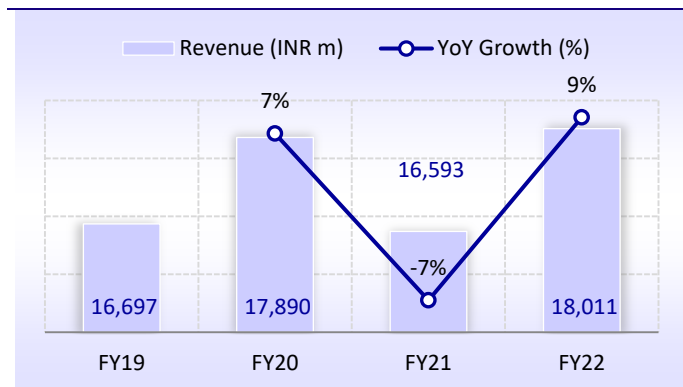
Source: MOFSL, Company



SFO TECHNOLOGIES

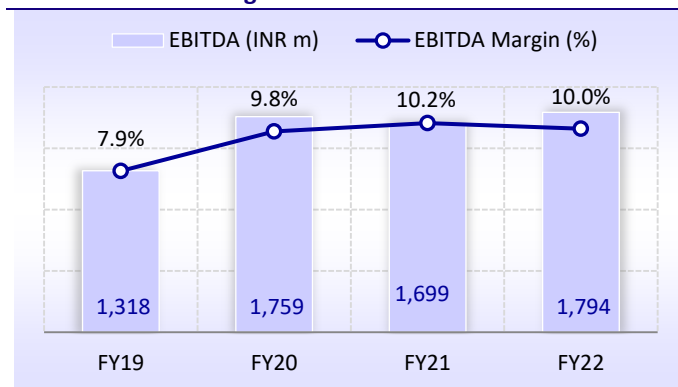
- SFO Technologies, a leading entity within the NeST Group, was established in 1990. The company specializes in delivering comprehensive ODM Plus solutions to a wide range of industries, including Aerospace & Defence, Communications, Energy & Industrial, Healthcare, and Transportation.
- The company is headed by Mr Javed Hassan (Founder) and N Jehangir (Founder, Chairman and Managing Director). The top management includes Mr. Althaaf Jehangir (Executive Director & CEO (Manufacturing Business)), & Ms. Naazneen Jehangir (Executive Director & CEO (Software Business)).
- Transitioning from EMS to ODM, and now to ODM Plus Solutions, SFO has gained a reputation for seamlessly integrating proprietary IPs and easily deployable product components. Embracing cutting-edge technologies such as IoT, Analytics & Mobility, Cloud, and AI, SFO has firmly established itself as a leader in the electronics sector. The introduction of ODM Plus Solutions has been instrumental in reshaping industry standards and setting new benchmarks.
- The company functions with a vision to "be a global technology-driven company contributing to the enhancement of quality of life of the people and provide best value for all stake holders."
- Additionally, the company boasts proficiency in related areas such as Enterprise solutions, Data Warehousing, and Business Intelligence, adding substantial value to the clients of the company.
- The company has facilities in Kochi, Trivandrum, Bangalore, Mysore, and Pune in India. It enjoys a robust market position within the domestic electronics manufacturing services (EMS) sector, primarily due to its integrated operations and well-established customer relationships.
- With nearly 40 years of experience in the EMS industry, the promoters bring a wealth of expertise to the table. This extensive experience has positioned the group to introduce innovative products to both existing and new customers, contributing to substantial revenue growth.
- Despite the challenges posed by the COVID-19 pandemic, SFO maintains a strong order book, indicating stable revenue prospects for the year.

Exhibit 63: Revenue clocked ~3% CAGR over FY18-22



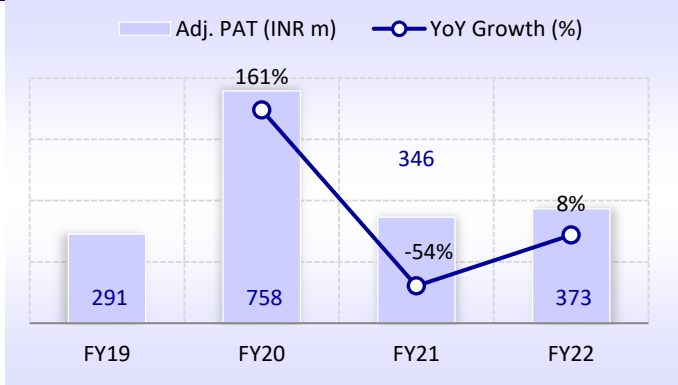
Source: MOFSL, Company

Exhibit 64: EBITDA registered ~11% CAGR over FY18-22



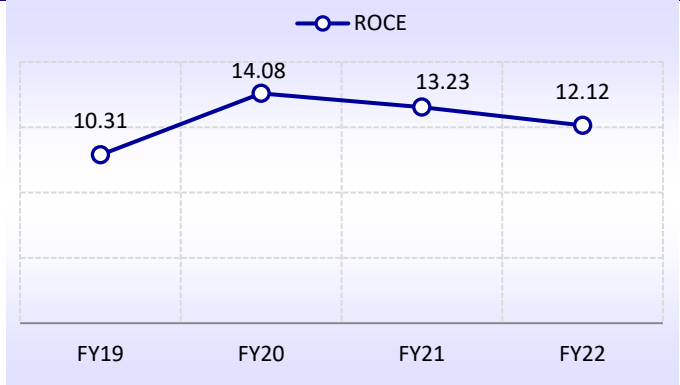
Source: MOFSL, Company

Exhibit 65: PAT recorded ~9% CAGR over FY18-22



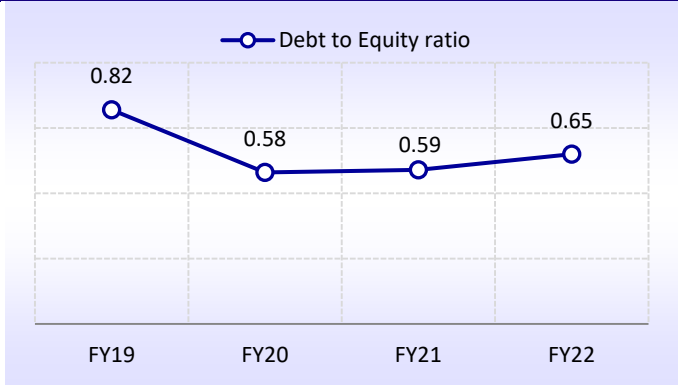
Source: MOFSL, Company

Exhibit 66: RoCE trend



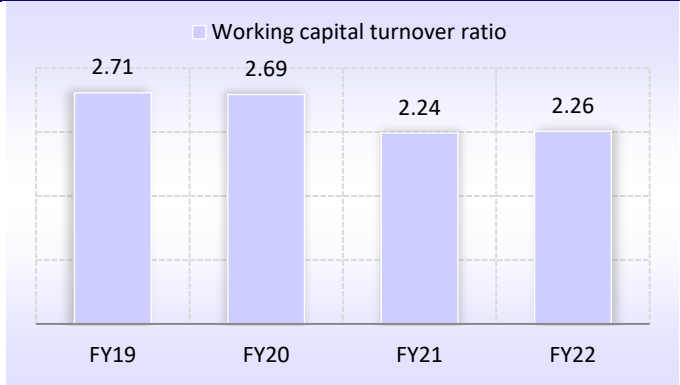
Source: MOFSL, Company

Exhibit 67: Debt-to-equity ratio trend



Source: MOFSL, Company

Exhibit 68: Working capital ratio trend



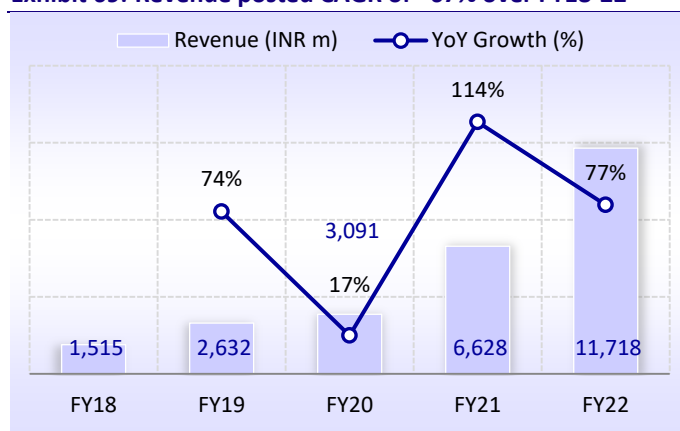
Source: MOFSL, Company



VVDN TECHNOLOGIES

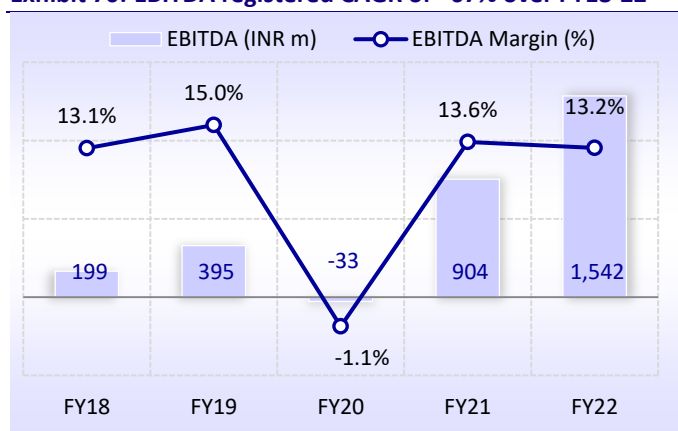
- VVDN is India's fastest growing Electronics Product Engineering and ODM Company with 10+ Design centers, along with 7 Manufacturing centers spread globally across 6 different locations. Accumulating over 14 years of R&D experience, VVDN houses 1 Global innovation park. While the strength of the Product Engineering Team stood at 2,500+, the workforce at the Manufacturing centers exceeded 3,000 staff members. The company is located in Delhi and was incorporated in Apr'07.
- The company is headed by Bhupender Saharan (Founder) and Puneet Agarwal (CEO), Ramesh Singh (Chairman). The Top management includes Vivek Bansal (President Engineering), Murali Jayaraman (President Engineering & Manufacturing Quality), Selva Muthukumar (CTO), and Jeetender Kumar Singh (CFO).
- VVDN specializes in delivering comprehensive solutions to a wide range of industries including Telecommunications, Consumer Electronics, Automotive and Transportation, Information Technology, Security and Surveillance, Energy and Utilities, and Digital commerce.
- VVDN serves global customers across several regions, including the US, Canada, Europe, India, Vietnam, Korea, and Japan.
- VVDN offers a distinctive value proposition, serving as a one-stop-shop for its customers, providing comprehensive hardware, software, mechanical, testing, prototyping, certification, and manufacturing services. Its main focus lies in helping customers with its next technology innovations in the domains of 5G, Wireless, AI/ML on Vision-based solutions, IoT, and Cloud & Apps.
- With a complete range of in-house expertise including Hardware, Firmware, Software, Testing & Validation, Cloud & Apps, and Mass Manufacturing, the company is adept at supporting clients in the design and development of a broad spectrum of automotive solutions.
- The company has achieved a strong presence in both domestic and international markets, leading to consistent growth in its scale of operations.
- The company had witnessed robust revenue growth (~67% CAGR over FY18-22) over past the few years and had a strong order book of INR14b as on FY22.

Exhibit 69: Revenue posted CAGR of ~67% over FY18-22



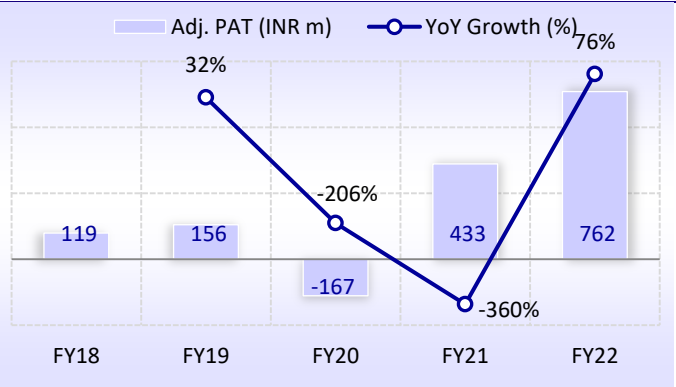
Source: MOFSL, Company

Exhibit 70: EBITDA registered CAGR of ~67% over FY18-22



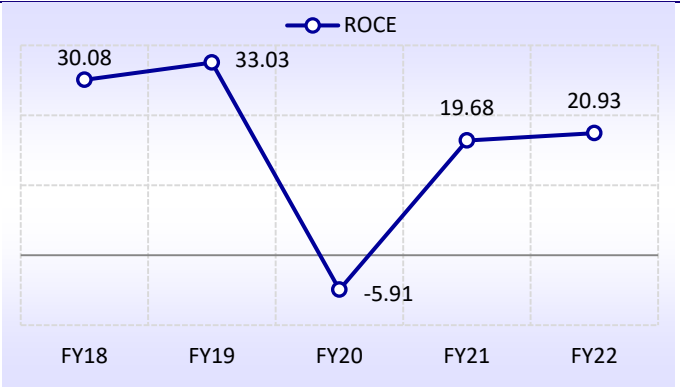
Source: MOFSL, Company

Exhibit 71: Adj. PAT reported CAGR of ~59% over FY18-22



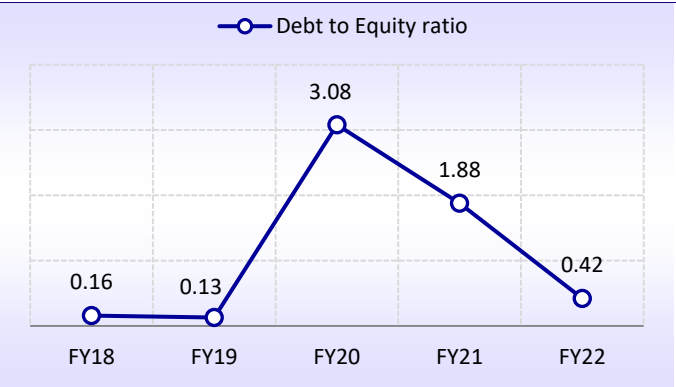
Source: MOFSL, Company

Exhibit 72: RoCE trend



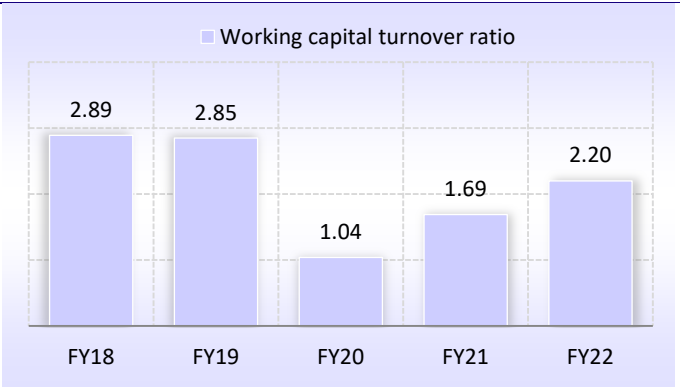
Source: MOFSL, Company

Exhibit 73: Debt-to-equity ratio trend



Source: MOFSL, Company

Exhibit 74: Working capital ratio trend



Source: MOFSL, Company

Keynes Technologies

Redefining possibilities with technology
& innovation

Pg. 46



Avalon Technologies

Built on Precision, driven by
Innovation!

Pg. 76



Syrma SGS Technology

Designing solutions; shaping futures

Pg. 105



Cyient DLM

Banking on strong parentage;
tapping the niche verticals

Pg. 130



Data Patterns (India)

Following the patterns of profitable
growth trajectory

Pg. 152



Kaynes Technologies

BSE Sensex
66,283NIFTY-50
19,751

CMP: INR2,669

TP: INR3,100 (+16%)

Buy



Stock Info

Bloomberg	KAYNES IN
Equity Shares (m)	58.1
M.Cap.(INRb)/(USDb)	155.2 / 1.9
52-Week Range (INR)	2966 / 625
1, 6, 12 Rel. Per (%)	34/169/-
12M Avg Val (INR M)	406
Free float (%)	36.4

Financial Snapshot (INR b)

Y/E MARCH	FY24E	FY25E	FY26E
Sales	17.1	24.0	31.6
EBITDA	2.6	3.8	5.2
Adj. PAT	1.7	2.5	3.6
EBITDA Margin (%)	15.2	15.7	16.5
Cons. Adj. EPS (INR)	29.0	43.8	61.5
EPS Gr. (%)	76.9	51.2	40.4
BV/Sh. (INR)	193.9	237.7	299.2

Ratios

Net D:E	-0.2	-0.2	-0.2
RoE (%)	16.1	20.3	22.9
RoCE (%)	16.0	20.0	22.7

Valuations

P/E (x)	92	61	43
EV/EBITDA (x)	59	41	29

Shareholding pattern (%)

As On	Sep-23	Jun-23
Promoter	63.6	63.6
DII	15.6	13.1
FII	9.9	8.0
Others	10.9	15.3

FII Includes depository receipts

Redefining possibilities with technology & innovation

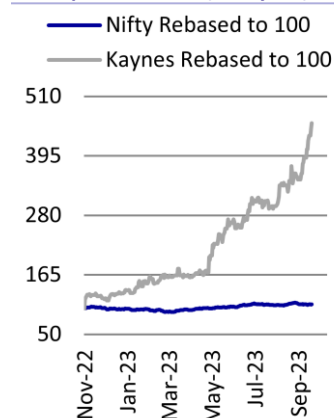
Kaynes Technologies India Ltd (Kaynes) is a prominent end-to-end and IoT-enabled integrated electronics manufacturer. It is a major player in India's Electronics System and Design Manufacturing Services (ESDM) sector. With over three decades of experience, Kaynes provides conceptual design, process engineering, integrated manufacturing and life cycle support to leading companies in automotive, industrial, aerospace, defense, outer-space, nuclear, medical, railways, IoT, IT, and other sectors.

- Leveraging its strong design-led manufacturing capabilities, Kaynes has witnessed exponential growth in its order books (at 96% CAGR over FY20-23) across key verticals such as automotive and industrial (~65% mix in FY23).
- The company has created its niche across the value chain, starting from designing and prototyping solely/jointly with OEMs (ODM Business – 3% in FY23) followed by OEM-PCBAs and lastly manufacturing Box Builds. OEM-PCBA (62%) and OEM-Box Builds (30%) together accounted for ~92% of business in FY23.
- A higher share of ODM and Box Builds (high-margin segments) will help Kaynes expand its margin profile. Moreover, its focus on backward integration (bare PCB manufacturing and OSAT) will boost margins and ease its supply chain notably.
- Working capital has been a cause for concern (128 days in FY23) for the company due to higher inventory days (150 days) amid supply chain constraints for its key raw material (semiconductor). However, with easing supply chain issues and measures taken to reduce lead time, we expect working capital days to improve further.
- We estimate its revenue/EBITDA/Adj. PAT to report a robust CAGR of 41%/46%/55% over FY23-FY26, driven by strong order book growth (at 32% CAGR) and an improving margin profile. Kaynes is currently trading at 43x FY26E P/E with an RoE/RoCE of 23% each in FY26E. We initiate coverage on the stock with a BUY rating and a TP of INR3,100 (premised on 50x FY26E P/E).
- Key downside risks: a) increase in working capital; b) delay in execution of order books; and c) supply disruption of semiconductors.

Robust order book pipeline with visibility across verticals

- Kaynes has seen fresh order inflows almost doubling every year since FY20. Accordingly, the company's order book jumped 7.5x/1.74x from FY20/FY22 levels to INR26.5b in FY23, aided by robust order flows from the automotive, industrial and railway segments. In 1QFY24, the order book further increased by 72% YoY/13% QoQ to INR30b.
- The company has been focusing on growing its order book in all verticals by adding new customers, increasing its wallet share with existing customers, providing value-added services and moving up the value chain.
- To support its growing order book, Kaynes has showcased a strong execution capability with a revenue CAGR of 45% over FY20-23. This was underpinned by **eight manufacturing facilities in seven Indian cities strategically located near the demand markets.**
- With strong order book visibility in the near term, the company has allocated a **capex of INR2,482m** for capacity expansion and upgrades of facilities (**tripling the capacity**), which can generate peak revenue of ~INR30b.

Stock performance (one-year)



Emerging applications to drive incremental growth

- Kaynes has a diversified business across seven verticals such as Automotive (38% of FY23 revenue), Industrial (27%), Aerospace & Defense – A&D (2%), Medical (6%), Railways (12%), IoT/IT (9%), and Consumer (9%).
- Automotive will remain the largest vertical for the company, aided by its: a) foray into Box Builds for OEMs in the automotive sector (present in OEM-PCBs only), and b) focus on garnering/growing more scalable businesses such as automotive lighting (among top five player) and import substitution.
- In the industrial sector, electronics components for EVs should drive growth. Kaynes will produce standard boards for EV chargers, electronics for high-end cars, and complex electronics systems. It will also cater to emerging applications such as smart energy meters (ODM), Brushless Direct Current (BLDC) motor controllers and solar-related electronics.
- The performance-linked incentive (PLI) scheme for telecom and white goods offers new opportunities to the company. Under the telecom PLI scheme, Kaynes has already invested the required capex and expects to receive benefits in FY24. While for the white goods PLI scheme (Air conditioners and LED lighting), it will invest ~INR50m with a revenue potential of INR1b.

Presence across value chain

- Kaynes has a presence across the value chain starting with the product designing (ODM; 3% of revenue in FY23) followed by OEM – Turnkey solutions for Printed Circuit Boards (PCBs; 62%), and OEM – Box build (30%). The company also provides Product Engineering and Internet of Things (IoT) solutions (5%) to customers.
- Box Builds and ODM segments enjoy higher margins than PCBAs, and going forward, their share is expected to increase due to an increase in orders for Box Builds in automotive, industrials, medical and railways.
- In ODM, Kaynes is continuously identifying new technology applications in consumer electronics, smart technology, IoT and IT accessories, which can be a scalable opportunity.
- In OEM-PCBAs, the company is mainly focusing on high-mix, high technology, and flexible volume production. It will remain the key business in future, as the electronics industry increasingly outsources due to technological advancements and a shift in the manufacturing base to India.
- To enhance operational efficiency, Kaynes plans to implement comprehensive backward integration measures, including manufacturing in-house components like **bare PCBs** (cost saving of 2%) and focusing on **design competencies for integrated circuits (IC), chipsets, and system-on-chips**. Recently, the company has also entered into two MOUs: a) one with the [Government of Karnataka](#) to set up post-FAB outsourced semiconductor assembly & testing (OSAT) and PCB manufacturing lines for an investment of INR37.5b; and b) the other with the [Government of Telangana](#) to set up an OSAT and compound semiconductor manufacturing facility in the state for a total investment of INR28.0b.

Strong track record of healthy financials

- Kaynes enjoys a strong financial track record with revenue/EBITDA/Adj. PAT CAGR of 45%/60%/117% over FY20-FY23. The company witnessed all-round revenue growth across business segments and business verticals.
- Margin improvement was led by increasing mix of high-margin segments (ODM and Box Builds) and verticals (A&D, industrials and medicals), coupled with increasing focus on backward integration and supply chain.
- Working capital has been stretched (128 days in FY23) for Kaynes over the last four years, mainly due to supply chain issues for its key raw material (semiconductor). However, going forward, working capital would ease notably owing to moderating supply chain issues and measures taken by the company in the form of creating local supply base and on-time supply management.

A bright future beckons! Initiate coverage with a BUY rating

- The ESDM industry is one of the fastest growing industries in India and Kaynes, being one of the largest players, will witness a robust growth over the medium to long term.
- The company's business has been driven by its design-led manufacturing capability, which is expected to be the vital factor in procuring orders in the higher-margin segments such as ODM and Box Build.
- The automotive and industrials will continue to be the leading business verticals for the company. Its focus on increasing the number of value-added products in these segments bodes well for margin.
- The management has guided to exit FY24 with revenue of INR17b (up 51% YoY) as well as improvement in profitability and reduction in net working capital. We believe Kaynes will be able to achieve its stated FY24 guidance comfortably aided by its strong order book visibility and execution capabilities.
- We estimate Kaynes to deliver revenue/EBITDA/Adj. PAT CAGR of 41%/46%/55% over FY23-26.
- Kaynes is currently trading at 43x FY26E P/E with an RoE/RoCE of 23% each in FY26E. We strongly believe that the company will be a key beneficiary of the growing ESDM industry if it executes well on the expanding order flows across its businesses. **We initiate coverage on the stock with a BUY rating and a TP of INR3,100 (premised on 50x FY26E P/E).**
- **Key downside risks: a) increase in working capital; b) delay in execution of order books; and c) supply disruption of semiconductors.**

Exhibit 75: Comparative valuation

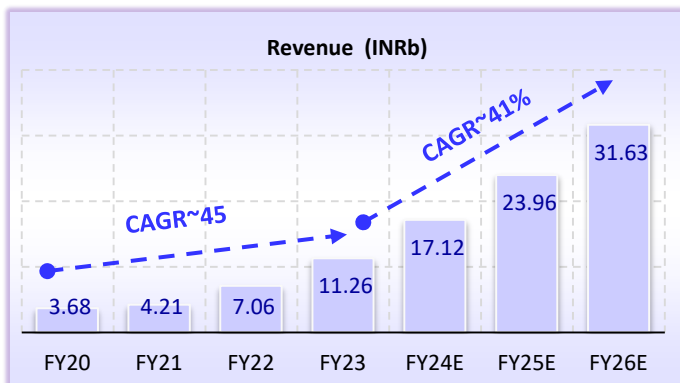
Peers	CMP	TP	MCap	EPS			P/E			RoE (%)			RoCE (%)		
	(INR)	(INR)	(INR b)	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

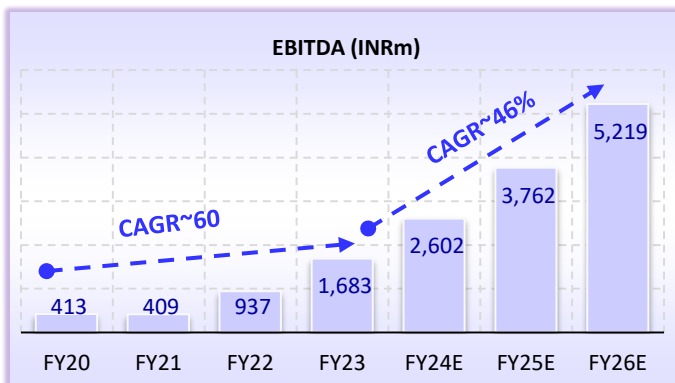
Source: MOFSL, Company, *BBG

STORY IN CHARTS

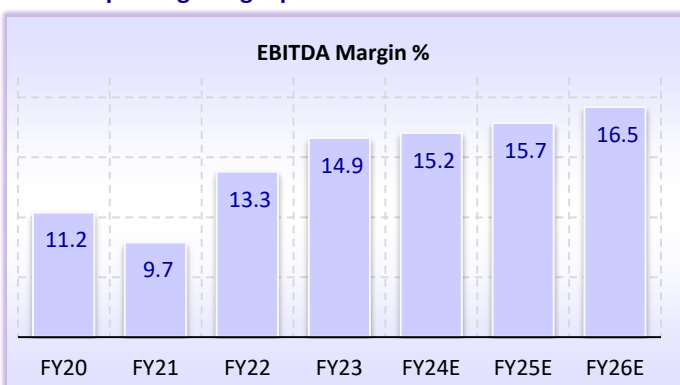
Revenue to record 41% CAGR over FY23-FY26E...



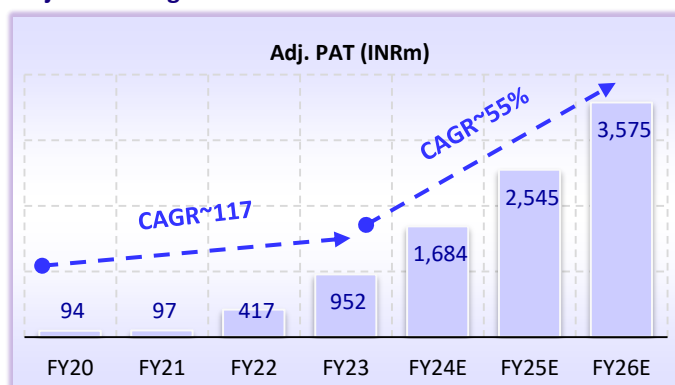
...supported by strong EBITDA growth...



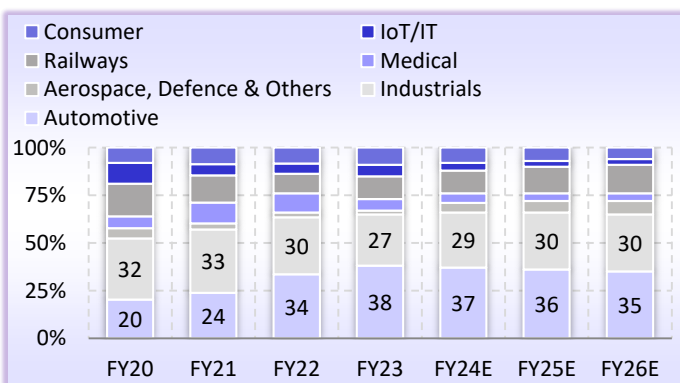
...and improving margin profile



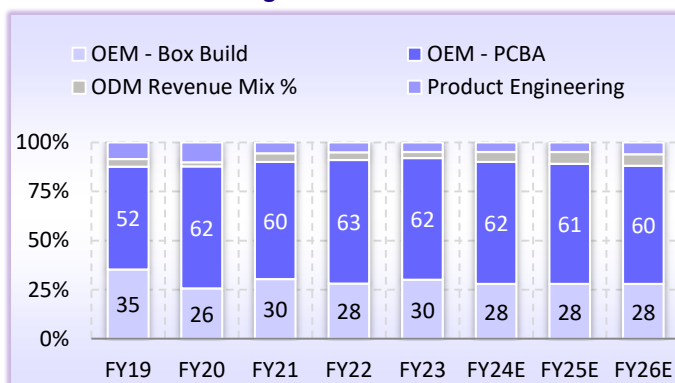
Adj. PAT to register 55% CAGR over FY23-FY26E



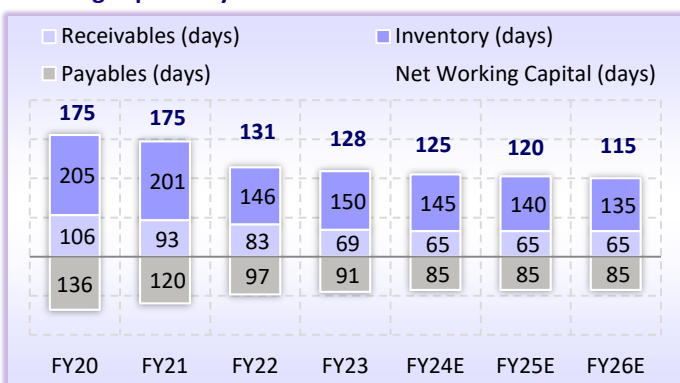
Revenue mix across verticals %



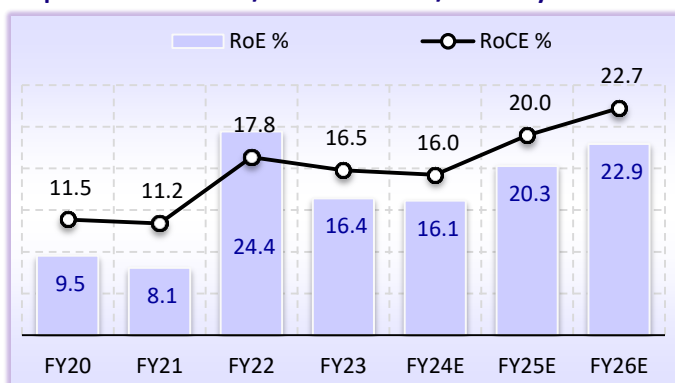
Revenue mix across segments %



Working capital days to reduce further



Improvements in RoE/RoCE to ~22.9%/22.7% by FY25E



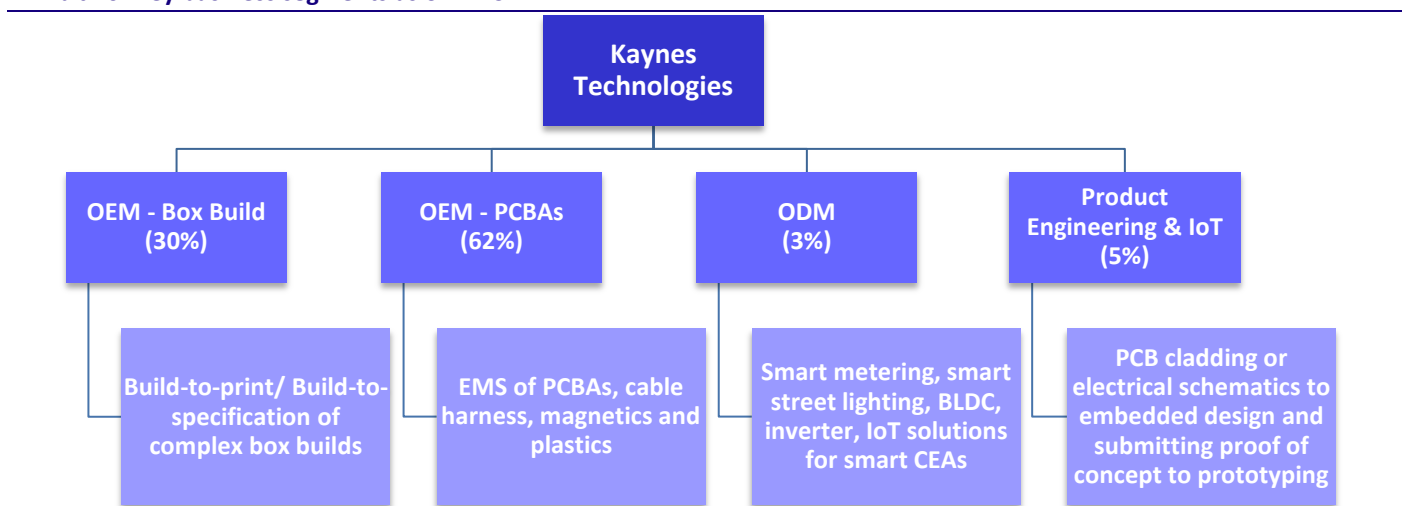
Source: MOFSL, Company

Company overview

OEM – PCBA and OEM – Box Build together accounts for 92% of the business

- Established in 1988, Kaynes is one of the **leading end-to-end, IoT solution-enabled integrated electronics manufacturers in India**. The company operates in the Electronics System and Design Manufacturing Services (ESDM) space.
- Kaynes has **over three decades of rich experience** in offering conceptual design, process engineering, integrated manufacturing and life cycle support to leading companies in automotive, industrial, aerospace, defense, outer-space, nuclear, medical, railways, IOT, IT, and other sectors.
- The company operates under four broad segments: OEM Box Build (30% of revenue in FY23), OEM Turnkey Solutions – PCBAs (62%), ODM (3%) and Product Engineering & IoT Solutions (5%).
- Kaynes derives a majority of its revenue from domestic market (85% in FY23) and balance from exports (15%). Europe is the largest market with 9% revenue share as of FY23.

Exhibit 76: Key business segments as of FY23



Source: Company, MOFSL

Exhibit 77: Service offerings across the entire customer value chain

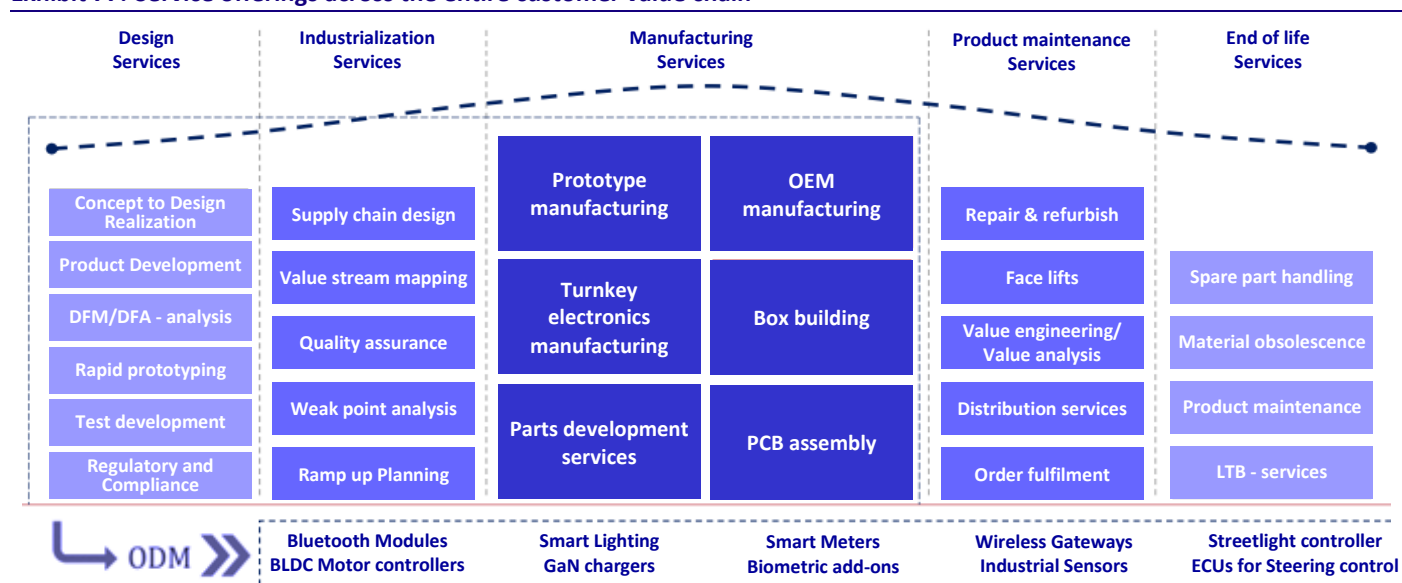
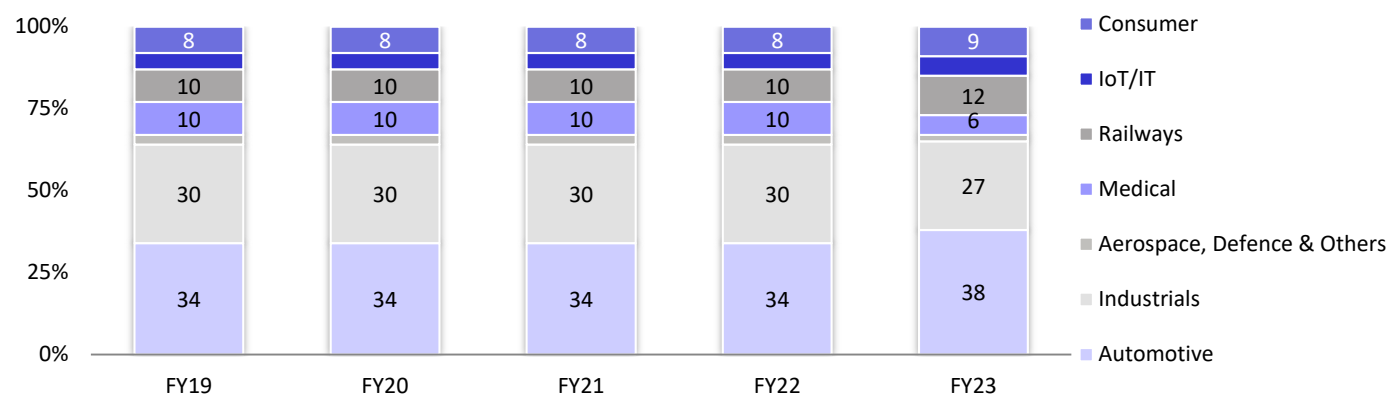


Exhibit 78: Automotive and Industrial – the major verticals (~65% of revenue as of FY23)

Source: Company, MOFSL

Exhibit 79: Diversified product portfolio with over 6,000 SKUs

Source: Company, MOFSL

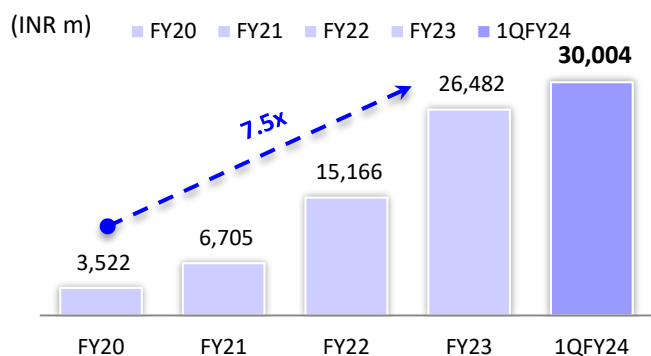
Robust order book pipeline with visibility across verticals

Order book to register a CAGR of 32% over FY23-FY26E

Order book jumped 7.5x/
1.74x from FY20/FY22
levels to reach INR26.5b in
FY23

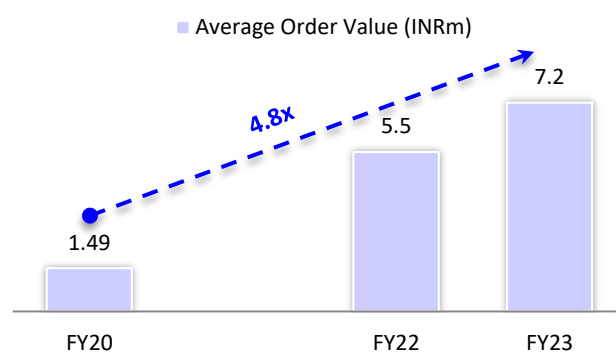
- Kaynes witnessed a spurt in its order book with fresh order inflows almost doubling every year since FY20 (average monthly order inflows surged to INR1.9b in FY23 from INR0.6b in FY21). The company's order book jumped 7.5x/ 1.74x from FY20/FY22 levels to reach INR26.5b in FY23 aided by robust order flows from the automotive, industrial and railway segments. In 1QFY24, the order book further increased to INR30b (up 72% YoY/13% QoQ).
- The current order book mix is similar to the revenue mix of the company as of FY23 (+/- 1%), i.e., major orders originate from the automotive and industrial segments. Moreover, exports mix in the order book is higher at 15-20% and is likely to increase further led by multiple Requests for Quotes (RFQs) from global customers in sectors such as industrial and medical.
- The company has been focusing on increasing its average order value thereby improving the overall margin. The average order value increased to INR7.2m in FY23 from INR1.5m in FY20 and further rose to INR2.2b in 1QFY24.

Exhibit 80: Exponential growth in order book...



Source: Company, MOFSL

Exhibit 81: ...along with surging order value (INR m)



Source: Company, MOFSL

Adding both domestic and
export customers across
business verticals

Addition of new customers to aid order book growth

- The company has also added new customers in segments such as electric vehicles (EV), medical, IT, defense, and aerospace.
- During the last five months, a new export customer has been added in the **EV sector**. This customer is involved in a substantial business related to various standard boards for EV charger, specifically targeting high-end cars.
- In the **medical segment** as well, the company recently acquired a prominent European customer that specializes in critical care and surgical equipment manufacturing. The supply audit was successfully passed by the company, and Kaynes is looking forward to managing pilot lots for this customer in this year. The project will encompass full box build and technology transfer.
- **In IT**, Kaynes recently got qualified for laptop production for specific use within India by one of the world's largest semiconductor companies. Moreover, it is also involved in supplying products for defense and aerospace applications.
- **Railways** used to be Kaynes' key segment a few years ago. It is getting its mojo back with rising enquiries from existing customers for railway signaling, metro signaling, and onboard equipment segments such as rack wiring.

- Under the **automotive** sector, the company has started receiving inquiries for box build projects, which involve complete production whereas, previously, the business mainly focused on PCB assembly. Increasing box build projects will provide significant value addition and lead to stronger customer relation.
- With strong enquiries and robust industry scenario, we expect a further increase in order book along with higher order value over the next few years.

Technical capabilities

- ✓ **11** SMT Lines
- ✓ **57** THD Lines
- ✓ **11** Cable Harness Lines
- ✓ **15** plastic molding machines
- ✓ 1 class **10,000** clean room
- ✓ Most of the manufacturing occurs at low-cost location
- ✓ Dedicated humidity controlled stores
- ✓ Flexible infrastructure
- ✓ **Two** exclusive RoHS compliant lines for green manufacturing
- ✓ **FDA approved**

A strong order book requires strong execution capabilities

- Kaynes has ~250,000 sqft of infrastructure spread across eight manufacturing units as well as two service centers in seven Indian cities.
- These plants are located in Manesar, Haryana; Chennai, Tamil Nadu; and Parwanoo, Himachal Pradesh that are strategically positioned near customers, resulting in reduced logistics costs, improved efficiency, and minimized capital expenditures.
- Since major automotive OEMs are located in Gurgaon, Haryana, Chennai, and Tamil Nadu, plant proximity helps in faster logistics and better support to the clients in its operations with the OEMs.
- Further, some of these facilities are located within dedicated parks and clusters identified by the government, which offers incentives similar to that of special economic zones:
 - Mysuru, Karnataka - Unit - I: Approved under Electronics Hardware Technology Park Scheme of Software Technology Park of India, Bengaluru
 - Chennai, Tamil Nadu: Approved under 100% Export Oriented Unit Scheme

Exhibit 82: Eight manufacturing facilities strategically located near the demand markets

Sr. No.	Location	% FY22 Revenue	Verticals offered
1	Mysore, Karnataka– Unit I	64.67%	❖ Railways, Defense and Aerospace, Medical and Industrial
2	Mysore, Karnataka– Unit II		
3	Parwanoo, Himachal Pradesh	4.08%	❖ IT, Telecom, Industrial, Medical and Automotive
4	Selaqui, Uttarakhand	0.08%	❖ IT and Industrial
5	Bengaluru, Karnataka– Unit I	2.69%	❖ Automotive, Medical, IOT, IT and Industrial
6	Bengaluru, Karnataka– Unit II	0.72%	❖ Automotive and Industrial
7	Chennai, Tamil Nadu	5.93%	❖ Automotive, Medical and Industrial
8	Manesar, Haryana	16.86%	❖ Industrial, Medical and Automotive

Source: Company, MOFSL

- To further strengthen its manufacturing prowess, the company has allocated a capex of INR2,482m for capacity expansion and upgrades of facilities in Mysore, Manesar, Bengaluru and Chennai. Of this, ~INR1,493m will be spent towards setting up a new facility at Chamarajanagar, Karnataka.

Exhibit 83: Capacity expansion to bolster future capabilities

Sr. No.	Locations	Comments	Expected completion
1	Manesar, Haryana	❖ 120k sq.ft. built-up space taken	❖ Planned operationalization under progress
2	Chamarajanagar, Karnataka	❖ Work going on at full swing	❖ Phase 1 to be operationalized by 2QFY24E
3	Pune, Maharashtra	❖ Leased place	❖ To be operationalized by 2QFY24E
4	Mysore Unit 1 & 2, Manesar, Bangalore, Chennai	❖ Upgrading existing facilities	

Source: Company, MOFSL

- The entire capacity expansion will triple the existing capacity and can generate ~INR30.0b in revenue vs. INR11.3b in FY23.
- Further, the company will be investing INR1,493m into Kaynes Electronics Manufacturing Private Limited for setting up a new facility in Chamarajanagar Karnataka, with the first phase likely to be operationalized by 2QFY24.
- Both the projects are funded through the IPO proceeds and any incremental capex on these will be funded internally.

Emerging application to drive incremental growth

Kaynes has a diversified business across seven verticals such as Automotive (38% of FY23 revenue), Industrial (27%), Aerospace & Defense – A&D (2%), Medical (6%), Railways (12%), IoT/IT (9%), and Consumer (9%).

Automotive to remain the largest segment for the company

~38% revenue share in FY23 (up from 20% in FY20)

- Under this segment, the company is a prominent supplier to OEMs, providing electronics components for lighting, entry passive start, electronics control units, door switches, clusters, sensors, EV electronics, converters, battery management systems, and electronics drives.
- Further, to reinforce its relationship with customers, the company is also providing design services to convert mechanical functions into electronics for steering control systems. Kaynes is also starting to offer designed infotainment systems, universal EV clusters for two and three-wheelers, inverter technology, and wireless chargers.
- The company aims to establish its presence only in those segments where it can carry out a large business so that it can enjoy a healthy bargaining power. **Scalability is the key focus area as margin in this automotive segment is lower than others.**
- Kaynes is among the top five **automotive lightings manufacturers**, having the highest volumes for **control systems** in India. The company is striving hard to substitute imports, which are heavy in India, thereby translating into a business of ~INR2.5-3.0b.
- The company had 67 domestic and five international customers as of FY22.

Orders with scalability will be key focus of the company

Exhibit 84: Current automotive product portfolio



Source: MOFSL, Company

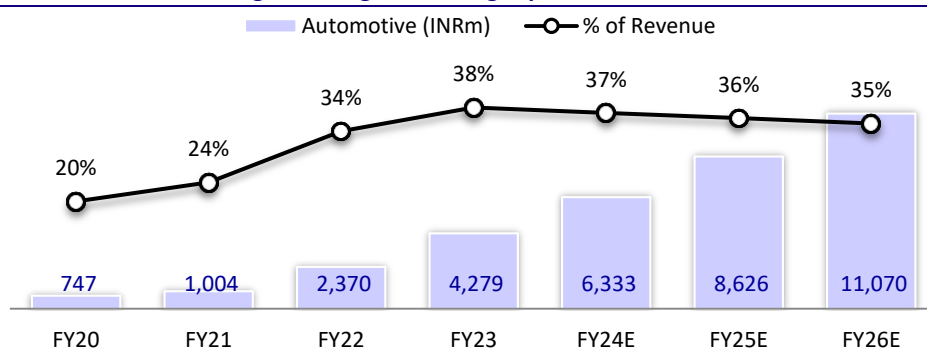
Exhibit 85: Major customers and products supplied to them

India Japan Lighting Private Limited

Cluster PCBAs, all types of electronics for automotive lighting, passenger entry passenger exit, electronics control units, switches for steering control, doors, windows, HVAC and lumbar support

Source: MOFSL, Company

Exhibit 86: Automotive segment to garner a larger pie of the business



Source: MOFSL, Company

Industrial segment to witness growth across applications

~27% revenue share in FY23 (down from 32% in FY20)

Kaynes has presence in smart meters, power electronics, low voltage power switchgear, BLDC and solar electronics

- Energy meters/smart meters, Computer Numerical Control (CNC) machine tools, and industrial machineries are dominant products in this segment, representing a significant market share.
- Major manufacturing companies are investing substantially in upgrading their facilities through digitization and adopting Industry 4.0 concepts. This trend is expected to drive demand for industrial electronics products.
- The industrial segment has been one of the key business segments of Kaynes; management aims to further grow this business by:
 - Enhancing the company's presence in **smart energy meters** through **ODM** products and strategic partnerships. The company has provided support to its European customer in designing and qualifying smart meters compliant with Indian standards for the Indian market.
 - Leveraging existing relationships in **power electronics and instrumentation** to increase market share.
 - Expanding customer base in **low voltage power switchgear** for import substitution.
 - Strategically developing the business in **large volume ODM electronics**, and focusing on **BLDC motor controllers**, inverters, and dispensing technology. Kaynes and Tata Projects collaborated on an ODM model to offer street light controllers to the Saudi Arabia government.
 - Targeting **solar energy-related electronics**, including AI-driven solar panel cleaning machines.

Exhibit 87: Current industrial product portfolio



Source: MOFSL, Company

Exhibit 88: Major customers and products supplied to them

Leading global manufacturer of electronic instruments and electromechanical device

Engine control panels, biometric add-ons, surge protectors, accelerometers, street light controller, BLE modules, precision bridges, test equipment, temperature controllers, switch gear electronics, instrumentation, power electronics, control systems, energy metering and controls, process control electronics, machinery electronics, security and surveillance systems, BLDC motor controllers, HVAC system electronics and alternate energy electronics

Source: MOFSL, Company

EV to form a major part of the industrial segment driving overall industrial mix to ~35%,

EV to boost industrial segment's revenue

- Kaynes has also forayed into manufacturing of electronics components for **EVs** where it directly supplies to the OEMs as against other automotive components where the company manufactures for Tier 1 suppliers (who sell to OEMs).
- In FY23, revenue from EV was ~INR600m i.e. ~5-6% of total revenue. However, management expects this to touch ~INR2b in FY24 i.e. ~12% of revenue.
- Further, during the last five months, Kaynes has added a new export customer in the **EV sector**. This customer is involved in a substantial business related to various standard boards for EV charger, specifically targeting high-end cars.
- Apart from that, the company will also manufacture simple electronics such as control systems for four wheelers, complex electronics for two wheelers, EV infrastructures, electronics for off highway vehicles such as golf carts, buses in airports etc.
- Going forward, we expect **EV to form a major part of the industrial segment driving overall industrial mix to ~35%**, on par with automotive segment. The Industrial segment also has better margin profile than automotive thereby improving the overall margin trajectory of the company.

Exhibit 89: Other key industrial products

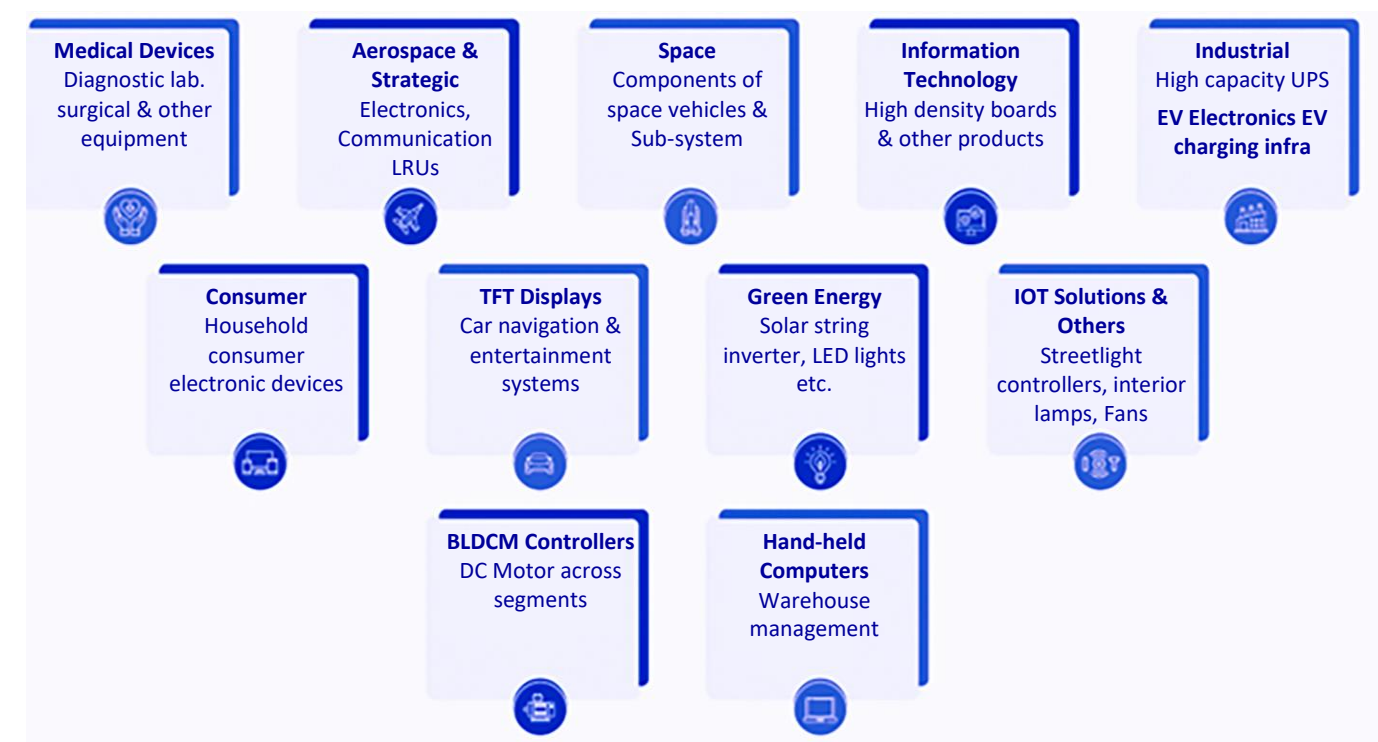
Other key industrial products	Comments
Switchgear	❖ Manufactures mainly for Schneider
Energy meters	❖ Mainly smart meters. Government reforms to drive smart meter sales
Power electronics	❖ Manufactures power node for UPS system
Electronics components	❖ Alternate energy i.e. Wind, Solar etc.
Street light controller	❖ ODM with Tata for government

Source: MOFSL, Company

Exhibit 90: Other segments and their key growth drivers

Segments	Comments
Railway	
Signaling & Track Maintenance	❖ GOI has a mandate to manufacture the entire signaling in India where it was earlier imported.
Metros	❖ Recently Hitachi has won a major order of INR60b for Chennai Metro project and Kaynes' revenue share from this order will be ~INR6b. Of this, Kaynes will earn INR1.0-1.5b revenue over the next 3-4 years.
Vande Bharat	❖ One rake has 20 racks and each rake house electronics is worth INR0.4m, i.e., for one Vande Bharat train the electronics required is ~INR50m. Hence, there is a huge opportunity from Vande Bharat launches in the coming years (GOI mandated to launch ~400 such trains).
Aerospace & Outer-space	❖ Expects INR1.0-1.5b of orders from Honeywell Automation. Honeywell has sent RFQ (Request for Quote) to Kaynes and the management is expecting revenue from this by next year. ❖ ISRO has 10 major suppliers for supply of critical parts and Kaynes is one of them.
IOT solutions	Expected to be a highly profitable business from FY25 ❖ Selling solutions ❖ Maintenance revenue ❖ Royalties
Medical	❖ Revenue from large business with client – SFO Technologies ❖ Kaynes is manufacturing testing equipment and other medical equipment such as glucometer

Source: Company, MOFSL

Exhibit 91: Application-specific road map

Source: MOFSL, Company

Telecom and White Goods PLI – another growth catalyst

- Under the PLI scheme by Government of India (GOI), Kaynes has been awarded PLI for telecom and white goods (mainly for air conditioners).
- The company has also applied for IT PLI.
- Currently, it has a very minimal presence in these segments and with the aid of incentives from PLI, Kaynes is likely to scale up these businesses rapidly.

Telecom PLI

- To boost the Telecom and Networking Products sector, deep penetration of broadband network and mobile telephony is crucial.
- The GOI's emphasis on broadband availability in rural areas is a significant demand driver.
- The sector is experiencing increased momentum due to the growing focus on 5G technology. 3G/4G will continue to be robust in near future, while the positive impact of 5G is expected to be felt relatively soon.
- To address the above factors, GOI has launched the PLI in telecom where ~42 companies have committed an investment of INR41.2b. This would result in an additional sale of INR2.45t.
- Kaynes has been awarded this PLI through its subsidiary Kaynes International Design & Manufacturing Private Limited (95.21% holding). The company has on-boarded two collaborators for the telecom division.
- Kaynes has invested a majority of the required investment under PLI in Telecom in FY23 and is expecting the benefits in profits and tax to start flowing in from FY24 onwards.

Telecom PLI – completed required investment; benefits to flow in from FY24 onwards

White Goods PLI – Kaynes investing ~INR500m with a revenue potential of INR1b

White Goods PLI

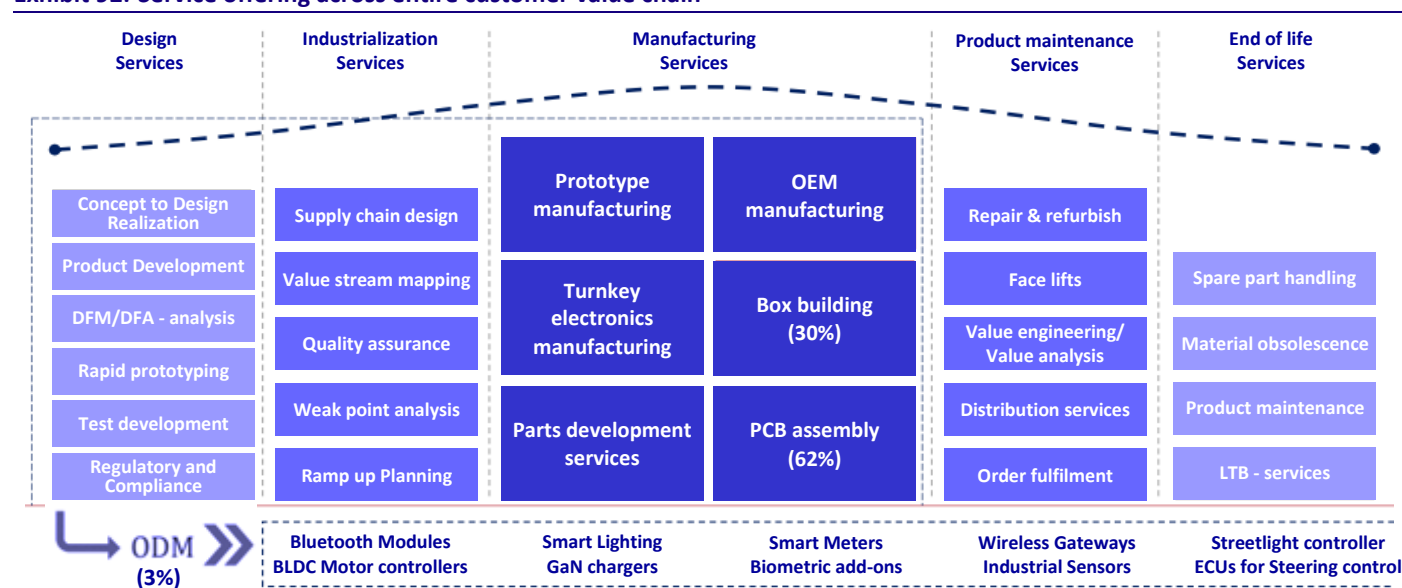
- The government has launched the white goods PLI to produce components that are currently not manufactured in India with adequate capacity.
- For ACs, various companies are likely to manufacture compressors, copper tubing, aluminum stock for foils, control assemblies for IDU or ODU, display units, BLDC motors, and other components.
- Similarly, for LED Lights, production would include LED chip packaging, LED drivers, LED engines, LED light management systems, PCBs (including metal-clad PCBs), and wire-wound inductors.
- The Scheme offers a 4% to 6% incentive on incremental sales for five years after the base year, with an additional one-year gestation period. However, the incentive is applicable only to the manufacturing of components for ACs and LED Lights.
- This scheme will require a total investment of INR58.9b with revenue potential of INR2.71t over the next five years.
- Kaynes has been awarded PLI under the white goods category; however, currently the company is not manufacturing white goods.
- The company is investing ~INR500m with a revenue potential of INR1b, which we believe can be easily achieved as the investment in white goods PLI is for general machinery.

Presence across the value chain

End-to-end capabilities across the ESDM spectrum

- Kaynes has presence across the value chain starting with the product designing i.e. ODM (3% of revenue in FY23) followed by OEM – Turnkey solutions for Printed Circuit Boards (PCBs; 62%), and OEM – Box build (30%). The company also provides Product Engineering and Internet of Things (IoT) solutions (5%) to the customers.
- OEM – PCB and OEM – Box Builds are the major business verticals of the company with combined revenue share of ~92% in FY23. ODM is currently a small part of the business at ~3% and the balance is Product Engineering & IoT.

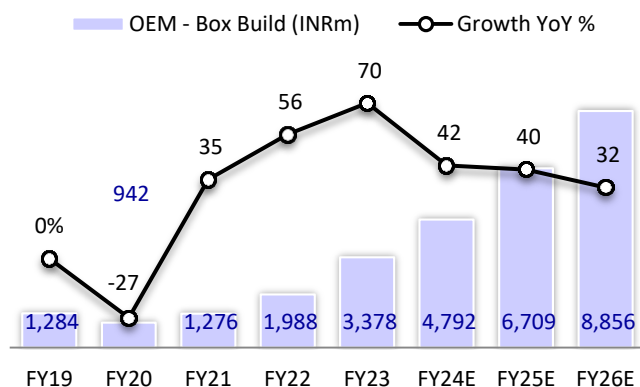
Exhibit 92: Service offering across entire customer value chain



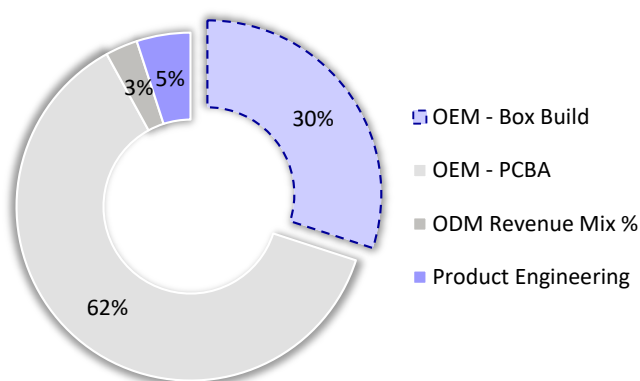
OEM – Box Build – 30% of the business in FY23

- Kaynes offers complete “Build to Print” or “Build to Specifications” of complex Box Builds, sub-systems and products in the **defense and aerospace, transportation, healthcare, IT and industrial verticals**.
- The company is equipped with custom manufacturing lines for box building, integration and testing, along with facilities for manufacturing cable forms and harnesses, plastic molding, and fabrication. OEM products of the company are shipped directly to the customers' warehouses.
- Box builds are more margin accretive than PCB assembly and also take more time to manufacture.
- We expect the **share of box builds to increase further** as Kaynes is getting more enquires for manufacturing the entire box build products for customers in automotive, industrial, medical and railways.
- Currently, Kaynes is only involved in PCBA in the automotive segment. Addition of box build will provide a bigger opportunity of value addition and also strengthen customer relations.

Box Build mix to increase further with order flows from automotive, industrial, medical and railways

Exhibit 93: Box build to post 38% CAGR over FY23-26E

Source: MOFSL, Company

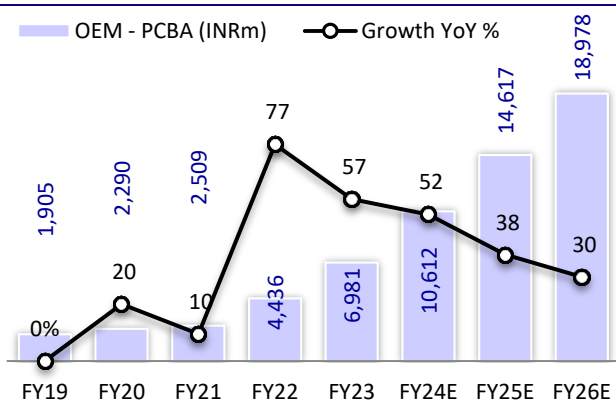
Exhibit 94: Box build contributes 30% to FY23 revenue

Source: MOFSL, Company

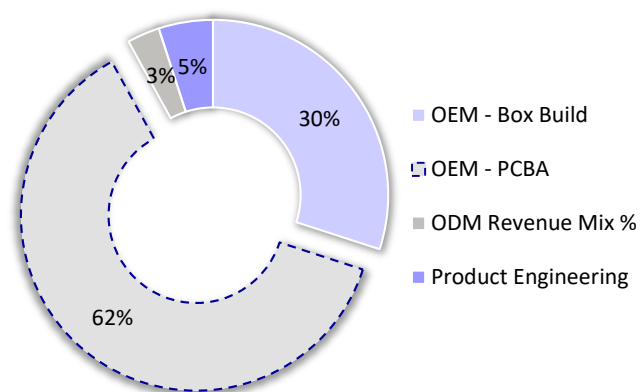
Under PCB, Kaynes primary focus lies in high mix, high technology, and flexible volume production.

OEM – PCB – 62% of the business in FY23

- Kaynes offers complete end-to-end turnkey solutions for PCB assembly manufacturing which include prototyping, sourcing, and supplier development for bare PCBs.
- The company also builds test jigs and design processes for PCBAs.
- Manufacturing takes place on its SMT lines, which is then tested, validated and delivered to customers worldwide.
- Under the PCB, primary focus lies in **high mix, high technology, and flexible volume production**.
- The company also offers value-added services to customers in various sectors, including aerospace, defense, outer-space, railways, medical, IT/ITES, industrial, and automotive electronics verticals.
- OEM-PCB will remain the major part of the business going forward as well with more outsourcing happening in the electronics industry on the back of developing technologies and shifting manufacturing base to India.

Exhibit 95: OEM-PCB to report 40% CAGR over FY23-26E

Source: MOFSL, Company

Exhibit 96: PCB accounts for a larger pie of revenue in FY23

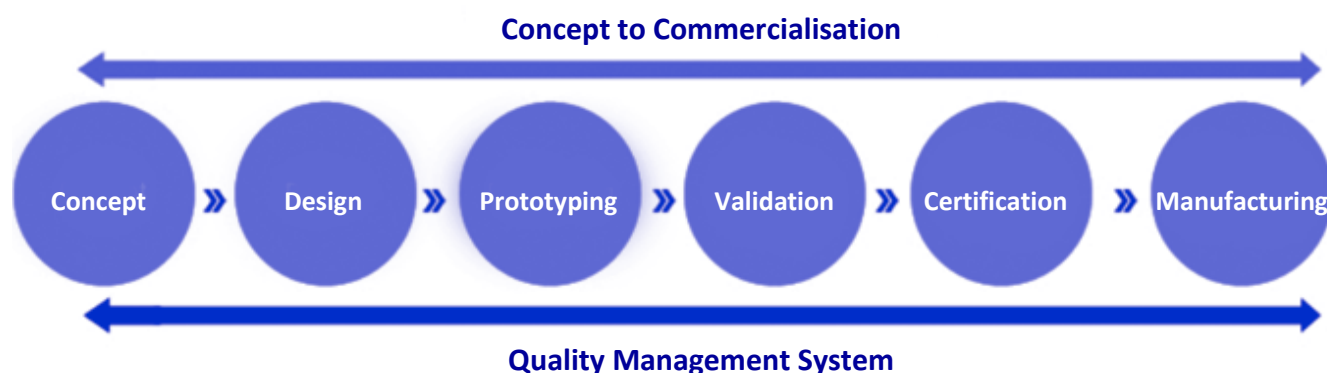
Source: MOFSL, Company

Under ODM, Kaynes manufactures Smart Devices, IoT Solutions, BLDC, and Gallium Nitride Technology.

ODM– 3% of the business in FY23

- Under ODM, Kaynes offers concept to commercialization services to its clients where the company is involved in software services, PCB designing, mechanical designing and prototyping.
- The ODM model of business requires additional investments in R&D as well as working capital; however, it results in higher margins, and recurring business with high customer retention as compared to the OEM model
- Kaynes is a **pioneer in design-led electronics manufacturing**, evolving into an ODM player in Smart Devices, IoT Solutions, BLDC, and Gallium Nitride Technology. The company also offers optimized product realization solutions across industry verticals.
- ODM capabilities of the company include hardware, software and firmware design, mechanical design, product integration and testing, amongst others.

Exhibit 97: Kaynes' ODM offerings



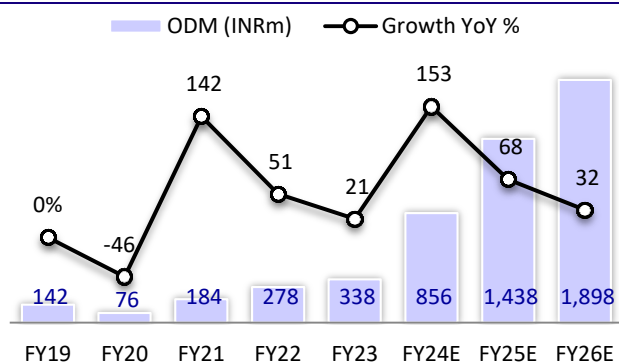
Source: MOFSL, Company

- Kaynes has increased its focus on the ODM business by leveraging its strong R&D skills and customer relations.
- The company has built expansion strategies, which include customer acquisition for smart meter ODM, appliance electronics ODM, solar panel cleaners as ODM, and BLDC electric motor ODM as part of its diversified product portfolio.
- The company is continuously identifying newer technology applications in consumer appliances, smart technology, IT accessories and cloud-based, sensor-driven IoT solutions that can easily be scaled up, leading to growth in revenue with better margins.
- Kaynes has a separate design team, which offers non-intellectual property design and engineering services in consumer and industrial segments. This team provides hardware or device design and can contribute towards design-led manufacturing.

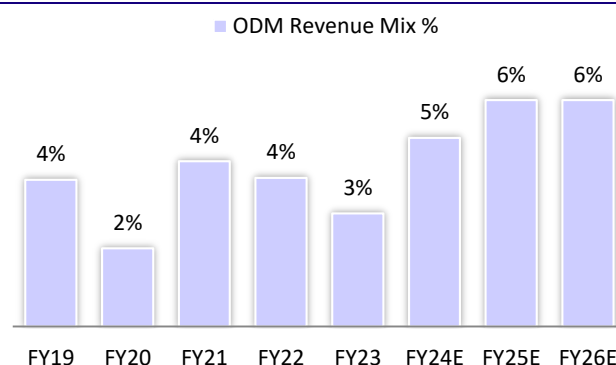
Exhibit 98: Instances of Kaynes' ODM capabilities

Product	Vertical	Description
Smart Meters	Industrials	❖ European customer entering the Indian market for smart meters where Kaynes will support in designing and qualification as per Indian Standards.
Home Diagnostic products	Medical	❖ Start-up entering into the at-home diagnostic market where Kaynes will undertake the design, prototype and bulk manufacturing.
Streetlight Controllers	IoT and IT	❖ Customer has its own long-range network for which Kaynes has designed and developed a streetlight controller that has a built-in energy meter. The product has qualified for reliability and taken up for bulk manufacturing including exports.
IoT appliances	Consumer	❖ Looking for support in IoT-driven smart solutions for appliances. Handled design and prototype and currently doing bulk manufacturing.
Consumer audio	Consumer	❖ Customer looking to localize manufacturing through assembly of semi-knockdown unit. Kaynes supported in SKU and localized the complete knockdown unit.

Source: Company, MOFSL

Exhibit 99: ODM revenue to record 78% CAGR over FY23-26E

Source: MOFSL, Company

Exhibit 100: ODM's share to improve going forward

Source: MOFSL, Company

Indigenizing the supply chain by collaborating with a bare PCB manufacturer and examining post-FAB OSAT

Improving operational efficiency through backward integration

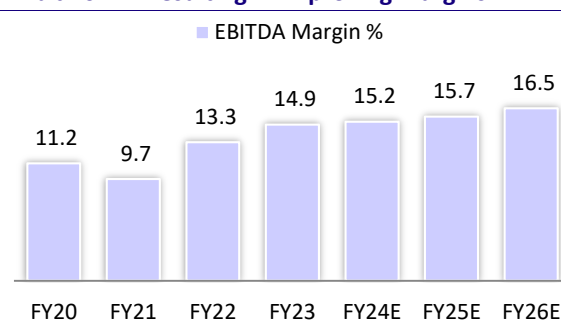
- To enhance operational efficiency, Kaynes plans to implement comprehensive backward integration measures, including manufacturing in-house components such as **bare PCBs** and focusing on **design competencies for ICs, chipsets, and system-on-chips**.
- The bare PCB (also known as PCB substrate/board on which all the components are placed) **forms ~8% of the total revenue of Kaynes**, which is mostly imported due to non-availability in India.
 - Kaynes is looking to set up high-quality bare PCB that has multiple layers and Hi-Tech products where margins are very high. The company is in advanced talks with collaborators regarding these.
 - Post-setting of these capacities, the **company plans to generate ~4%** of total revenue i.e. half of the bare PCB in-house, which will reflect in a **savings of ~2% on cost (implying margin improvement)**.
 - Kaynes will also supply bare PCBs to other companies (**implying revenue generation**).
- These measures aim to reduce reliance on third-party components, decrease lead time, manage material inventory better, and contribute to higher margins.
- Currently, the company imports 60% of raw materials for PCBA that will reduce by 20% in the next two to three years as more local vendors will emerge.
- **Backward integration will offer Kaynes greater control over the manufacturing process, maintain quality standards and achieve cost efficiencies.**
- This will lead to meeting customers' needs efficiently, increasing sales per customer, and improving working capital as well as supply chain processes.

Exhibit 101: Scope of further backward integration...

Unit Cost Metrics	INR	%	Comments
Raw material	70	100%	
Imports	42	60%	
PCB	10	14%	can be indigenized
Power devices	12	17%	can be indigenized
Other Electronics Components	20	29%	will remain imported
Indigenous Sourcing	24	34%	
Plastics	4	6%	

Source: MOFSL, Company

Exhibit 102: ...resulting in improving margins



Source: MOFSL, Company

- Kaynes is working on indigenizing the supply chain by collaborating with a bare PCB manufacturer and examining the **post-FAB OSAT**.
- For the same, the company has recently entered into two MOUs: a) one with the [Government of Karnataka](#) to set up post-FAB outsourced semiconductor assembly & testing (OSAT) and PCB manufacturing lines for an investment of INR37.5b; and b) the other with the [Government of Telangana](#) to set up an OSAT and compound semiconductor manufacturing facility in the state for a total investment of INR28.0b.
- The MOU with the **Karnataka Government** has two parts: 1) setting up OSAT for an investment of ~INR30b where Kaynes and GOK both will invest equally; 2) setting up a PCB manufacturing line for an investment of INR7.0-7.5b where Kaynes will invest ~60% of the capex and the balance will be equally divided between GOK and GOI.
- The MOU with the **Telangana Government** is to set up the OSAT and compound semiconductor facility in Kongara Kalan, adjacent to the upcoming electronics manufacturing facility of Foxconn. The proposed facility will entail an investment of INR28b. Kaynes Semicon (subsidiary of Kaynes) will support customers worldwide in QFN, SOT, TO, BGA, and FC BGA kind of packages in the first three years for power devices. Kaynes Semicon is also setting up a state-of-the-art R&D center for package research in collaboration with IIT Bombay.

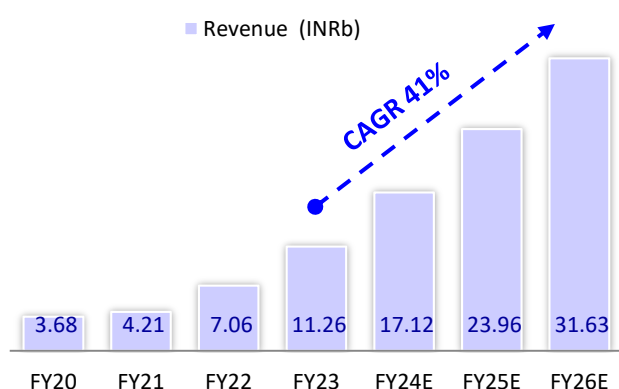
Strong track record of healthy financials

Revenue/EBITDA/PAT clocked an impressive 45%/60%/117% CAGR over FY20-23

Revenue growth momentum to intensify further

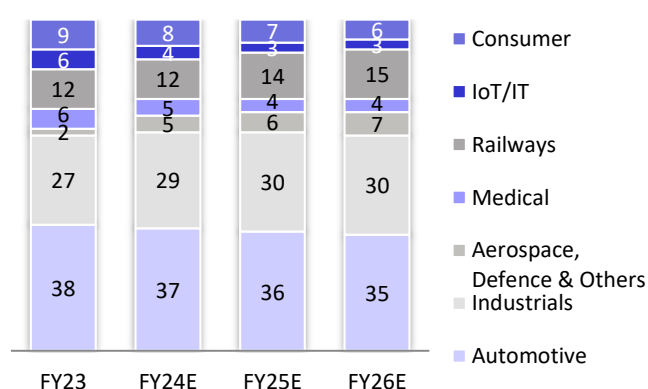
- Kaynes has delivered a strong revenue growth over the last three years despite the pandemic. It reported a revenue CAGR of 45% over FY20-23 fueled by all business verticals.
- ODM business registered the highest revenue CAGR at 64% followed by OEM-Box Build at 53% and OEM-PCB at 45%.
- Higher growth in ODM business indicates a strong focus on design-led manufacturing, consequently translating into order flows in other verticals such as Box Build and PCB.
- As highlighted earlier, we expect the ODM revenue mix to improve further to ~6% by FY26 from 3% in FY23.
- Moreover, the company is moving towards manufacturing the entire value chain starting from designing and prototyping to manufacturing of Box Build. We expect the Box Build revenue to clock a healthy CAGR of 38% over FY23-26.
- OEM-PCB is one of the key components in an electronics device. With strong growth in the Indian electronics industry as highlighted earlier, we expect Kaynes to post a 40% CAGR (above industry) in its PCB vertical over FY23-26.
- With growth in ODM business, the Product Engineering and IoT businesses are also expected to grow with large OEMs adopting industry 4.0, thereby raising the requirement of IoT Solutions. Product Engineering and IoT accounted for ~5% of total revenue in FY23 and are likely to remain around FY23 levels (+/- 1%) by FY26, recording a CAGR of 50%.
- With strong thrust across business verticals, overall revenue of Kaynes is projected to register a robust CAGR of 41% over FY23-26.

Exhibit 103: Revenue to report 41% CAGR over FY23-26



Source: MOFSL, Company

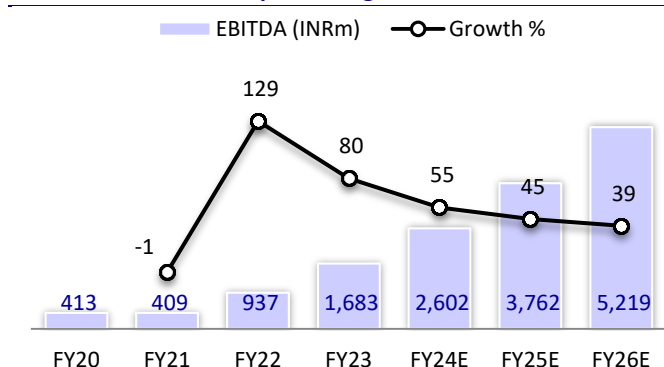
Exhibit 104: Expected business mix going forward (%)



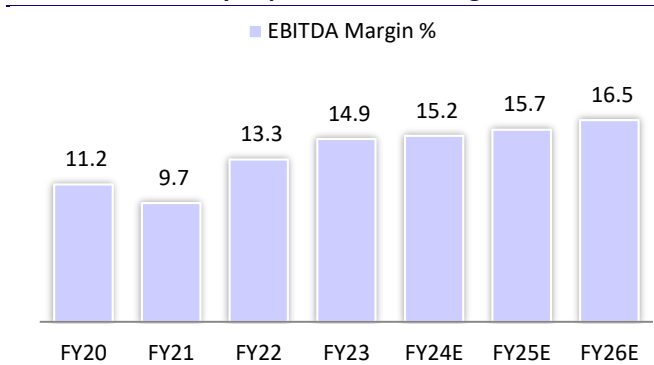
Source: MOFSL, Company

Margins on an upward trajectory

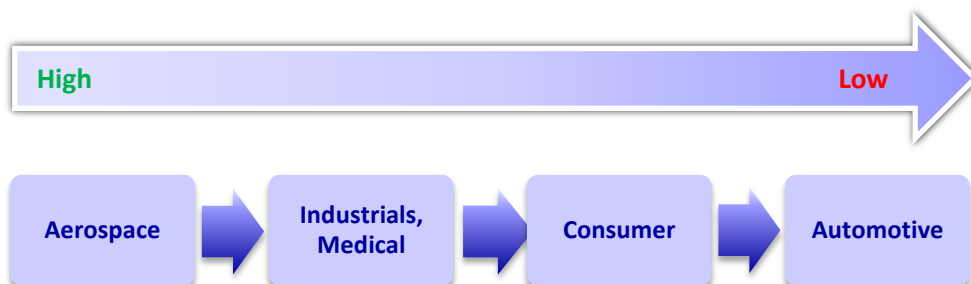
- Kaynes' margin profile has witnessed an improvement over the last few years despite volatile raw material prices amid global supply chain disruption in semiconductors. The margin improved to 13.3% in FY23 from 11.2% in FY20.
- Major factors contributing to Kaynes' improved profitability are its presence across value chain; increased focus on backward integration; growing mix of value-added/high-margin business such as ODM and Box Builds; and increase in order flows from high-margin segments such as A&D, industrials and medical.
- We expect further improvement in margins aided by growing mix of A&D/ railways/industrial (7%/30%/15% by FY26 from 2%/27%/12% in FY23), which are high-margin businesses; setting up bare PCB will improve margins by ~2%.
- We expect margin to improve to 15.2% in FY24 and further to ~16.5% by FY26.

Exhibit 105: EBITDA reported higher CAGR of 46%...

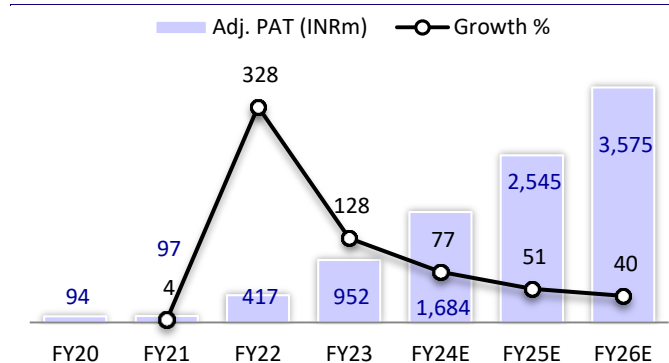
Source: MOFSL, Company

Exhibit 106: ...led by improvement in margin over FY23-26

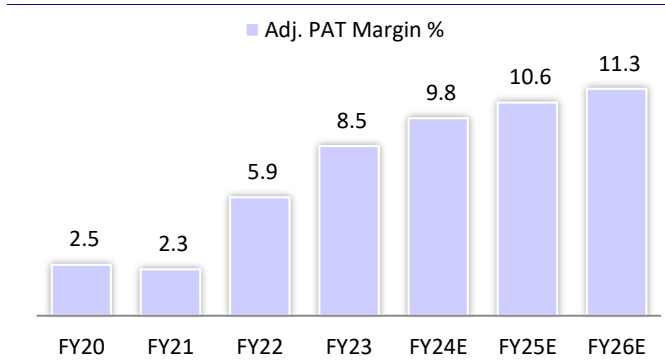
Source: MOFSL, Company

Exhibit 107: Margin profile comparison across verticals

Source: Company, MOFSL

Exhibit 108: Adj. PAT to report higher CAGR of 55%...

Source: Company, MOFSL

Exhibit 109: ...led by improvement in margin over FY23-26

Source: Company, MOFSL

Easing of supply chain issues and setting up local supply chain to aid in reduction of working capital days

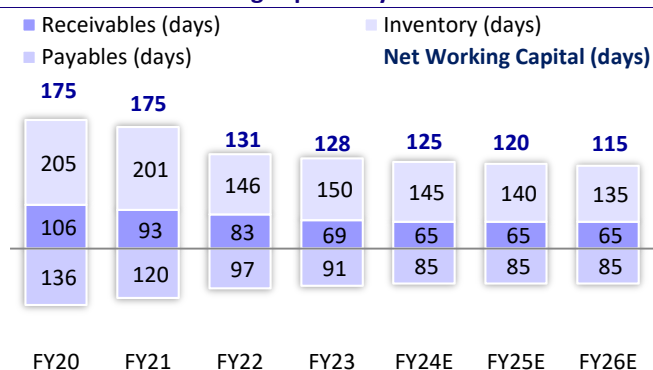
Working capital to improve due to improving inventory days...

- Kaynes has witnessed an increase in net working capitals in the last four years mainly led by supply chain disruption of key raw materials.
- The company has created a surplus inventory of semiconductors to prevent from any operational hurdles in terms of raw material shortages. However, with easing of semiconductor supply chain issues, the inventory days reduced to 150 in FY23 from as high as 205 in FY20.
- While 150 days are still high, we expect this to reduce further with normalcy in the supply chain environment.
- The company is working with its distributors to establish local supply warehouses in Mysore or Bangalore (near plant locations) to reduce lead time and improve on-time supplies.
- In terms of payables, Kaynes has deliberately set the dial at low payables to get favorable attention from suppliers due to supply chain issues in electronics last year. Management expects supply chain-related lead-time issues and unreliability to diminish in the future due to moderating global challenges and capacity enhancement in semiconductors.
- Overall, we expect the working capital to ease further fueled by measures taken by the company coupled with electronics eco-system being built in India, which will reduce the burden of import and improve supply chain.

...resulting in higher free cash flows

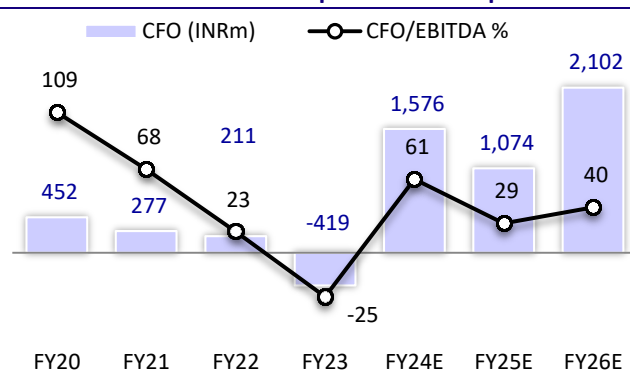
- The company generated negative CFO (-INR419m) in FY23 mainly due to higher working capital.
- The CFO/EBITDA ratio which used to be upwards of 100% in FY20 has gradually declined and turned negative in FY23 as discussed above. Going forward, with strong growth trajectory and easing working capital scenario, we expect the ratio to inch upwards and sustain above 50% levels indicating a decent cash flow generation.

Exhibit 110: Net working capital days to reduce...



Source: Company, MOFSL

Exhibit 111: Cash flows from operations to improve

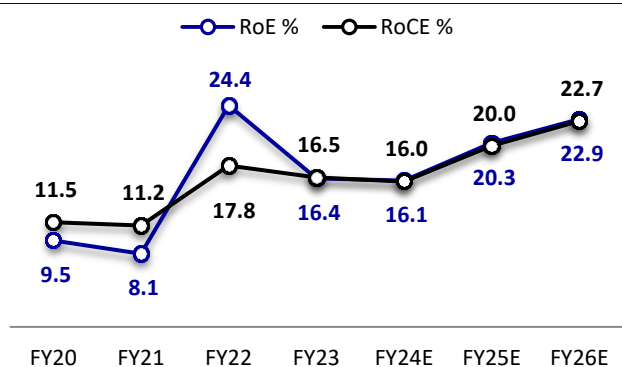


Source: Company, MOFSL

Delivering healthy return ratios

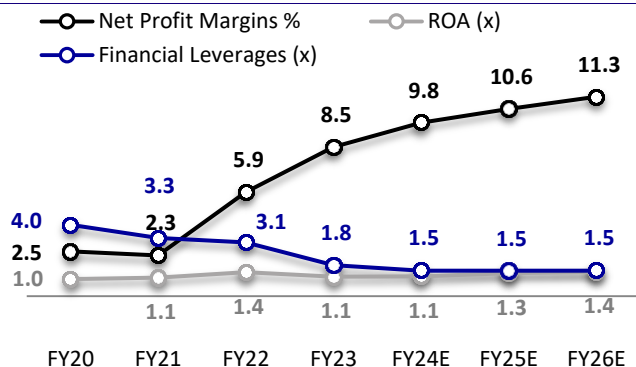
- ROE/ROCE of the company has witnessed improvement to 16.4%/16.5% in FY23 from 9.5%/11.5% in FY20.
- As per DuPont analysis, ROE has improved primarily due to an increase in PAT margins to 8.5% in FY23 from 2.5% in FY20, on the back of improving EBITDA.
- Asset T/O and Financial leverage remained stable/ declined from FY20 levels. Asset T/O increased marginally to 1.1x in FY23 from 1.0x in FY20, while financial leverage declined significantly to 1.8x in FY23 from 4.0x in FY20. Fixed Asset T/O rose to 5.9x in FY23 from 4.0x in FY20, indicating improved plant productivity and efficiency in operations.
- Going forward as well, further improvement in net profit margin (to 11.3% in FY26) will be the key reason for expansion in ROE to 22.9% in FY26 from 16.4% in FY23.

Exhibit 112: Healthy return ratios to improve further



Source: MOFSL, Company

Exhibit 113: Improving net profit margin – the key driver



Source: MOFSL, Company

Overall, we expect a healthy improvement in the company's financials going forward propelled by strong revenue growth, improving margin profile, easing working capital (resulting in strong cash flow generation) and lastly a healthy return ratio.

Valuation and key risks

A bright future beckons! Initiate coverage with a BUY

Evolving technologies,
increasing applications
leading to increasing
outsourcing by OEM

Revenue/EBITDA/Adj. PAT
CAGR of 41%/46%/ 55%
over FY23-26E

- Kaynes has been one of the key players in India's ESDM story and with its diversified business and design-led manufacturing, we believe it will continue to contribute significantly towards India's electronics industry evolution.
- Order book has been growing at an exponential rate (at 96% CAGR over FY20-23) fueled by evolving technologies and their applications, increasing outsourcing by OEMs, and growing offerings across value chain. We expect its order book growth momentum to sustain. We project the company to report a CAGR of 32% over FY23-26.
- Every business vertical is witnessing strong industry tailwinds in the form of growing mix of electronics components, increasing support from government and creation of electronics ecosystem in India.
- We estimate Kaynes to deliver revenue/EBITDA/Adj. PAT CAGR of 41%/46%/ 55% over FY23-26.
- Kaynes is currently trading at 43x FY26E P/E with an RoE/ RoCE of 23% each in FY26E. We strongly believe that the company will be a key beneficiary of the growing ESDM industry if it executes well on the expanding order flows across its businesses. **We initiate coverage on the stock with a BUY rating and a TP of INR3,100 (premised on 50x FY26E P/E).**

Key risks

- Increase in working capital can result in cash flow deterioration and liquidity concerns for the company.
- Execution of the order book will be a key monitorable for Kaynes. Any delay in execution will have an adverse impact on its revenue and profitability.
- Top 10 customers contributed ~60% of FY23 revenue; any loss of these customers will have a detrimental impact on the company's earnings.
- Semiconductor is the key raw material for Kaynes, which has faced supply constraint in the past. Any supply crunch in future will have a similar adverse impact on the company's operations, working capital and earnings.

Exhibit 114: Comparative valuation

Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Kaynes	2669	3100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

Source: MOFSL, Company, *BBG

ESG initiatives



Environmental initiatives

- The company uses advanced and state-of-the-art technology, which decreases emissions, reduces carbon footprint, and promotes sustainable operations.
- The company regularly undertakes plantation programs to revive the quality of soil and air near the facilities. It also employs technological solutions to ensure minimal environmental impact.
- The company is committed to environmental sustainability and has established a dedicated "Lead-free" manufacturing line for PCB assemblies. Kaynes possesses the expertise to manufacture products that comply with RoHS regulations, ensuring a commitment to environmental-friendly practices.

CSR initiatives

- The company actively engages in improving the lives of people living in villages near the manufacturing facilities.
- The company's commitment to social accountability and labor rights is demonstrated by obtaining the SA8000 certification, an international standard for social responsibility and corporate governance.
- Technical training for economically weaker sections: The institute provides a two-year diploma program in electronics and mechanics, which is duly approved by the National Council for Vocational Training.
- Kaynes Technical Training Foundation actively employs differently-abled individuals, providing them with specialized training and guidance to perform repetitive tasks.
- Kaynes Technical Training Foundation supports the Spastic Society's wellbeing by contributing to the organization "Sneha Kiran," which runs a school catering specifically to children with cerebral palsy.

Governance

- As of Jun'23, the Board comprised eight Directors that included five Independent Directors and two woman Directors.
- The Board comprises seasoned professionals with expertise in various fields, contributing diverse experiences.
- The Board's performance is assessed annually based on their responsibilities, and a strong compliance mechanism is in place to adhere to applicable rules and regulations.

Bull and Bear cases



Bull case

- ✓ In our bull case, we assume a revenue CAGR of 43% over FY23-26E on the back of an increase in order flows from new technologies.
- ✓ We expect margin to expand by ~155bp from current levels to ~16.5% over FY26E led by an improving mix of ODM and higher-margin businesses.
- ✓ EPS to register a robust CAGR of 58% over FY23-26E led by operating leverage.

Bear case

- ✓ In our bear case, we assume a revenue CAGR of 39% over FY23-26
- ✓ Margin will expand by ~75b from current level to 15.7% over FY26E
- ✓ EPS to register a CAGR of 50% over FY23-26E.

Exhibit 115: Bull and Bear case scenario (INR m)

	Particulars	FY23	FY24E	FY25E	CAGR (FY23-26E, %)
Bear case	Revenue	16,890	23,309	30,301	39
	EBITDA	2,534	3,566	4,757	41
INR2500	EPS	28.1	41.2	55.4	50
Base case	Revenue	17,116	23,962	31,630	41
	EBITDA	2,602	3,762	5,219	46
INR3100	EPS	29.0	43.8	61.5	55
Bull case	Revenue	17,453	24,784	33,210	43
	EBITDA	2,705	3,941	5,480	48
INR3580	EPS	30.3	46.2	65.0	58

Source: MOFSL, Company

SWOT analysis

- ✓ A strong customer base across diversified product portfolio
- ✓ IoT solutions-enabled integrated ESDM player
- ✓ Efficient and globally certified manufacturing capabilities

S
STRENGTH



- ✓ High working capital days impacting cash flow generation
- ✓ Reliance on a few key customers.

W
WEAKNESS



- ✓ Growing demand for electronics products
- ✓ Shift of ESDM base in India.
- ✓ New applications with high electronics contents across business verticals
- ✓ Development of new technologies such as EVs, 5G, AI and virtual/augmented reality

O
OPPORTUNITY



- ✓ Increasing competition from global players setting up manufacturing in India.
- ✓ Changes in regulatory environment for EMS industry.
- ✓ Reduction/withdrawal of incentives provided to EMS industries can impact the entire sector adversely

T
THREATS



Management team



Savitha Ramesh

Chairperson of board

Savitha Ramesh is the Promoter and Chairperson of Kaynes, with a bachelor's degree in commerce from the University of Madras. She has been associated with Kaynes since 1996. With 25+ years of experience in the electronics manufacturing services industry, she oversees the overall implementation of processes and controls.



Ramesh Kannan

Managing Director

Ramesh Kunhikannan is the Promoter and Managing Director of the company, with a bachelor's degree in electrical engineering from the National Institute of Engineering, Mysore. He has been associated with the Company since its inception in 1988 and possesses 33 years of experience in the electronics manufacturing services industry.



Rajesh Sharma

Chief Executive Officer

Rajesh Sharma, the Chief Executive Officer of the Company, is an associate member of The Institute of Chartered Accountants of India. He holds a graduate degree in commerce from Bangalore University and has over 15 years of rich experience in accounting and finance.



Jairam P Sampath

WTD & Chief Financial Officer

Jairam Paravastu Sampath is the Whole Time Director & CFO of the Company since 2011. He holds a bachelor's degree in mechanical engineering from IIT Madras and a post-graduate diploma in management from IIM Ahmedabad. With 30+ years of experience, he leads finance and strategy functions.



Sajan Anandaraman

Head of commercial and corporate affairs

Sajan Anandaraman heads Commercial and Corporate Affairs, with 25+ years of experience in the company. He holds an engineering degree from the University of Calicut and completed the Executive General Management Program from IIM-B in 2010.



Ramchandran Kunnath

Chief Strategy officer

He is a fellow member of the Institute of Chartered Accountants of India, an associate member of the Institute of Company Secretaries of India, and a certified management accountant and associate member of the Institute of Cost Accountants of India. With 29+ years of experience, he previously served as the CFO, Company Secretary, and Compliance Officer at M/s. Bharat FIH Limited.

Financials and valuations

Consolidated - Income Statement (INR m)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Total Income from Operations	3,682	4,206	7,062	11,261	17,116	23,962	31,630
Change (%)	1.1	14.2	67.9	59.4	52.0	40.0	32.0
RM Cost	2,417	2,861	4,894	7,801	11,844	16,534	21,635
Employees Cost	424	459	602	771	1,164	1,605	2,088
Other Expenses	428	477	629	1,006	1,506	2,061	2,689
Total Expenditure	3,269	3,797	6,126	9,578	14,514	20,200	26,411
% of Sales	88.8	90.3	86.7	85.1	84.8	84.3	83.5
EBITDA	413	409	937	1,683	2,602	3,762	5,219
Margin (%)	11.2	9.7	13.3	14.9	15.2	15.7	16.5
Depreciation	84	101	132	187	267	431	599
EBIT	330	308	805	1,496	2,335	3,331	4,620
Int. and Finance Charges	236	240	256	349	222	110	65
Other Income	19	40	41	114	137	180	221
PBT bef. EO Exp.	113	109	590	1,260	2,250	3,401	4,777
EO Items	0	0	0	0	0	0	0
PBT after EO Exp.	113	109	590	1,260	2,250	3,401	4,777
Total Tax	19	11	174	308	566	856	1,202
Tax Rate (%)	17.1	10.5	29.4	24.5	25.2	25.2	25.2
Minority Interest	0	0	0	0	0	0	0
Reported PAT	94	97	417	952	1,684	2,545	3,575
Adjusted PAT	94	97	417	952	1,684	2,545	3,575
Change (%)	-3.8	4.0	328.2	128.4	76.9	51.2	40.4
Margin (%)	2.5	2.3	5.9	8.5	9.8	10.6	11.3

Consolidated - Balance Sheet

(INR m)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	68	68	462	581	581	581	581
Preference Capital	0	11	4	0	0	0	0
Total Reserves	959	1,308	1,560	9,009	10,693	13,238	16,813
Net Worth	1,027	1,387	2,026	9,590	11,274	13,819	17,394
Minority Interest	6	9	11	13	13	13	13
Total Loans	1,643	1,526	1,779	1,359	859	359	359
Deferred Tax Liabilities	79	52	68	77	77	77	77
Capital Employed	2,755	2,974	3,884	11,039	12,223	14,268	17,843
Gross Block	930	1,181	1,544	1,925	3,410	5,207	6,766
Less: Accum. Deprn.	382	483	615	802	1,069	1,500	2,098
Net Fixed Assets	547	698	929	1,123	2,341	3,707	4,668
Goodwill on Consolidation	23	23	23	23	23	23	23
Capital WIP	119	126	83	293	1,309	1,012	952
Total Investments	16	17	15	33	33	33	33
Current Investments	0	0	0	0	0	0	0
Curr. Assets, Loans&Adv.	3,075	3,330	5,173	12,715	12,645	15,261	19,735
Inventory	1,511	1,639	2,264	4,132	4,705	6,342	8,002
Account Receivables	937	1,218	1,977	2,271	3,048	4,267	5,633
Cash and Bank Balance	123	143	216	4,860	3,351	2,495	3,254
Loans and Advances	504	331	716	1,453	1,540	2,157	2,847
Curr. Liability & Prov.	1,027	1,219	2,340	3,148	4,127	5,767	7,569
Account Payables	921	954	1,641	2,229	2,758	3,850	5,038
Other Current Liabilities	76	226	648	857	1,198	1,677	2,214
Provisions	30	39	52	62	171	240	316
Net Current Assets	2,048	2,110	2,833	9,567	8,517	9,493	12,167
Misc Expenditure	0	0	0	0	0	0	0
Appl. of Funds	2,755	2,974	3,884	11,039	12,223	14,268	17,843

Financials and valuations

Ratios

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)							
EPS	13.8	14.3	9.0	16.4	29.0	43.8	61.5
Cash EPS	26.1	29.1	11.9	19.6	33.5	51.2	71.8
BV/Share	151.0	203.9	43.9	164.9	193.9	237.7	299.2
DPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Payout (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Valuation (x)							
P/E	194.0	186.4	295.6	163.0	92.2	61.0	43.4
Cash P/E	102.3	91.6	224.6	136.2	79.6	52.1	37.2
P/BV	17.7	13.1	60.8	16.2	13.8	11.2	8.9
EV/Sales	5.3	4.6	17.7	13.5	8.9	6.4	4.8
EV/EBITDA	47.6	47.8	133.2	90.1	58.7	40.7	29.2
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	20.6	4.0	-4.6	-17.2	-15.9	-7.3	10.4
Return Ratios (%)							
RoE	9.1	8.1	24.4	16.4	16.1	20.3	22.9
RoCE	10.8	11.2	17.8	16.5	16.0	20.0	22.7
RoIC	10.9	10.7	18.2	24.0	26.1	27.3	28.4
Working Capital Ratios							
Fixed Asset Turnover (x)	4.0	3.6	4.6	5.9	5.0	4.6	4.7
Asset Turnover (x)	1.0	1.0	1.1	0.8	1.0	1.2	1.2
Inventory (Days)	205	201	146	150	145	140	135
Debtor (Days)	106	93	83	69	65	65	65
Creditor (Days)	136	120	97	91	85	85	85
Leverage Ratio (x)							
Current Ratio	3.0	2.7	2.2	4.0	3.1	2.6	2.6
Interest Cover Ratio	1.4	1.3	3.1	4.3	10.5	30.4	71.5
Net Debt/Equity	1.5	1.0	0.8	-0.4	-0.2	-0.2	-0.2

Consolidated - Cash Flow Statement

(INR m)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
OP/(Loss) before Tax	113	109	590	1,260	2,250	3,401	4,777
Depreciation	84	101	132	187	267	431	599
Interest & Finance Charges	228	233	-11	-100	85	-70	-157
Direct Taxes Paid	-19	-28	-22	-503	-566	-856	-1,202
(Inc)/Dec in WC	44	-137	-743	-1,629	-459	-1,832	-1,914
CF from Operations	451	277	-53	-784	1,576	1,074	2,102
Others	2	0	265	365	0	0	0
CF from Operating incl EO	452	277	211	-419	1,576	1,074	2,102
(Inc)/Dec in FA	-312	-250	-422	-581	-2,500	-1,500	-1,500
Free Cash Flow	140	27	-211	-1,001	-924	-426	602
(Pur)/Sale of Investments	205	2	-33	0	0	0	0
Others	8	7	11	-4,352	137	180	221
CF from Investments	-99	-241	-445	-4,933	-2,363	-1,320	-1,279
Issue of Shares	0	270	228	6,600	0	0	0
Inc/(Dec) in Debt	-118	-44	301	-336	-500	-500	0
Interest Paid	-236	-240	-256	-349	-222	-110	-65
Dividend Paid	0	0	0	0	0	0	0
Others	0	-6	0	-371	0	0	0
CF from Fin. Activity	-354	-19	272	5,543	-722	-610	-65
Inc/Dec of Cash	-1	17	38	191	-1,509	-856	759
Opening Balance	8	126	143	216	4,860	3,351	2,495
Other cash & cash equivalent	115	0	35	4,453	0	0	0
Closing Balance	123	143	216	4,860	3,351	2,495	3,254

Avalon Technologies

BSE Sensex
66,283NIFTY-50
19,751

CMP: INR529

TP: INR730 (+38%)

Buy



Stock Info

Bloomberg	AVALON IN
Equity Shares (m)	65.3
M.Cap.(INRb)/(USDb)	34.6 / 0.4
52-Week Range (INR)	732 / 347
1, 6, 12 Rel. Per (%)	-5/-/-
12M Avg Val (INR M)	287
Free float (%)	48.8

Financial Snapshot (INR b)

Y/E MARCH	FY24E	FY25E	FY26E
Sales	11.4	14.5	17.6
EBITDA	1.4	1.8	2.3
Adj. PAT	0.8	1.2	1.6
EBITDA Margin (%)	12.3	12.7	13.2
Cons. Adj. EPS (INR)	11.7	18.4	24.4
EPS Gr. (%)	29.5	56.5	32.8
BV/Sh. (INR)	94.2	112.6	136.9

Ratios

Net D:E	(0.1)	(0.2)	(0.2)
RoE (%)	13.3	17.8	19.5
RoCE (%)	12.1	16.7	19.1

Valuations

P/E (x)	45.1	28.8	21.7
EV/EBITDA (x)	26.2	18.1	13.9

Shareholding pattern (%)

As On	Jun-23	Mar-23
Promoter	51.2	70.7
DII	16.6	0.0
FII	12.5	0.0
Others	19.7	29.3

FII Includes depository receipts

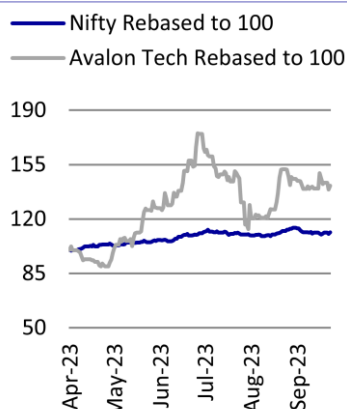
Built on Precision, driven by Innovation!

Avalon Technologies Ltd (Avalon) is a prominent vertically integrated EMS provider in India and the only Indian company with a full-fledged manufacturing facility in the US. Through its diverse manufacturing infrastructure, the company caters to a wide range of industries including Clean Energy, Mobility, Industrials, Communication, and Medical.

- Over the years, Avalon has transformed into a comprehensive provider of box build solutions, encompassing the entire value chain. In FY23, box build accounted for ~47% of Avalon's total revenue, and it is expected to increase going forward.
- In FY23, Avalon generated around 76% of business from three major industries: Clean Energy (25%), Mobility (21%), and Industrials (29%). Going forward, this mix is expected to tilt toward Clean Energy (strong order inflows) and Mobility (mainly aerospace). Both the verticals have long life cycles and command higher margins than other verticals.
- The extended life cycle aids in customer retention, and Avalon's presence across the value chain further enhances its ability to expand wallet share among existing clients.
- With a global manufacturing presence, Avalon can offer its customers a hybrid manufacturing approach (automated work in the US and labor-intensive work in India). This strategy would enable the company to serve a broader customer base, including the emerging clean energy industry in the Indian subcontinent.
- Key risks include: 1) higher working capital (160 days in FY23) due to higher inventory days (166 days) amid supply chain constraints for its key raw material (semiconductor); and 2) a slowdown in the US operations (~5% growth in FY23) due to a delay in order flows. However, with easing supply chain challenges, we expect working capital days to improve further, while US operations may remain under pressure for the short term.
- We estimate its revenue/EBITDA/Adj. PAT to clock a robust CAGR of 23%/27%/45% over FY23-FY26, driven by strong order book growth (24% CAGR) and an improving margin profile. Avalon currently trades at 22x FY26E P/E with RoE/RoCE of 19.5%/19% in FY26E. We initiate coverage on the stock with a BUY rating and a TP of INR730 (premised on 30x FY26E P/E).

One-stop shop for the entire EMS value chain

- Avalon has evolved over the years into a provider of the entire box building solutions, which include PCB design, PCB assembly, new product development, cable assembly, sheet metal, plastics, magnetics, testing and logistics.
- Each of these verticals exists as a separate profit/loss center besides serving as a captive supplier for box build offerings. For instance, for the aerospace vertical, the company only does sheet metal, plastic and cable manufacturing.

Stock performance (one-year)

- However, the company's primary objective is to enhance its customer value proposition by fully manufacturing the entire box build. As of FY23, box build accounts for ~47% of the total revenue, up from 44% in FY22. It is further expected to grow with increased orders from the Clean Energy vertical.

Increasing presence across growing industries

- Avalon manufactures products for various industries/verticals, with Industrials accounting for 29% of revenue in FY23, followed by Clean Energy (25%), Mobility (21%), Communication (11%), and Medical and other sectors (including defense) at 13%.
- Avalon is witnessing strong order inflows in the clean energy segment with the evolving market for EVs, increasing adoption of renewable energy, and the development of fuel cells. The share of clean energy is expected to significantly bump up to ~30-32% over the next couple of years.
- Another growing sector for the company is aerospace. It recently secured a huge order from a prominent global aircraft conglomerate for a factory transfer to India. This will be a key milestone for the company, and is expected to fuel future growth in this vertical.

Business model to strengthen customer relations

- Avalon thrives in industries with extended life cycles, high technical demands, and a need for precision. This fosters a strong customer connect and a better margin profile.
- As of FY22, customers that contribute ~80% of the business have an average relationship spanning over seven years with Avalon. This reflects the strong customer loyalty resulting from the business model.
- The new product development (NPD) division further solidifies customer relationships by involving Avalon in PCB design, a process spanning 12 to 18 months. Thereafter, by leveraging its comprehensive offerings across the value chain, the company expands its share of wallet with existing customers.

Global footprint – Best of both worlds

- The majority of manufacturing (~72% in FY23) takes place in India, with operations in Tamil Nadu (seven units) and Karnataka (three units). Additionally, the company operates two units in the US (one each in Georgia and California). Avalon derives the majority of its revenue (59% in FY23) from customers in the US.
- Avalon is the only company that has a manufacturing facility in the US. From its US operations, the company can easily cater to local (59% customer mix in FY22) as well as global customers.
- Avalon's Indo-US manufacturing footprint gives customers the leverage to buy directly from India or through its US operations or through a hybrid model that leverages the strengths of both the US and India.
- Also, with presence in the North American market, the company is able to cater to high-growth and high-margin industries such as Clean Energy and Aerospace.

Solid financial performance

- Avalon has seen healthy growth over the last few years, with revenue/EBITDA/adj. PAT CAGRs of 14%/20%/66% over FY20-FY23, driven by strong growth in India operations (16% CAGR). US operations saw an 11% CAGR.
- Margin improvement was driven by an increasing mix of high-margin verticals Clean Energy/Communication (33%/36% CAGR) and an increase in the mix of box build to 47% in FY23 from 44% in FY20.
- Avalon's working capital extended to 160 days in FY23 due to supply chain challenges with key raw materials, notably semiconductors. This negatively impacted the company's cash flows (CFO turned negative). However, we anticipate improved working capital days as supply chain issues ease going forward.

Multiple drivers in place! Initiate with a BUY

- Avalon, through its vertical integration and Indo-US operations, has been riding the wave of robust growth in the EMS industry in both regions.
- The company has developed a strong business model over the years in terms of product offerings, NPD division, presence across the value chain and multi-locational manufacturing advantage.
- These factors make Avalon a preferred option for customers, as evident in its growing order book size (~35% CAGR over FY20-23) to INR12.3b as of Mar'23.
- We expect the company's growth to be driven by two factors: 1) an increase in the mix of box build (through new orders or increasing wallet share); and 2) order flows from high-growth/high-margin industries such as Clean Energy and Aerospace.
- We estimate Avalon to deliver revenue/EBITDA/Adj. PAT CAGR of 23%/27%/45% over FY23-26.
- Avalon currently trades at 22x FY26E P/E with RoE/RoCE of 19.5%/19% in FY26E. We believe that the company will benefit from strong order inflows from emerging applications in both the US and India. We initiate coverage on Avalon with a BUY rating and a TP of INR730 (premised on 30x FY26E P/E).
- **Key downside risks:** a) increase in working capital; b) delay in execution of order books; c) supply disruption of semiconductors; and d) customer and geographic concentration

Exhibit 116: Comparative valuation

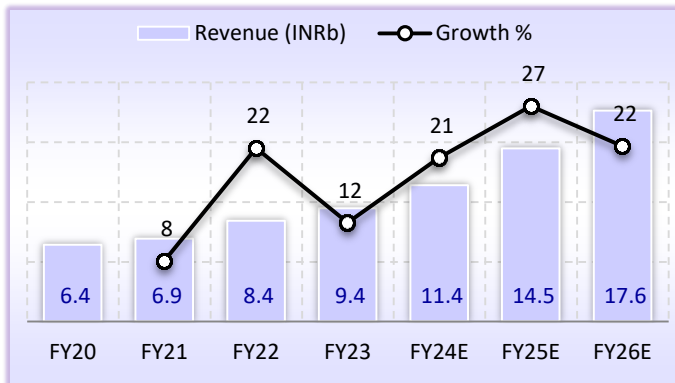
Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

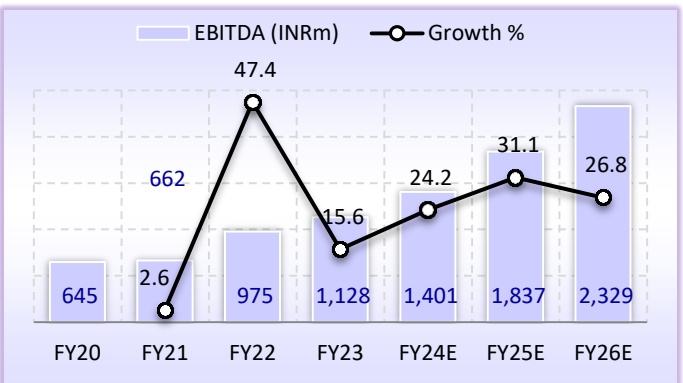
Source: MOFSL, Company, *BBG

STORY IN CHARTS

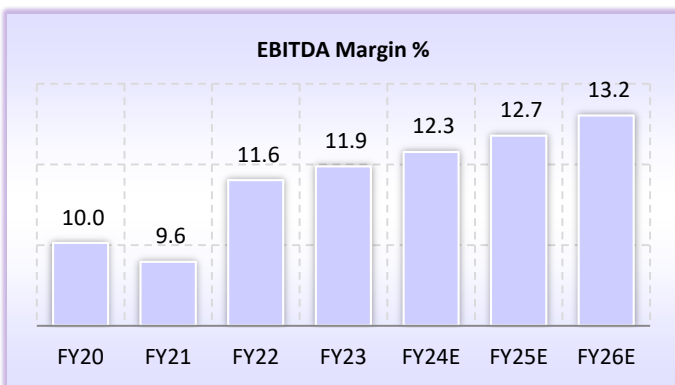
Revenue CAGR of 23% over FY23-FY26E...



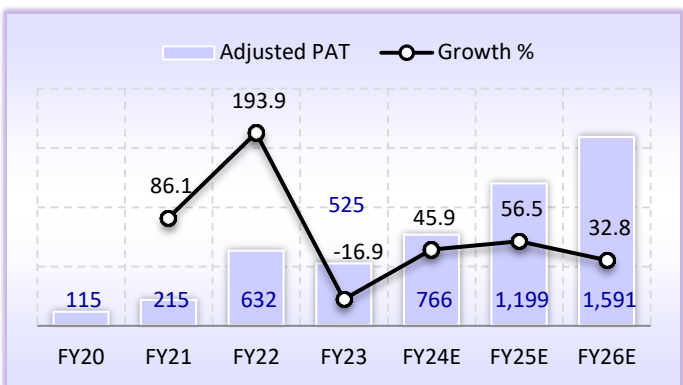
...with EBITDA registering a CAGR of 27%...



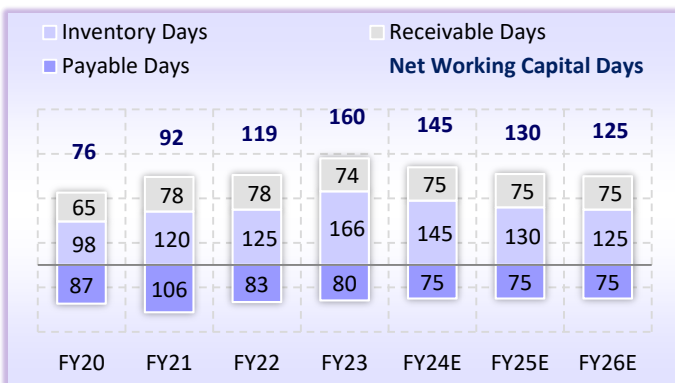
...led by margin improvement to 13.2% in FY26E



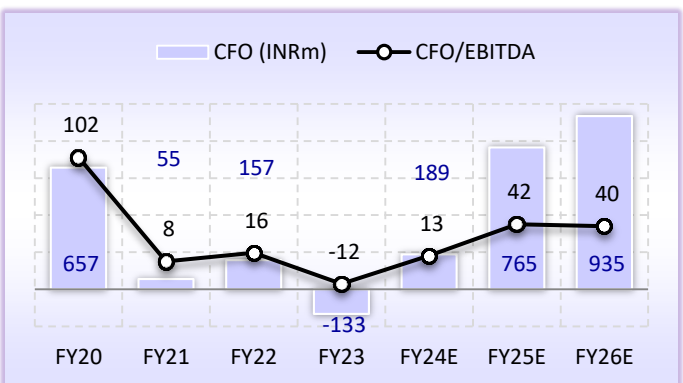
Adj. PAT CAGR of 45% over FY23-26E



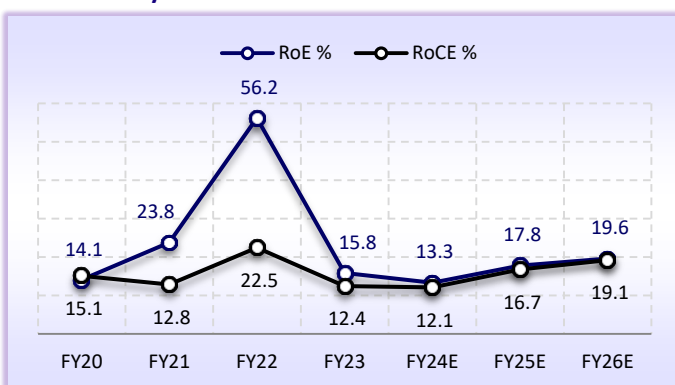
Working capital days to improve to 125 days by FY26E...



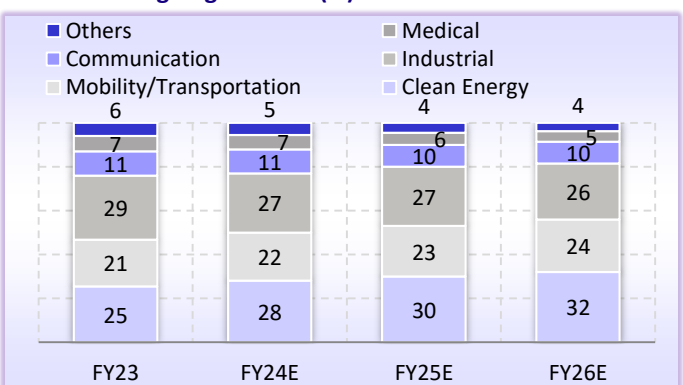
...leading to decent cash flow generation...



...and healthy return ratios



Business mix going forward (%)



Source: MOFSL, Company

Company overview

Avalon operates in high-mix and flexible-volume product manufacturing segment

59% of revenue from the US

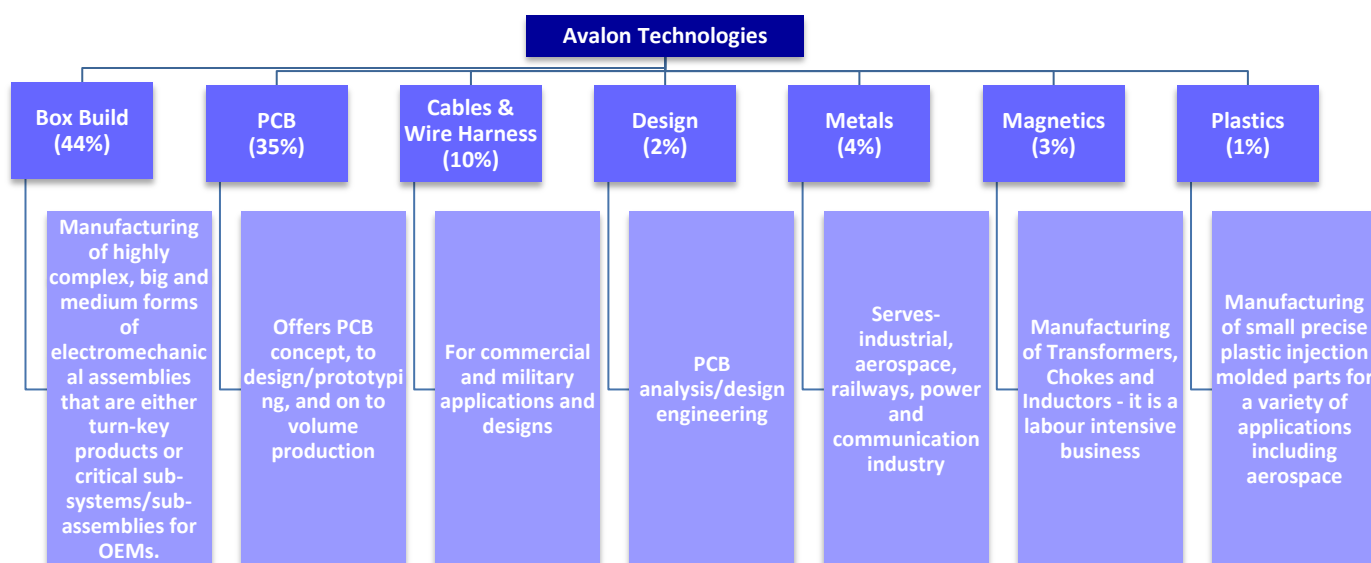
- Beginning its journey in 1999 in Chennai, India, as a pure play PCB assembler, Avalon is now one of the leading vertically integrated players in the country. The company, as of the IPO, was entirely bootstrapped.
- The company offers manufacturing services across the value chain, including designing and new product development, PCB assemblies, cable assembly, wire harness, machining and magnetics, injection molded plastics, sheet metal fabrication and box build.
- Avalon operates in high-mix and flexible volume product manufacturing segment across businesses, such as Clean Energy, Mobility/Transportation, Industrials, Communication, Medical and others (includes defense).
- The company generates ~59% (FY23) of its revenue from the US and the balance from India. The company has set up a subsidiary to facilitate its US operations. However, a major part of manufacturing is done in India, i.e., Tamil Nadu (seven units) and Karnataka (three units). The company also has two units in the US (one each in Georgia and California).

Exhibit 117: Avalon's Corporate Structure

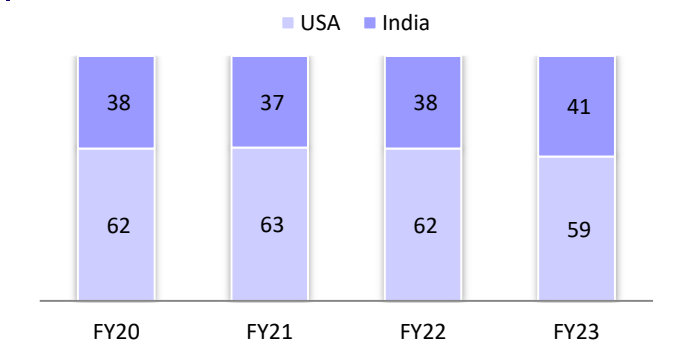


Source: MOFSL, Company

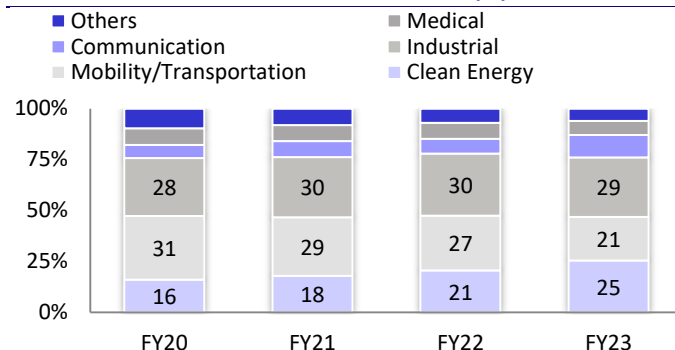
Exhibit 118: Avalon's business overview (FY22)



Source: Company, MOFSL

Exhibit 119: Major revenue from USA (%)

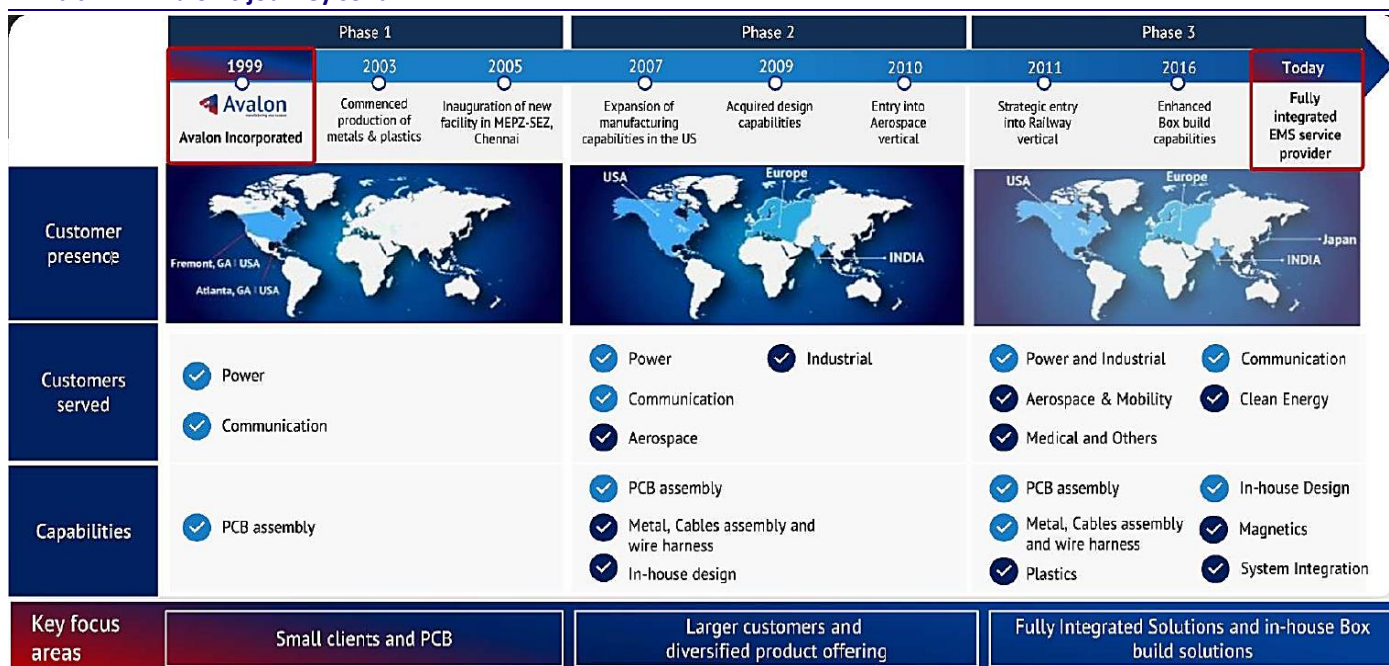
Source: Company, MOFSL

Exhibit 120: Diversified business verticals (%)

Source: Company, MOFSL

Exhibit 121: Catering to growing applications and high-precision industries

Source: Company, MOFSL

Exhibit 122: Avalon's journey so far

Source: Company, MOFSL

One-stop shop for the entire EMS value chain

Box build business mix to grow further from 47% in FY23

- Over the years, Avalon has evolved from only assembling PCBs to now manufacturing all the products under the EMS values chain.
- The company offers the entire box building solutions, which include PCB design, PCB assembly, new product development, cable assembly, sheet metal, plastics, magnetics and finally testing and logistics.
- These capabilities mentioned below help Avalon deliver a **true complex box build solution** (refer exhibit 123):
 - **PCB assembly** (35% of revenue in FY22): The company makes complex multi-layer assemblies that are used for mission-critical applications, like railway signaling systems, roadway systems, vehicle tracking systems, medical equipment, etc.
 - **PCB design** (2%): Avalon has one of the India's largest PCB design and analysis teams based out of Bengaluru. Its **new product development** (NPD) division typically starts with the component-level design engagement with customers. This allows the company to be entrenched with customers from the conception of their product, and subsequently move up the value chain by leveraging its fully integrated offerings.
 - **Cables** (10%): The company does complex cable assemblies and wire harnesses.
 - **Sheet metal and machining** (4%): The company makes precision engineering products for mission-critical applications and also has NADCAP approval for sheet metal fabrication and welding. The company does ~50-60% of metals business for aircraft parts (aerospace vertical).
 - **Magnetics** (3%): Avalon makes different types of transformers or magnetics (e.g., chokes and inductors) that are specifically designed and manufactured for clean energy and other products.
 - **Plastics** (1%) is a small and growing division with injection molding capabilities.
 - Besides, the company also manages supply chain and logistics to have a complete offering for customers.

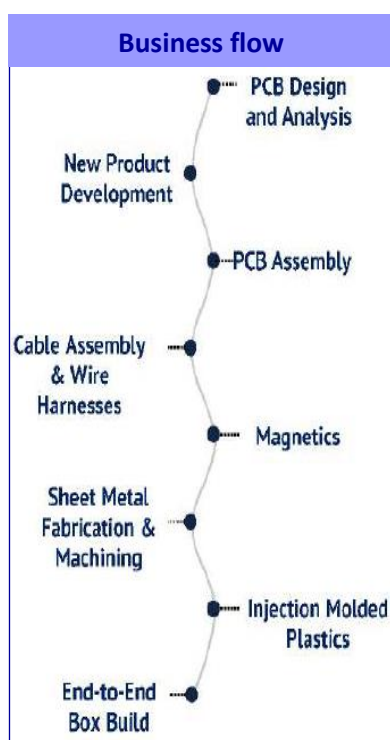
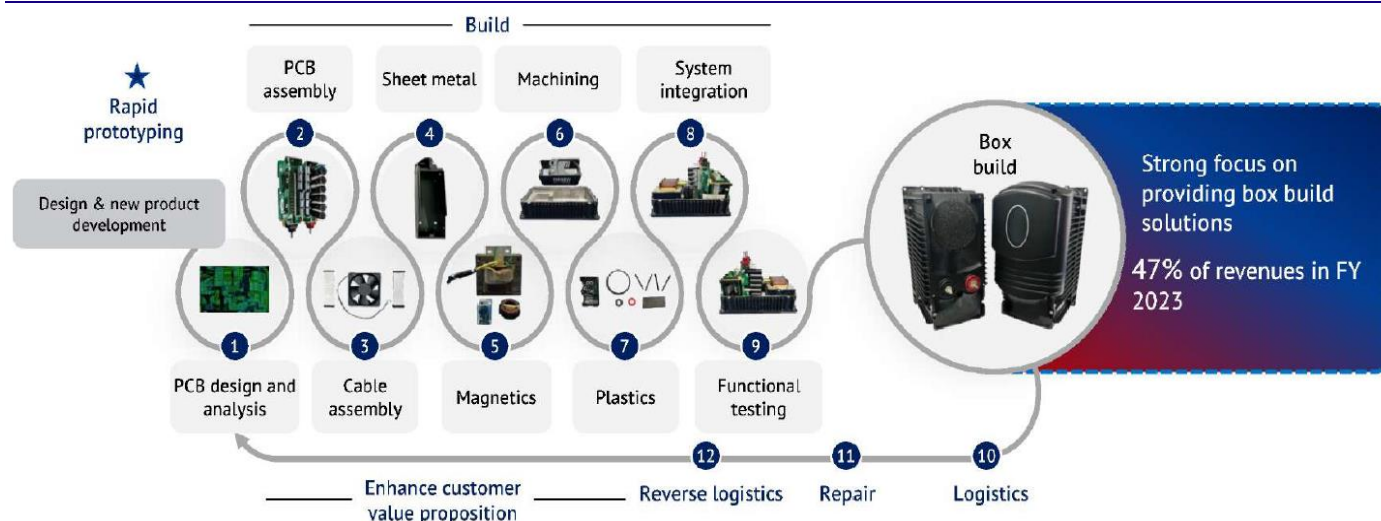
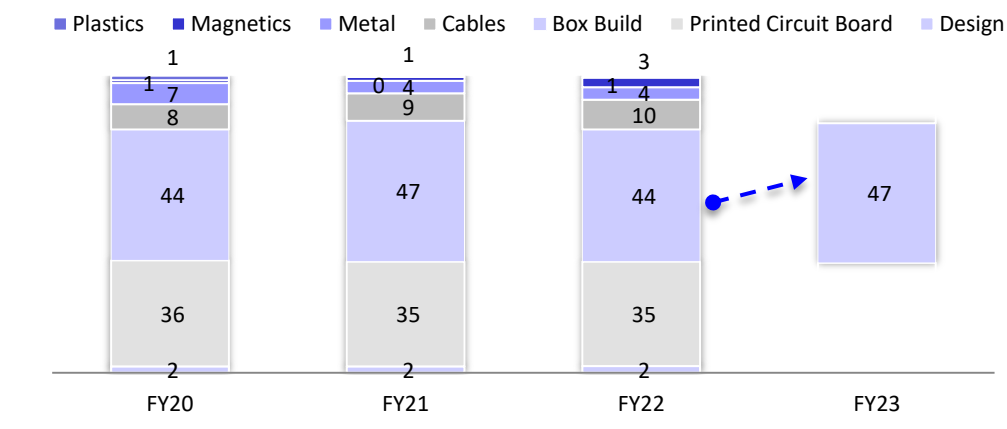


Exhibit 123: Vertically Integrated manufacturing; offering the entire Box build solution



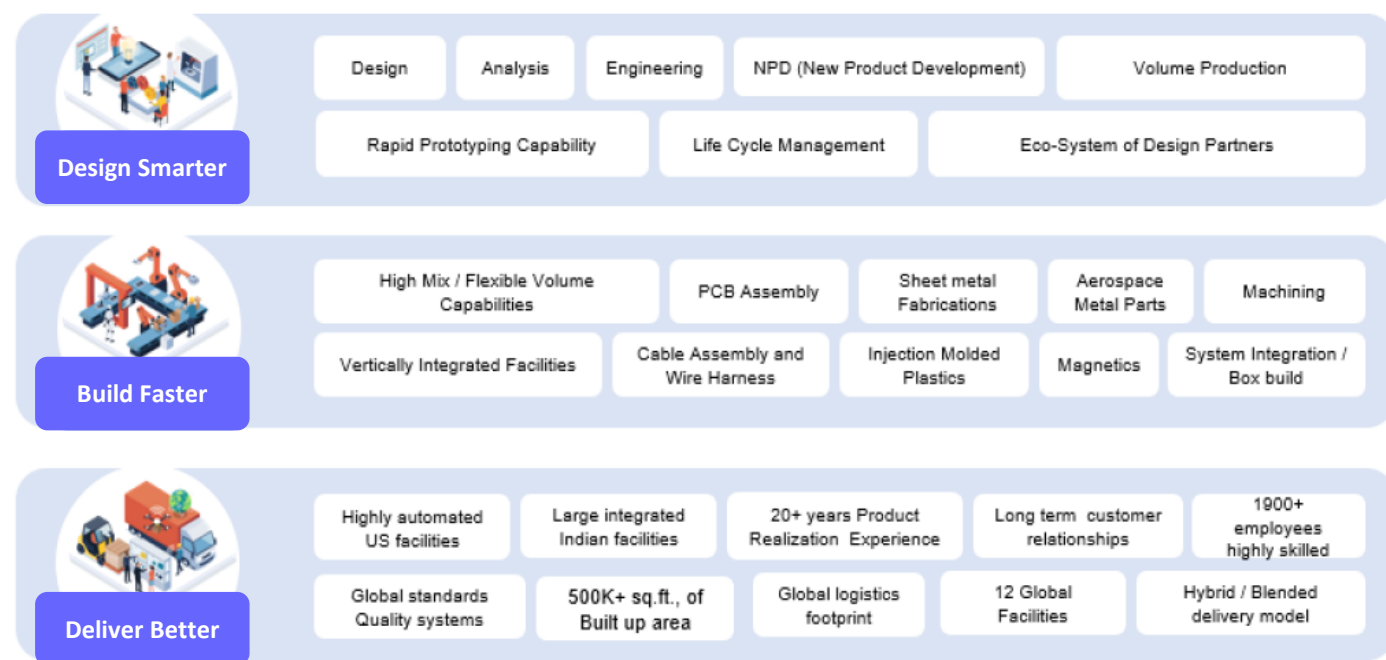
Source: Company, MOFSL

- The major focus area for the company is to increase the value proposition for customers by manufacturing the entire box build. Currently box build contributes ~47% of total revenue in FY23, up from 44% in FY22.

Exhibit 124: Segment mix of the company (%)

Source: MOFSL, Company

- Each of the verticals exists as separate profit/loss center besides serving as a captive supplier for its box build offerings.
- The diversification in these areas has empowered the company to expand across multiple verticals.
- The company's portfolio diversification and expansion are chiefly fueled by customers' needs and technological advancements in the industry.
- The evolution of its portfolio has significantly contributed to growth acceleration, enabling it to retain existing clientele and attract new customers.

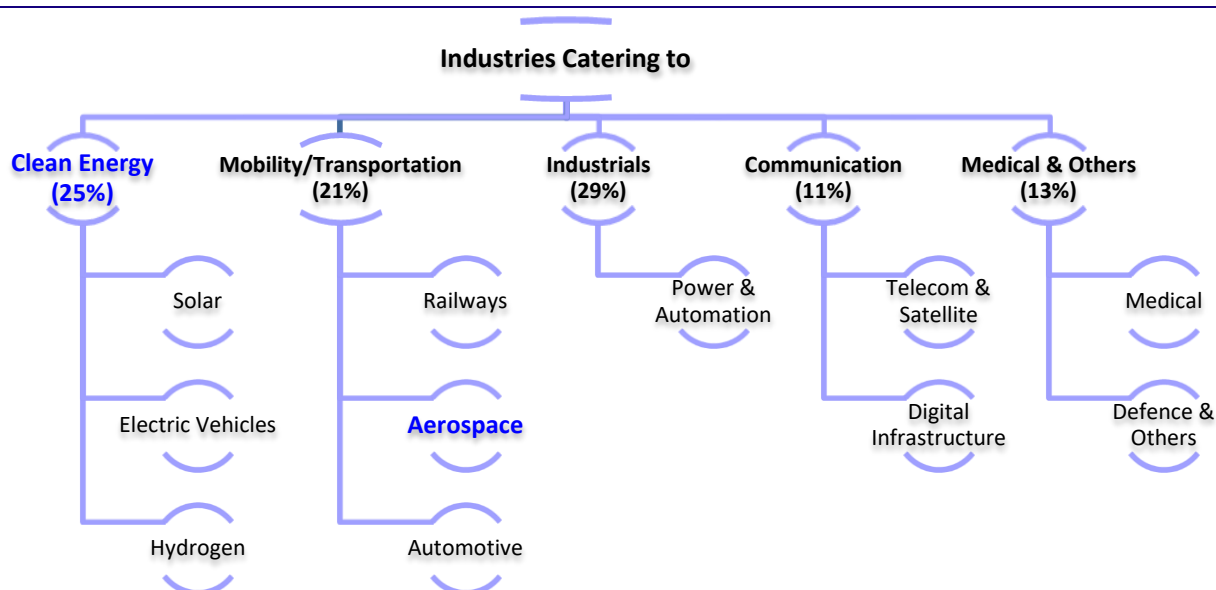
Exhibit 125: Avalon has unique set of customers for each of the below mentioned capabilities

Source: Company, MOFSL

Increasing presence across growing industries

- Avalon manufactures products for diverse industries/verticals, such as Clean Energy (25% revenue mix in FY23), Mobility (21%), Industrials (29%), Communication (11%), Medical and others (includes defense) (13%).
- Clean Energy, Mobility (aerospace and railways) and Industrials account for a majority (76% in FY23) of business and will be the key focus areas for the company going forward.

Exhibit 126: Presence across diverse industries



Note: Clean Energy and Aerospace will be key focus areas going forward

Source: Company, MOFSL

- Avalon has broadened its business to include products like electric mobility, energy systems, satellite communications, telematics, and more. These products are utilized in high-growth sectors like Clean Energy and Emerging Communication Technology.
- The demanding technical requirements of these businesses allow Avalon to offer advanced full-spectrum engineering solutions, making it capable of catering to high-precision industries like aerospace and defense.
- Avalon is witnessing strong growth in clean energy, aerospace, and the EV side of mobility, and is well equipped to deal with new customers and new products.
- Since these industry products have long life cycles and require high-precision work, they offer higher margins than other industries.

Clean Energy

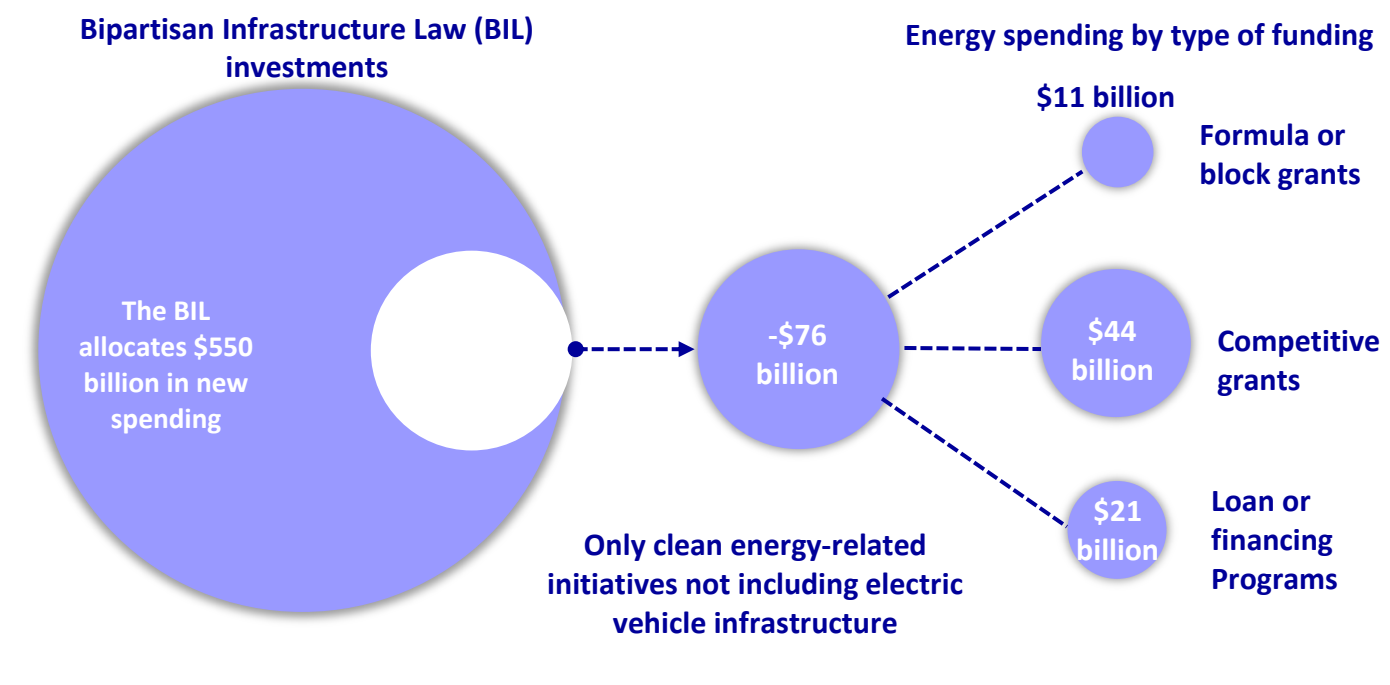
- Under clean energy, the company caters to solar, EVs and hydrogen segments majorly for its US clientele.
- The company's offerings under clean energy include: EV charging points, electronics dashboards/display, battery management systems, charging station, motor/vehicle control unit, AC/DC convertor; Solar – trackers/invertors/chargers/ micro invertors/ battery; and hydrogen – power

US government under the BIL will provide incentives worth USD76b for manufacturing of EVs in the US

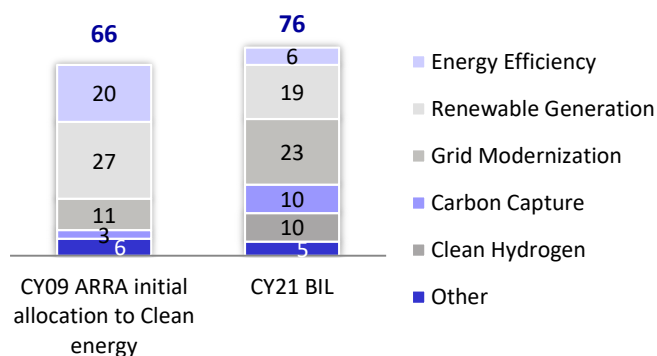
Clean Energy revenue mix to improve to 32% by FY26 from 25% in FY23

- units of fuel cells based on Pym technology. (A fuel cell is an electrochemical device that converts chemical energy from a fuel into electrical energy).
- The clean energy segment is witnessing strong growth, with increasing penetration of renewables in India’s energy mix, and increasing strictness of government policies in North America aimed at reducing the carbon footprint.
 - The US has introduced the Bipartisan Infrastructure Law (BIL) (~USD76b investment) that will provide incentives for manufacturing in the US. This will drive the expansion of electric vehicles and will encourage automakers to choose EMS.
 - The company has recently won business from global majors in clean energy. Given the high complexity of the order, it will take Avalon 6-12 months to deliver products at a sizable scale to these new customers. Revenue from this new order is expected to start from the latter part of FY24.
 - In 1QFY24, the company added three new customers in clean energy: two in the US and one in India. One of the new customers is for EV and revenue for which is expected to ramp up in 4QFY24.
 - Avalon also manufactures power units for fuel cells based on Pym technology.
 - The segment has seen a CAGR of 32.7% over FY20-23, with a revenue mix improving from 16% in FY20 to 25% in FY23.
 - With recent order wins and continued focus of the company to garner more orders in this space, we expect this business to see a strong CAGR of ~33% over FY23-FY26 with mix improving to 32% by FY26.

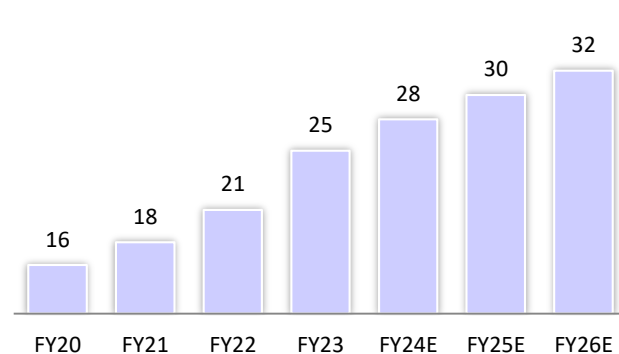
Exhibit 127: The US BIL targets sizable portion for the energy sector



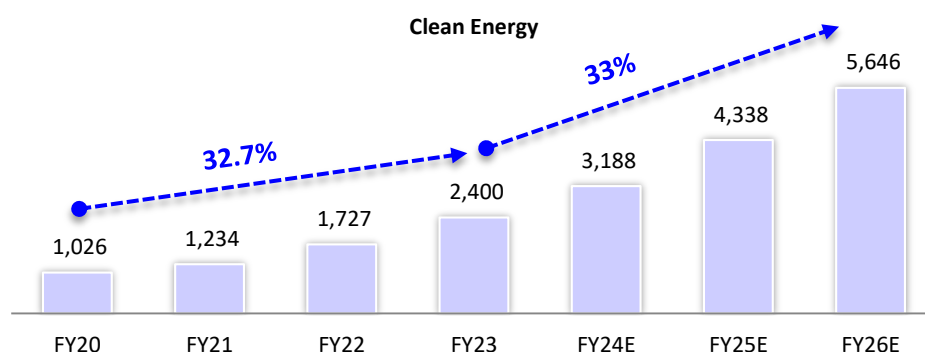
Source: Mckinsey, MOFSL

Exhibit 128: US BIL- Clean Energy Funding Mix (USD b)

ARRA – American Recovery and Reinvestment Act
Source: Mckinsey, MOFSL

Exhibit 129: Avalon's clean energy mix to improve (%)

Source: Company, MOFSL

Exhibit 130: Fastest-growing segment for the company with ~33% CAGR over FY23-26E

Source: Company, MOFSL

Aerospace is a high margin business

Aerospace Industry (Mobility vertical)

- The Aerospace business is part of the Mobility/transportation segment, which contributed ~21% in FY23. Railways and automotive EMS are also included in this segment.
- **Key offerings under each business:**
 - **Railways:** signaling systems, pilot seating, tracking system, braking system, battery box, passenger information system and HVAC, among others.
 - **Automotive:** electronics dashboard, digital cockpit, telematics control unit and battery management system
 - **Aerospace:** Pilot seat frame, crew seat frame, business class seat actuator parts, smoke detectors enclosure, lighting part & enclosure, engine parts, cargo parts and auxiliary power enclosures
- Of the three verticals, the aerospace business is entirely export oriented, while railways and automotive businesses are more domestic.
- Aerospace has been the key focus area for the company and it currently manufactures only metals, cables and plastics for its clients.
- Margins are the higher in the aerospace business compared to other segments in the mobility vertical.
- The company has also recently won new business from one of the world's largest aerospace conglomerates, including a factory transfer project to India.

Received major orders in Aerospace such as factory transfer project and plastic part tooling for commercial aircrafts

- This factory transfer project is a significant win for Avalon and is a vote of confidence in the company's capabilities. This is expected to help Avalon grow its business in the aerospace sector.
- Avalon also received its first major tooling order in 1QFY24 for plastic part used in interiors of commercial aircraft. This project is expected to take 8 to 12 months to begin and will generate ~USD3-5m in the first year and only from one part. The company is also looking to expand this by doing more parts.
- The management expects ~40-50% growth in this segment over the next few years.

Exhibit 131: Mobility to record CAGR of 27.9% over FY23-26E

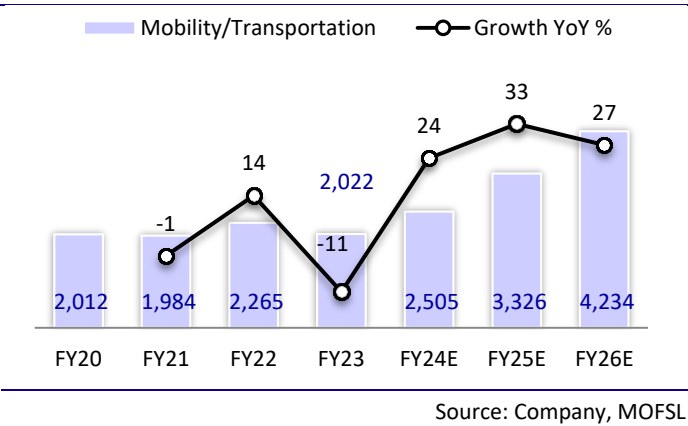
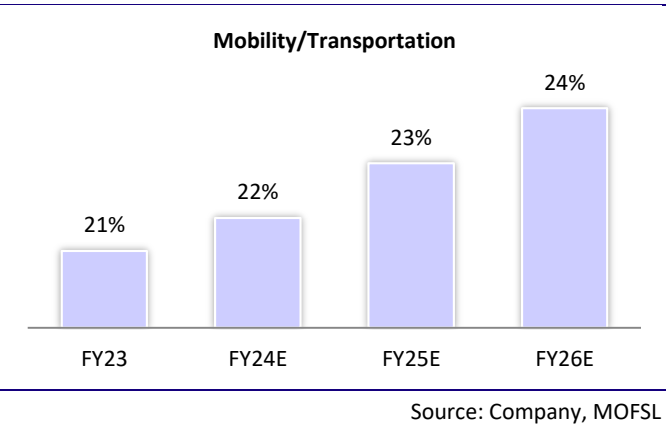


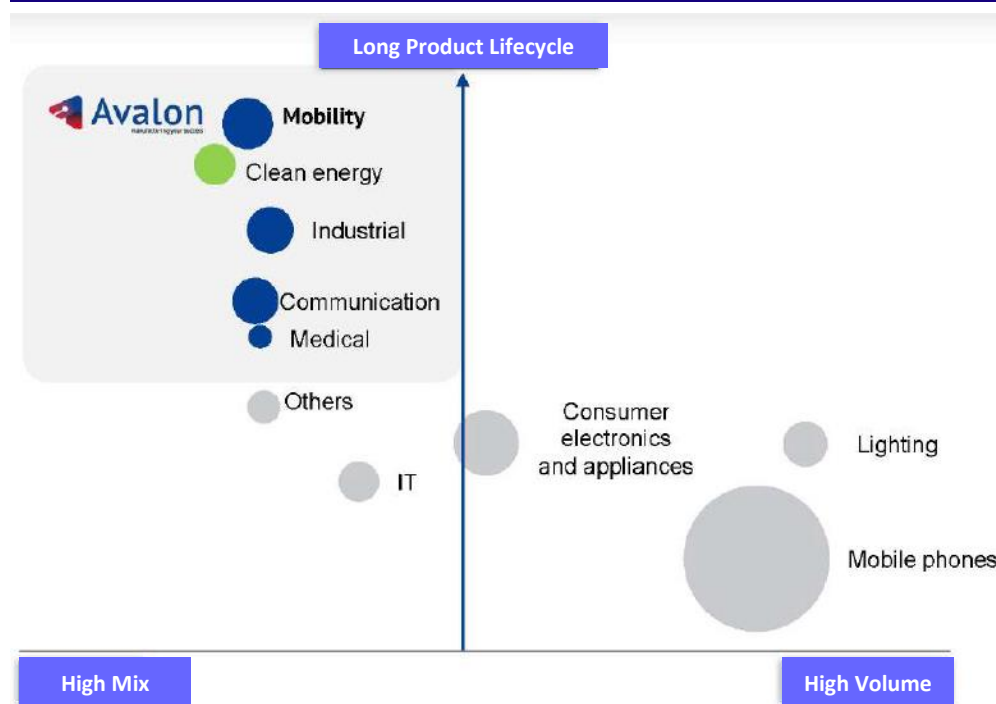
Exhibit 132: Aerospace division to drive up mobility mix



Business model to strengthen customer relation

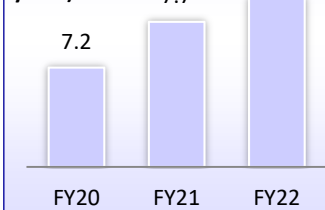
- Avalon manufactures products under diverse industry/verticals such as power, clean energy, railways, aerospace and medical industries, which are characterized to be long life cycles.

Exhibit 133: Avalon has a strong presence in industry classified as long lifecycle industry

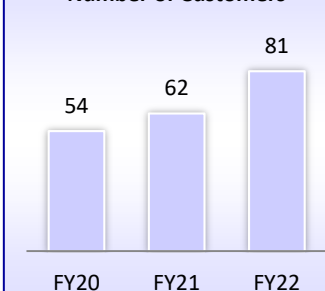


Source: Company, MOFSL,

Average length of relationship with customers who contribute to top 80% revenue (in number of years)



Number of Customers

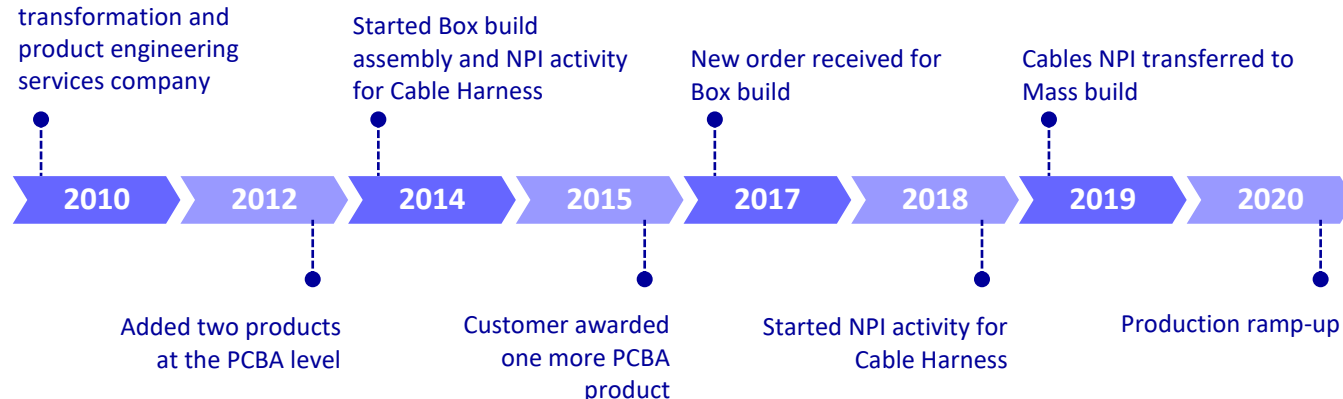


- This helps Avalon maintain a strong long term relation with clients as it is not easy for customers to switch over to alternative EMS providers as the cost, time and effort for such transitions are high.
- As of FY22, customers that contribute ~80% of business have an average relationship period of over seven years with Avalon. This indicates customer stickiness that Avalon enjoys thanks to its business model.
- **For Instance:**
 - **Railways:** Long lead times and significant barriers to entry exist in railway projects due to customer acquisition, onboarding, prototyping, OEM approvals, and the need for high reliability anti-collision signaling systems.
 - **Aerospace:** This industry also faces extended development lead times, often lasting several months or even years depending on product complexity. Aerospace product development follows a series of gates, including sample development, transition development, pilot lots, and subsequent production.
- The NPD offering of the company also acts as a first step in building a long-term relation with customers. The company offers design and NPD services starting from component level and it utilizes its vertical integration to provide integrated box build solutions. Its in-house logistics, including warehousing, enables it to engage with clients from design to system delivery.

- Below are the two case studies where Avalon has initially engaged with the customer for a single product then gradually moved on to providing multiple products or the entire box build solution, thereby increasing its wallet share.
- Case Study 1: Initially started offering a customer its design services and then moved up the value chain to offer cables, PCBA and box build services. This customer contributed ~2.5% of revenue in FY22.
- Case Study 2: Started with supplying cable assemblies to a leading OEM of telematics and fleet management equipment in the US, and subsequently, went on to provide a full box build with PCBA. This customer contributed ~8% of revenue in FY22.

Exhibit 134: Case Study 1

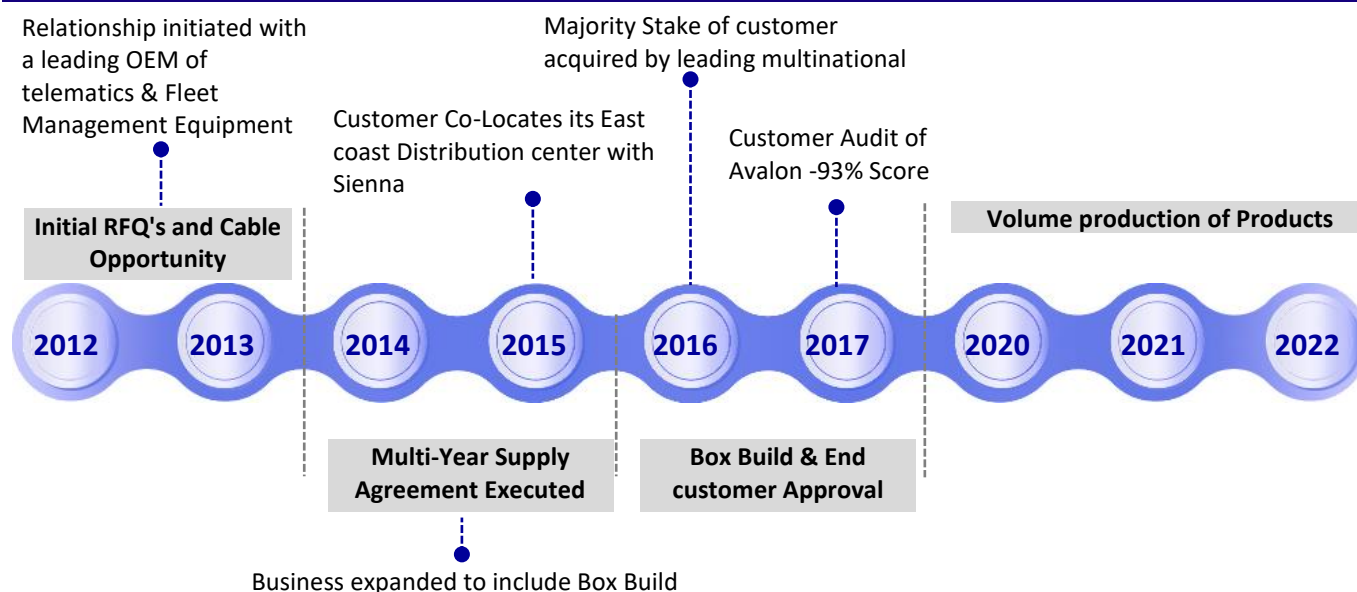
Joint development with leading provider of digital transformation and product engineering services company



Source: Company, MOFSL,

Exhibit 135: Case Study 2

Relationship initiated with a leading OEM of telematics & Fleet Management Equipment



Source: Company, MOFSL,

- Avalon's success so far is attributed to a robust and expanding customer base, along with an emphasis on up-selling and cross-selling. This strategy is expected to continue to drive future growth, expand market share, facilitate new product development, and venture into new markets.

Exhibit 136: Avalon's marquee clientele across business verticals

Clean Energy	Mobility	Industrials	Medical
<ul style="list-style-type: none"> ❖ TMEIC ❖ Ohmium India Private Limited 	<ul style="list-style-type: none"> ❖ Kyosan India Private Limited ^ ❖ Faiveley Transport Rail Technologies India Private Limited, a Wabtec Company ❖ TransDigm Technologies India Private Limited ❖ Zonar Systems Inc.^ ❖ Collins Aerospace^ ❖ Malabar International^ 	<ul style="list-style-type: none"> ❖ e-Infochips Private Limited^ ❖ Haas Automation, Inc 	<ul style="list-style-type: none"> ❖ Caire Inc

^relationship for more than seven years

Source: Company, MOFSL,



Global Footprint – Best of both worlds

Avalon is the only EMS player in India that has a full-fledged manufacturing facility in the US and a major revenue share from the US.

Global manufacturing base

- Avalon has total 12 manufacturing units, with two in the US (one in Atlanta, Georgia, and one in Fremont, California) and 10 in India (seven in Chennai, Tamil Nadu, one in Kanchipuram, Tamil Nadu, and two in Bengaluru, Karnataka).
- As of FY23, Avalon has ~72% manufacturing presence in India and the balance in the US. Through these locations, the company serves customers primarily in the North America, India and the EU.

Exhibit 137: Global manufacturing footprint

Technical capabilities	
Production Lines	65
SMT line	10
THT Lines	12
Assembly Lines	43
Total installed SMT lines	366m components per year

SMT: Surface Mount Technology
THT: Through Hole Technology



Source: Company, MOFSL,

Avalon's Hybrid manufacturing model leverages the strengths of both US and India.

- Avalon's Indo-US manufacturing footprint gives customers the leverage to buy directly from India or through US operations or through a hybrid model that leverages the strengths of both US and India.
- Through a hybrid model, the company offers two modes of delivery, depending on customer preference:
 - i) the automated portion of manufacturing is conducted in the US facilities, and the labor-intensive portion is conducted in India and the product is configured in the US; or,
 - ii) the option to cater directly to customers in the US from the Indian manufacturing bases, leveraging high-value markets and optimal cost manufacturing in India.
- For instance, certain customers approach Avalon with the proposition to have the end product configured or system integrated in the US, while the component / sub-assembly level manufacturing is carried out in India. Through this, customers can cater to the 'Made-in-USA' initiative, while at the same

Setting up two new export-oriented facilities in MEPZ, Chennai spread across 160,000sqft

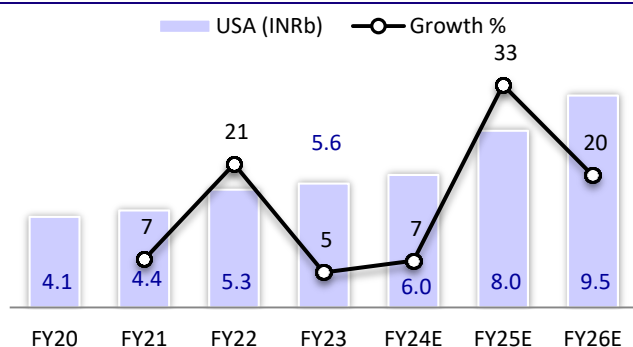
time being able to procure products at optimal costs. Avalon also benefits from the 'Made in India for the US'.

- Avalon is in process of setting up two more facilities in Madras Export Processing Zone (MEPZ)-Chennai spread across 160,000sqft. These facilities are expected to become operational in six months.
- The large portion of this expansion will be for box build (generator type boxes which are large in size). We believe this will be used for clean Energy orders (power units), which the company has recently highlighted.
- In the second facility, the company will be moving its cable and harness assembly and the existing space will be used for PCB assembly.
- So ~50% of the capex (~INR300-350m in FY24/~INR400-450m in FY25) will be for land and building to create more space for large orders and the balance 50% will be for machinery additions.
- Going forward, the company targets to maintain a manufacturing mix of 80:20 between India and the US.

Global Client base

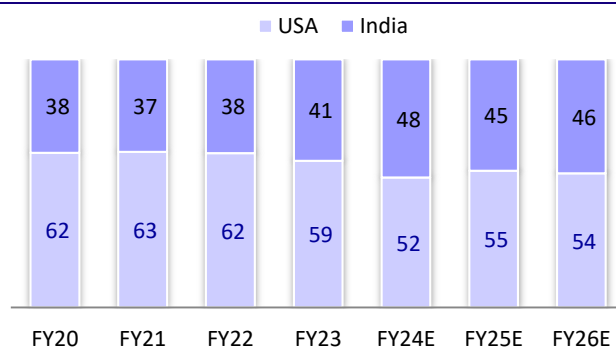
- Avalon generates ~59% of revenue from the US operations and the balance 41% from India.
- The company is the only EMS player in India that has a higher global revenue share and a manufacturing base outside India.
- The US operations help Avalon garner more US clients, thereby enabling it to benefit from the growing North America's EMS industry.

Exhibit 138: US Revenue to clock CAGR of 19.6% over FY23-26E



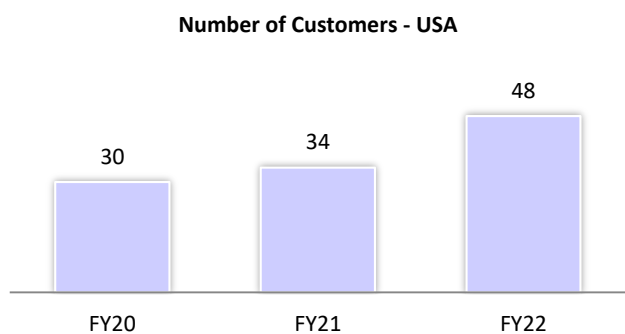
Source: Company, MOFSL

Exhibit 139: US continues to hold major revenue share



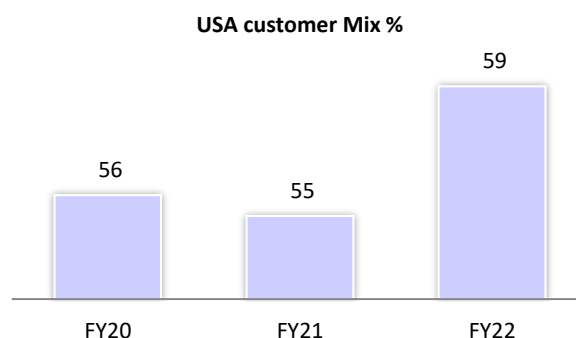
Source: Company, MOFSL

Exhibit 140: Increasing US customer base...



Source: Company, MOFSL

Exhibit 141: ...with improving overall customer Mix



Source: Company, MOFSL

- The customer base in the US increased from 30 in FY20 to 48 in FY22. Avalon is focusing on increasing the order book and the customer base in the US.
- The major factor is the benefit of its hybrid manufacturing model, i.e., low cost and high value mix.
- The other reason is the growing EMS market in the North America.
- Going forward, the company targets a 50:50 revenue mix between the US and India.

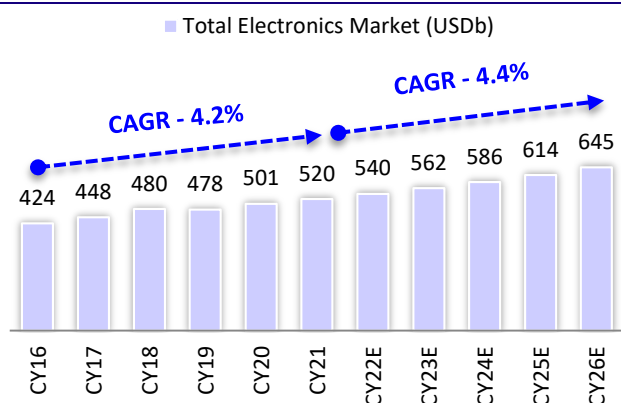
North America EMS industry overview

- As per Frost and Sullivan, the North American electronics industry was valued at USD520b in CY21 and is expected to witness a CAGR of 4.4% to reach USD645b by CY26. This directly contributes ~1.6% of US GDP.
- The EMS market in North America was valued at USD91b in CY21 and is expected to see a CAGR of 4.8% to reach USD114b in CY26. During the past decade, the region has lost market share due to offshore activities and changes in manufacturing investment.
- Now the EMS market in North America is experiencing a positive impact due to the US-China trade conflicts, which are leading to a reshoring of manufacturing back to the US. Imports in North America contribute nearly 34% of total electronics market in CY22.
- Additionally, supply chain disruptions caused by Covid-19 are prompting OEMs and EMS companies to reconsider their supply chain strategies, favoring a more resilient and locally reliant network. This trend is strengthening the market for EMS services in the region.
- Further, the rising stringency in the government policies in North America to curb the carbon footprint is resulting in growth for electric vehicles and will encourage automakers to opt for EMS.
- Avalon will benefit from the government initiatives in infrastructure, clean energy and sustainability in the US.

North America's EMS industry expected to register CAGR of 4.8% over CY21-26E

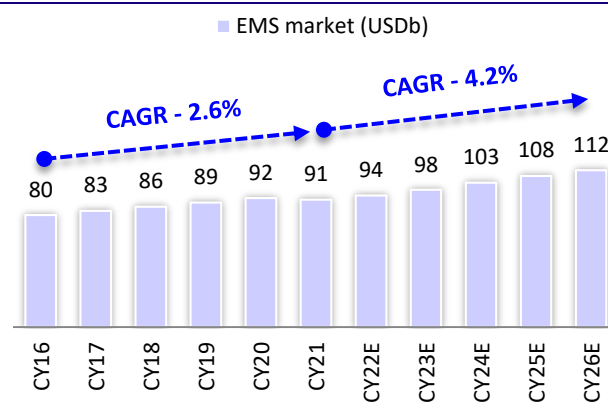
Reshoring of manufacturing back to the US

Exhibit 142: North America Electronics market size



Source: Company, MOFSL

Exhibit 143: North America's EMS growth to pickup



Source: Company, MOFSL

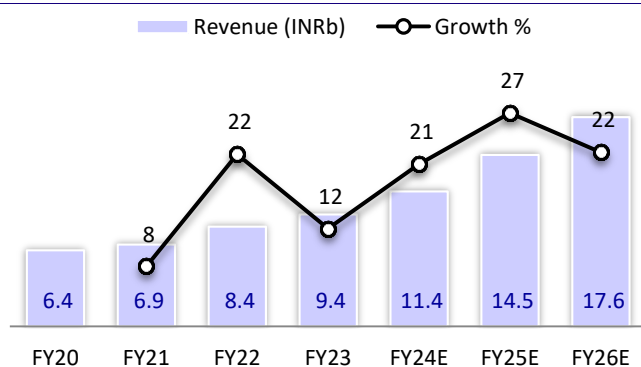
Solid financial performance

Revenue/EBITDA/PAT witnessed 14%/24%/66% CAGRs over FY20-23

Strong revenue trajectory going ahead...

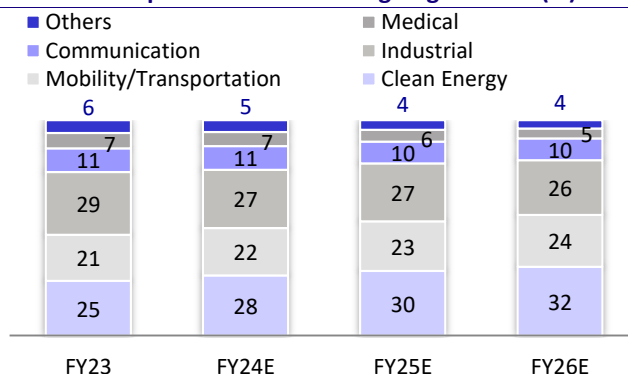
- Avalon recorded decent revenue growth over the last three years, with a CAGR of ~14% over FY20-23. This was mainly attributable to Covid-19-induced slowdowns in major economies such as US.
- US operations witnessed a slower ~11% CAGR over FY20-23, while Indian operations witnessed a healthy CAGR of 16%. Also in 1QFY24, the US operations remained muted due to delayed ordering by US customers. 2HFY24 is expected to be strong with revenue flowing in from recent order wins.
- Among business verticals, Clean Energy, Industrials and Communication were the fastest-growing verticals for the company, with a CAGR of ~33%, 15% and 36%, respectively.
- Going forward, the Clean Energy and Mobility divisions (aerospace mainly) are expected to lead growth for the company, with an expected CAGR of 33% and 28%, respectively, over FY23-26. Growth will be driven by a strong thrust by the company to cater to high-growth industries and expectations of sizable order inflows in the near to medium term.
- The management has guided for an improvement in the Clean Energy business mix to 35% in the next 3 to 4 years from 25% currently, indicating a high-growth outlook. Similarly, for the aerospace business, the management has guided for 30-40% growth in the near term. Both verticals witnessed growth in exports.
- We expect the US operations revenue CAGR to improve to ~20% over FY23-26E, while India operations to register a higher CAGR of ~28% over the same period.
- With a strong thrust across key business verticals, Avalon is expected to record a robust CAGR of 23% in total revenue over FY23-26.

Exhibit 144: Revenue to see 23% CAGR over FY23-26



Source: MOFSL, Company

Exhibit 145: Expected Business Mix going forward (%)

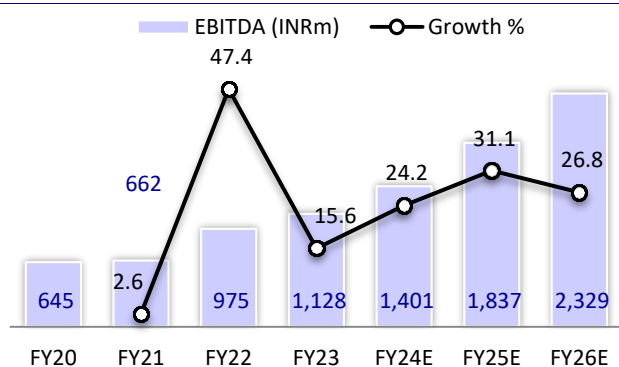


Source: MOFSL, Company

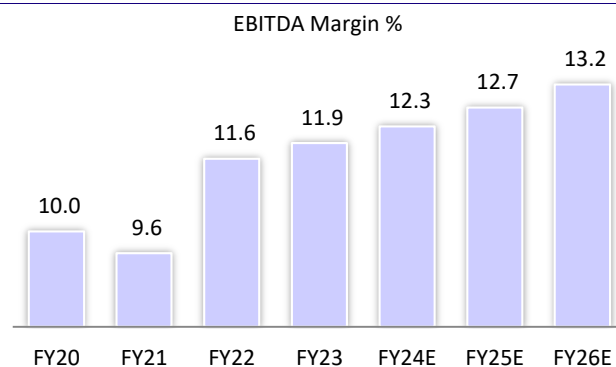
...coupled with margin expansion

- Avalon's margin profile has witnessed an improvement over the last few years' despite volatile raw material prices. Margins improved from 10% in FY20 to 11.9% in FY23.
- The margin expansion was on the back of operating leverage, increasing mix of high-margin business, such as clean energy, communication and industrial segments. Further, box build mix improved from 44% in FY20 to 47% in FY23.

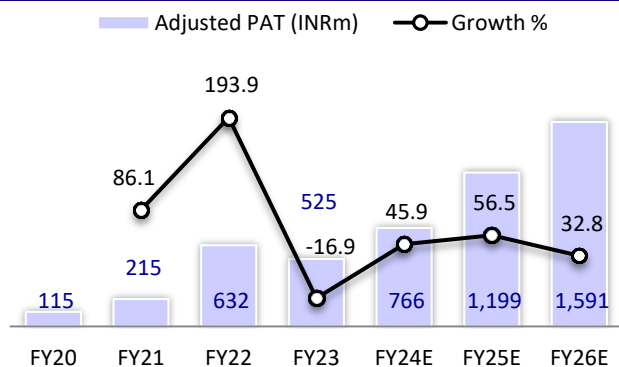
- The company is focusing on increasing the share of box build to strengthen its footing as a true box build solutions company.
- Amid recent stress in the US operations, the company takes certain measures to sustain and improve its margin profile. These are: 1) optimizing manufacturing by transferring some manufacturing to India; and 2) optimizing costs in the US operations
- Consequently, we expect further improvement in margins on the back of a growing mix of clean energy, higher order inflow from aerospace business and a growing wallet share with customers towards entire box build solutions.
- We expect margins to improve to ~12.3% in FY24 and to ~13.2% by FY26.

Exhibit 146: EBITDA registers a higher CAGR of 27%...

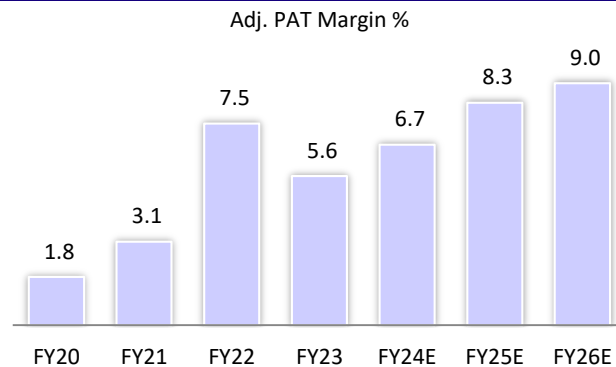
Source: MOFSL, Company

Exhibit 147: ...led by margin improvement over FY23-26

Source: MOFSL, Company

Exhibit 148: Adj. PAT to report CAGR of 45%...

Source: MOFSL, Company

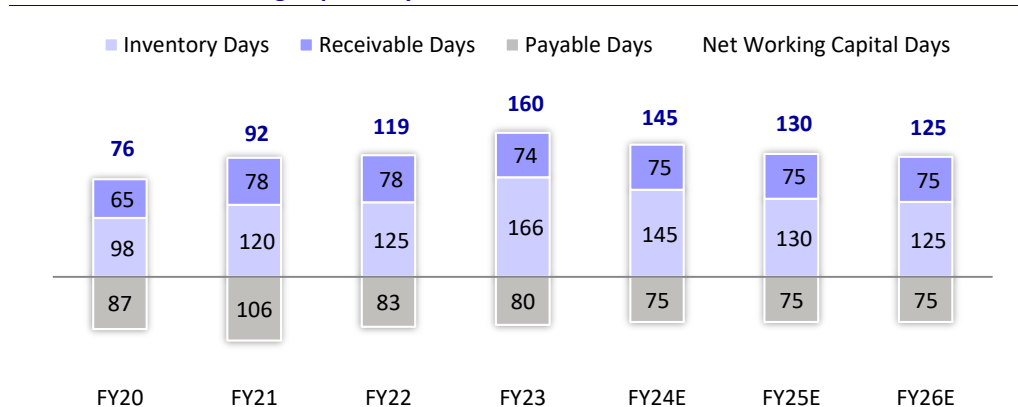
Exhibit 149: ...led by margin improvement over FY23-26

Source: MOFSL, Company

Working Capital to improve on back of improving inventory days...

- The major concern for Avalon is its rising working capital days. Its working capital days increased from 76 days in FY20 to ~160 days in FY23, largely due to an increase in inventory days from 98 days in FY20 to 166 days in FY23.
- The increase in inventory days were due to global supply chain issues of key raw materials and overall logistical constraints. To prevent any stoppages in the operations, the company had to maintain high inventory levels, which impacted their overall liquidity.
- However, with the easing of global supply chain issues, we expect the inventory days to come down gradually. We expect the inventory days to reduce to 145 days in FY24 and ~120-125 days by FY26.

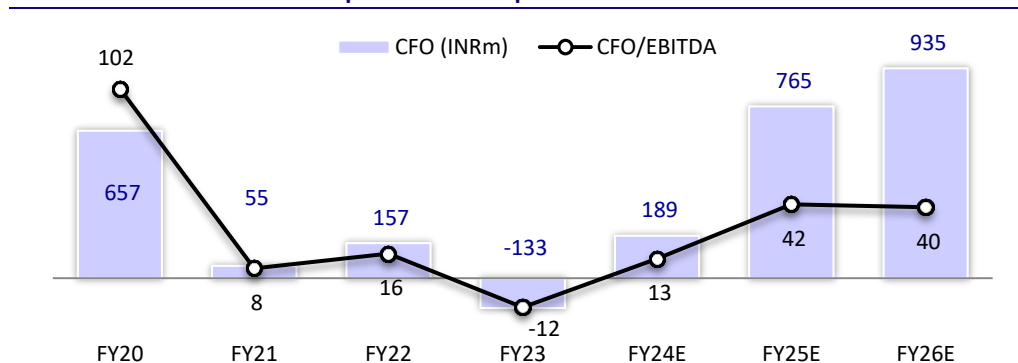
- Overall, we expect the working capital to ease further on the back improving supply chain, coupled with electronics eco-system being built in India, which will reduce the burden of import and improve supply chain.
- This will in turn help Avalon reduce working capital days to 125 by FY26.

Exhibit 150: Net Working Capital days to reduce

Source: Company, MOFSL

...resulting in increasing free cash flows

- The company reported cash outflow from operations of INR133m in FY23, mainly due to higher working capital.
- The CFO/EBITDA ratio, which was over 100% in FY20, has gradually declined and turned negative in FY23 as discussed above. Going forward, with a strong growth trajectory and an easing working capital scenario, we expect the ratio to inch up and sustain above ~40% levels, indicating a decent cash flow generation.

Exhibit 151: Cash flows from operations to improve

Source: Company, MOFSL

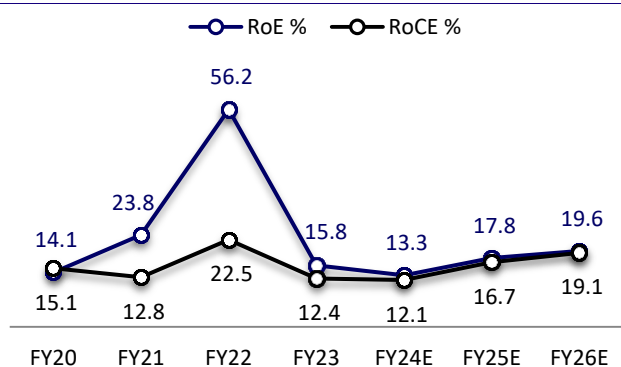
Delivering healthy return ratios

- ROE/ROCE improved from 14.1%/15.1% in FY20 to 56.2%/22.5% in FY22. However, it declined to 15.8%/12.4% in FY23.
- RoCE's decline in FY23 was mainly attributable to an increase in capital employed with the IPO (size of INR8.65b) and an increase in total borrowings from INR2.8b in FY22 to INR3.1b in FY23.
- As per a Dupont analysis, ROE has improved primarily led by an increase in net profit margin from 1.8% in FY20 to 7.5% in FY22 on the back of improving

EBITDA, while ROE in FY23 fell to 15.8% due to a decline in net profit margins to 5.6%, along with a decline in the financial leverage to 2.7x vs. 4.9x in FY22.

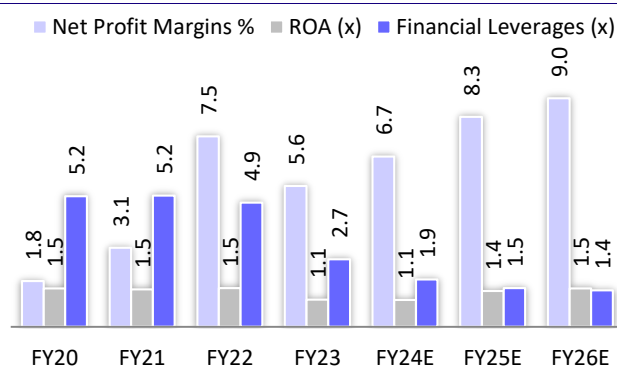
- Asset turnover and financial leverage remained stable over FY20-22. Asset turnover remained ~1.5x over FY20-22 but fell to 1.1x in FY23. Financial leverage declined from 5.2x in FY20 to 4.9x in FY22.
- Fixed asset turnover has also remained in the range of 5.6x to 5.9x over FY20-23, indicating high productivity and efficiency in operations. We expect it to further increase to 6.4x by FY26E on the back of higher order flows.
- Going forward, a further improvement in the net profit margins (to 9% in FY26) will be the key factor for ROE improvement to 19.6% in FY26 from 15.8% in FY23.

Exhibit 152: Healthy return ratios to further improve



Source: MOFSL, Company

Exhibit 153: Improving net profit margins –key driver



Source: MOFSL, Company

Overall, we expect a healthy improvement in the company's financials going forward, led by strong revenue growth, an improving margin profile, and easing working capital resulting in strong cash flow generation and healthy return ratios.

Valuation and key risks

Multiple drivers in place! Initiate coverage with a BUY rating

Avalon benefits from Global manufacturing base along with global clientele

Clean Energy and Aerospace to drive next leg of growth

- Avalon is one of the leading vertically integrated players in India and has a full-fledged manufacturing facility in the US.
- Avalon, through its Indo-US operations, has been able to build strong long-term relations with its customers and gain more wallet share over the years. The company offers a hybrid model of manufacturing that is beneficial to customers (in terms of cost) as well as Avalon (in terms of customer stickiness). This has been visible through its growing order book (CAGR of ~35% over FY20-23) to INR12.3b as of Mar'23.
- Avalon has over the years increased its presence in the entire box build value chain and it currently contributes ~47% in FY23, up from 44% in FY20. This is expected to further increase with order inflows expected from high growth areas such as clean energy.
- Clean energy and the aerospace industry are the key focus areas for the company, where it is witnessing strong traction. Also, the margin profile is higher in these segments compared to other verticals.
- We estimate Avalon to post revenue/EBITDA/Adj. PAT CAGRs of 23%/27%/45% over FY23-26. Avalon currently trades at 22x FY26E P/E with RoE/RoCE of 19.5%/19% in FY26E. We believe that the company will benefit from the growing EMS industry in both the US and India, with strong order inflows from emerging applications. We initiate coverage on Avalon with a BUY rating and a TP of INR730 (30x FY26E P/E).

Key risks

- Increase in working capital can result in cash flow deterioration and liquidity concerns
- Execution of the order book will be a key monitorable for the company. Any delay in execution will have negative impact on revenue and profitability.
- Customer concentration (top five/ten contributed ~50%/65% in FY22) and geographic concentration (US contributed ~59% of revenue in FY23) can limit the company's growth if any of these customers or geographies witness slowdown.
- Semiconductor, the key raw material for the company, has faced supply constraints in the past. Any supply crunch in future will have a similar adverse impact on the company's operations, working capital and earnings.

Exhibit 154: Comparative valuation

Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

Source: MOFSL, Company, *BBG

ESG initiatives



Environmental initiatives

- Avalon has entered into an agreement with recycling/disposing companies that recycle by-products (scrap metal, plastics and electric materials) or dispose of the same in an authorized manner prescribed by the government.
- The company has not been subject to any material fine or legal action for non-compliance with any applicable environmental laws or regulations.

CSR initiatives

- Avalon has constituted a CDR Committee and has adopted a CSR policy in Jun'22. In FY21/FY22, the company spent INR1.75m/INR2.83m toward CSR activities.
- CSR spending is mostly done for the development of local areas, funding education and environmental activities.

Governance

- As of Mar'23, the board comprised eight directors, including four independent directors and one woman director.
- The executive leadership and the board of directors possess a collective cross-industry experience in the vertically integrated manufacturing industry. Their knowledge and expertise provide exceptional support to the teams and customers.

Bull and Bear cases



Bull case

- ✓ In our bull case, we assume 26% revenue CAGR over FY23-FY26E led by strong order inflows from the US customer for clean energy and aerospace.
- ✓ We expect margin to expand by ~200bp from current levels to ~13.9% over FY26E aided by an improving mix of box build coupled with improvement in business mix for higher-margin sectors.
- ✓ EPS to register a CAGR of 53% over FY23-26E led by operating leverage.



Bear case

- ✓ In our bear case, we assume a revenue CAGR of 20% over FY23-FY26E.
- ✓ Margin will expand by 70bp from current levels to 12.6% over FY26E.
- ✓ EPS to register a CAGR of 33% over FY23-26E.

Exhibit 155: Bull and Bear Case Scenario (INR m)

	Particulars	FY24E	FY25E	FY26E	CAGR (FY23-26E, %)
Bear case	Revenue	11,026	13,562	16,274	20
	EBITDA	1,312	1,668	2,051	22
INR530	EPS	10.7	16.4	21.1	33
Base case	Revenue	11,387	14,461	17,643	23
	EBITDA	1,401	1,837	2,329	27
INR730	EPS	11.7	18.4	24.4	39
Bull case	Revenue	11,692	15,199	18,999	26
	EBITDA	1,497	2,037	2,641	33
INR950	EPS	14.5	23.3	31.6	52

Source: MOFSL, Company

SWOT analysis

- ✓ Avalon has a strong customer base and manufacturing capabilities in India and US
- ✓ Avalon has presence across the entire Box build value chain
- ✓ It caters to various industries

S
STRENGTH



- ✓ High working capital days impacting cash flow generation
- ✓ Reliance on few key customers

W
WEAKNESS



- ✓ Growing demand for electronics products
- ✓ Shift of ESDM base in India
- ✓ New applications with high electronics contents across business verticals
- ✓ Development of new technologies such as clean energy, EVs, 5G, AI and virtual/augmented reality
- ✓ Growing EMS market in US with reshoring of manufacturing units

O
OPPORTUNITY



- ✓ Increasing competition from global players setting up manufacturing in India
- ✓ Changes in regulatory environment for EMS industry
- ✓ Reduction or withdrawal of incentives provided to EMS industries
- ✓ Geopolitical threats such as export restriction or slowdown in key geographies

T
THREATS



Management team



Kunhamed Bicha
Chairman and MD

He holds a bachelor's degree in mechanical engineering from PSG College of Technology and a master's degree in industrial engineering from Wichita State University. He has been associated with Avalon since its inception. He received the "CII Connect 2017 Award for Entrepreneur of the year" from the Confederation of Indian Industry.



Bhaskar Srinivasan
President

He holds a bachelor's degree in mechanical engineering from Annamalai University, an MBA from Cochin University of Science and Tech, and a master's degree in industrial engineering from Wichita State University. He has been associated with Avalon since its establishment and was previously connected with Applied Materials Inc.



T.P. Imbichammed
Chairman Emeritus

He is a pivotal figure in the establishment of Avalon, and has been the guiding light for the company for over three decades. He holds a mechanical engineering degree from the University of Kerala. He is also a distinguished philanthropist.



R M Subramanian
Chief Financial Officer

He holds a civil engineering degree from Birla Institute of Technology and Science and a management diploma from Indian Institute of Management, Bangalore. He joined Avalon in Aug'19. Prior experience includes roles at A.F. Ferguson & Co, Cairn Energy India Pty Limited, Greenstar Fertilizers Limited, Essar Oil Limited, Sembcorp India Private Limited, and Chemplast Cuddalore Vinyls Limited.



Kesavan Parthasarathy
Vice President India Operations

He has several years of experience in electronics manufacturing services. Before joining Avalon, he was associated with Quest Smartech Private Limited, Texmaco Micro Indo Utama, Quest Technology, Sun Fibre Optics Private Limited, MiniCircuits Limited, and Talent Packaging Industries.



Mike Robinson
Chief Operating Officer

He has a science degree from Worchester Polytechnic Institute. He joined Avalon in Dec'09. Prior to Sienna, he worked at Motorola Inc. and Wconnect LLC, where he co-invented patented technologies.

Financials and valuations

Consolidated - Income Statement

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Total Income from Operations	6,419	6,905	8,407	9,447	11,387	14,461	17,643
Change (%)	NA	7.6	21.8	12.4	20.5	27.0	22.0
RM Cost	4,128	4,574	5,552	6,067	7,367	9,356	11,379
Employees Cost	1,162	1,192	1,314	1,605	1,879	2,357	2,823
Other Expenses	484	478	566	647	740	911	1,111
Total Expenditure	5,774	6,243	7,432	8,319	9,986	12,625	15,314
% of Sales	90.0	90.4	88.4	88.1	87.7	87.3	86.8
EBITDA	645	662	975	1,128	1,401	1,837	2,329
Margin (%)	10.0	9.6	11.6	11.9	12.3	12.7	13.2
Depreciation	155	158	172	197	245	282	329
EBIT	490	504	803	931	1,156	1,555	2,000
Int. and Finance Charges	450	270	248	348	248	89	34
Other Income	113	54	309	144	148	188	229
PBT bef. EO Exp.	153	288	864	727	1,056	1,654	2,195
EO Items	0	0	0	0	0	0	0
PBT after EO Exp.	153	288	864	727	1,056	1,654	2,195
Total Tax	30	58	183	202	291	455	604
Tax Rate (%)	19.4	19.9	21.1	27.8	27.5	27.5	27.5
Minority Interest	8	16	50	0	0	0	0
Reported PAT	115	215	632	525	766	1,199	1,591
Adjusted PAT	115	215	632	525	766	1,199	1,591
Change (%)	NA	86.1	193.9	-16.9	45.9	56.5	32.8
Margin (%)	1.8	3.1	7.5	5.6	6.7	8.3	9.0

Consolidated - Balance Sheet

(INRm)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	15	16	16	116	131	131	131
Preference Capital	356	388	388	0	0	0	0
Total Reserves	450	584	856	5,254	6,020	7,219	8,810
Net Worth	822	988	1,260	5,370	6,151	7,350	8,941
Minority Interest	-431	-317	0	0	0	0	0
Total Loans	2,388	2,775	2,789	3,063	1,063	563	63
Deferred Tax Liabilities	-263	0	0	0	0	0	0
Capital Employed	2,515	3,445	4,049	8,433	7,213	7,912	9,004
Gross Block	1,126	1,335	1,512	1,861	2,159	2,548	2,961
Less: Accum. Deprn.	139	295	390	586	831	1,112	1,441
Net Fixed Assets	987	1,041	1,123	1,275	1,328	1,436	1,520
Goodwill on Consolidation	0	0	0	0	0	0	0
Capital WIP	27	0	20	153	206	266	253
Total Investments	24	0	0	0	0	0	0
Current Investments	0	0	0	0	0	0	0
Curr. Assets, Loans&Adv.	3,197	4,084	4,738	10,375	8,150	9,203	10,698
Inventory	1,553	1,458	2,330	3,179	2,927	3,332	3,897
Account Receivables	1,138	1,819	1,774	2,062	2,340	2,971	3,625
Cash and Bank Balance	266	335	101	4,219	1,973	1,887	2,117
Loans and Advances	241	472	532	915	911	1,012	1,059
Curr. Liability & Prov.	1,719	1,680	1,831	3,370	2,470	2,993	3,467
Account Payables	1,369	1,289	1,242	1,418	1,514	1,923	2,338
Other Current Liabilities	216	253	449	1,823	797	868	882
Provisions	134	138	141	130	159	202	247
Net Current Assets	1,478	2,404	2,906	7,005	5,680	6,210	7,231
Misc Expenditure	0	0	0	0	0	0	0
Appl. of Funds	2,516	3,445	4,049	8,433	7,213	7,912	9,004

Financials and valuations

Ratios

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)							
EPS	2.0	3.7	10.9	9.1	11.7	18.4	24.4
Cash EPS	4.7	6.4	13.9	12.5	15.5	22.7	29.4
BV/Share	14.2	17.0	21.7	92.7	94.2	112.6	136.9
DPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Payout (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Valuation (x)							
P/E	265.4	142.6	48.5	58.4	45.1	28.8	21.7
Cash P/E	113.3	82.3	38.2	42.5	34.2	23.3	18.0
P/BV	37.3	31.0	24.3	5.7	5.6	4.7	3.9
EV/Sales	5.0	4.7	4.0	3.1	3.0	2.3	1.8
EV/EBITDA	50.2	49.6	34.2	26.2	24.0	18.1	13.9
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	8.4	-2.4	-0.4	-7.0	-2.5	4.8	8.2
Return Ratios (%)							
RoE	14.1	23.8	56.2	15.8	13.3	17.8	19.5
RoCE	15.1	12.8	22.5	12.4	12.1	16.7	19.1
RoIC	21.4	17.7	20.2	17.7	18.4	20.9	23.4
Working Capital Ratios							
Fixed Asset Turnover (x)	5.7	5.6	5.9	5.6	5.7	6.1	6.4
Asset Turnover (x)	1.5	1.3	1.4	0.8	1.2	1.3	1.4
Inventory (Days)	98	120	125	166	145	130	125
Debtor (Days)	65	78	78	74	75	75	75
Creditor (Days)	87	106	83	80	75	75	75
Leverage Ratio (x)							
Current Ratio	1.9	2.4	2.6	3.1	3.3	3.1	3.1
Interest Cover Ratio	1.1	1.9	3.2	2.7	4.7	17.4	58.2
Net Debt/Equity	2.6	2.5	2.1	-0.2	-0.1	-0.2	-0.2

Consolidated - Cash Flow Statement

(INRm)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
OP/(Loss) before Tax	153	288	856	727	1,056	1,654	2,195
Depreciation	155	158	180	197	245	282	329
Interest & Finance Charges	434	222	209	244	99	-99	-195
Direct Taxes Paid	-47	-35	-125	-189	-291	-455	-604
(Inc)/Dec in WC	-121	-561	-805	-1,125	-921	-616	-790
CF from Operations	574	72	315	-147	189	765	935
Others	83	-17	-158	13	0	0	0
CF from Operating incl EO	657	55	157	-133	189	765	935
(Inc)/Dec in FA	-170	-192	-177	-273	-350	-450	-400
Free Cash Flow	487	-137	-21	-406	-161	315	535
(Pur)/Sale of Investments	-24	29	0	0	0	0	0
Others	2	-104	-6	2	148	188	229
CF from Investments	-192	-267	-184	-271	-202	-262	-171
Issue of Shares	0	73	0	798	15	0	0
Inc/(Dec) in Debt	-296	461	158	128	-2,000	-500	-500
Interest Paid	-426	-217	-189	-283	-248	-89	-34
Dividend Paid	-4	-37	-38	-37	0	0	0
Others	302	22	-138	3,915	0	0	0
CF from Fin. Activity	-424	301	-207	4,522	-2,233	-589	-534
Inc/Dec of Cash	42	89	-234	4,118	-2,246	-86	230
Opening Balance	204	246	335	101	4,219	1,973	1,887
Other cash & cash equivalent	20	0	0	0	0	0	0
Closing Balance	266	335	101	4,219	1,973	1,887	2,117

Syrma SGS Technology

BSE Sensex
66,283

NIFTY-50
19,751

CMP: INR639

TP: INR775 (+21%)

Buy



Stock Info

Bloomberg	SYRMA IN
Equity Shares (m)	176.8
M.Cap.(INRb)/(USD\$)	113 / 1.4
52-Week Range (INR)	659 / 248
1, 6, 12 Rel. Per (%)	25/106/108
12M Avg Val (INR M)	332
Free float (%)	52.7

Financial Snapshot (INR b)

Y/E March	FY24E	FY25E	FY26E
Sales	28.7	39.3	53.0
EBITDA	2.7	4.2	5.7
Adj. PAT	1.6	2.4	3.4
EBITDA Margin (%)	9.6	10.6	10.7
Cons. Adj. EPS (INR)	9.2	13.7	19.3
EPS Gr. (%)	35.6	49.5	41.4
BV/Sh. (INR)	96.3	110.0	129.3

Ratios (%)

Net D:E	0.1	0.1	0.0
RoE (%)	10.0	13.3	16.2
RoCE (%)	9.7	13.5	16.4

Valuations

P/E (x)	70	47	33
EV/EBITDA (x)	42	28	20

Shareholding pattern (%)

As On	Jun-23	Mar-23
Promoter	47.3	47.3
DII	9.2	8.6
FII	9.3	4.6
Others	34.2	39.5

FII Includes depository receipts

Designing solutions; shaping futures

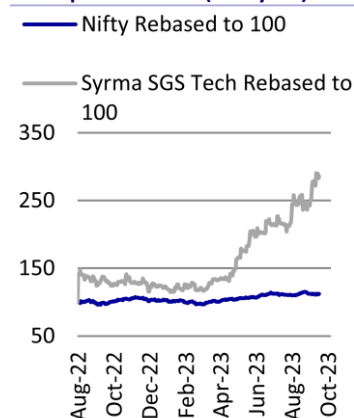
Poised to ride the wave of ESDM demand!

Syrma SGS Technology (SYRMA) is a technology-focused engineering & design company specializing in precision manufacturing for diverse end-use industries, including automotive, healthcare, consumer products, Industrial, IT and Railways.

- SYRMA's strong revenue growth (~33% CAGR over FY20-23) and robust order inflow (~INR11b in 1QFY24) are expected to continue, aided by rapidly growing end-user industries (25%+ CAGR) such as consumer, automotive and healthcare (~60% revenue contribution).
- Going ahead, consumer (~40% of ~INR35b order book as of 1QFY24) and automotive (~25%) are likely to be the key growth drivers for the company led by rising demand owing to emerging applications in consumer electronics and strong traction from EVs in automotive segment.
- The revenue share of exports is likely to inch up (~31% in FY23) as SYRMA has achieved a breakthrough in the US EMS market via a major utility metering system contract. Further, the company's target of increasing its ODM share (~18% in FY23) is also likely to boost its profitability.
- We estimate SYRMA to report a CAGR of 37%/45%/42% in revenue/EBITDA/Adj. PAT over FY23-26, driven by its strong order book, healthy order inflows, traction in end-user industries and an improving margin profile. The normalizing working capital scenario will further augment healthy cash flow generation.
- SYRMA currently trades at 33x FY26E EPS with RoE/RoCE of 16.2%/16.4% in FY26E. We initiate coverage with a BUY rating and a TP of INR775 (based on 40x FY26E EPS).

Robust growth in end-user industries drives future prospects

- With ~60% of SYRMA's sales originating from rapidly growing sectors (such as consumer, automotive, and healthcare), it has clocked a robust revenue CAGR of ~33% during FY20-23.
- Consumer segment (~32% of FY23 sales) has been at the forefront of growth (~50% CAGR over FY20-23) aided by strong order inflows from the built-to-print consumer business. However, lower margin of this business led to a subdued margin profile for the segment as a whole (~17% in FY23 vs. ~53% in FY20).
- Automotive segment (~20% of FY23 sales) recorded a strong ~45% CAGR over FY20-23, aided by robust traction from the EV business (~50% of total segmental sales in 1QFY24). Further, margin of this segment improved to ~22.1% in FY23 from ~18.4% in FY20, as EV-related contracts boosted margins.
- Industrial segment (~31% of FY23 sales) should maintain its stable growth rate (~23% CAGR over FY23-26E) and should continue to form a major part of sales going ahead.

Stock performance (one-year)

- Going forward, we expect both Consumer and Automotive segments to retain their healthy growth momentum backed by strong industry demand, especially from new verticals such as BLDC Fans in Consumer and EV ecosystem in Automotive.
- Considering strong traction within end-user industries, a robust order book of ~INR35b as on 1QFY24 and healthy order inflows (INR11b in 1QFY24), we expect SYRMA to register a 37% revenue CAGR over FY23-26.

Reinstated focus on exports and ODM to boost profitability

- SYRMA recently achieved a breakthrough in the US EMS market with a major contract for utility metering systems from a dominant player within the industry. Further, the company has reinforced its marketing teams in the East and West Coast of the US to explore additional growth opportunities.
- Accordingly, we anticipate its export revenue to pick up (~40% CAGR over FY23-26E), and account for about one-third of total sales by FY26E.
- Further, the company has reinstated its focus on the ODM business by carving out the design & development center into a subsidiary 'SYRMA SETS' in Apr'23. SYRMA is also putting up a prototype line in its German R&D center to ensure better customer service, especially for new customers. Factoring in the same, we expect ODM sales to form ~23% of total sales by FY26 (vs. ~18% in FY23), registering a ~49% CAGR over FY23-26E.

Multiple growth levers in place!

- To maintain its growth trajectory, SYRMA is strategically expanding its customer base and market presence. The company is diversifying its product range and services, actively targeting additional end-user sectors such as lighting, medical, aerospace, and defense.
- Historically, SYRMA has continuously expanded the range of the spectrum via organic as well as inorganic routes. Recently, the company has acquired ~51% stake in Johari Digital Healthcare Ltd (JDHL) in order to foray into the large, fragmented and fast-growing medical devices segment.
- Further, the company is almost tripling its manufacturing area available for production (adding ~1.5m sqft), enabling faster execution of the orders in-hand.

Strong earnings and normalizing working capital to improve cash flow

- Going ahead, SYRMA is expected to report a ~42% earnings CAGR over FY23-26, aided by robust revenue growth (~37% CAGR) and improving margins (led by favorable operating leverage and improving product mix).
- Net working capital days have stretched to ~95 in FY23 due to a surge in inventory. However, they are likely to decline on account of easing supply chain issues, leading to significant improvements in cash flows from operations.
- Return ratios contracted in FY23 because of declining margins and capital infusion (fresh issue of ~INR7.7b in Aug'22). Factoring in robust earnings growth, we expect SYRMA's RoCE/RoE to improve to 16.2%/16.4% by FY26.

A major beneficiary of the growing ESDM industry – Initiate with BUY

- SYRMA should significantly benefit from the rapid growth in the ESDM industry, given its rich experience of over three decades (including subsidiaries), robust technical know-how, a higher ODM share, and strong executional capabilities.
- Going ahead, we expect SYRMA to report robust earnings growth on the back of: 1) ample revenue visibility led by healthy order book and strong order inflows; 2) faster executional capabilities due to the expansion of manufacturing capabilities; 3) high growth in end-user industries and; and 4) reinstated focus on exports and ODM.
- We estimate SYRMA to post a CAGR of 37%/45%/ 42% in revenue/EBITDA/Adj. PAT over FY23-26.
- SYRMA currently trades at 33x FY26E EPS with RoE/RoCE of 16.2%/16.4% in FY26E. We believe that the company will be a key player in the growing ESDM industry (especially in the ODM segment) if it grabs the opportunities available across end-user industries and executes well on the burgeoning order inflows. We initiate coverage with a BUY rating and a TP of INR775 (based on 40x FY26E EPS).
- **Key downside risks:** 1) Failure to keep up with technological advancements and emerging trends, 2) Supply chain disruptions leading to higher working capital requirement, and 3) Slowdown in economic growth in India.

Exhibit 156: Comparative valuation

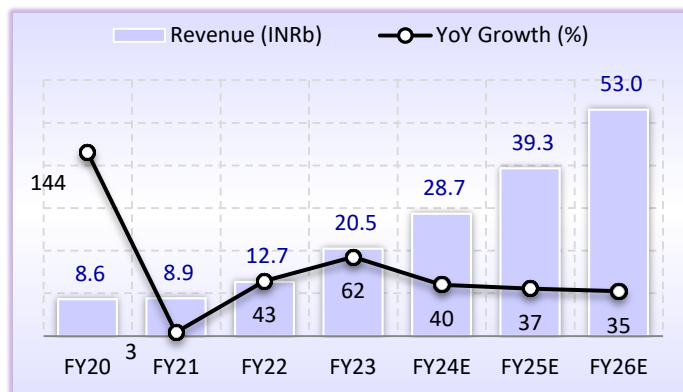
Peers	CMP	TP	MCap	EPS			P/E			RoE (%)			RoCE (%)		
	(INR)	(INR)	(INR b)	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

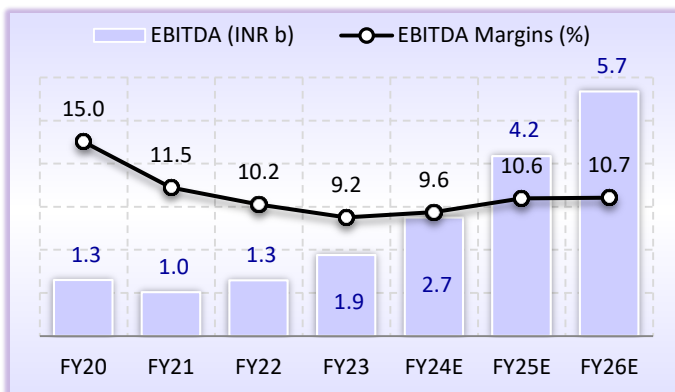
Source: MOFSL, Company, *BBG

STORY IN CHARTS

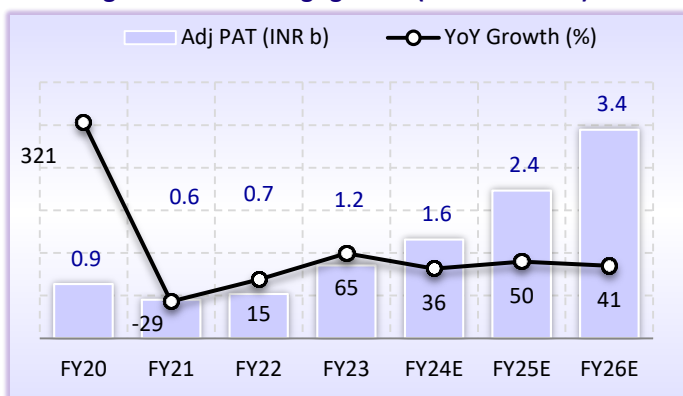
Revenue CAGR of ~37% over FY23-FY26E...



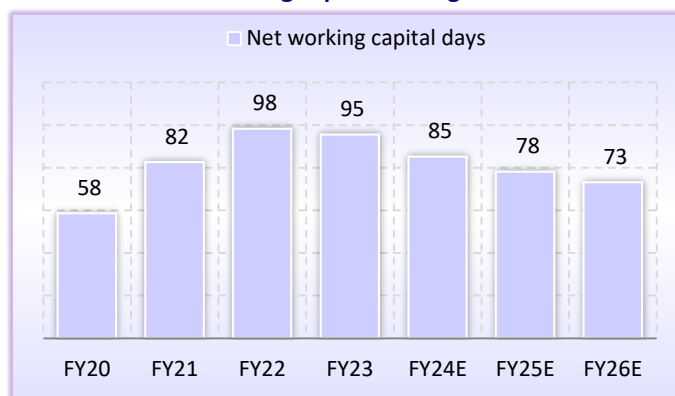
...coupled with margin expansion...



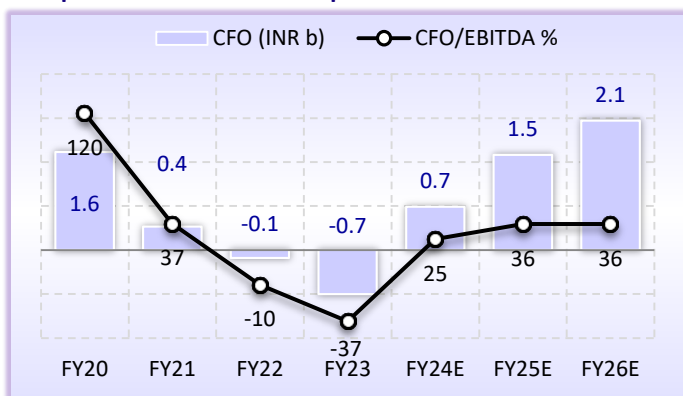
...leading to robust earnings growth (at ~42% CAGR)



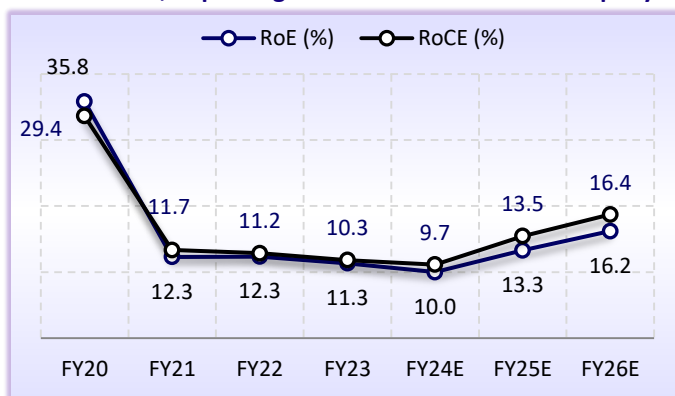
Reduction in net working capital leading to...



...improved cash flow from operations...



...and in-turn, improving the return ratios of the company

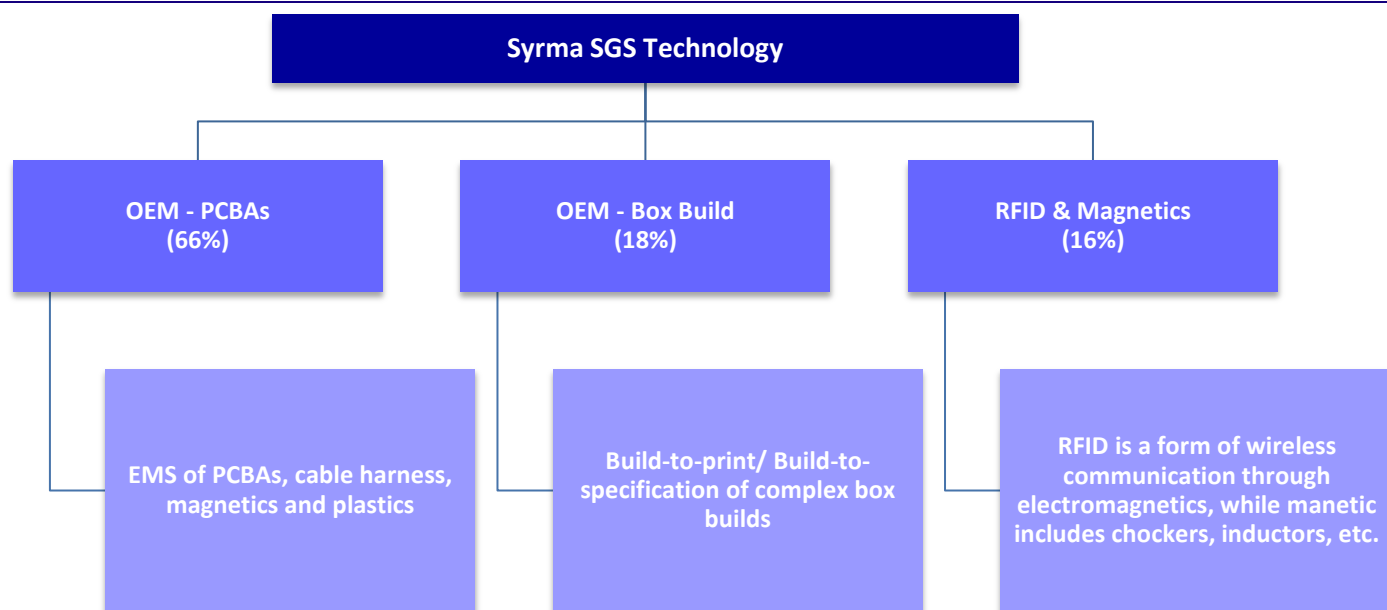


Company overview

Over three decades of experience serving end user industries such as Automotive, Consumer, Industrial, Healthcare, IT and Railways; with ~31% of total revenue in FY23 coming from exports

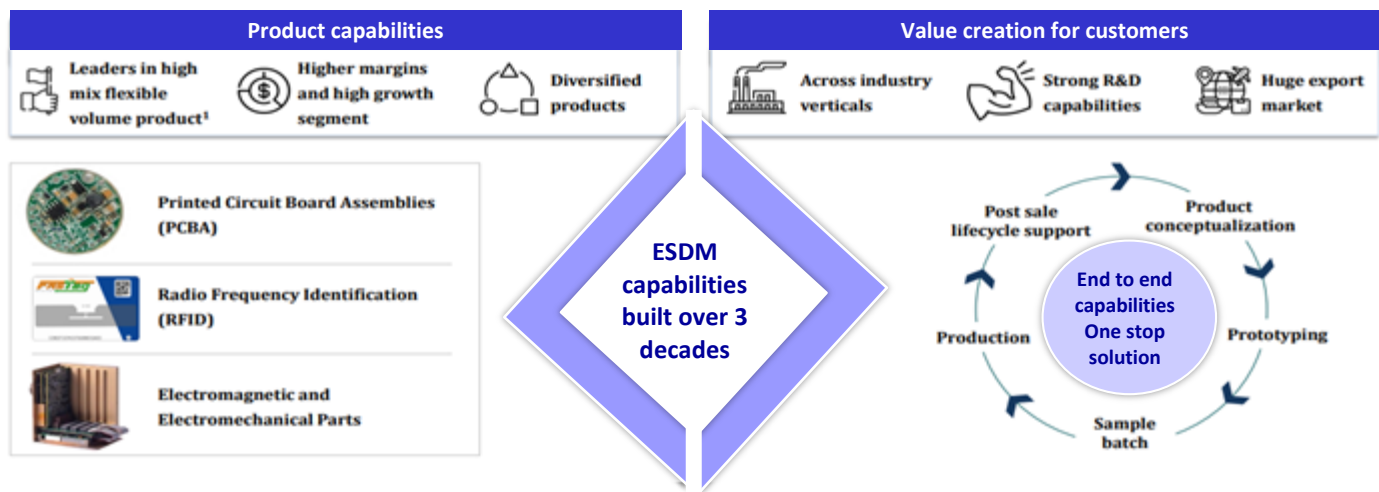
- Founded in 1978, SYRMA (erstwhile Syrma Technologies Pvt Ltd) is a technology-focused engineering & design company engaged in turnkey electronics manufacturing services ("EMS").
- Syrma has over three decades of experience specializing in precision manufacturing for diverse end-use industries, including automotive, healthcare, consumer products, Industrial and IT & Railways.
- The parent company (Syrma Technologies Pvt Ltd) acquired 'SGS Teknics Manufacturing Pvt Ltd' in Sep'21 and 'Perfect ID' in Oct'21 and was accordingly renamed to 'Syrma SGS Technology Ltd' in Oct'21.
- Syrma currently operates through 13 strategically located manufacturing facilities in North and South India with ~840k sq. ft. of manufacturing space and workforce of over 7,500.
- SYRMA operates under three broad segments: OEM Turnkey Solutions - PCBAs (66% of revenue in FY23), OEM Box Build (18%), and RFID & Magnetics (16%). The company derives a majority of its revenue from domestic market (69% in FY23) and balance from exports (31%).

Exhibit 157: Key business segments (FY23)



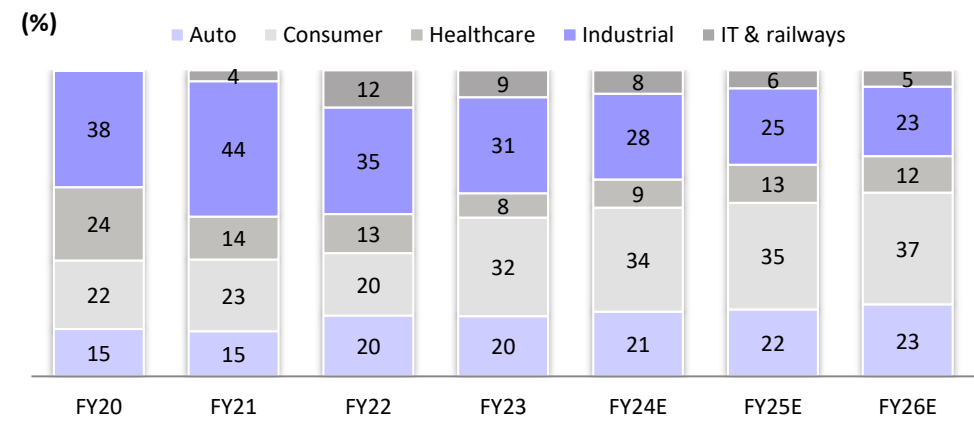
Source: Company, MOFSL

Exhibit 158: End-to-end ESDM capabilities developed over the decades



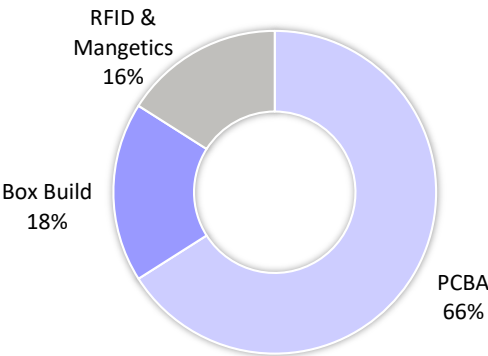
Source: Company, MOFSL

Exhibit 159: Automotive, Consumer and Industrial are major verticals (~83% of revenue as of FY23)



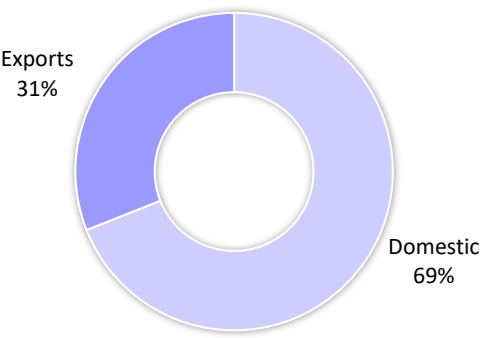
Source: Company, MOFSL

Exhibit 160: Product wise revenue segmentation (FY23)



Source: Company, MOFSL

Exhibit 161: Geography wise revenue segmentation (FY23)



Source: Company, MOFSL

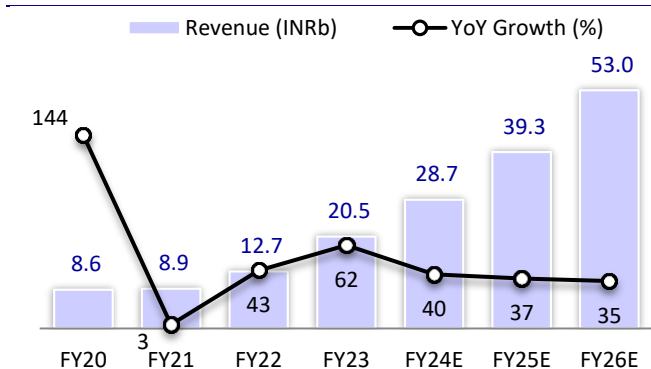
Robust growth in end-user industries drives future prospects

Catering to multiple high-growth end-user industries

- SYRMA's revenue base is diversified across various rapidly growing end-user industries with Consumer (accounting for ~32% of FY23 sales), Industrial (~31%) and Automotive (~20%) forming the major chunk of total sales while the rest being divided into healthcare (~8%) and IT & Railways (~9%).
- The company had a strong order book of ~INR30b as of FY23 with a book-to-bill ratio of ~1.5x.
- Around 60% of sales originate from the rapidly growing end-user industries (at 25%+ CAGR) (refer to exhibit 43 – *sector part chart*) such as consumer, automotive and healthcare reflecting strong growth visibility.
- Accordingly, the company continues to witness robust order inflows with order book jumping ~17% QoQ to ~INR35b as of 1QFY24 (consumer/automotive/industrial segments accounted for ~40%/25%/22% of the order book).
- Going ahead, we expect the healthy momentum of order inflows to continue. We further anticipate both Consumer and Automotive segments to retain their healthy growth trajectory backed by strong industry demand.

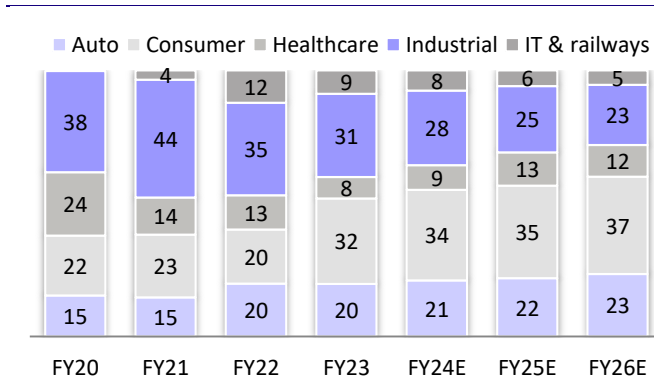
~60% of sales originating from rapidly growing end user industries (over 25% CAGR) such as consumer, automotive and healthcare reflecting strong tailwind for the company.

Exhibit 162: Revenue CAGR of ~37% over FY23-26E



Source: Company, MOFSL

Exhibit 163: End-user wise revenue segmentation (%)



Source: Company, MOFSL

Strong industry demand aids to continue robust growth momentum (~43% CAGR over FY23-26E); higher purchasing power and operating leverage to improve margins

Strong traction and newer applications to propel the consumer segment

- Recognizing the rising requirements within the consumer electronics industries, SYRMA commenced manufacturing of automatic dimmers for homes in CY10.
- This was followed by multiple product launches such as boiler management, energy-efficient electronics inverters, home appliance control PCBAs, controller units for air conditioners, etc. over a period of time.
- The consumer electronics segment is still witnessing high growth in demand driven by some of the newer verticals such as BLDC Fans (consumes ~INR350-400 worth electronics components vs. zero in traditional fans.)
- The consumer business of SYRMA is further classified into the Original Design Manufacturing (ODM; a high-margin business) and built-to-print (a plain vanilla EMS).
- Although the latter generates lower margin than ODM, it is a high-volume business with better asset turns (due to lower changeover & stoppages) and lower working capital requirement (owing to involvement of technology provider). These ultimately result in better ROCE and cash flow generation.

- The strong order inflows of built-to-print business led to a robust ~50% CAGR within the segment over FY20-23. However, the rising share of this low-margin business led to margin erosion within the segment to ~17% in FY23 from ~53% in FY20.
- However, going ahead, margin is likely to inch up from current levels due to higher purchasing power and operating leverage as the volumes keep on rising.
- Further, factoring in the strong momentum and emerging application in the consumer's electronics space, we expect the segment to register ~43% CAGR over FY23-26.

Exhibit 164: Consumer revenue likely to register 43% CAGR over FY23-26E

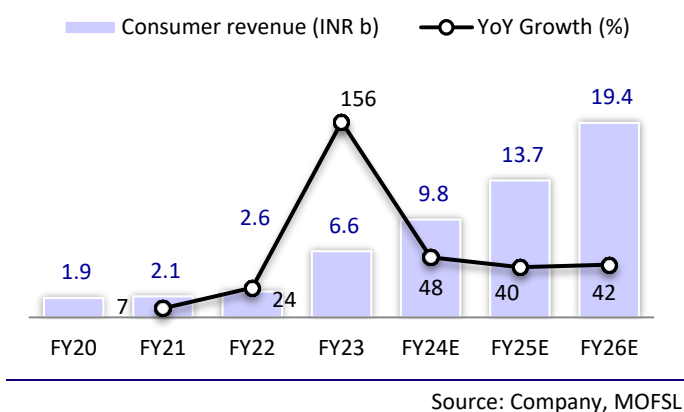


Exhibit 165: Consumer material margin trend

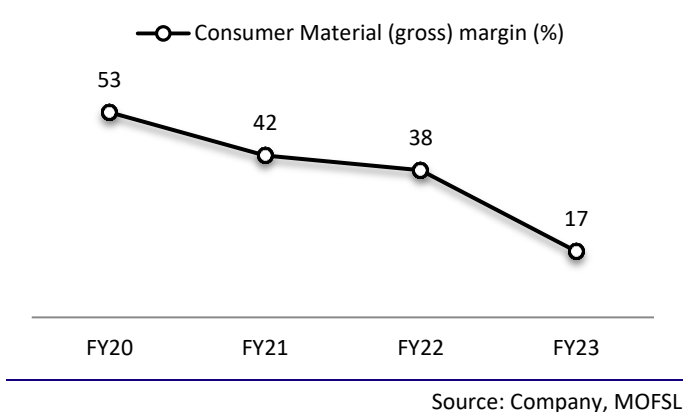
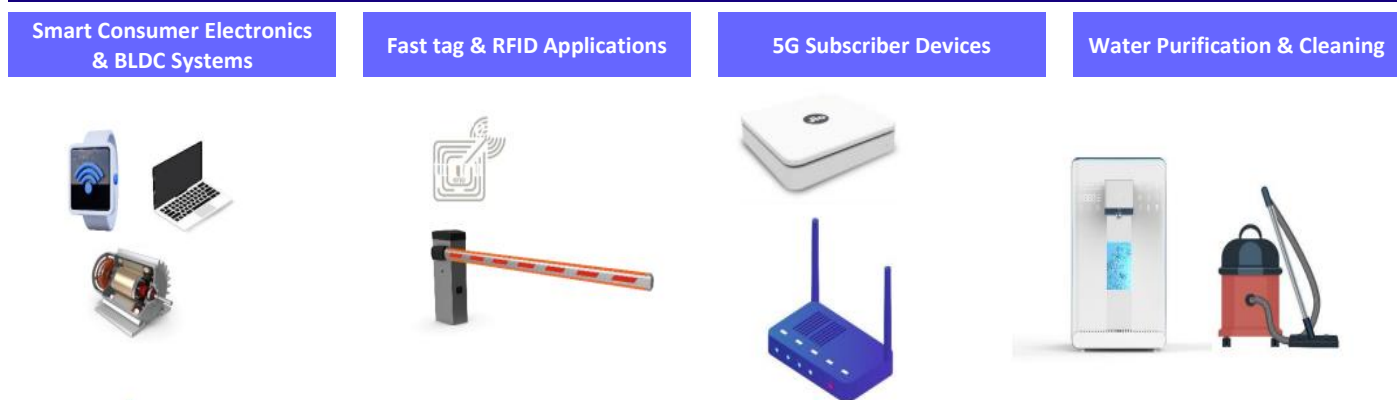


Exhibit 166: SYRMA's key products within the consumer segment



Source: Company, MOFSL

Electric vehicles (EVs) to drive automotive sales and margins

- SYRMA started catering to the automotive end-use industry from CY07 with the production of hall sensor PCBAs.
- This was followed by manufacturing of vehicle tracking systems and toll management systems in CY09, beacons for vehicles in CY12 and 4W lighting system boards in CY21.
- Accordingly, the sales of company from the segment stood at ~INR1.3b as of FY20, contributing to ~15% of the total sales.
- However, considering the rapid advancement of EVs, SYRMA has also commenced manufacturing components related to EVs starting with controllers of the EV battery management systems in CY20.

Rising share of EV contracts accelerated growth, improved margins for Automotive segment; Traction in charging infrastructure & pick up in electric four wheelers volume to drive growth ahead

- With induction of EV, the key EMS players (like SYRMA) have benefitted the most, as an electric two-wheeler has electronics components worth ~INR15,000-20,000, up ~7x vs. ~INR2,000 for combustion two-wheeler.
- Similarly, an electric four-wheeler consists of electronics components worth ~INR60,000-70,000 vs. ~INR15,000-20,000 for traditional four-wheeler vehicles.
- Accordingly, the move to cater to EV segment bodes very well for the company with the segment reporting revenue CAGR of ~45% over FY20-23 and the share of EVs standing at ~50% of total sales as of 1QFY24. Further, the contract for manufacturing EV components generally enjoys better margins, thereby, improving the contribution margin for the segment to ~22.1% in FY23 from ~18.4% in FY20.
- Going ahead, the strong traction from EVs is expected to continue fueled by rising need for charging infrastructure and pick-up in volumes of electric four wheelers within the industry. Accordingly, we expect the segment to register 46% CAGR over FY23-26 with margin continuing to inch up.

Exhibit 167: Automotive revenue expected to report 46% CAGR over FY23-26

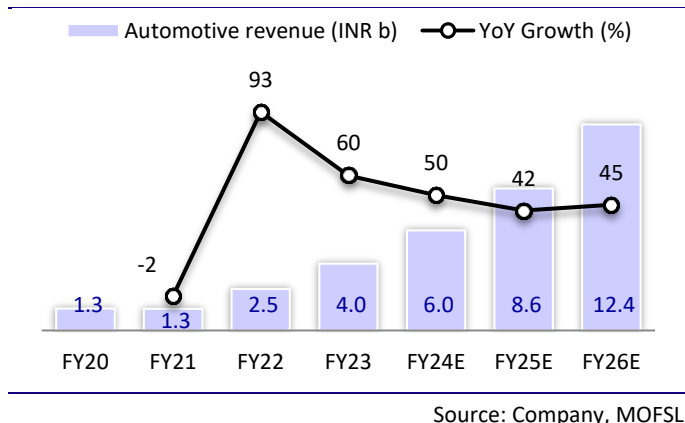


Exhibit 168: Automotive material margin trend

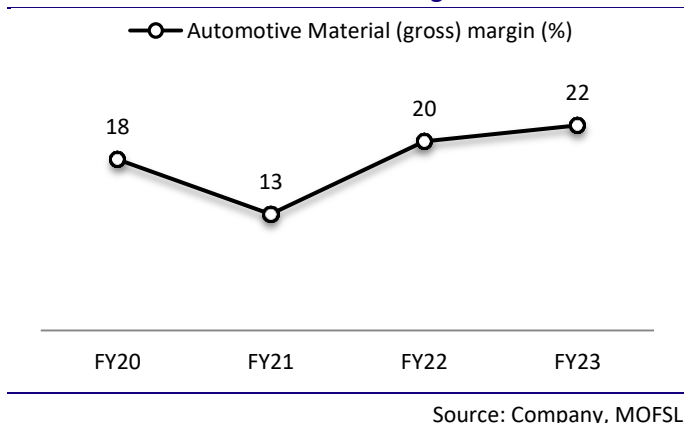
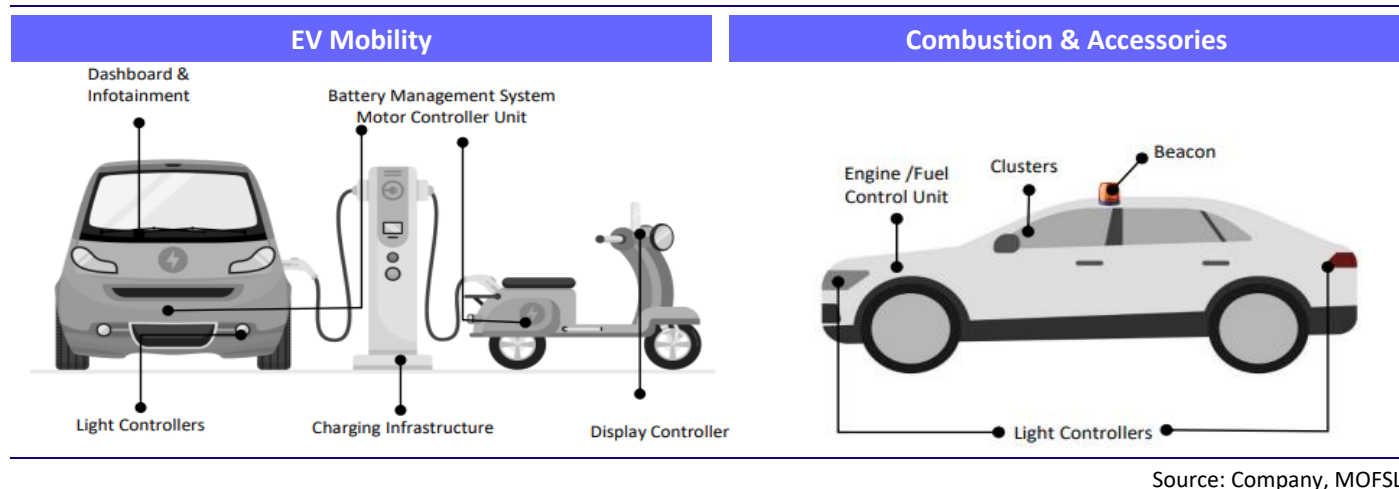


Exhibit 169: SYRMA's key products within the automotive segment



5G Infrastructure & Smart Cities



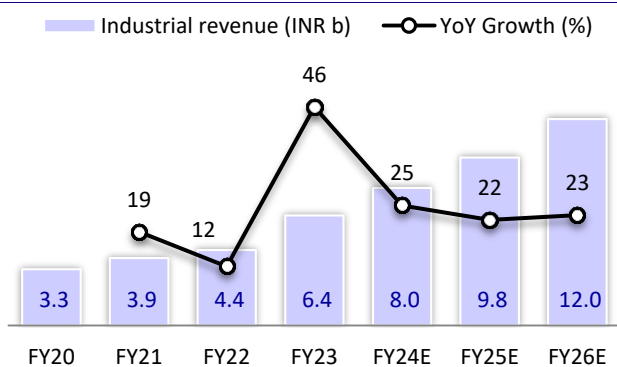
Industrial Power Supplies, Solar Controllers



Steady growth in Industrial vertical supports the upward journey

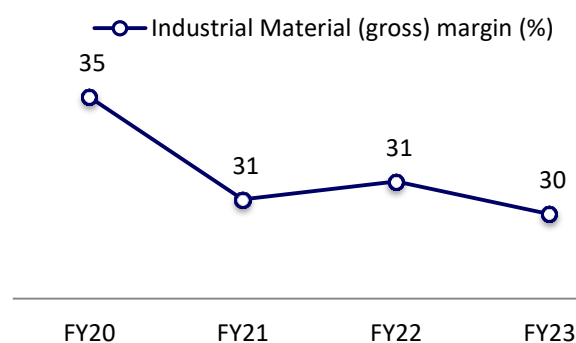
- SYRMA's industrial vertical is built by identifying and understanding the key market trends and evolving needs of its customers.
- Accordingly, it started manufacturing high-precision coils for hard disk drives in CY05, which was followed by manufacturing of USB drives, GSM Antenna and 4G & LTE Antennae.
- Currently, the company is also manufacturing the modules for 5G technology infrastructure.
- The segment has posted a ~25% CAGR over FY20-23 vs. ~33% for the consolidated entity. Accordingly, its contribution to sales declined to ~31% in FY23 from ~38% in FY20. Further, the margin has also taken a hit with gross margin for the segment contracting to ~29.9% in FY23 from ~35.3% in FY20.
- Going ahead, we expect the segment to register ~23% CAGR over FY23-26 with the vertical continuing to form a significant part of revenue going ahead (~23% of sales by FY26).

Exhibit 170: Industrial revenue expected to register 23% CAGR over FY23-26



Source: Company, MOFSL

Exhibit 171: Industrial material margin trend



Source: Company, MOFSL

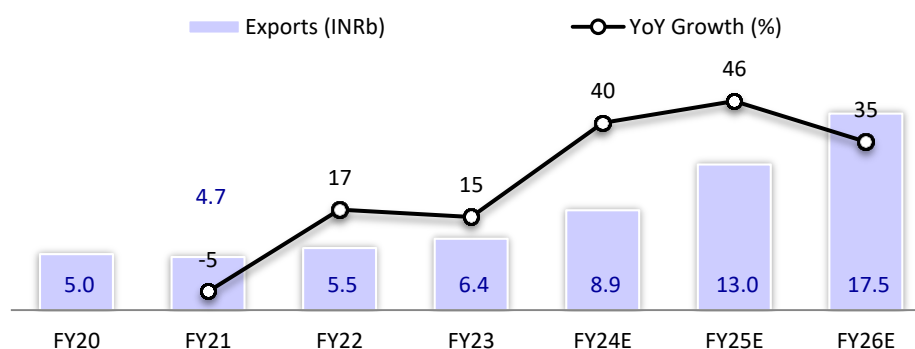
Reinstated focus on Exports and ODM to boost profitability

Entry into the US EMS market to boost exports

The recent breakthrough in US EMS market through a utility metering system contract coupled with reinforced marketing teams to boost exports (~40% CAGR over FY23-26E)

- Exports account for a significant portion of SYRMA's revenue. However, its contribution to total sales is on a declining trend with exports accounting for ~31% of total sales in FY23, notably down from ~58% in FY20.
- The decline is mainly attributable to the relatively subdued growth in exports (at ~8% CAGR over FY20-23) due to unfavorable geopolitical situation. Further, the company was also focused on tapping the surging domestic opportunities (domestic sales clocked ~57% CAGR over FY20-23).
- SYRMA recently achieved a breakthrough in the US with a major contract for utility metering systems from a dominant player in the industry. The company is likely to start production by 3QFY24 and expects this to significantly boost its export growth potential from FY25 onwards.
- Management is expecting a gross margin profile of ~23-24% from this contract (in-line with existing industrial contracts). Generally, margin for export sales is likely to be better than domestic sales.
- Further, the company has reinforced its marketing teams in the East and West Coast of the US to explore additional growth opportunities.
- Going ahead, we anticipate its export revenue to pick up (registering ~40% CAGR over FY23-26E), and account for about one-third of total sales by FY26.

Exhibit 172: Export revenue to clock ~40% CAGR over FY23-26E



Source: MOFSL, Company

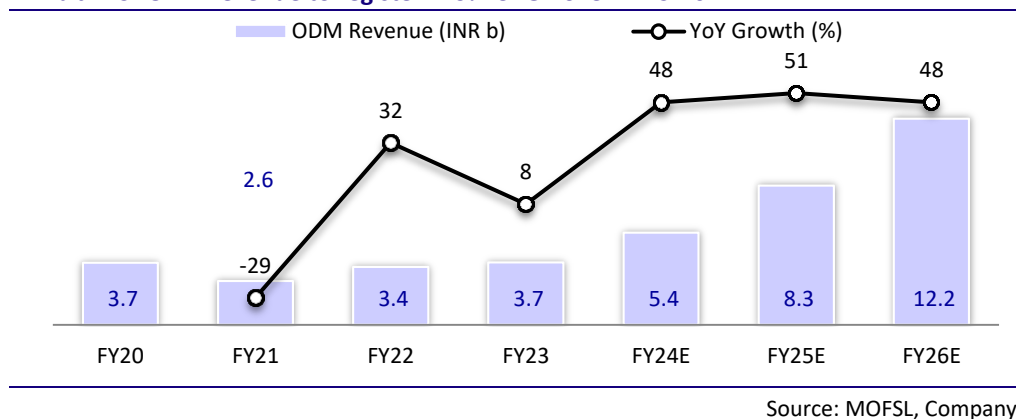
Reinstated focus on design and development vertical to boost ODM sales

Carving out the subsidiary for design and development and setting up of prototyping line in German R&D center reflects SYRMA's focus on increasing the share of ODM sales

- The strong ODM capabilities have been the key business source for the company, with ODM sales accounting for ~43% of total revenue in FY20.
- However, the same has fallen drastically to ~18% in FY23 due to the rising share of low-margin, built-to-print business and change in mix of end-user industry revenue.
- To intensify its strong focus on design & development and improve the mix of ODM, SYRMA has carved out the design & development center and housed it into a 100% owned subsidiary 'Syrma SGS Engineering and Technology Services Limited' (SYRMA SETS) in Apr'23.
- The aforesaid entity is now being headed by the CEO of erstwhile SYRMA (i.e., before the merger of Syrma, SGS and Perfect ID), Dr. Sreeram Srinivasan.

- The company has also hired a senior president from the industry, who has more than two decades of experience in software and engineering services industry, to support Dr. Sreeram Srinivasan in this push.
- Going ahead, the company anticipates this vertical to be a significant revenue and margin contributor, which will also aid in increasing the stickiness with its customers.
- SYRMA is also strongly focused on the R&D center in Germany. Accordingly, it is putting up a prototype line over there to ensure better customer service (especially for the new customers) with the prototyping stage completed over there itself. Further, the series productions will be migrated back into India.
- Going forward, we expect ODM sales to form ~23% of the total revenue by FY26 on the back of strong initiatives taken by the company on this front.

Exhibit 173: ODM revenue to register ~49% CAGR over FY23-26E

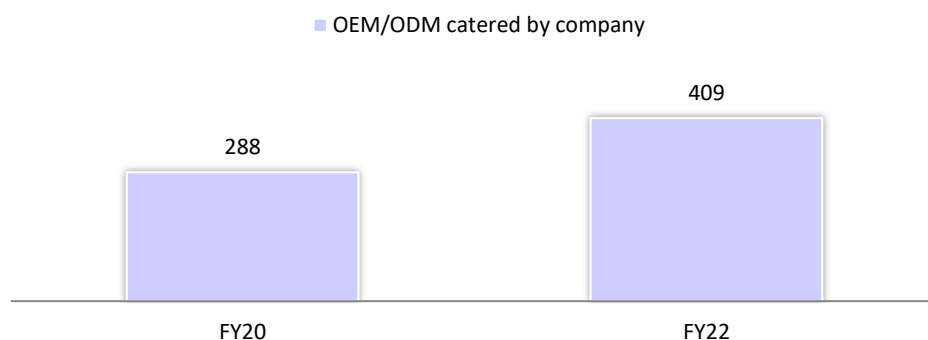


Multiple growth levers in place

Expanding the customer base to drive sustainable growth

- SYRMA continuously focuses on increasing its customer base and its reach by enhancing its product portfolio and service offerings along with expanding geographical presence.
- Accordingly, it is looking to cater to more end-user industries such as lightings, medical electronics and aerospace & defense. It has also expanded its services offerings to prototyping services, tester development, and repair & rework services.
- As a result of its strong focus on customer base expansion, the number of OEMs and ODMs catered by the company has grown significantly to 409 in FY22 from 288 in FY20 (i.e., up 42% in just over two years).

Exhibit 174: Strong customer base expansion over FY20-22



Source: MOFSL, Company

Pursuing inorganic growth opportunities to capture its share in the rising ESDM market

- Apart from the organic route, SYRMA has successfully tapped into multiple inorganic growth opportunities in the past, in order to capture its share in the rapidly growing ESDM market.
- Historically, SYRMA has acquired Tovya Automation/3G Communication/ SGS Teknics/Perfect ID in Dec'14/Apr'16/Sep'21/Oct'21. These acquisitions provided SYRMA with technical know-how and enhanced its customer base significantly.
- In 1QFY24, the company acquired 51% stake in Johari Digital Healthcare Ltd (JDHL) for INR2.3b. JDHL provides a platform to SYRMA to foray into the large, fragmented and fast-growing medical devices segment.
- JDHL possesses advanced medical technologies designed in East Europe integrated with complete box build solutions, which are "made in India" for global customers.
- The acquisition of JDHL is likely to be margin accretive for the SYRMA (EBITDA margin accretion of 120-140bp) on back of significantly better margin profile of JDHL (~36% EBITDA margin in FY23)

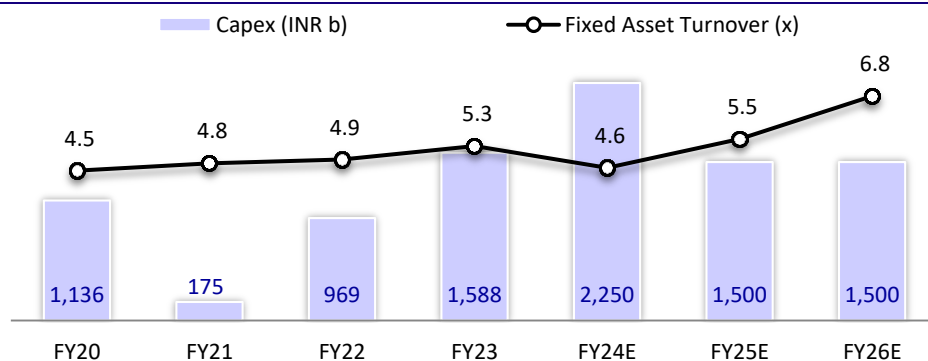
Tapping into the inorganic growth opportunities and foray into multiple end-user industries

Tripling of manufacturing capacity (addition of ~1.5m sq. ft.); dedicated plant for consumer contracts to fast track execution of order book.

Capacity expansion to aid faster execution of orders

- SYRMA currently has ~0.8m sq. ft. of manufacturing area available for production. In a bid to expand its available manufacturing capacity to keep up with the surging revenue (at 33% CAGR over FY20-23), the company has acquired a 16-acre plot from SIPCOT in Krishnagiri district, next to Hosur. It has also signed an agreement to acquire a 6-acre plot in Chennai for the domestic business.
- These two plants when fully commissioned will have a factory-covered area of ~1.5m sq. ft., **about 2x of the company's current manufacturing capacity.**
- Further, it has also signed a long-term lease agreement for a ~100K sq. ft. plant in Noida, which is currently under trial production. SYRMA has dedicated the plant for manufacturing of consumer electronics to address the growing market potential of the segment.
- SYRMA intends to make this plant a specialized high-volume consumer-oriented manufacturing unit, considering the requirements of different manufacturing strategies and shop floor cultures for industrial consumer electronics.
- On an overall basis, the company is planning to incur a **capex of INR4b** over the next couple of years (~INR2.5b/INR1.5b in FY23/24). It has already incurred a capex of ~INR500m in 1QFY24.

Exhibit 175: Capex and Fixed Asset turnover ratio for SYRMA



Source: MOFSL, Company

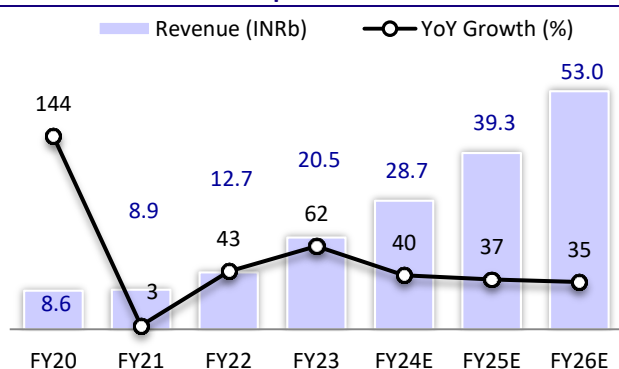
Financial Performance

Strong order book (book-to-bill ratio of 1.5x as on FY23), coupled with healthy order inflows (~INR11b in 1QFY24) provides ample medium-term revenue visibility.

Strong revenue growth momentum likely to sustain

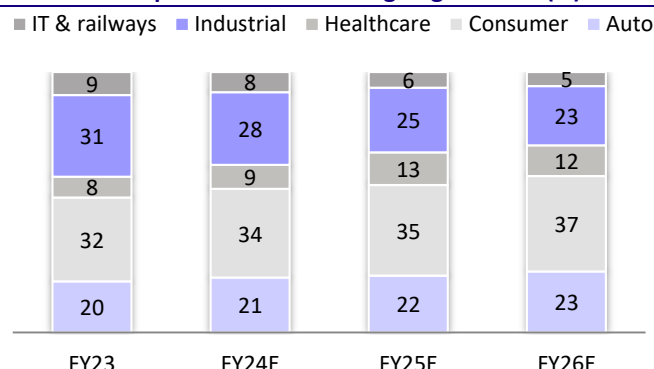
- SYRMA reported a healthy ~33% revenue CAGR over FY20-23 led by a surge in domestic business (at ~57% CAGR over the same period). The company witnessed broad-based growth across verticals (except healthcare), with consumer/auto leading from the front and clocking a revenue CAGR of ~50%/~45% over FY20-23.
- The company has started FY24 (1Q) with a monthly revenue run rate of ~INR2b. The same is likely to inch up sequentially in the rest of 9MFY24, as per the trend seen in FY23 (revenue run rate of ~INR1.28b/INR1.48b/ INR1.75b/INR2.0b in 1Q/2Q/3Q/4QFY23).
- Further, the strong order book of ~INR35b as of 1QFY24 (up 17% QoQ) and healthy order inflows of INR11b (in 1QFY24) provide ample visibility of medium-term revenue growth for the company.
- Going ahead, we expect the medium-term growth to be primarily driven by consumer (~43% CAGR over FY23-26E) and automotive (~46% CAGR) segments.
- Moreover, SYRMA's newer growth verticals such as medical, defense, IoT and railway might play a significant role in the longer run.
- Factoring in the robust growth runway for the company, as mentioned above, we expect SYRMA to post a revenue CAGR of ~37% over FY23-26.

Exhibit 176: Revenue to report 37% CAGR over FY23-26



Source: MOFSL, Company

Exhibit 177: Expected business mix going forward (%)

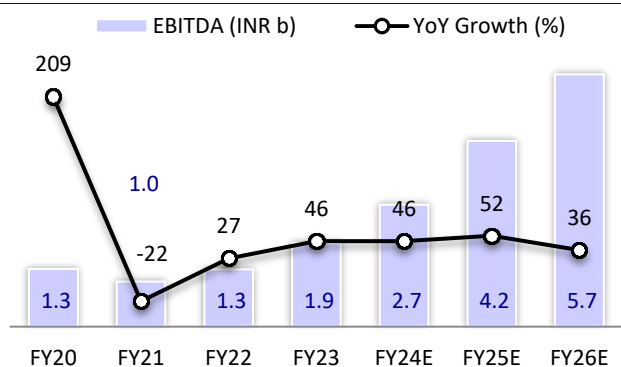


Source: MOFSL, Company

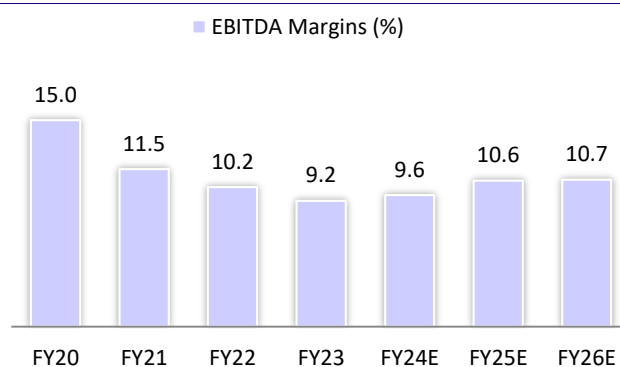
Favourable business mix, operating leverage and rising share of ODM sales to improve the margins profile (up ~150bp over FY23-26E)

Double-digit EBITDA margin to sustain

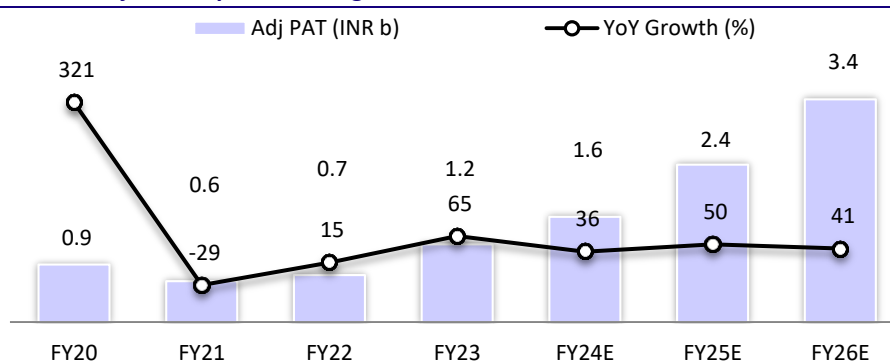
- SYRMA's EBITDA margin contracted to ~9.2% in FY23 from ~15.0% in FY20 as it witnessed an increasing share of (low-margin) built-to-print contracts.
- Accordingly, the material (gross) margin in the consumer/industrial segments dipped to ~17%/30% in FY23 from ~53%/35% in FY20, although revenue for these segments surged over FY20-23 (at 50%/25% CAGR).
- However, the margin in Automotive segment has improved to ~20% in FY23 from ~15% in FY20 aided by rising share of EV contracts (high-margin business); offsetting some of the negative impact.
- Going forward, we expect margin to improve aided by favorable operating leverage coupled with growing mix of ODM sales (~23% by FY26 vs. 18% in FY23).
- We expect EBITDA/Adj. PAT to register ~45%/42% CAGR over FY23-26.

Exhibit 178: EBITDA expected to register 45% CAGR....

Source: MOFSL, Company

Exhibit 179: ...led by improvement in margin over FY23-26

Source: MOFSL, Company

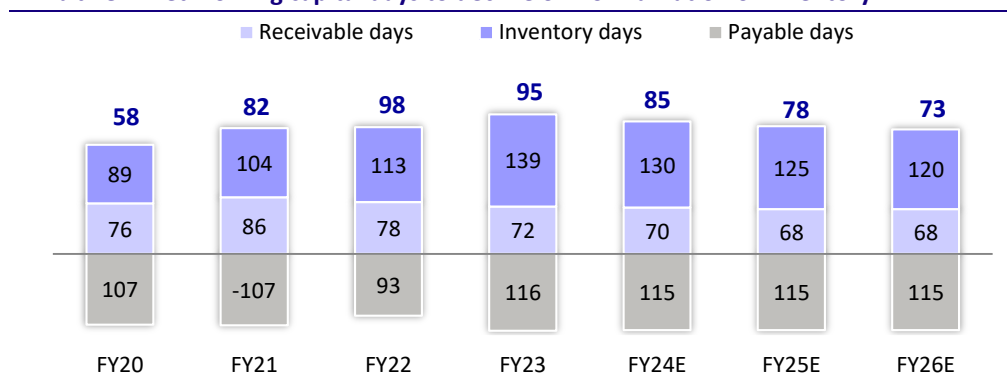
Exhibit 180: Adj. PAT expected to register ~42% CAGR over FY23-26

Source: MOFSL, Company

Easing of supply chain issues to decline working capital requirements for the company.

Working capital days to decline due to normalcy in inventory days...

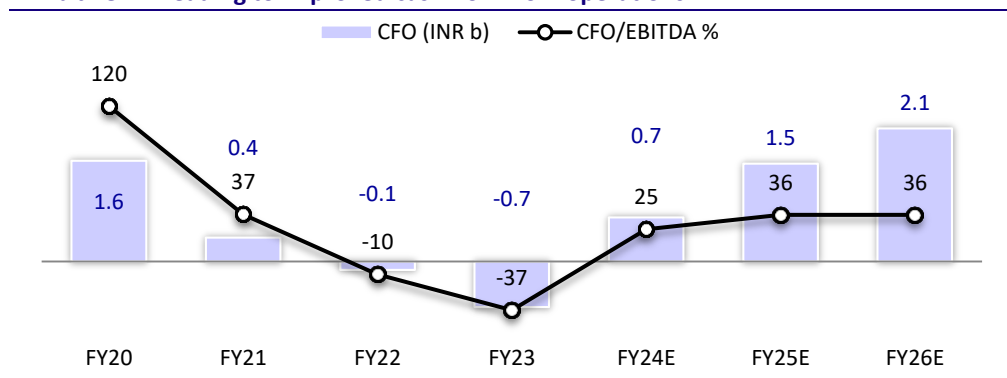
- SYRMA has high working capital requirement as it has to finance the procurement of raw materials and other manufacturing-related costs till the time the company receives its dues from the customers.
- The company has witnessed an increase in net working capital in the last four years (from ~58 days in FY20 to ~95 days in FY23) mainly led by an increase in inventory days (to ~139 in FY23 from ~89 in FY20).
- The supply chain disruption of key raw materials led to a surge in inventories as the company has created a surplus inventory of semiconductor to prevent from any operational hurdles in terms of raw material shortage.
- However, with easing of semiconductor supply chain issues, the inventory days are expected to come down materially.
- The company's strong focus on reduction in working capital is reflected in its 1QFY24 performance. Working capital requirement reduced notably by ~INR400m in 1QFY24 vs. FY23 level.
- Accordingly, we expect net working capital to stand at ~73 days by FY26.

Exhibit 181: Net working capital days to decline on normalization of inventory....

Source: Company, MOFSL

...resulting in higher cash flow from operations

- The company generated negative CFO (INR0.7b) for FY23 mainly due to increase in working capital required (by ~INR2.1b over FY22). Going ahead, we expect cash flow to turn positive supported by normalization of working capital requirement.
- The CFO/EBITDA ratio, which used to be upwards of 100% in FY20, has gradually declined and turned negative in FY23. Going ahead, we expect the ratio to inch up gradually as the company witness strong growth trajectory and improving working capital scenario.

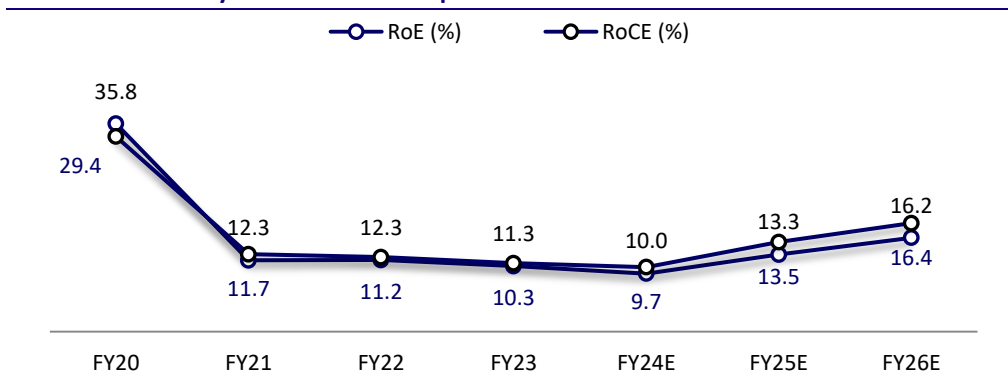
Exhibit 182: ...leading to improved cash flow from operations

Source: Company, MOFSL

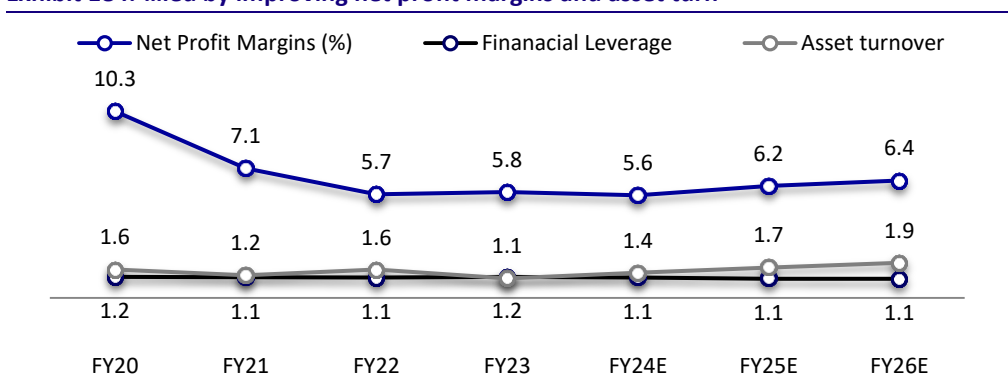
Delivering healthy return ratios

- ROE/ROCE declined sharply to 11%/10% in FY23 from FY20 levels of 36%/29%.
- As per DuPont analysis, ROE declined primarily due to a decrease in net profit margin to 5.8% in FY23 from 10.6% in FY20 because of falling EBITDA margin. While Asset T/O has declined over the period (to 1.08x in FY23 from 1.56x in FY20) despite robust revenue growth due to infusion of funds, financial leverage remained stable vs. FY20 levels at ~1.16x.
- Fixed Asset T/O has increased to 5.3x in FY23 from 4.5x in FY20, indicating an improvement in plant productivity and efficiency in operations.
- Going forward, improvement in net profit margin (to ~6.4% in FY26) will be the key driver for improvement in ROE (to 16.2% in FY26 from 11.3% in FY23).

Improving net profit margins (up 60bp over FY23-26E) and asset turnover ratio to drive RoE.

Exhibit 183: Healthy return ratios to improve further...

Source: MOFSL, Company

Exhibit 184: ...led by improving net profit margins and asset turn

Source: MOFSL, Company

A major beneficiary of the growing ESDM industry

Poised for growth | Initiate coverage with a BUY rating

SYRMA to witness robust earnings momentum (~42% CAGR over FY23-26E) led by strong order book, healthy order inflows, traction across end-user industries and reinstated focus on export and ODM

- SYRMA, being a technology-focused engineering & design company engaged in turnkey EMS solutions, is primed for growth by tapping into the rapidly growing ESDM industry backed by its rich experience of over three decades (including subsidiaries), vast technical know-how, higher ODM share, and robust executional capabilities.
- It is witnessing broad-based growth across business verticals with Consumer/Automotive leading from the front aided by emerging new applications and strong traction in EVs.
- Accordingly, order book of the company has also grown robustly (~17% QoQ to INR3.5b in 1QFY24) with Consumers (~40% of total order book), Automotive (~25%), and Industrial (~22%) verticals continuing to account for a major share of the book.
- Going ahead, we expect SYRMA to report robust earnings growth on the back of: 1) ample revenue visibility led by healthy order book and strong order inflows 2) faster executional capabilities due to expansion of manufacturing capabilities; 3) high growth in end-user industries and; 4) reinstated focus on exports and ODM.
- We estimate SYRMA to register revenue/EBITDA/Adj. PAT CAGR of 37%/45%/42% over FY23-26.
- SYRMA currently trades at 33x FY26E EPS with RoE/RoCE of 16.2%/16.4% in FY26E. We believe that the company will be a key player in the growing ESDM industry (especially in the ODM segment) if it grabs the opportunities available across end-user industries and executes well on the burgeoning order inflows. We **initiate coverage with a BUY rating** and a TP of INR775 (based on 40x FY26E EPS).

Key risks

- The company's success will depend on its ability to anticipate changes in technology and to adopt ODM capabilities on a timely basis. Failure to do so can put the business at a significant risk.
- The performance and growth of the company's business are necessarily dependent on the overall Indian economy and development of a manufacturing ecosystem, which is a significant tailwind. Any slowdown in this could adversely affect the business of the company.

Exhibit 185: Comparative valuation

Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

Source: MOFSL, Company, *BBG

ESG initiatives



Environmental initiatives

- SYRMA adheres to legal requirements and maintains a compliance checklist to address emissions, leakage, waste management, and employee safety.
- It has established an agreement with a reputable hospital for proper biomedical waste disposal.
- Periodical testing of plant and machinery is conducted by the environment testing labs to monitor emissions.
- The company conducts annual planning and monitoring of Environmental Health and Safety (EHS) objectives, including emissions, pollution (air, water, and noise), plantation, leakage, wastage checks, and proper disposals to ensure compliance.
- The company incurs regular expenditures to ensure further safety and environment control.

Social

- Keeping employee's health and safety at the forefront, SYRMA had launched a LOTO program wherein it identified hazards and ensured safety before employees proceed to work.
- Further, it has an Annual Hazard Identification & Risk Assessment (HIRA) plan as well as an emergency preparedness and response plan to ensure well-being of its workforce.

Governance

- As of Jun'23, the Board comprised 10 Directors that included five independent Directors and one-woman Director.
- The company established an Employee Grievances Redressal Policy to address any employee concerns effectively. It has policies in place for Equal Employment Opportunity, Human Rights, and Anti-Corruption thus demonstrating its commitment to fair and ethical practices.
- The company has established a Sexual Harassment & Resolution Committee to handle and resolve issues related to harassment in the workplace.

Bull and Bear cases



Bull Case

- ✓ In our bull case, we assumed revenue CAGR of 39% over FY23-26E on back of healthy order inflows in automotive and consumer segment.
- ✓ We expect margins to expand from current levels by ~150bp to ~10.7% over FY26E led by increase mix of high margin ODM business.
- ✓ EPS to register a robust CAGR of 47% over FY23-26E led by operating leverage.

Bear Case

- ✓ In our bear case, we assumed a revenue CAGR of 33% over FY23-26.
- ✓ Margins will expand by ~130b from current level to 10.5% over FY26E.
- ✓ EPS to register a CAGR of 35% over FY23-26E.

Exhibit 186: Bull and Bear Case Scenario (INR m)

	Particulars	FY24E	FY25E	FY26E	CAGR (FY23-26E, %)
Bear case	Revenue	27,610	37,274	48,456	33
	EBITDA	2,628	3,914	5,088	39
INR635	EPS	8.7	12.5	16.7	35
Base case	Revenue	28,678	39,288	53,039	37
	EBITDA	2,746	4,175	5,675	45
INR775	EPS	9.2	13.7	19.3	42
Bull case	Revenue	28,746	40,245	55,538	39
	EBITDA	2,809	4,277	5,943	47
INR885	EPS	9.4	14.7	21.6	47

Source: MOFSL, Company

SWOT analysis

- ✓ Presence across diverse end-user industries.
- ✓ Long standing relationships with marquee customers
- ✓ Global sourcing capabilities
- ✓ Higher share of ODM clients than peers

S

STRENGTH



- ✓ High working capital requirement
- ✓ High dependence on imports

W

WEAKNESS



- ✓ Growing demand for electronics products with import replacement and export opportunities
- ✓ Newer applications driving high industry demand
- ✓ Entering into newer end-user verticals such as lightings, medical and aerospace & defense

O

OPPORTUNITY



- ✓ Increasing competition from global players setting up manufacturing units in India.
- ✓ Changes in regulatory environment for EMS industry.
- ✓ Reduction/ withdrawal of incentives provided to EMS industry can impact the entire sector adversely.

T

THREATS



Management team



Sandeep Tandon
Executive Chairman

He has 18+ years of rich experience in electronics manufacturing. He holds a Bachelor's degree in Electrical Engineering from USC and has completed the YPO Presidents' Program from Harvard Business School. He is known for his ability to transform strategic visions into actionable plans and is an angel investor for start-ups.



Jasbir Singh Gujral
Managing Director

He has 39+ years of experience in electronics manufacturing. He is known for his professional expertise, team-building skills, and philanthropic endeavors. He was associated with companies like Metro Milk Products Limited, Eltek Sgs Private Limited, Sgs Tekniks Manufacturing Private Limited, and Valere Power India Private Limited.



Satendra Singh
CEO

He has over three decades of rich experience in operations, strategic planning, global supply chain, and manufacturing. He has a deep knowledge of the Indian as well as global industry. Prior to joining SyrmaSGS, he was the Global Head of Hardware Service Delivery at Nokia, and has held several leadership positions over a 15-year period.



Ranjit Singh
Co-founder International Business

Ranjit Singh is the Co-founder & Executive Director at SyrmaSGS, with 39+ years of experience in the Electronics Industry. He heads the International Business, overseeing export operations in the US, Europe, and Pan Asian countries.



Krishna Pant
Co-founder Domestic Business

Krishna Pant is the Co-founder & Executive Director at SyrmaSGS, with over 39 years of experience in Marketing & Management. He heads the domestic business and is known for his service orientation and innovative customer practices that create new opportunities in the industry.



Dr. Sreeram Srinivasan
CEO, SETS

Dr. Sreeram Srinivasan is the CEO of Syrma Technology & Engineering Services, based in Chennai. He holds a B.Tech. from IIT, Madras, and an MS and PhD from North Carolina State University. With 20+ years of experience in Business Operations, he has served in key roles at companies like Shanti Gears, Saint Gobain Sekurit India, MTAR Technologies, and Rane Engine Valves. He is highly valued for his contributions to Syrma SGS since its inception.

Financials and valuations

Consolidated - Income Statement

(INR m)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Total Income from Operations	8,621	8,858	12,667	20,484	28,678	39,288	53,039
Change (%)	143.5	2.8	43.0	61.7	40.0	37.0	35.0
RM Cost	5,847	6,276	9,408	15,405	21,718	29,388	39,673
Employees Cost	748	781	823	1,060	1,426	1,954	2,652
Other Expenses	731	786	1,148	2,142	2,787	3,772	5,039
Total Expenditure	7,325	7,842	11,380	18,606	25,932	35,113	47,364
% of Sales	85.0	88.5	89.8	90.8	90.4	89.4	89.3
EBITDA	1,295	1,016	1,287	1,878	2,746	4,175	5,675
Margin (%)	15.0	11.5	10.2	9.2	9.6	10.6	10.7
Depreciation	191	228	249	312	541	738	878
EBIT	1,105	789	1,038	1,566	2,205	3,437	4,797
Int. and Finance Charges	154	97	108	216	250	250	250
Other Income	183	177	178	437	503	629	796
PBT bef. EO Exp.	1,134	869	1,108	1,787	2,457	3,816	5,343
EO Items	0	0	0	0	0	0	0
PBT after EO Exp.	1,134	869	1,108	1,787	2,457	3,816	5,343
Total Tax	219	213	343	556	723	1,068	1,496
Tax Rate (%)	19.3	24.5	31.0	31.1	29.4	28.0	28.0
Minority Interest	31	25	42	38	117	328	426
Reported PAT	884	630	722	1,193	1,618	2,419	3,420
Adjusted PAT	884	630	722	1,193	1,618	2,419	3,420
Change (%)	321.5	-28.7	14.5	65.2	35.6	49.5	41.4
Margin (%)	10.3	7.1	5.7	5.8	5.6	6.2	6.4

Consolidated - Balance Sheet

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	46	46	1,376	1,768	1,768	1,768	1,768
Preference Capital	47	0	0	0	0	0	0
Total Reserves	4,182	5,946	4,344	13,635	15,253	17,672	21,092
Net Worth	4,275	5,992	5,721	15,403	17,021	19,440	22,860
Minority Interest	2	6	108	26	143	471	897
Total Loans	1,205	1,029	2,183	3,468	3,468	3,468	3,468
Deferred Tax Liabilities	42	62	124	138	138	138	138
Capital Employed	5,523	7,089	8,136	19,035	20,769	23,517	27,363
Gross Block	2,089	2,264	3,233	4,821	7,678	9,369	10,907
Less: Accum. Deprn.	191	405	635	947	1,489	2,227	3,105
Net Fixed Assets	1,898	1,858	2,597	3,874	6,190	7,142	7,801
Goodwill on Consolidation	1,059	1,059	1,182	1,182	1,182	1,182	1,182
Capital WIP	12	0	408	253	1,176	985	947
Total Investments	301	1,316	410	8,500	5,500	5,500	5,500
Current Investments	0	0	0	780	780	780	780
Curr. Assets, Loans&Adv.	4,591	5,365	6,945	11,603	15,658	20,835	28,305
Inventory	1,419	1,789	2,913	5,874	7,735	10,064	13,043
Account Receivables	1,804	2,084	2,722	4,032	5,500	7,319	9,881
Cash and Bank Balance	780	729	369	544	703	1,094	2,199
Loans and Advances	588	763	940	1,151	1,721	2,357	3,182
Curr. Liability & Prov.	2,338	2,509	3,407	6,377	8,937	12,128	16,373
Account Payables	1,707	1,848	2,405	4,881	6,843	9,259	12,500
Other Current Liabilities	506	554	857	1,362	1,907	2,613	3,527
Provisions	125	108	145	134	187	256	346
Net Current Assets	2,253	2,856	3,538	5,226	6,721	8,707	11,932
Misc Expenditure	0	0	0	0	0	0	0
Appl. of Funds	5,523	7,089	8,136	19,035	20,769	23,517	27,363

Financials and valuations

Ratios

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)							
EPS	193.4	136.5	5.2	6.7	9.2	13.7	19.3
Cash EPS	235.2	185.7	7.1	8.5	12.2	17.9	24.3
BV/Share	935.4	1,296.9	41.6	87.1	96.3	110.0	129.3
DPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Payout (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Valuation (x)							
P/E	3.3	4.7	121.8	94.7	69.8	46.7	33.0
Cash P/E	2.7	3.4	90.5	75.1	52.3	35.8	26.3
P/BV	0.7	0.5	15.4	7.3	6.6	5.8	4.9
EV/Sales	0.4	0.4	7.1	5.6	4.0	2.9	2.2
EV/EBITDA	2.6	3.2	69.8	61.3	41.9	27.6	20.2
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	236.1	39.8	-7.5	-12.1	-17.5	0.1	3.2
Return Ratios (%)							
RoE	35.8	12.3	12.3	11.3	10.0	13.3	16.2
RoCE	29.4	11.7	11.2	10.3	9.7	13.5	16.4
RoIC	31.1	12.6	11.9	12.9	13.5	16.9	19.9
Working Capital Ratios							
Fixed Asset Turnover (x)	4.1	3.9	3.9	4.2	3.7	4.2	4.9
Asset Turnover (x)	1.6	1.2	1.6	1.1	1.4	1.7	1.9
Inventory (Days)	89	104	113	139	130	125	120
Debtor (Days)	76	86	78	72	70	68	68
Creditor (Days)	107	107	93	116	115	115	115
Leverage Ratio (x)							
Current Ratio	2.0	2.1	2.0	1.8	1.8	1.7	1.7
Interest Cover Ratio	7.2	8.1	9.6	7.3	8.8	13.8	19.2
Net Debt/Equity	0.1	0.1	0.3	0.1	0.1	0.1	0.0

Consolidated - Cash Flow Statement

(INR m)

Y/E March	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
OP/(Loss) before Tax	1,134	869	1,108	1,787	2,457	3,816	5,343
Depreciation	191	228	249	312	541	738	878
Interest & Finance Charges	117	52	54	-222	-253	-379	-546
Direct Taxes Paid	-207	-220	-289	-556	-723	-1,068	-1,496
(Inc)/Dec in WC	301	-499	-1,212	-2,140	-1,337	-1,594	-2,121
CF from Operations	1,535	430	-90	-818	686	1,513	2,058
Others	23	-58	-36	115	0	0	0
CF from Operating incl EO	1,558	371	-126	-703	686	1,513	2,058
(Inc)/Dec in FA	-479	-187	-901	-1,433	-3,780	-1,500	-1,500
Free Cash Flow	1,079	184	-1,027	-2,136	-3,094	13	558
(Pur)/Sale of Investments	-20	-51	11	0	0	0	0
Others	42	-888	-2,844	-7,711	3,503	629	796
CF from Investments	-457	-1,127	-3,734	-9,144	-277	-871	-704
Issue of Shares	0	331	2,715	9,682	0	0	0
Inc/(Dec) in Debt	-416	-179	1,159	1,285	0	0	0
Interest Paid	-119	-70	-70	-216	-250	-250	-250
Dividend Paid	-20	0	0	0	0	0	0
Others	-37	622	-303	-730	0	0	0
CF from Fin. Activity	-593	705	3,500	10,022	-250	-250	-250
Inc/Dec of Cash	508	-51	-360	175	159	392	1,104
Opening Balance	143	780	729	369	544	703	1,094
Other cash & cash equivalent	130	0	0	0	0	0	0
Closing Balance	780	729	369	544	703	1,094	2,199

Cyient DLM

BSE Sensex 66,283
NIFTY-50 19,751

CMP: INR687

TP: INR870 (+27%)

Buy



Stock Info

Bloomberg	CYIENTDL IN
Equity Shares (m)	79.3
M.Cap.(INRb)/(USDb)	54.4 / 0.7
52-Week Range (INR)	779 / 401
1, 6, 12 Rel. Per (%)	3/-/-
12M Avg Val (INR M)	664
Free float (%)	33.3

Financial Snapshot (INR b)

Y/E MARCH	FY24E	FY25E	FY26E
Sales	12.1	16.9	22.8
EBITDA	1.3	1.9	2.7
Adj. PAT	0.7	1.3	2.0
EBITDA Margin (%)	10.8	11.5	12.0
Cons. Adj. EPS (INR)	9.0	16.4	24.7
EPS Gr. (%)	125.2	82.1	50.5
BV/Sh. (INR)	122.2	138.6	163.3

Ratios

Net D:E	-0.6	-0.5	-0.6
RoE (%)	12.2	12.6	16.3
RoCE (%)	10.3	11.9	15.9

Valuations

P/E (x)	76	42	28
EV/EBITDA (x)	38	25	17

Shareholding pattern (%)

As On	Sep-23	Jun-23
Promoter	66.7	66.7
DII	12.3	12.2
FII	6.2	7.2
Others	14.8	14.0

FII Includes depository receipts

Banking on strong parentage; tapping the niche verticals

Healthy order book and improving margin to drive growth | Initiate with a BUY

Cyient DLM (CYIENTDL) is an integrated electronics manufacturing service (EMS) and solutions provider with a focus on the entire life cycle of a product, including design, build and maintain. The company, incorporated in Jun'93, has over three decades of rich experience in developing high-mix, low-to-medium volume of highly complex systems and services. The company has a diversified revenue stream across end-user industries, including Defense (~38% of FY23 revenue), Aerospace (~20%), Industrial (~25%) and Medical Technology (~16%).

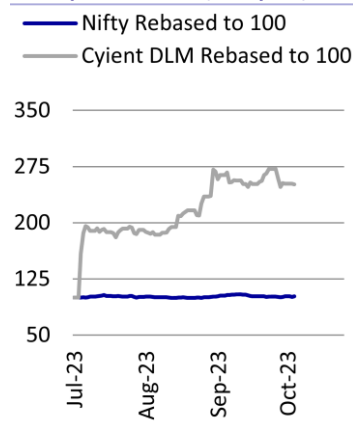
- CYIENTDL's order book stood at ~INR24.3b in FY23 (~64% CAGR over FY21-23), with a book-to-bill ratio of ~2.9x. The healthy order book along with strong order inflows and robust traction in end-user industries (medical technology/aerospace industries expected to post ~41%/38% CAGR over FY22-27), provides ample revenue visibility for the company.
- The company's long-standing relationships (avg. relationship of over 11 years) with several marquee customers across highly regulated industries and its strong parentage (subsidiary of Cyient Ltd) give it a competitive edge over its peers.
- We estimate CYIENTDL to post a revenue/EBITDA/Adj. PAT CAGR of 40%/46%/83% over FY23-26, driven by its healthy order book and strong order inflows along with an improving margin profile. Its strong cash-generation ability (CFO/EBITDA of ~59% in FY23) will be further aided by a normalizing working capital scenario.
- CYIENTDL currently trades at 28x FY26E EPS with RoE/RoCE of 16.3%/15.9% in FY26E. We initiate coverage with a BUY rating and a TP of INR870 (based on 35x FY26E EPS).

Robust order book and healthy order inflows to boost revenue growth

- CYIENTDL's consolidated orders doubled YoY to ~INR24.3b in FY23 (~64% CAGR over FY21-23), aided by robust order inflows (~INR20.6b in FY23), as the company has received a large-scale order in addition to a few multi-year orders from some of the key customers.
- Further, it witnessed order inflows of INR2.8b in 1QFY24, which bolstered its order book to ~INR25b as of 30th Jun'23.
- The company has a high book-to-bill ratio (~2.9x as on FY23), which provides strong revenue visibility in the near-to-medium term.
- Going ahead, the strong momentum in exports (~60% of revenues in FY23; expected to improve to ~75% in the longer run) and the expansion in the aftermarket and value-added service portfolio are likely to be key growth driver for CYIENTDL.
- We expect revenue CAGR of ~40% over FY23-26, led by healthy order inflows with the bill-to-book ratio sustaining in the range of ~2.6x-2.9x by FY26E.

Healthy traction in Medical Technology and Aerospace to drive sales

- CYIENTDL focuses on the medical technology/aerospace verticals, given strong traction in these end-user industries (expected to register ~41%/38% CAGR over FY22-27) and better margin profile compared to the defense vertical.

Stock performance (one-year)

- We expect the aerospace/medical technology verticals to register a ~51%/45% CAGR over FY23-26, with the revenue mix improving to 25%/18% by FY26E.
- However, the company's revenue growth in the long run will be driven by all the four segments (contributing equally to the long-term revenue).

High customer stickiness provides long-term visibility

- CYIENTDL enjoys long-term relationships (as an integrated partner) with several marquee customers such as Honeywell International Inc., Thales Global Services S.A.S, ABB Inc., Bharat Electronics Ltd. and Molbio Diagnostics Pvt. Ltd. As of FY23, the company had an average relationship of over 11 years with these marquee customers.
- Being a strategic partner to clients across highly regulated industries (such as defense & aerospace), CYIENTDL enjoys high customer stickiness and has a high proportion of repeat business. This allows it to have better visibility on the future revenue stream as well as a stable client base.
- Accordingly, the company received ~97% of orders from its top 10 customers as of FY23. Though this raises concentration risk for its business, the healthy track record of customer stickiness reflects sustainable growth for the business.

Strong parentage provides competitive advantage

- Cyient Ltd, the promoter of CYIENTDL, is a brand associated with global engineering capabilities, as well as quality of service and reliability. The strong parentage helps CYIENTDL engage with relatively large multinational clients despite its smaller size.
- Further, strong association with its promoters not only brings in rich domain expertise but also renders the company with an advantage in designing capabilities, attracting talent pool and corporate governance practices.
- CYIENTDL's strong end-to-end executional capabilities backed by design proficiency and rich heritage of its promoter give the company an edge over its peers and allow it to offer a larger value proposition on the 'design, build and maintain' value chain.

Healthy financial performance led by improving margins

- CYIENTDL turned around its financial performance (Adj. PAT of ~INR317m in FY23 from a net loss of INR67m in FY20), aided by healthy revenue growth (~22% CAGR over FY20-23) and significant expansion in EBITDA margin (~10.6% in FY23 vs. ~3% in FY20).
- EBITDA margin expansion was driven by improved gross margin (up ~230bp over FY20-23) and favorable operating leverage.
- Going ahead, margins are expected to improve further on the back of a higher share of build-to-specifications contracts (high-margin business vs. traditional built-to-print business) and continued operating leverage (capacity utilization still at ~35-40%).
- CYIENTDL continues to generate healthy cash flows (CFO/EBITDA of 59% in FY23) despite net working capital days stretching to 130 in FY23 (vs. 109 in FY22). Working capital days are expected to improve going ahead, led by a normalization in inventory (due to easing supply chain issues), which will further boost cash flow generation.
- Factoring in robust earnings growth (83% CAGR over FY23-26E), we expect RoE/RoCE to improve to ~16.3%/15.9% by FY26.

Valuation and view: Multiple growth levers in place; initiate with a BUY

- CYIENTDL, being an integrated EMS and solutions provider in the rapidly growing critical end-user industries such as Aerospace and Defense (~38% CAGR over FY23-27E) and Medical technology (~41% CAGR over FY23-27E), is likely to capture its share of the pie on the back of its strong core competencies and high technical capabilities.
- Going ahead, we expect CYIENTDL to sustain its growth momentum, aided by: 1) strong order book (book-to-bill ratio of ~2.9x as of FY23) coupled with healthy order inflows; 2) high customer stickiness providing sustainable growth; and 3) strong promoter heritage enabling access to a larger pool of customers and providing technical competencies.
- We estimate CYIENTDL to report a CAGR of 40%/46%/ 83% in revenue/EBITDA/ Adj. PAT over FY23-26.
- CYIENTDL currently trades at 28x FY26E EPS with RoE/RoCE of 16.3%/15.9% in FY26. We initiate coverage with a BUY rating and a TP of INR870 (based on 35x FY26E EPS).
- **Key risks include:** 1) High concentration of orders, 2) delay in key government programs in the space and defense sectors due to fiscal constraints, and 3) high working capital requirement.

Exhibit 187: Comparative valuation

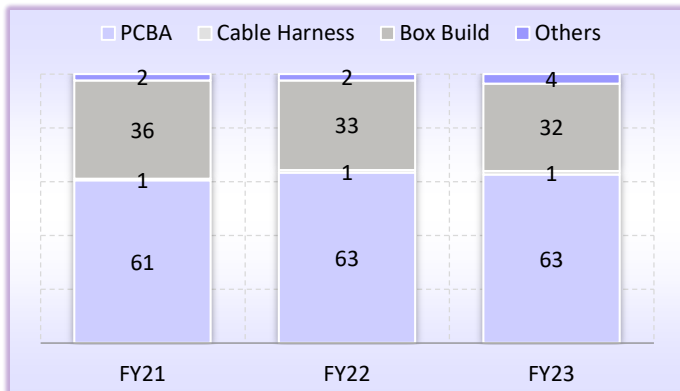
Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

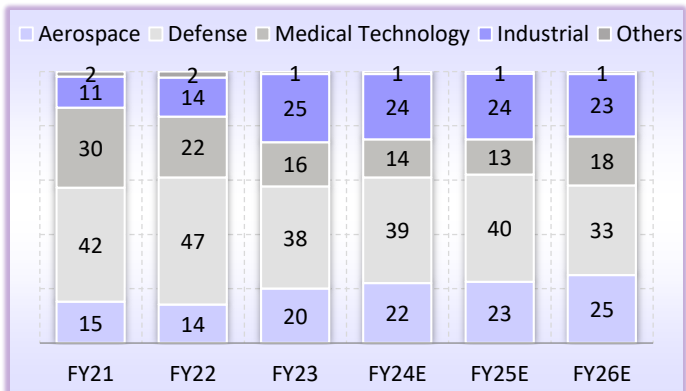
Source: MOFSL, Company, *BBG

STORY IN CHARTS

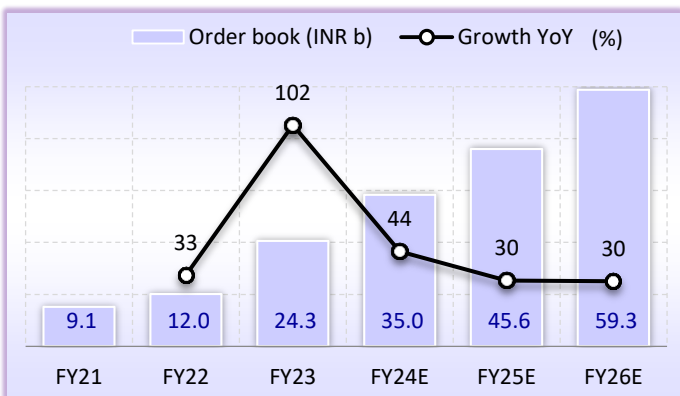
Product-wise revenue mix (%)



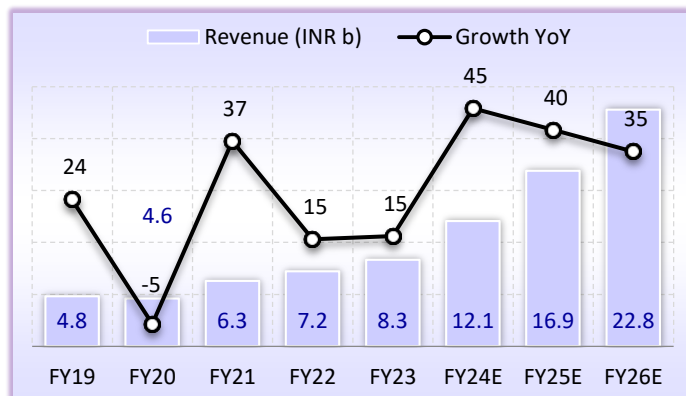
End-user vertical-wise revenue segmentation (%)



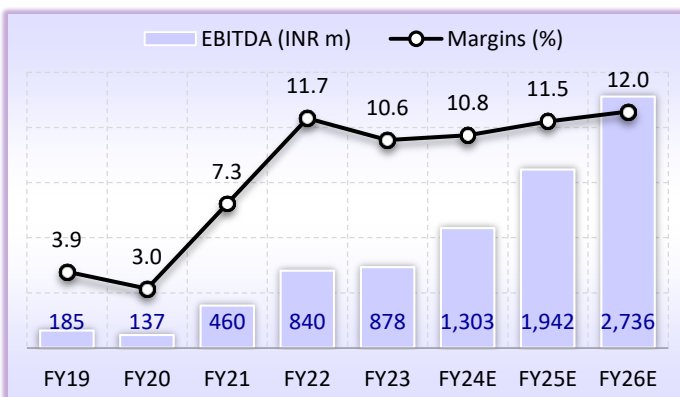
Order book trend



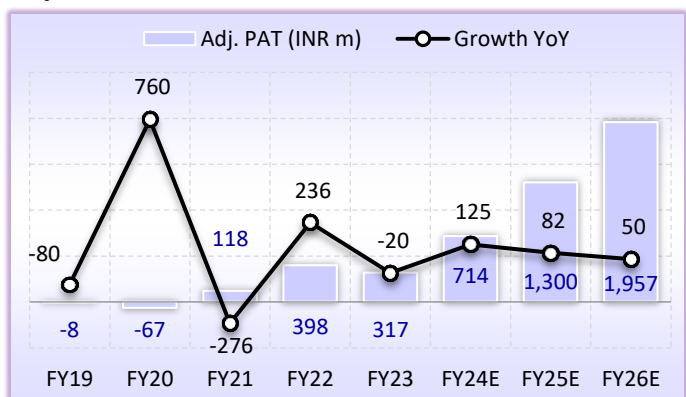
Revenue CAGR of 40% over FY23-26E



EBITDA CAGR of 46% over FY23-26E

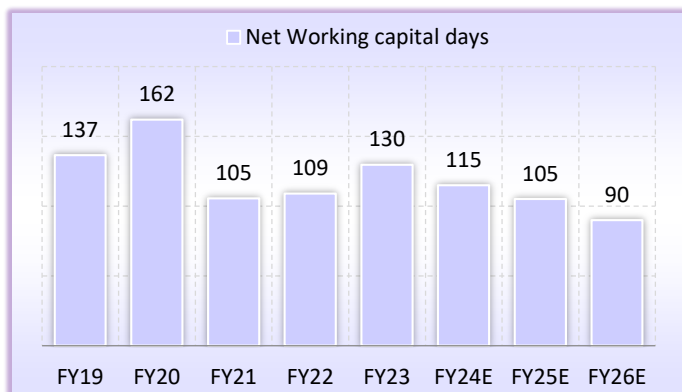


Adj. PAT CAGR of 83% over FY23-26E

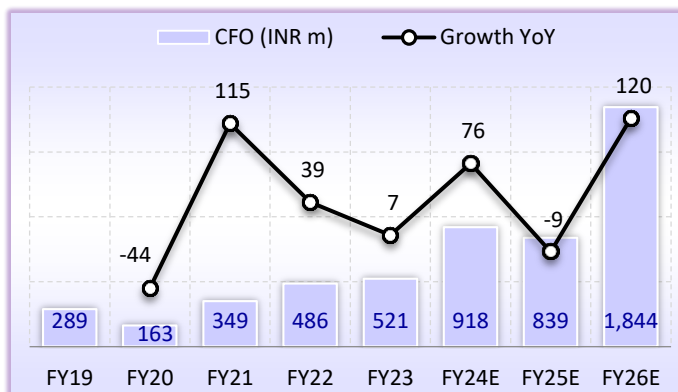


STORY IN CHARTS

Net working capital days to decline to 90 days by FY26E...

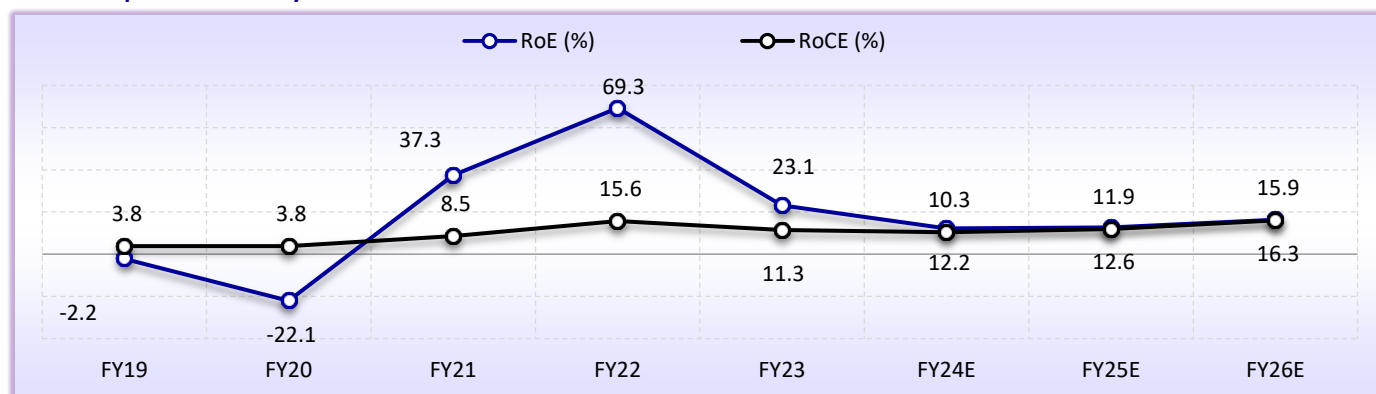


...leading to significant improvement in Cash flows



Source: MOFSL, Company

RoCE to improve to 16% by FY26E



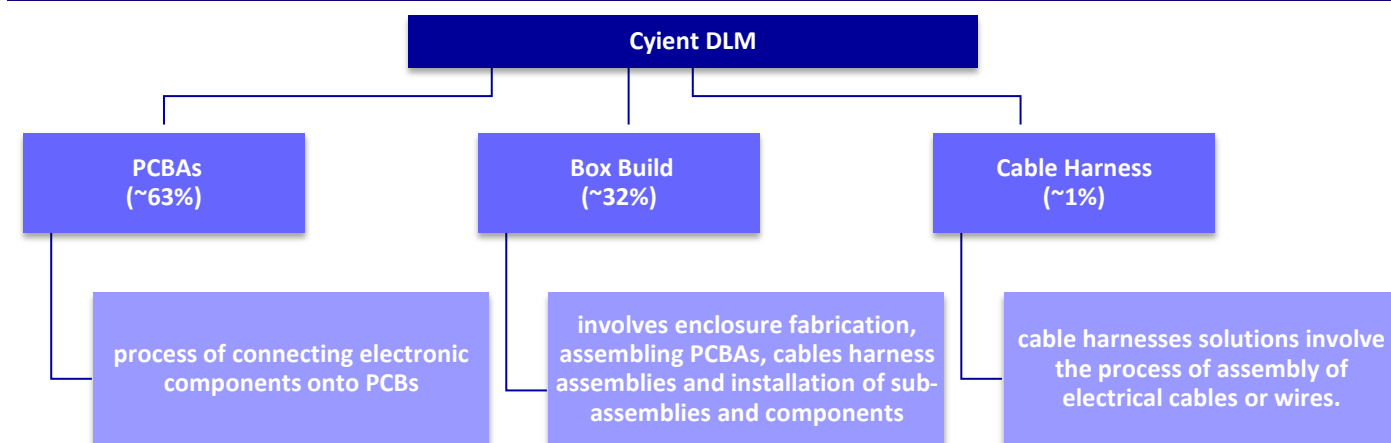
Source: MOFSL, Company

Company overview

Over three decades of experience serving critical end-user industries such as Aerospace, Defence and Medical Technology (cumulatively accounts for ~74% of FY23 revenues)

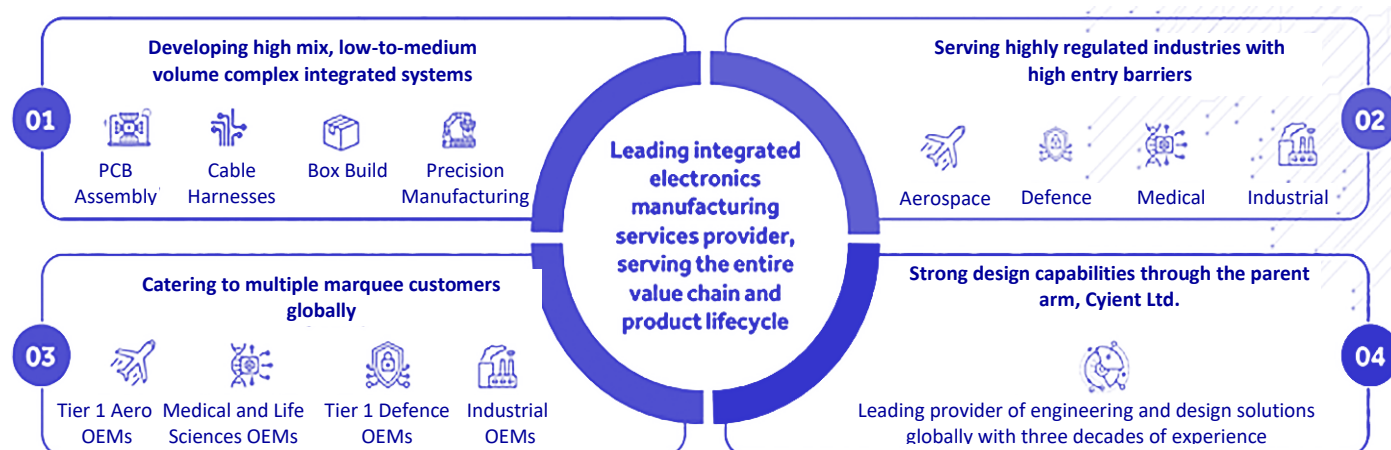
- Founded in 1993, CYIENTDL is an integrated EMS and solutions provider with a focus on the entire life cycle of a product, including design, build and maintain.
- CYIENTDL has over three decades of experience in developing high mix, low-to-medium volume highly complex systems. It is a qualified supplier to global OEMs across sectors such as Defense (accounts for 38% of FY23 revenue), Industrial (~25%), Aerospace (~20%) and Medical technology (16%).
- The company successfully leverages the design capabilities of its promoter Cyient Ltd (a leading engineering services provider with over three decades of domain expertise providing engineering and design solutions globally).
- CYIENTDL currently operates through three manufacturing facilities in India spread over ~300k sqft of manufacturing space and workforce of over 1,000.
- CYIENTDL's solutions primarily comprise: (1) Printed Circuit Board Assembly (PCBA) (accounts for ~63% of FY23 revenues) (2) Box Build (~32%) (3) Cable Harness (~1%). Other products form ~4% of total revenue as of FY23.
- The company derives a majority of its revenue from exports (~60% in FY23), with the rest coming from domestic markets (40%). It is mainly focusing on North America (NAM), Europe, Middle East and Africa (EMEA) and Asia Pacific (APAC).

Exhibit 188: Key business segments (FY23)



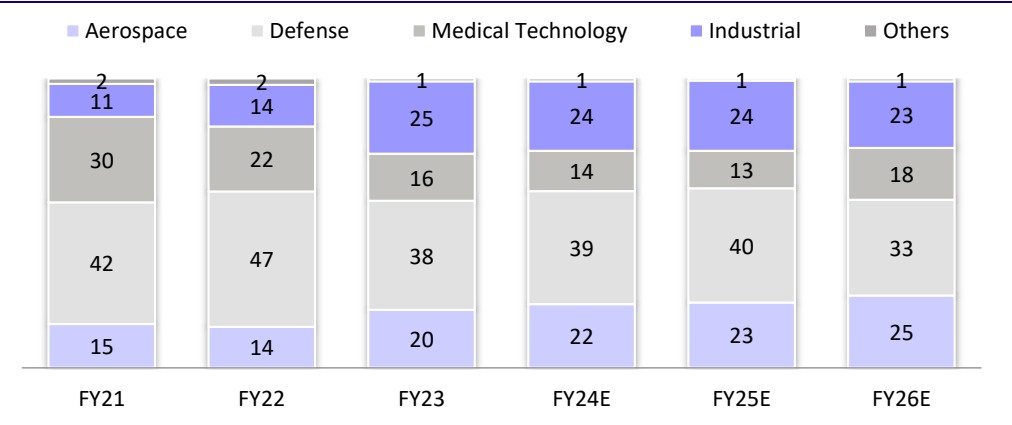
Source: Company, MOFSL

Exhibit 189: Key EMS player serving the entire value chain and product lifecycle



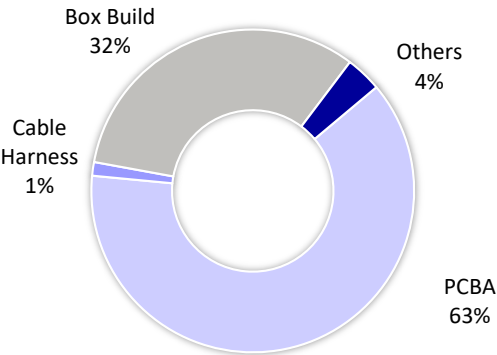
Source: Company, MOFSL

Exhibit 190: End-user industry-wise revenue mix



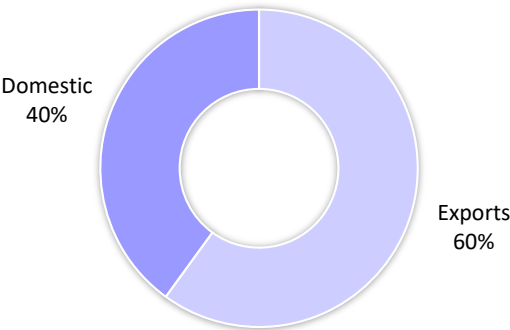
Source: Company, MOFSL

Exhibit 191: Product-wise revenue segmentation (FY23)



Source: Company, MOFSL

Exhibit 192: Geography-wise revenue segmentation (FY23)

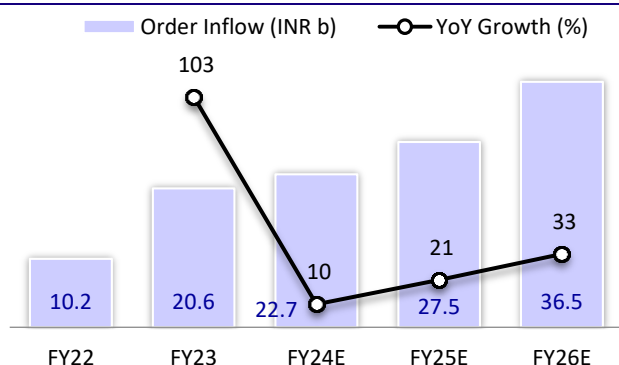


Source: Company, MOFSL

Robust order book and healthy order inflows to boost revenue growth

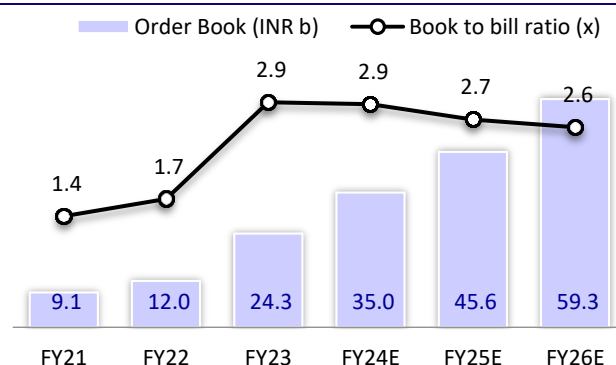
- CYIENTDL's consolidated orders grew strongly over the past couple of years (~64% CAGR over FY21-23) on the back of robust order inflows (~INR10.1b/ INR20.6b in FY22/FY23) as the company secured a large-scale order in addition to a few multi-year orders from some of the key customers over the period.
- Accordingly, the order book as of FY23 stood at ~INR24.3b (up 2x YoY) with a book-to-bill ratio of ~2.9x. Further, it reported order inflows of INR2.8b in 1QFY24, which bolstered its order book to ~INR25b as of 30th Jun'23.

Exhibit 193: Order inflow trend



Source: Company, MOFSL

Exhibit 194: Order book and book-to-bill ratio trend

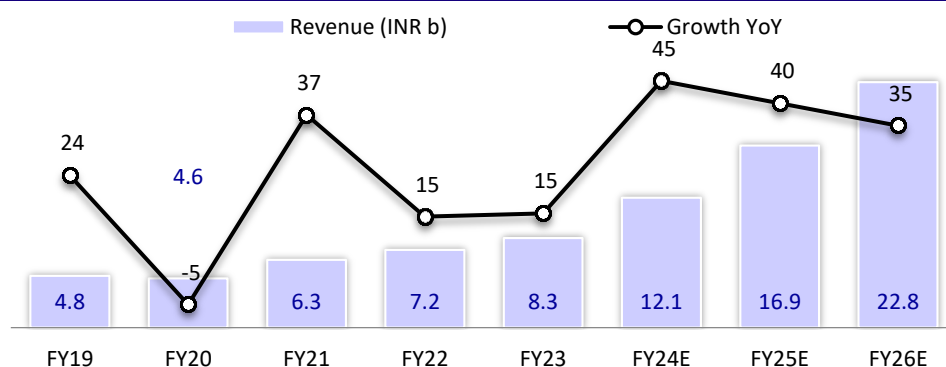


Source: Company, MOFSL

Strong order book (book-to-bill ratio of 2.9x as on FY23), healthy order inflows, momentum in exports, and expansion in aftermarket & value added portfolio would drive revenue

- Exports accounted for ~60% of the revenue in FY23, with a major contribution from Aerospace and Medical verticals. We expect that strong momentum in exports should drive the export mix to 75% by FY26. Another factor for a high export mix by FY26 will be the completion of a large domestic order for BHEL by FY25 end.
- A higher export mix and the expansion in the aftermarket and value-added service portfolio will further boost growth for the company.
- Accordingly, we expect CYIENTDL to register a ~40% revenue CAGR over FY23-26 on the back of cumulative order flows of ~86.7b over the same period with a bill-to-book ratio of ~2.6 times by FY26.

Exhibit 195: CYIENTDL to register 40% CAGR over FY23-26E



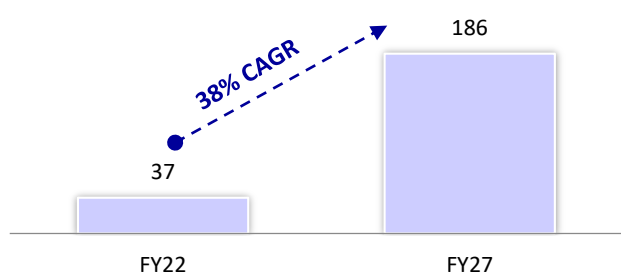
Source: Company, MOFSL

Healthy traction within Medical Technology and Aerospace to drive sales

- CYIENTDL has a diversified revenue base with Defense accounting for the highest share at ~38%, followed by Industrial (25%), Aerospace (~20%), Medical technology (~14%), and others (~1%).
- However, the company is witnessing strong traction in some of the end-user industries, particularly in Aerospace and Medical Technology, and is therefore shifting its focus towards these specific verticals.
- In FY22, the Indian EMS market for the A&D Electronics segment was valued at INR37b. It is likely to report a CAGR of 38%, reaching INR186b by FY27. Currently, the A&D Electronics segment accounts for just 2.5% of the Indian EMS market.
- Similarly, the Medical Devices EMS industry was valued at INR23b in FY22, and is expected to post a CAGR of ~41% to reach INR125b by FY27 in India.

Exhibit 196: Indian A&D EMS Market

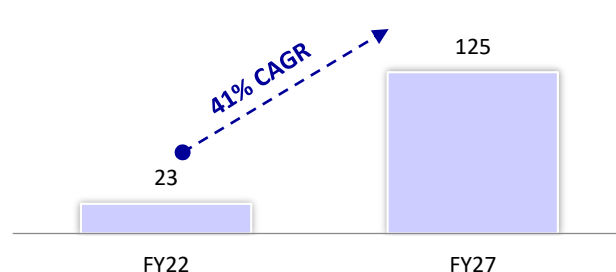
■ Indian A&D EMS Market (INR b)



Source: Company, MOFSL

Exhibit 197: Indian Medical Device EMS market

■ Indian Medical Device EMS Market (INR b)

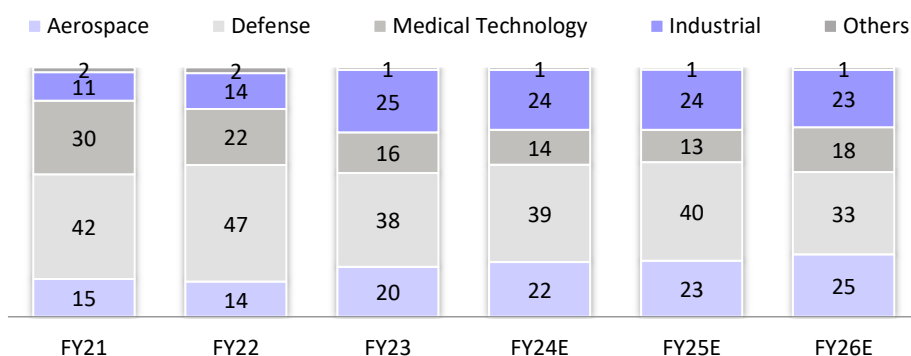


Source: Company, MOFSL

Strong traction in end-user industries, such as Aerospace and Medical Technology (cumulatively accounts for ~36% of revenue as on FY23) to aid revenue growth

- Further, within the Defense vertical, current margins are relatively low, primarily attributed to the domestic defense contract, with a major ongoing project from BHEL that has lower profit margins. This project is expected to be completed by the end of FY25.
- Thus, a heightened emphasis on other verticals would be advantageous for the company's profit margins.
- The company expects all the four segments (Defense, Industrial, Aerospace, and medical technology) to contribute equally toward the revenue in the next three to five years.
- Factoring the same, we expect the Aerospace/Medical technology vertical to register the highest CAGR of ~51%/45% over FY23-26, outpacing other industries leading the company's revenue growth.

Exhibit 198: End-user industry-wise revenue segmentation (%)



Source: Company, MOFSL

High customer stickiness provides long-term visibility

High customer stickiness (average relationship of ~11 years with key marquee customers) provides mid-to-long term visibility; albeit with high customer concentration risk

- CYIENTDL has built a diverse customer base with marquee clients over three decades of its presence in the EMS industry.
- The company adheres to a strategic partnership model wherein it focusses on assisting its customers in fulfilling their needs across the entire spectrum of their engagement. This encompasses areas such as cost optimization, productivity improvement, product reliability, and reduction in production time.
- This, coupled with high delivery standards and performance excellence, has enabled CYIENTDL to acquire, service, and deepen its relationship with a diverse range of high-level clients ranging from startups to the industry leaders.
- Accordingly, CYIENTDL enjoys long-term relationships (as an integrated partner) with multiple marquee customers such as Honeywell International Inc., Thales Global Services S.A.S, ABB Inc., Bharat Electronics Limited, and Molbio Diagnostics Private Limited.
- The company had an average relationship of over 11 years with these marquee customers as of FY23.

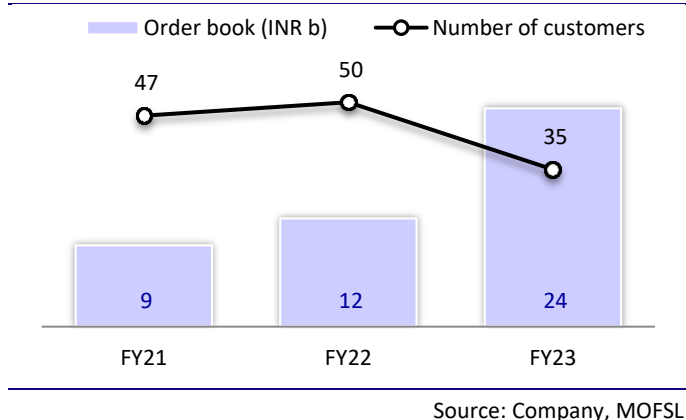
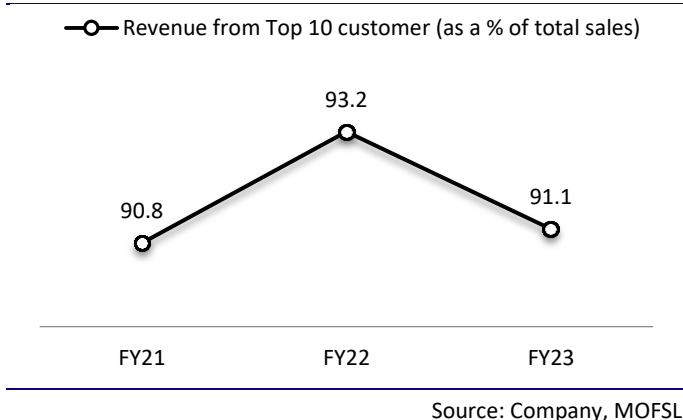
Exhibit 199: Revenue contribution from key long-term customers of CYIENTDL

Name of customer	No. of years of relationship (as of FY23)	FY23		FY22		FY21	
		Revenue (INR m)	% of total sales	Revenue (INR m)	% of total sales	Revenue (INR m)	% of total sales
ABB Inc.	14	1,794	22	786	11	431	7
Bharat Electronics Limited	12	887	11	1,086	15	867	14
Honeywell International Inc.	14	747	9	539	7	540	9
Thales Global Services S.A.S	8	1,046	13	693	10	639	10
Molbio Diagnostics Private Limited	10	241	3	515	7	1,031	16
Total		4,715	57	3,619	50	3,509	56

Source: Company, MOFSL

Healthy track records moderate concentration risk

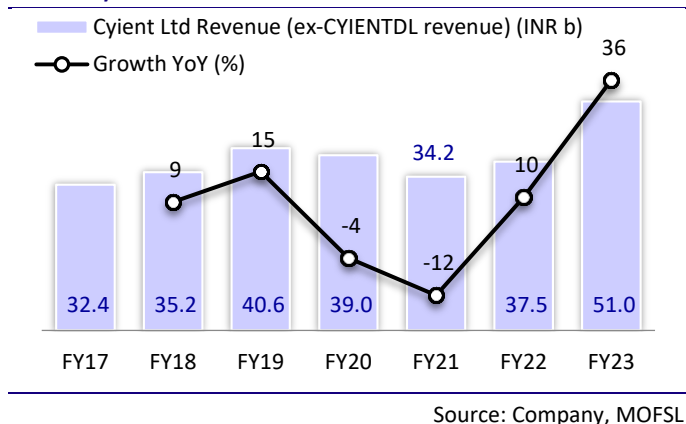
- Being a strategic partner to clients across the highly regulated industries (such as defense, aerospace and medical technology), CYIENTDL enjoys high customer retention and long-term relationships with a high proportion of repeat business.
- Generally, CYIENTDL's long-term contracts with clients have durations ranging from three years and to more than 15 years.
- The strong customer stickiness ensures better visibility on future revenue stream as well as a stable client base.
- Accordingly, ~97% of the orders as of FY23 and ~91% of the revenues for FY23 were generated from the top 10 customers of the company.
- This does pose concentration risk, as a major customer shifting to another provider could result in a decline in the company's revenue.
- However, historically, CYIENTDL has showcased a healthy track record of customer stickiness, which reflects sustainable growth for the business.
- Further, the current order book (~2.9x of FY23 sales) reflects strong confidence of customers on CYIENTDL.

Exhibit 200: Order book and no. of customer trend**Exhibit 201: High customer concentration**

Strong promoter backing provides competitive advantage

- CYIENTDL was originally incorporated as Rangsons Electronics Private Limited at Mysuru, Karnataka, in 1993.
- In 2015, Cyient acquired a majority stake in Rangsons Electronics. Accordingly, the company was renamed Cyient DLM (Design Led Manufacturing) Ltd. in 2017.
- CYIENTDL derived significant advantages and a competitive edge from the sectoral expertise of its promoter 'Cyient Ltd'.
- Cyient Ltd is a global Digital, Engineering, and Technology solutions company. It collaborates with its customers to design digital enterprises, build intelligent products and platforms, and solve sustainability challenges.
- 'Cyient' is a brand associated with global engineering capabilities, as well as the quality of service and reliability. Cyient Ltd has over 250 customers, out of which, over 90 customers have contracts of over a million dollars with the company.
- Currently, ~20% of Cyient Ltd's customers are affiliated with CYIENTDL. Consequently, the strong customer base, coupled with Cyient Ltd's acquisition of new clients, bodes well for CYIENTDL as it expands the potential customer pool for the company.

Strong parentage aids CYIENTDL in engaging with larger multinational clients, while providing domain expertise and design capabilities.

Exhibit 202: Cyient Ltd Revenue trend (ex of CYIENTDL revenue)**Exhibit 203: Around 20% of Cyient Ltd customers are associated with CYIENTDL**

No. of Million \$ clients			
DET*	1QFY24	4QFY23	1QFY23
20m+	7	7	4
10m+	13	13	11
5m+	31	31	25
1m+	90	84	81
New Clients Added	20	13	8

*Digital, Engineering and Technology

Source: Company, MOFSL

- This strong parentage helps CYIENTDL engage with relatively large multinational client base despite its smaller size.
- Further, the strong association with its promoters not only provides access to valuable domain expertise, but also grants the company advantages in terms of design capabilities, attracting a talent workforce, and maintaining high corporate governance standards.
- Going ahead, we believe that CYIENTDL's strong end-to-end executional capabilities, backed by the design proficiency and rich heritage of its promoter will continue to provide it with an edge over its peers.
- Further, these traits will allow the company to provide a larger value proposition on the 'design, build, and maintain' value chain.

Exhibit 204: Overview of Cyient Group Businesses

- **Cyient Group Business Segments:**
 - **Cyient DET:** Digital, Engineering & Technology
 - **Cyient DLM**
 - **Cyient Others[^]**
- **Cyient DET: Consolidated Services + Engineering Parts business^{*}**
 - **Transportation:** Aerospace + Rail Transportation
 - **Connectivity:** Communications
 - **Sustainability:** Mining, Energy & Utilities
 - **New Growth Areas:** Medical, Semiconductor, Hi-Tech and Automotive

^{*}Engineering Parts business was included in Cyient DLM segment earlier

[^]Cyient Others: Aerospace Tooling business (Included in DLM segment earlier)

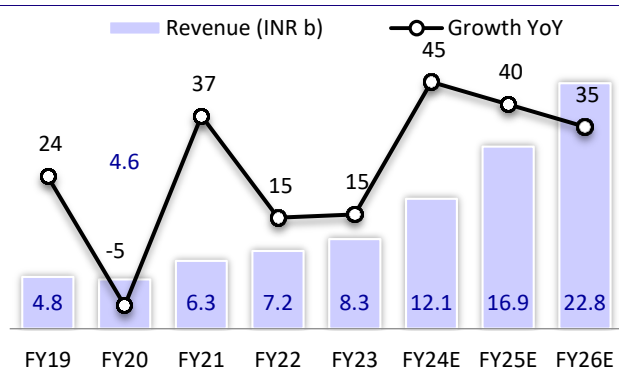
Source: Company, MOFSL

Robust earnings, easing working capital to drive returns

Healthy order book, coupled with strong order inflows, to drive sales

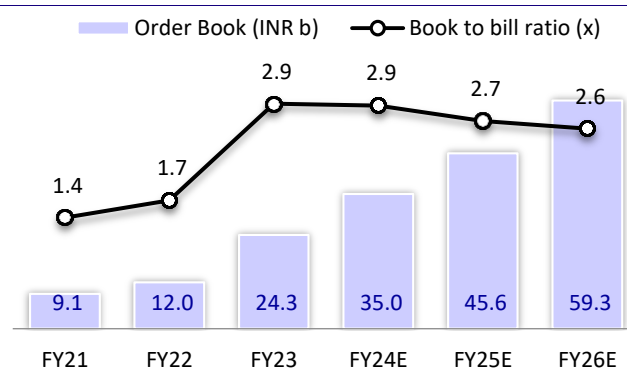
- CYIENTDL has witnessed a revenue CAGR of ~22% over FY20-23, led by healthy order inflows (~INR20.6b in FY23) across verticals.
- Going ahead, we expect the momentum to accelerate, on the back of a healthy order book of ~INR25b as on Jun'23 and strong order inflows (we expect cumulative orders inflows of ~INR86.7b over FY23-26E)
- The company expects to execute ~50% of the order book within a year (subject to raw material availability). This provides strong revenue visibility in the near term.
- In the long term, the strong momentum in exports (~60% of revenues in FY23), along with expansion in the aftermarket and value-added service portfolio, are expected to drive the company's sales.
- Accordingly, we expect ~40% revenue CAGR for CYIENTDL over FY23-26E, with book-to-bill ratio of ~2.6 by FY26.

Exhibit 205: Revenue CAGR of ~40% over FY23-26E



Source: MOFSL, Company

Exhibit 206: Order book and book-to-bill ratio trend

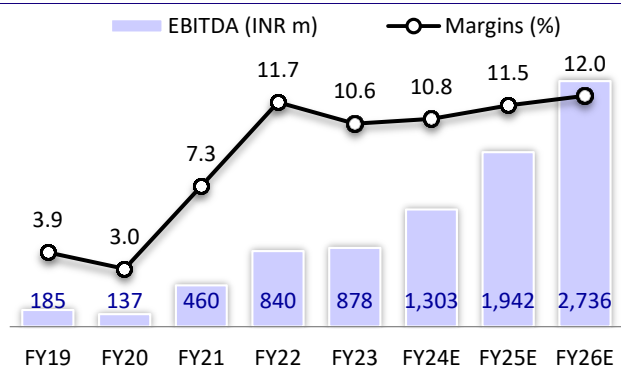


Source: MOFSL, Company

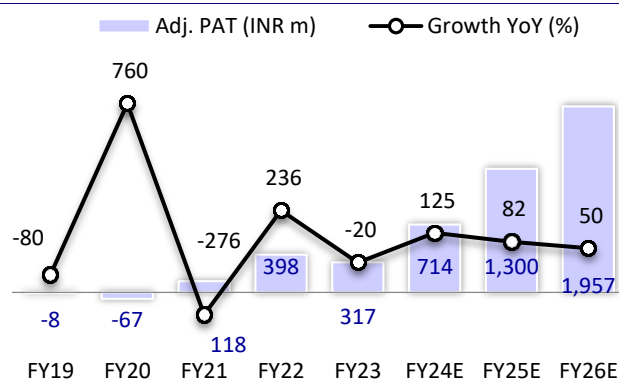
Improved gross margins coupled with favorable operating leverage to drive operating profitability. Lower interest expenses (led by repayment of debt) are likely to boost earnings.

Operating leverage to inch up margins

- Over the past few years, the company's EBITDA margins has improved significantly (from 3% in FY20 to 10.6% in FY23) on the back of improved gross margins (up from ~20.2% in FY20 to ~22.5% in FY23) and favorable operating leverage.
- Employee expenses/other expenses as a percentage of sales declined from 9.6%/7.5% in FY20 to ~7.8%/4.1% in FY23.
- Going ahead, we expect an EBITDA CAGR of ~46% over FY23-26E, with EBITDA margins improving to ~12% by FY26E.
- Further, the company will be utilizing the IPO proceeds to reduce its borrowing, leading to lower interest expenses and improved net profitability.
- Accordingly, Adj. PAT is expected to register ~83% CAGR over FY23-26.

Exhibit 207: EBITDA and EBITDA Margin trends

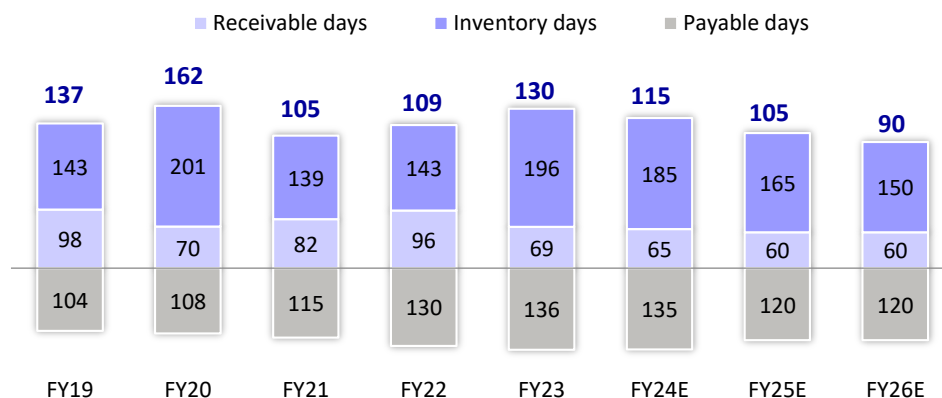
Source: MOFSL, Company

Exhibit 208: Adj. PAT trend

Source: MOFSL, Company

Easing of supply chain to normalize inventory days and ease working capital requirement

- CYIENTDL has high working capital requirements. The Net working capital days stretched to ~130 days in FY23 vs. ~105/109 days in FY21/FY22.
- High inventory levels (inventory of ~196 days in FY23) are pushing up the working capital requirements, which are partially offset by higher payable days (~136 days in FY23).
- Going ahead, we expect the inventory levels to come down, on the back of stability in global supply chains and improved availability of semi-conductors.

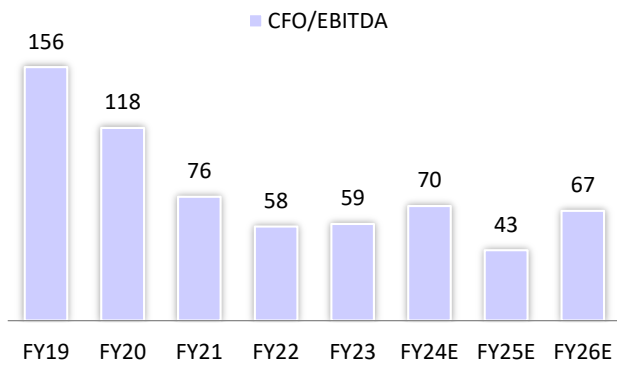
Exhibit 209: Working capital days trend

Source: Company, MOFSL

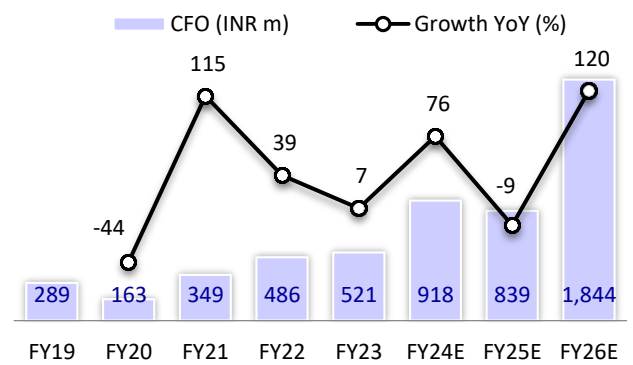
Easing of supply chain to improve working capital requirements; leading to improved cash flow generation by the company.

Moderating working capital to generate higher cash flow

- CYIENTDL is generating positive cash flow from operations over the past few years with CFO to EBITDA ratio standing as high as ~118% as on FY20.
- However, heightened working requirement later on resulted in CFO to EBITDA ratio moderating to ~76%/58%/59% in FY21/FY22/FY23.
- Still, this is among the best operating profitability to cash flow conversion ratio within the EMS segment.
- Going ahead, as working capital requirements continue to decrease, we anticipate that the CFO/EBITDA ratio to improve from its current levels and reach ~67% by FY26.

Exhibit 210: High CFO/EBITDA ratio... (%)

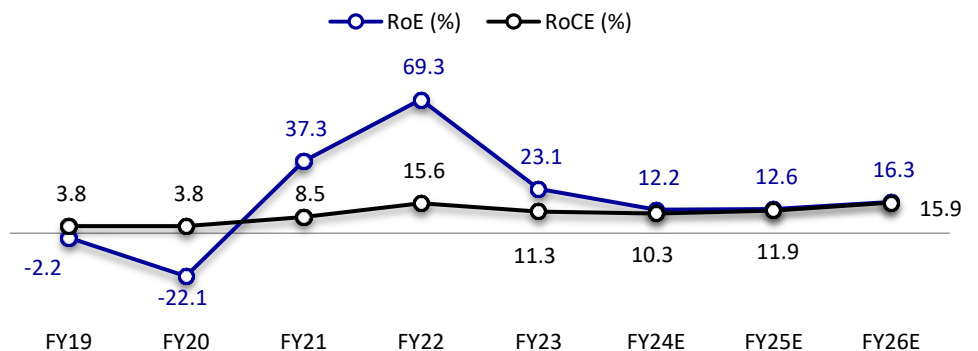
Source: MOFSL, Company

Exhibit 211: ...led to high cash flow generation

Source: MOFSL, Company

Robust profit growth driving the returns for the company

- CYIENTDL witnessed a strong surge in its return ratio with RoE standing at ~23.1% in FY23 (vs. negative returns as on FY20).
- RoCE also improved significantly to ~11.3% in FY23 from ~3.8% in FY20.
- As per Dupont analysis, RoE improvement was primarily led by an increase in net profit margins (to ~3.8% in FY23 from a net loss in FY19). Asset turnover remained at similar levels, while financial leverage turned positive.
- Asset turnover improved marginally to ~1.5x in FY23 from 1.4x in FY20, despite the company raising capital over the period. Similarly, fixed Asset T/O has improved to ~3.1x in FY23 from 2.7x in FY20.
- Going forward, we expect RoE to inch up further to ~16.3% by FY26, on the back of improved net profit margins (~8.6% by FY26)

Exhibit 212: RoE and RoCE trends

Source: Company, MOFSL

Multiple growth levers in place | Initiate with a BUY

Banking on its expertise within the niche verticals

- CYIENTDL, being an integrated EMS and solutions provider within the rapidly growing critical end-user industries such as Aerospace & Defense and Medical Technology, is likely to garner its share of the pie backed by its strong core competencies and robust technical capabilities.
- Going ahead, we expect CYIENTDL to continue its growth momentum aided by: 1) strong order book (book-to-bill ratio of ~2.9x as of FY23) coupled with healthy order inflows; 2) high customer stickiness providing sustainable growth; and 3) strong promoter heritage enabling access to a larger pool of customers and providing technical competencies.
- We estimate CYIENTDL to register a revenue/EBITDA/Adj. PAT CAGR of 40%/46%/83% over FY23-26.
- CYIENTDL currently trades at 28x FY26E EPS with a RoE/RoCE of 16.3%/15.9% in FY26E. We believe the company would capitalize on the strong industry tailwinds and continue to remain a key market player, thus sustaining its healthy growth momentum. **We initiate coverage on the stock with a BUY rating and a TP of INR870 (based on 35x FY26E EPS).**

Key risks

- High customer concentration risk with ~91% of revenue originating from the top 10 customers in FY23.
- Delay in key government programs in the space and defense sectors due to fiscal constraints
- High working capital requirement primarily due to high inventory days

Exhibit 213: Comparative valuation

Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

Source: MOFSL, Company, *BBG

ESG initiatives



Environmental initiatives

- CYIENTDL has three lead-free SMT lines and three lead-free PTH lines in its Hyderabad and Mysuru facilities.
- It also has a roadmap for implementing carbon dioxide reduction measures, involving carbon footprint assessment and proposed energy reduction plans.
- Further, the company has planted thousands of trees over the past four years, ensuring better environment sustainability.

Social

- In FY21/FY22/FY23, CYIENTDL have spent NIL/INR1.3m/INR4.5m towards corporate social responsibility.
- **Cyient Foundation** (part of Cyient Group) is actively involved in the Swachh Bharat Initiative, running the Swachh Telangana-Swachh Pathashala campaign to enhance water, sanitation, and hygiene facilities in 54 government schools that are benefiting over 20,000 students.
- **Employee well-being:** The company has provided electrostatic discharge aprons to all the employees working in the manufacturing facilities, and has in-house occupational health centers with full-time doctors for health emergencies. It also conducts annual health check-ups for all the employees.

Governance

- As of Jun'23, the Board comprised six Directors including three Independent Directors and a woman Director.
- The company is in compliance with the requirements of corporate governance with respect to composition of the Board and constitution of the committees of the Board.

Bull and Bear cases



Bull Case

- ✓ In our bull case, we assume a revenue CAGR of 47% over FY23-26E on the back of higher orders inflows and efficient execution.
- ✓ We expect margin to expand from the current level by ~120bp to reach ~12.8% over FY26 fueled by operating leverage.
- ✓ EPS to register a robust CAGR of 98% over FY23-26E.



Bear Case

- ✓ In our bear case, we assume a revenue CAGR of 33% over FY23-26.
- ✓ Margin to expand ~60bp from the current level to reach 11.2% over FY26E.
- ✓ EPS to register a CAGR of 69% over FY23-26E.

Exhibit 214: Bull and Bear case scenario (INR m)

	Particulars	FY24E	FY25E	FY26E	CAGR (FY23-26E, %)
Bear case	Revenue	11,648	15,376	19,681	33
	EBITDA	1,235	1,676	2,204	36
INR630	EPS	8.3	13.8	19.4	69
Base case	Revenue	12,064	16,890	22,802	40
	EBITDA	1,303	1,942	2,736	46
INR870	EPS	9.0	16.4	24.7	83
Bull case	Revenue	12,480	18,097	26,240	47
	EBITDA	1,423	2,190	3,359	56
INR1100	EPS	10.4	19.2	31.2	98

Source: MOFSL, Company

SWOT analysis

- ✓ High entry barrier due to technical expertise in critical end-user industries.
- ✓ Long standing relationships with top customers
- ✓ Catering to multiple marquee customers globally
- ✓ Strong design capabilities through the parent arm, Cyient Ltd.

S
STRENGTH



- ✓ High customer concentration risk
- ✓ High requirement of working capital

W
WEAKNESS



- ✓ Strong domestic demand along with huge import replacement and export opportunities
- ✓ Increase in spends within Aerospace and Defense segments

O
OPPORTUNITY



- ✓ Competition from large global players and small domestic suppliers
- ✓ Possible delays in key government programs in the space and defense sectors due to fiscal constraints

T
THREATS



Management team



Rajendra Velagapudi

Managing Director

He is responsible for manufacturing operations, including growth strategies and emerging sectors. He joined Cyient Ltd in 1999. In April 2017, he became the MD & CEO of Cyient DLM, focusing on mechanical and electronic products. He holds a Master's degree in Automobile Engineering from the Madras Institute of Technology and a Master's in Design from Cranfield University, UK



KRISHNA BODANAPU

Non-Executive Chairman

He plays a pivotal role in providing strategic direction to Cyient, contributing to its consistent growth in revenue and customer engagement. He led the acquisition of Rangsons Electronics in 2015, enhancing Cyient's capabilities and contributing to the "Make in India" program. He holds degrees in electrical engineering and B.A. from Purdue and Northwestern University, respectively.



ANTHONY MONTALBANO

CEO

He is responsible for steering the company's strategic direction and creating long-term value for stakeholders. He has a wealth of experience in global leadership roles within Engineering and EMS, where he has driven impressive growth. He holds an MBA from UCLA Anderson School of Management.



RAM DORNALA

COO

He leads global operations at Cyient DLM, emphasizing on the expansion of the organization's global presence. His extensive experience includes formulating and implementing corporate-level manufacturing strategies, along with leadership roles in Supply Chain Management. He has a strong background in establishing new manufacturing facilities and relocating products to low-cost countries. He holds a Master's Degree in Industrial Engineering from Western Michigan University.



SHRINIVAS KULKARNI

CFO

His responsibilities include enhancing financial and operational efficiencies, promoting corporate governance, optimizing costs, managing cash flow, and improving margins to drive growth and shareholder value. He is an associate member of the Institute of Cost and Management Accountants of India and has completed Global Leadership Programs at Wharton and ISB, Hyderabad.



SUCHITRA ROYROTH

Head of EMS

She manages the manufacturing site operations at Mysuru and Hyderabad. Her role encompasses quality management, New Product Introduction (NPI), and ensuring smooth transitions to series production. Suchitra holds a bachelor's degree from Mangalore University and has completed the Advanced Management Program on Manufacturing and Operations at the Indian School of Business.

Financials and valuations

Consolidated - Income Statement (INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Total Income from Operations	4,805	4,571	6,280	7,205	8,320	12,064	16,890	22,802
Change (%)	23.9	-4.9	37.4	14.7	15.5	45.0	40.0	35.0
RM Cost	3,833	3,649	4,953	5,440	6,452	9,350	13,056	17,557
Employees Cost	455	441	469	517	647	869	1,182	1,551
Other Expenses	331	344	399	409	344	543	709	958
Total Expenditure	4,619	4,434	5,821	6,365	7,442	10,762	14,948	20,066
% of Sales	96.1	97.0	92.7	88.3	89.4	89.2	88.5	88.0
EBITDA	185	137	460	840	878	1,303	1,942	2,736
Margin (%)	3.9	3.0	7.3	11.7	10.6	10.8	11.5	12.0
Depreciation	83	106	185	193	194	201	221	246
EBIT	102	31	275	647	684	1,102	1,721	2,490
Int. and Finance Charges	141	182	208	220	315	239	111	48
Other Income	25	78	89	79	63	91	128	173
PBT bef. EO Exp.	-14	-72	156	507	432	954	1,738	2,615
EO Items	0	0	0	0	0	0	0	0
PBT after EO Exp.	-14	-72	156	507	432	954	1,738	2,615
Total Tax	-6	-5	38	109	114	240	437	658
Tax Rate (%)	43.1	7.2	24.2	21.6	26.5	25.2	25.2	25.2
Minority Interest	0	0	0	0	0	0	0	0
Reported PAT	-8	-67	118	398	317	714	1,300	1,957
Adjusted PAT	-8	-67	118	398	317	714	1,300	1,957
Change (%)	-79.7	760.3	-276.3	236.0	-20.2	125.2	82.1	50.5
Margin (%)	-0.2	-1.5	1.9	5.5	3.8	5.9	7.7	8.6

Consolidated - Balance Sheet

(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	14	14	14	14	529	793	793	793
Preference Capital	0	0	0	0	0	0	0	0
Total Reserves	336	243	363	757	1,450	8,900	10,201	12,158
Net Worth	349	257	377	771	1,979	9,693	10,994	12,951
Minority Interest	0	0	0	0	0	0	0	0
Total Loans	1,603	3,080	2,790	3,369	3,561	2,061	561	561
Deferred Tax Liabilities	-49	-62	-51	-39	-54	-54	-54	-54
Capital Employed	1,904	3,275	3,116	4,101	5,485	11,700	11,500	13,457
Gross Block	1,039	1,705	2,650	2,668	2,642	2,853	3,190	3,537
Less: Accum. Deprn.	586	674	824	977	1,063	1,264	1,485	1,731
Net Fixed Assets	452	1,032	1,826	1,692	1,579	1,589	1,705	1,807
Goodwill on Consolidation	30	30	30	30	30	30	30	30
Capital WIP	10	774	23	34	13	203	216	218
Total Investments	0	3	3	3	895	895	895	895
Current Investments	0	0	0	0	0	0	0	0
Curr. Assets, Loans&Adv.	4,119	4,034	4,517	5,971	8,476	15,520	16,751	21,187
Inventory	1,789	2,226	1,555	2,696	4,251	4,739	5,902	7,215
Account Receivables	1,197	546	2,264	1,523	1,618	2,148	2,776	3,748
Cash and Bank Balance	596	661	342	1,218	1,676	7,547	6,552	8,172
Loans and Advances	537	601	357	534	931	1,086	1,520	2,052
Curr. Liability & Prov.	2,709	2,599	3,284	3,629	5,508	6,538	8,097	10,680
Account Payables	962	1,205	1,928	1,932	2,867	3,458	4,292	5,772
Other Current Liabilities	1,707	1,330	1,262	1,564	2,521	2,895	3,547	4,560
Provisions	39	64	93	134	120	184	258	348
Net Current Assets	1,411	1,435	1,233	2,342	2,968	8,983	8,654	10,507
Misc Expenditure	0	0	0	0	0	0	0	0
Appl. of Funds	1,904	3,274	3,116	4,101	5,486	11,700	11,500	13,457

Financials and valuations

Ratios

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)								
EPS	-0.1	-0.8	1.5	5.0	4.0	9.0	16.4	24.7
Cash EPS	0.9	0.5	3.8	7.4	6.4	11.5	19.2	27.8
BV/Share	4.4	3.2	4.7	9.7	25.0	122.2	138.6	163.3
DPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Payout (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Valuation (x)								
P/E	-6,980.5	-811.4	460.3	137.0	171.7	76.2	41.9	27.8
Cash P/E	723.1	1,406.9	179.8	92.2	106.5	59.5	35.8	24.7
P/BV	155.9	211.8	144.6	70.6	27.5	5.6	5.0	4.2
EV/Sales	11.5	12.4	9.1	7.9	6.8	4.1	2.9	2.1
EV/EBITDA	299.1	414.5	123.8	67.4	64.2	37.6	24.9	17.1
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	2.2	-8.4	0.9	5.2	5.6	6.5	6.2	18.8
Return Ratios (%)								
RoE	-2.2	-22.1	37.3	69.3	23.1	12.2	12.6	16.3
RoCE	3.8	3.8	8.5	15.6	11.3	10.3	11.9	15.9
RoIC	3.9	1.9	9.1	18.1	17.5	27.7	37.4	46.5
Working Capital Ratios								
Fixed Asset Turnover (x)	4.6	2.7	2.4	2.7	3.1	4.2	5.3	6.4
Asset Turnover (x)	2.5	1.4	2.0	1.8	1.5	1.0	1.5	1.7
Inventory (Days)	143	201	139	143	196	185	165	150
Debtor (Days)	98	70	82	96	69	65	60	60
Creditor (Days)	104	108	115	130	136	135	120	120
Leverage Ratio (x)								
Current Ratio	1.5	1.6	1.4	1.6	1.5	2.4	2.1	2.0
Interest Cover Ratio	0.7	0.2	1.3	2.9	2.2	4.6	15.5	52.3
Net Debt/Equity	2.9	9.4	6.5	2.8	1.0	-0.6	-0.5	-0.6

Consolidated - Cash Flow Statement

(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
OP/(Loss) before Tax	-14	-67	118	398	317	954	1,738	2,615
Depreciation	83	106	185	193	194	201	221	246
Interest & Finance Charges	124	133	171	175	267	148	-16	-125
Direct Taxes Paid	-1	3	1	-62	-168	-240	-437	-658
(Inc)/Dec in WC	39	-105	-200	-329	-229	-144	-666	-234
CF from Operations	232	69	275	375	381	918	839	1,844
Others	57	93	74	111	140	0	0	0
CF from Operating incl EO	289	163	349	486	521	918	839	1,844
(Inc)/Dec in FA	-116	-830	-274	-77	-76	-400	-350	-350
Free Cash Flow	172	-667	75	409	445	518	489	1,494
(Pur)/Sale of Investments	0	-3	0	0	-892	0	0	0
Others	17	-51	265	-247	-450	91	128	173
CF from Investments	-100	-884	-9	-324	-1,418	-309	-222	-177
Issue of Shares	0	0	0	0	889	7,000	0	0
Inc/(Dec) in Debt	0	905	-336	534	-4	-1,500	-1,500	0
Interest Paid	0	-183	-92	-73	-145	-239	-111	-48
Dividend Paid	0	0	0	0	0	0	0	0
Others	-16	0	-232	0	0	0	0	0
CF from Fin. Activity	-16	723	-660	461	740	5,261	-1,611	-48
Inc/Dec of Cash	173	2	-320	622	-157	5,871	-995	1,619
Opening Balance	135	596	662	342	1,218	1,676	7,547	6,552
Other cash & cash equivalent	288	64	0	254	615			
Closing Balance	596	662	342	1,218	1,676	7,547	6,552	8,172

Data Patterns (India)

BSE Sensex 66,283 NIFTY-50 19,751

CMP: INR2,028 TP: INR2,270 (+12%) Neutral

DATA PATTERNS

Stock Info

Bloomberg	DATAPATT IN
Equity Shares (m)	56.0
M.Cap.(INRb)/(USD\$)	113.5 / 1.4
52-Week Range (INR)	2485 / 995
1, 6, 12 Rel. Per (%)	1/11/58
12M Avg Val (INR M)	447
Free float (%)	57.6

Financial Snapshot (INR b)

Y/E March	FY24E	FY25E	FY26E
Sales	5.9	8.0	10.9
EBITDA	2.3	3.2	4.5
Adj. PAT	1.7	2.5	3.4
EBITDA Margin (%)	39.6	40.6	41.0
Cons. Adj. EPS (INR)	30.7	43.8	61.3
EPS Gr. (%)	38.7	42.7	39.8
BV/Sh. (INR)	238.2	281.1	341.5

Ratios (%)

Net D:E	-0.5	-0.5	-0.5
RoE (%)	13.8	16.9	19.7
RoCE (%)	14.3	17.3	20.1

Valuations

P/E (x)	66	46	33
EV/EBITDA (x)	46	33	23

Shareholding pattern (%)

As On	Jun-23	Mar-23	Jun-22
Promoter	42.4	42.4	45.6
DII	11.1	11.6	8.3
FII	5.3	5.1	1.4
Others	41.2	40.9	44.7

FII Includes depository receipts

Following the patterns of profitable growth trajectory

DATAPATT, a leader in defense and aerospace electronics solutions, has achieved ~36% revenue CAGR over FY19-23, backed by over three decades of industry expertise. With presence across the spectrum (land, air, sea & space) and end-to-end vertical integration (from design to deployment), the company has a large total addressable market (TAM) of ~USD2b.

- DATAPATT's consolidated orders grew robustly to ~INR9.2b in FY23 (up 2x YoY; ~50% CAGR over FY19-23), with a book-to-bill ratio of ~2x. The share of development contracts (which are generally followed by production contracts) stood at ~64% in FY23, up from ~7% in FY19, reflecting ample revenue visibility for the company.
- Its reusable building block model, robust engineering capabilities, and recently expanded manufacturing capacity ensure timely execution.
- We expect ~40% earnings CAGR over FY23-26, fueled by robust revenue growth (~34% CAGR) and improving margins. However, higher working capital days (628 days in FY23) will be a key concern for the company.
- DATAPATT currently trades at 33x FY26E EPS with an RoE/RoCE of 19.7%/20.1% in FY26E. However, given the healthy opportunity in the aerospace & defense electronics sector, we expect the company to trade at rich valuations; on the other hand, its higher working capital days pose a major concern. We initiate coverage on DATAPATT with a Neutral rating and a TP of INR2,270 (based on 37x FY26E EPS).

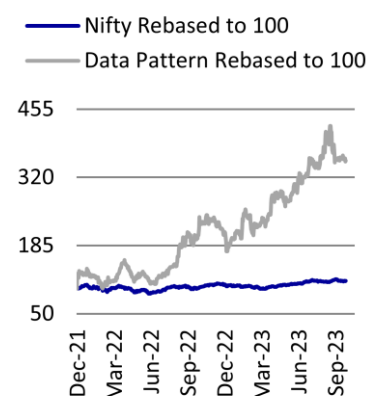
Strong focus on new product development to help it stay ahead of curve

- In Mar'23, DATAPATT secured INR5b through a QIP, reaffirming its commitment to building next-generation products. These funds will be directed toward the development of new offerings in radar, electronic warfare, communications, and satellites.
- Initially launched in the domestic market, these new products will later expand into export markets, and are expected to drive substantial growth for the company in the next three to five years.
- Development contracts account for ~64% (vs. ~25%/7% in FY22/FY19) of DATAPATT's total order book as on FY23, with total order inflows from the category growing ~3.6x YoY to INR6b in FY23.
- The rising share of development orders gives strong revenue visibility in the longer run, as these contracts are usually followed by contracts for full-scale production.

Robust order book gives near to mid-term visibility

- DATAPATT's consolidated orders grew robustly to ~INR9.2b in FY23 (up 2x YoY; ~50% CAGR over FY19-23), as the company received some large-scale development and production orders from key customers. (Exhibit 228).
- The order book further strengthened to INR9.7b as on 1QFY24, with order inflows of ~INR1.3b during the quarter. This provides ample revenue visibility for the company and we expect a revenue CAGR of 34% over FY23-26.

Stock performance (one-year)



Capturing its pie within rising A&D EMS segment via robust executorial capabilities

- The Indian Aerospace and Defense (A&D) electronics market is expected to reach ~INR186b by FY27 with a ~38% CAGR over FY22-27E (as per Frost & Sullivan report). This growth is fueled by increased electronic component integration in defense systems (that currently accounts for only ~20-25% of total platform costs). Additionally, the sector benefits from a growing emphasis on domestic procurement (~60% components supplied by foreign OEM) and various government initiatives.
- DATAPATT has smartly structured its business on the re-usable building block model, wherein it uses the foundation of in-house developed components and sub-systems in subsequent projects for a quick turnaround and cost efficiency.
- Besides, the company's robust R&D and engineering capabilities and recently expanded manufacturing capacity (doubled manufacturing space and infrastructure for capital outlay of INR450m) ensure timely execution
- Accordingly, we believe DATAPATT is well-positioned to benefit from sectoral changes, given its robust executorial capabilities.

Robust earnings, improving balance sheet to drive returns

- DATAPATT is expected to register an earnings CAGR of ~40% over FY23-26E, on the back of robust revenue growth (~34% CAGR). EBITDA margins are expected to improve to ~41% by FY26, led by improving operating leverage.
- Net working capital days stretched to 628 days in FY23; however, they are expected to decline on account of normalization of inventory (due to improving availability of semi-conductor) and receivable days, leading to significant improvement in cash flows from operations (CFO/EBITDA expected to improve to 31% in FY26; negative in FY23).
- Return ratios declined in FY23 on account of increased net worth (QIP of INR5b in Mar'23). Factoring in robust earnings growth, we expect RoCE/RoE to improve to 19.7%/20.1% by FY26.

Valuation and view

- DATAPATT, a prominent player (36% CAGR over FY19-23) in the defense and aerospace electronics sector in India, is set to capture a larger share of pie (TAM of ~USD2b as on CY20; registering a 9% CAGR) on the back of its vast experience (over 3 decades), strong core competencies (product development), and robust executorial capabilities.
- Going ahead, we expect DATAPATT to grow its earnings significantly, driven by 1) faster order execution, driven by improved manufacturing capabilities and experienced team; 2) healthy revenue growth visibility in the mid-to-long term, led by strong order inflows, especially within development contracts; 3) sustained progress in new product development, led by infusion of funds (INR5b QIP) and adoption of the building block model; and 4) strong import substitution and export opportunities.

- Going ahead, we expect DATAPATT to register Revenue/EBITDA/PAT CAGR of ~34%/37%/40% over FY23-26E. The company currently trades at 33x FY26E EPS. We expect the stock to trade at rich valuations on account of the current growth opportunities in the sector, while its higher working capital days pose a major concern. **We initiate coverage on the stock with a Neutral rating and a TP of INR2,270 (premised on 37x FY26E EPS).**
- **Key risks include:** 1) Delay in key government programs in the space and defense sector due to fiscal constraints; 2) high working capital requirement; and 3) long gestation period for development contracts; 4) competition from large global players

Exhibit 215: Comparative valuation

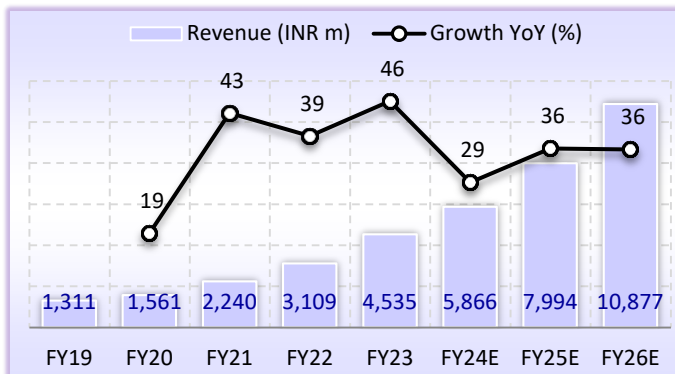
Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

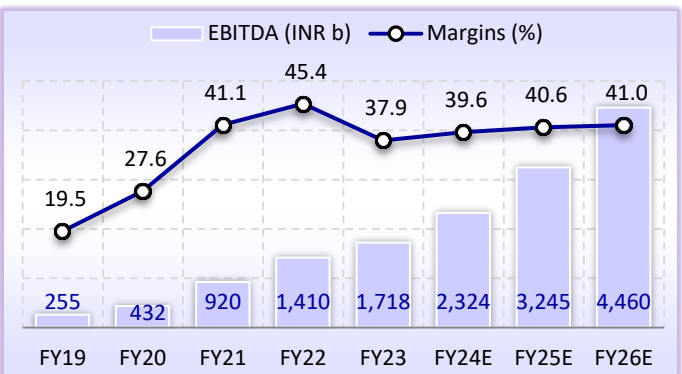
Source: MOFSL, Company, *BBG

STORY IN CHARTS

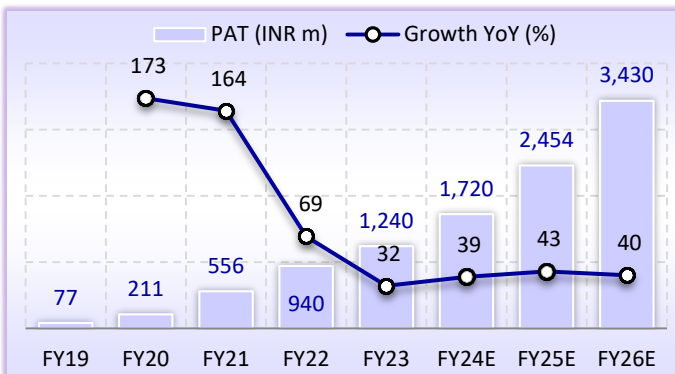
Revenue CAGR of 34% over FY23-26E



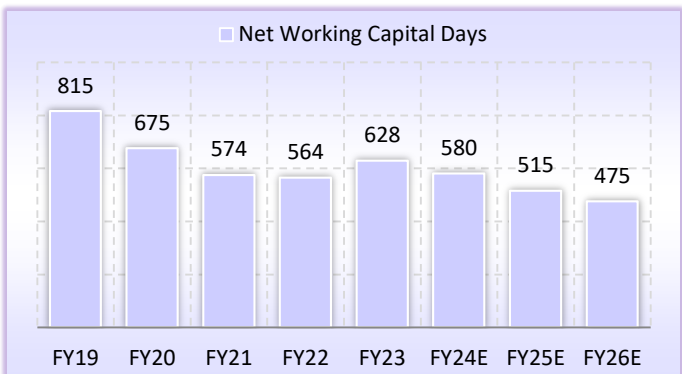
EBITDA CAGR of 37% over FY23-26E



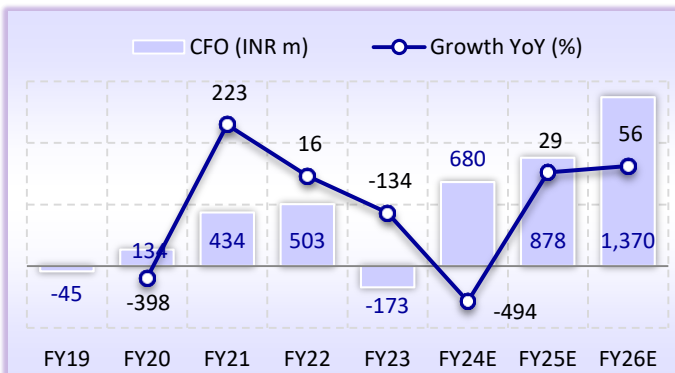
PAT CAGR of 40% over FY23-26E



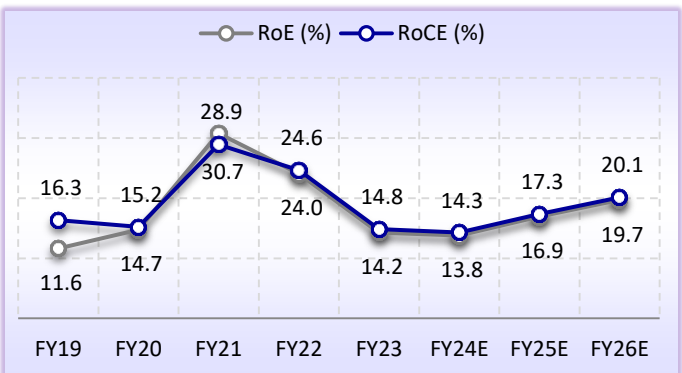
Net working capital days to decline to 475 days by FY26E...



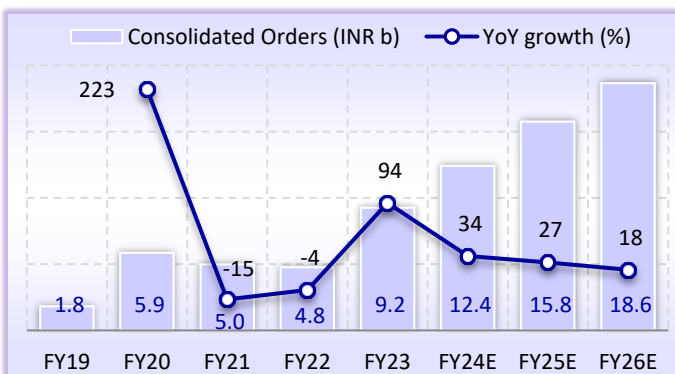
...leading to significant improvement in Cash flows



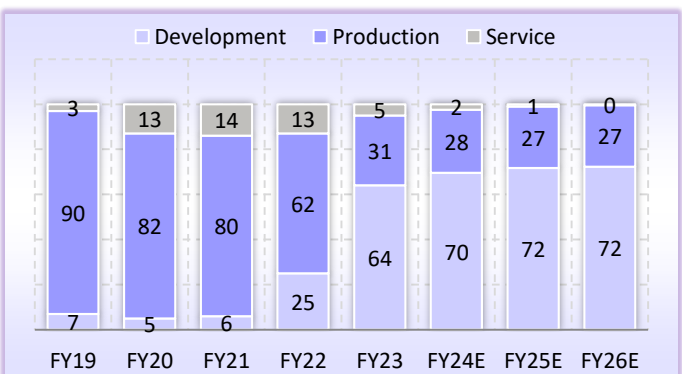
RoCE to improve to 20% by FY26E



Strong order book despite improved execution



Segment-wise Order mix (%)



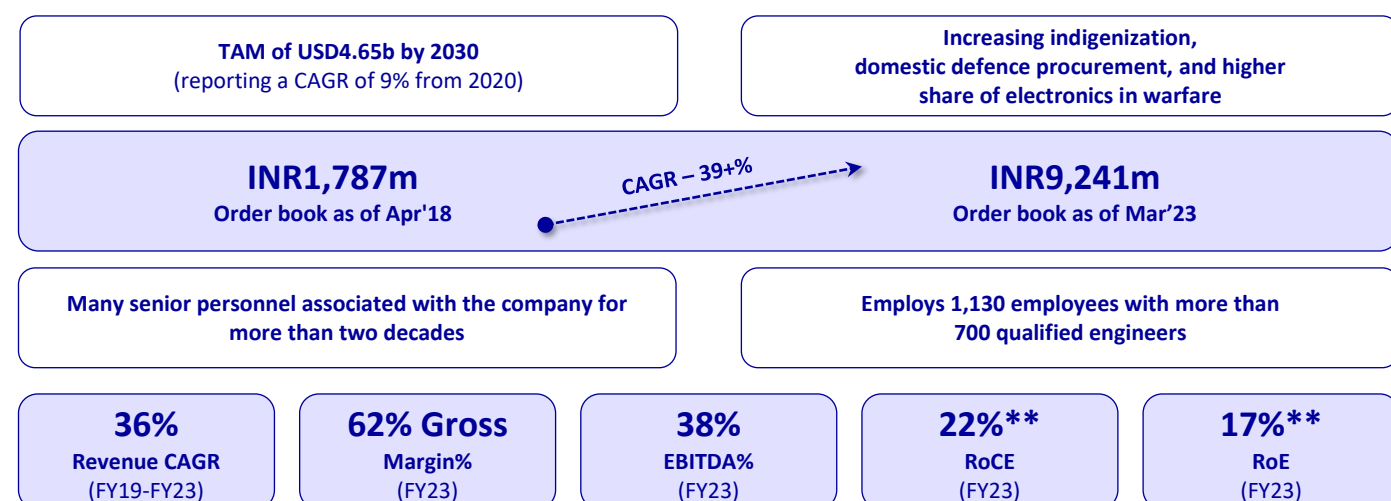
Source: MOFSL, Company

Company overview

DATAPATT is an end-to-end vertically integrated electronics solutions provider in the defence and aerospace sector with a presence across the spectrum (land, air, sea & space)

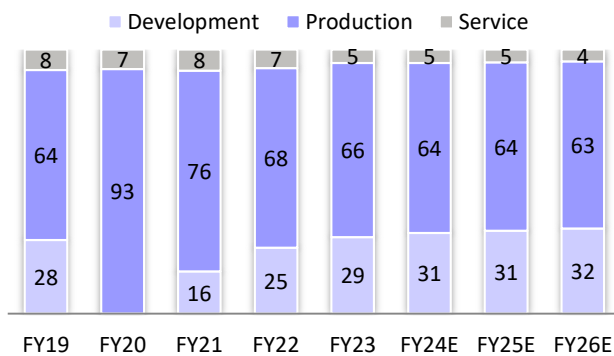
- Data Patterns India Ltd (DATAPATT) is one of the few **vertically integrated defence and aerospace electronics solutions providers** catering to the indigenously developed defence products industry with end-to-end capabilities.
- The business was established by Mr. Srinivasagopalan Rangarajan in 1985. He incorporated the company in Nov'98 under the name of 'Indus Teqsite Private Limited' in Bangalore, Karnataka (which was later renamed to Data Patterns India Ltd in 2021).
- As on Mar'23, DATAPATT has a diversified order book (~INR9.2b) with marquee customers (including Indian Space Organization, Hindustan Aeronautics Ltd, etc.) along with state-of-the-art manufacturing facilities (~200,000 sq. ft. built up area of manufacturing capacity in Chennai). It has a workforce of ~1,130 employees with more than 700 qualified engineers.
- The entity (over its tenure of ~35 years in the business) has supplied products catering to all the platforms, viz., space, air, land and sea, including products such as LCA-Tejas, Light Utility Helicopter and BrahMos missile.

Exhibit 216: Key business parameters

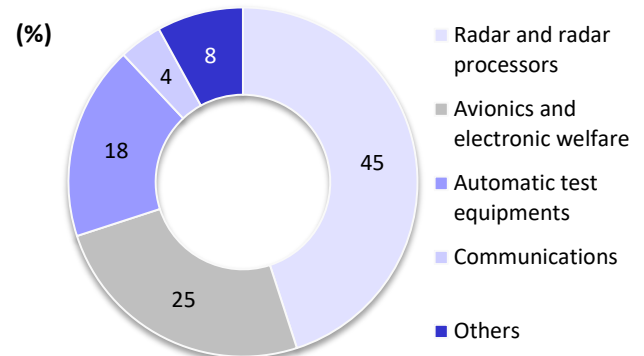


** without considering QIP funds raised in Mar'23; Source: Company, MOFSL

- DATAPATT is one of the fastest-growing companies in the defence and aerospace electronics sector in India, with a 36% revenue CAGR in FY19-23.
- Radar and radar processors accounted for ~45% of its total revenue in FY23, followed by Avionics and electronic warfare (~25%), automatic test equipment (~18%), communications (~4%) and others (~8%). Among the segments, the revenue contribution of production contracts (~66%) was the highest in FY23, followed by development contracts (~29%) and service contracts (~5%).
- Historically, 4Q accounts for the highest share of revenue (more than 70% of annual sales). However, the company has made efforts to reduce the dependency on the last quarter.
- Accordingly, the revenue share of 4Q in total annual sales has been declining, from ~70% in FY21 to ~55% in FY22 and to ~41% in FY23.

Exhibit 217: Segment-wise revenue breakup (%)

Source: MOFSL, Company

Exhibit 218: Product-wise revenue breakup (FY23)

Source: MOFSL, Company

Exhibit 219: DATAPATT's diverse product offerings

Category	Select Product Offering	Category	Select Product Offering
Commercial off the shelf (COTS)	<p>COTS modules designed in context of reusable building blocks for building Military Electronics systems with a quick turnaround time</p>	BrahMos Programme	<ul style="list-style-type: none"> Fire control systems Mobile autonomous launcher Airborne launcher and Other electronic systems
Avionics	<p>Avionics displays used on :</p> <ul style="list-style-type: none"> Light Combat Aircraft ("LCA"), Intermediate Jet Trainers Light Utility Helicopters ("LUH") 	Electronic Warfare	<ul style="list-style-type: none"> Surveillance and intelligence gathering ("SIGINT") Further divided into COMINT and ELINT
Communications, ATEs and Satellites	<ul style="list-style-type: none"> Underwater electronics / Communications / Other Systems Automated Test Equipment (ATE) Small and Nano Satellites 	Radars	<p>Surveillance radars Weather radars Coastal Surveillance Radar</p>

Source: Company, MOFSL

Exhibit 220: DATAPATT's key product verticals

Product	Demonstrated capabilities	Potential opportunities
Satellites	<ul style="list-style-type: none"> ❖ Designed and launched compete satellite in India ❖ Design payloads like ESM, Imaging (RF and ESM), other remote sensing, etc. ❖ Comprehensive exposure to Ground stations, including Radars and command ❖ Implemented capabilities for large satellites 	<ul style="list-style-type: none"> ❖ Large market for Defence and LEO satellites (domestic and international) ❖ Focus on micro satellites ❖ Made in India – its cost effective
Radars	<ul style="list-style-type: none"> ❖ Designed building blocks to complete radars systems in India ❖ Re-use already developed building blocks to meet timelines ❖ Building blocks in Signal Processing, Antenna, Transmit/Receive Modules, etc. ❖ VHF, S, C and X Band, Gimbal, Algorithms, Radar Display, Consoles, etc. 	<ul style="list-style-type: none"> ❖ Focus on Fire Control Radars, X-Band Radars and smaller Radars for UAVs ❖ Cost competitive with in-house IP ❖ Export potential
Electronics Surveillance & Monitoring	<ul style="list-style-type: none"> ❖ Developed state-of-the-art ESM Receivers from 1MHz to 40GHz ❖ Both COMINT and ELINT, including DF, can be used in Truck Mounted Systems and UAV-based ESM Systems ❖ POD-based Jammers, Communication Jammers, Stand-off Jammers 	<ul style="list-style-type: none"> ❖ Potential large market with future tenders ❖ Requirement across Army, Air Force and Navy
Communication Systems	<ul style="list-style-type: none"> ❖ Developed SDR Platform for <ul style="list-style-type: none"> ➢ Fighter Aircrafts ➢ Radio Relay for Airborne Platforms/UAVs ➢ Radio Relays 	<ul style="list-style-type: none"> ❖ Military Radars, Radio Relays, etc. being procured under emergency fast-track procurement ❖ Large volume requirements ❖ Requirement across Army, Navy and Air Force

Source: Company, MOFSL

New product development to drive long-term growth

Strong focus on new product development to help it stay ahead of the curve

Successfully raised INR5b via QIP in Mar'23; majority of the funds will be utilized in developing new products across spectrum.

- DATAPATT's business model is structured in such a way, wherein, the company works on multiple projects and program to secure scale. Accordingly, it focuses on building next-generation products that will help the company scale up multifold going ahead.
- During FY23, the company developed weather radar, receiver system for airports and Nano satellite for Hyper Spectral Imaging, among many others.
- Further, it has **successfully raised INR5b through QIP in Mar'23**. It expects to utilize a majority of the proceeds for development of new products in the areas of radars, electronic warfare, communications and satellite.
- DATAPATT plans to initially introduce new products in the domestic market and then expand in the export market. These products are expected to be significant growth drivers over the next three to five years.

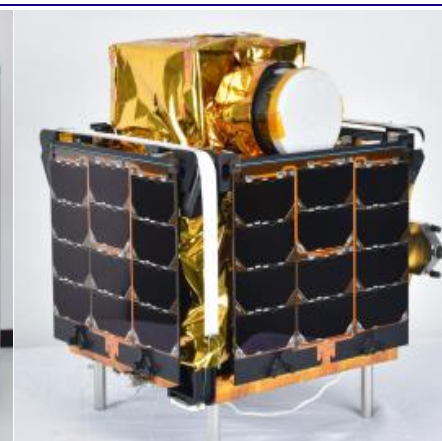
Exhibit 221: Key products developed/manufactured by DATAPATT in FY23



Polarimetric Doppler Weather Radar



ADS-B receiver systems



Nano Satellite for Hyper Spectral Imaging

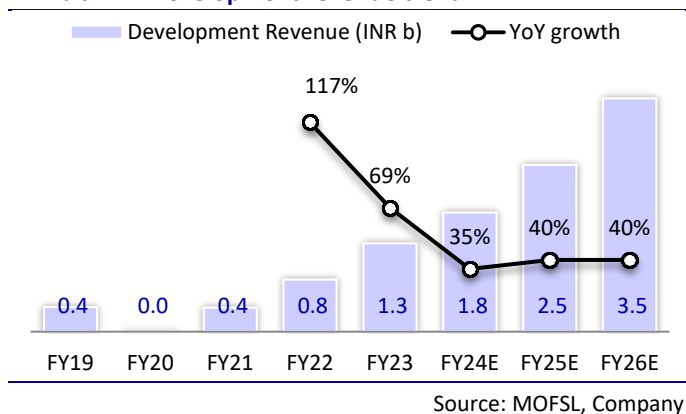
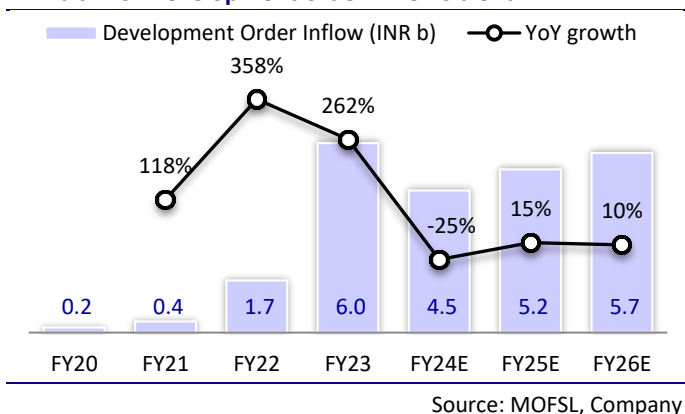
Source: Company, MOFSL

Growth in development contracts improves revenue visibility

Rising share of development orders (~64% of order book as on FY23) provides long-term revenue visibility

- DATAPATT focuses on augmenting its design and development capabilities through enhancing infrastructure, procurement of additional software/equipment and improving its engineering capabilities.
- Such investments will enable the company to cater to the growing demand from customers and enhance its product portfolio, further resulting in better revenue and profitability.
- For example, DATAPATT developed and deployed its first Nano satellite in CY17, which helped the company get two additional orders for Nano satellites. All parts of this satellite were designed in-house. These capabilities enable the company to further tap into the sector and allow it to develop larger defense satellites.
- The development of a product takes ~10-12 months, although it varies significantly from order to order.

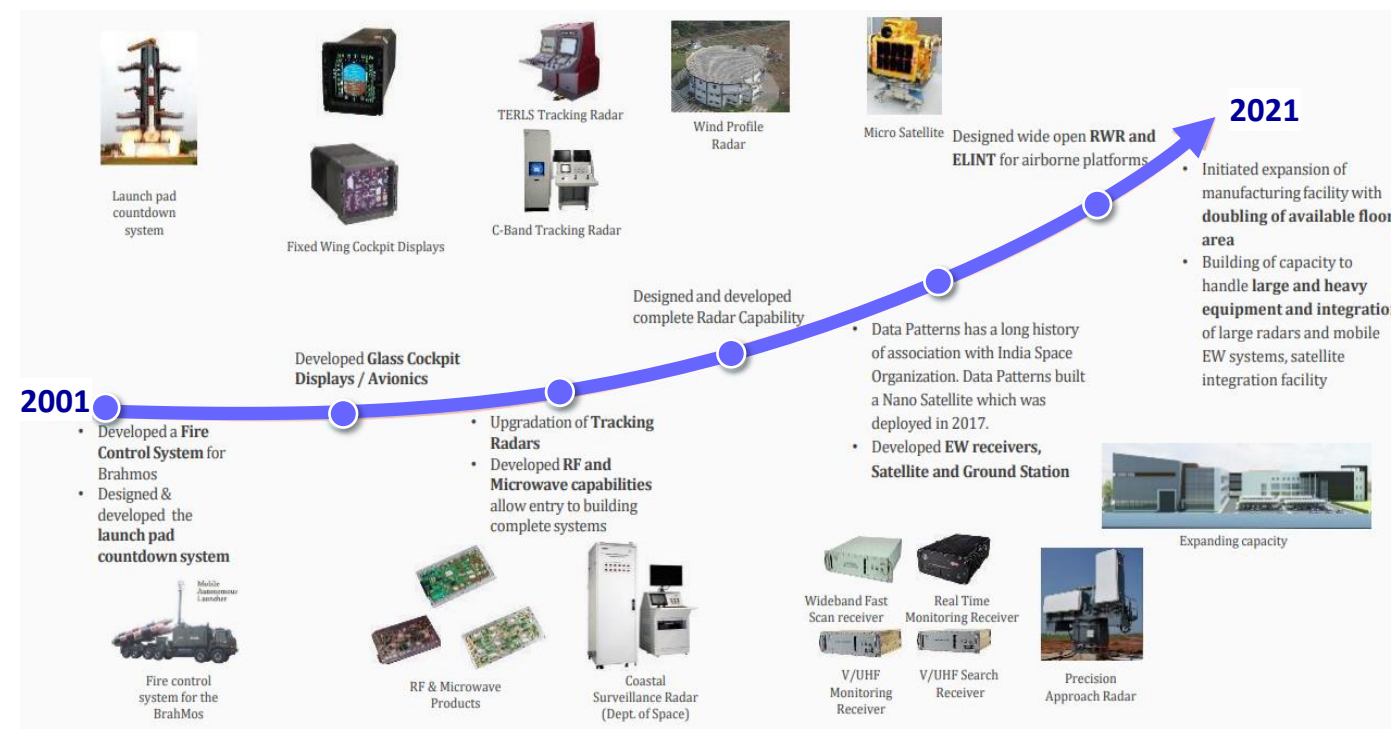
- DATAPATT has the ~100% acceptance rate for its developed products. However, the company generally gets paid only after the testing of the developed product. This is a slow process as end-customers may require many other components (not procured from DATAPATT) in order to test the complete product/system.
- DATAPATT's strong focus on development contracts (a contract for developing a product/system for the first time) resulted in a surge in orders for FY23 (order inflow of INR6b, up 3.6x YoY). Accordingly, the development order book stood at INR5.9b as on FY23 (up 5x YoY), despite strong execution of existing orders (INR1.3b of orders executed in FY23; up 69% YoY).
- The rising share of development orders (~64% of total orders in FY23 vs. ~25%/7% in FY22/FY19), gives strong revenue visibility in the long run, as the successful development and deployment of products is followed by production orders.
- Going ahead, we expect the development order inflow to moderate (vs. a surge witnessed in FY23) with cumulative order inflows of ~INR15.5b over FY23-26E. We expect a revenue CAGR of 38% in development contracts over FY23-26E, led by execution of the strong order book.

Exhibit 222: Development revenue trend**Exhibit 223: Development order inflows trend****Exhibit 224: Future-ready products developed and designed by DATAPATT**

Sr. No.	Products	Details
1	Monopulse RF Seeker	❖ Delivered prototypes to DRDO
2	X-Band Doppler Weather Radar	❖ Prototype installed in Chennai for meteorology department
3	205MHz Wind Profile Radar for CUSAT	❖ Installed at Cochin for a government-owned university
4	Radar for Naval Utility Helicopter	❖ Prototype delivered to LRDE
5	A Next-Generation Software-Defined Radio for fighter aircraft	❖ Prototype developed for DEAL
6	A Next-Generation Radar Warning Receiver for fighter aircraft	❖ Prototype developed for DLRL
7	A Next-Generation COMINT	❖ Prototype developed for DLRL
8	Precision Approach Radar	❖ Delivered to AF
9	Nano Satellite	❖ Being delivered to industry
10	Power PC Card	❖ 190 nos. delivered to HAL
11	WBLRU	❖ Delivered to DRDO

Source: Company, MOFSL

Exhibit 225: Key product development over last two decades



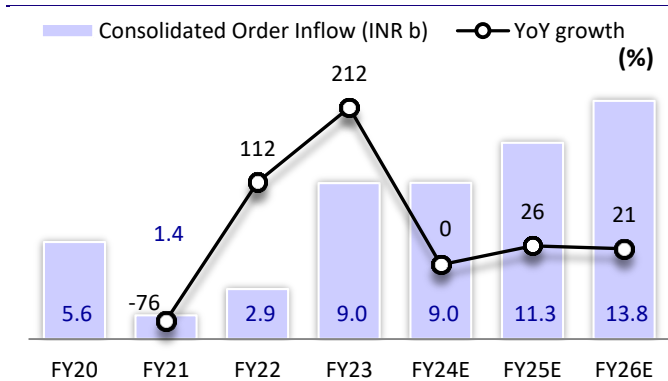
Source: Company, MOFSL

Robust order book gives near-to medium-term visibility

Robust order book (book-to-bill ratio of ~2x as on FY23) and healthy order inflows (~INR1.3b in 1QFY24) reflect strong growth momentum

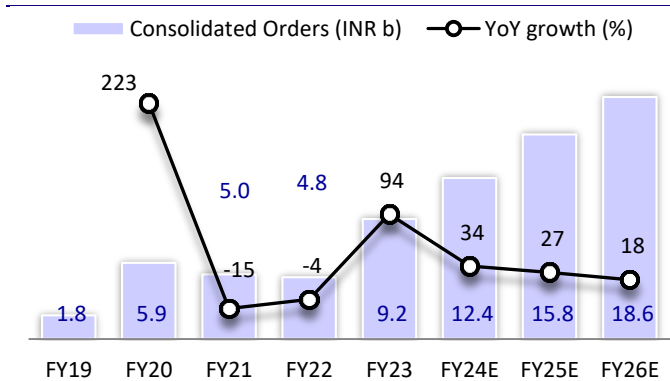
- DATAPATT's order inflows grew robustly to ~INR9.2b in FY23 (up 2x YoY; ~50% CAGR over FY19-23), as it received few large-scale orders from key customers. (Exhibit 228). The order book strengthened to INR9.7b as on 1QFY24 with order inflows of ~INR1.3b during the quarter.
- The contracts/orders received by the company are classified as development contracts, production contracts (contract for manufacturing and deployment of certain pre-developed product/systems) and service contracts (product life cycle management, repairs, after sale services. Etc.)
- In FY23, about one-third of orders were production contracts, while two-thirds were development contracts, with service contracts accounting for just 1% of the order inflows.
- DATAPATT executed orders worth INR4.5b in FY23 (up 46% as compared to INR3.1b in FY22).
- Accordingly, the order book stood at INR9.2b as on FY23 (vs. INR4.8b/INR5b in FY22/FY21). Production/development contracts account for ~31%/64% of the order book, with service contracts making up the rest 5%.
- The robust order inflows and the strong order book (book-to-bill ratio of ~2x as on FY23) provide ample revenue visibility for the company going ahead.

Exhibit 226: Order Inflow trend



Source: MOFSL, Company

Exhibit 227: Order book trend



Source: MOFSL, Company

Exhibit 228: Major orders received in FY23

Product	Customer	Order type	Value (INR m)
Radar	DRDO	Development	4,489
Avionics	HAL	Production	737
EW	DRDO	Development	530
Tank	DRDO	Development	345
FCS	Brahmos	Production	400

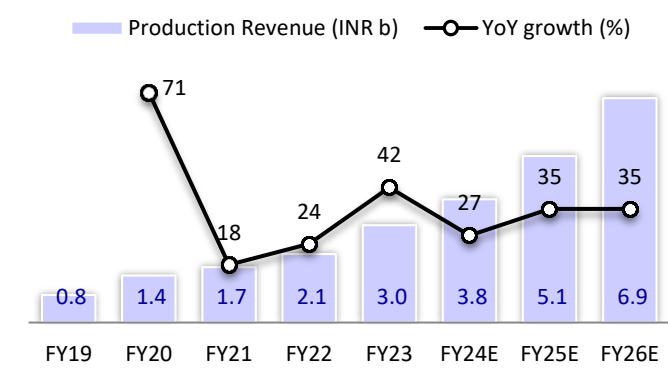
Source: Company, MOFSL

Increasing revenue (up 42% YoY) and orders (up 2.7x YoY) from production contract reflect successful development/execution capabilities

Ensuring sustainability through large and repetitive production contracts

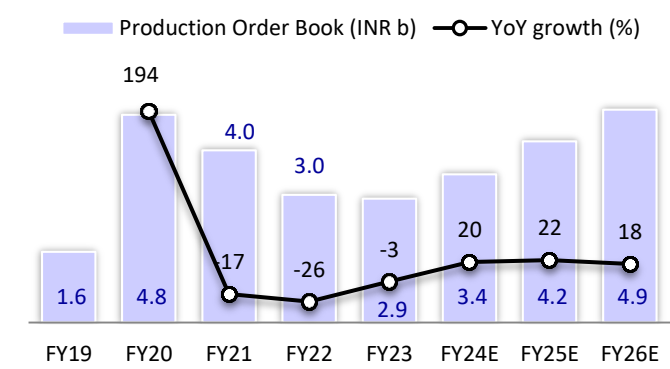
- DATAPATT is focusing on repeat procurement production contract as it provides the company with long-term order visibility and allows it to spread the delivery over the year, providing stable cash flows to the company.
- Further, the company's reusable building block model (i.e., using the foundation of existing proprietary products/component to develop new system/execute another contract), coupled with pre-existing certificates and platforms gives it an edge in the order execution capabilities, thereby enabling it to be a preferred OEM supplier for ongoing programs.
- Accordingly, the company recognizes significant scope for high-volume repeat orders wherein the initial development stage has been completed (leads to better margin profile for the company).
- The production order book stood at INR2.9b as on FY23, down 3% from previous year on the back of strong execution of orders during the year (INR3b, up 42% YoY).
- Order inflow for the year more than doubled YoY to INR2.9b (up 2.7x YoY), reflecting the robust traction within the category.
- We expect a revenue CAGR of 32% in production contracts over FY23-26E, led by the execution of the strong order book and upcoming order flows (expected cumulative orders of INR17.9b).

Exhibit 229: Production contracts' revenue trend



Source: MOFSL, Company

Exhibit 230: Production order book trend



Source: MOFSL, Company

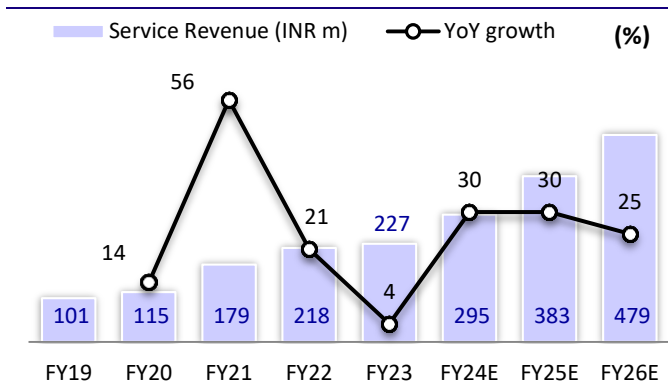
Expanding its portfolio of services by leveraging core competencies in order to boost revenues

Expanding services business by leveraging core competencies

- DATAPATT has significant growth opportunities for its services on account of a relatively longer life of platforms or products in the defense and aerospace sector.
- Further, the company's domain expertise helps it to understand customer requirements in a timely manner, thereby leading to time and cost efficiencies for all parties.
- Accordingly, the company intends to leverage its core competencies to provide engineering services to OEMs. These services include electronics hardware development, embedded software and application development, algorithm and firmware development, testing and validation activities, obsolescence management and life extension.

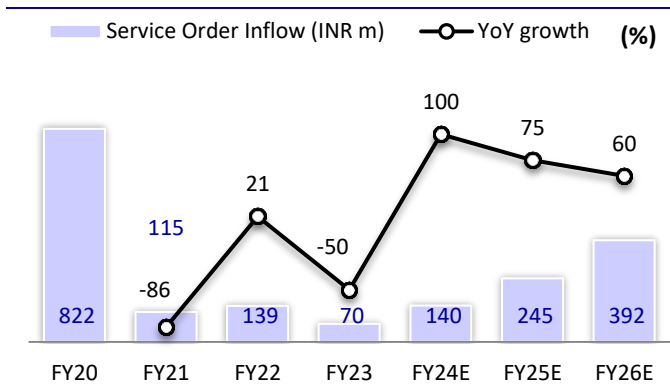
- The service order book stood at INR462m as on FY23, down 25% YoY, due to weak order inflows during the year (INR70m, down 50% YoY). Revenue from the segment grew 4% YoY to INR227m in FY23.
- DATTPATT targets to expand its portfolio of services and provide maintenance services, upgradation and other routine repair and upkeep services to customers in order to expand revenue from the category.
- We expect a revenue CAGR of 28% in services contracts over FY23-26E, led by the continuity of existing orders and an uptick in new contracts.

Exhibit 231: Service contract revenue to register 28% CAGR over FY23-26E



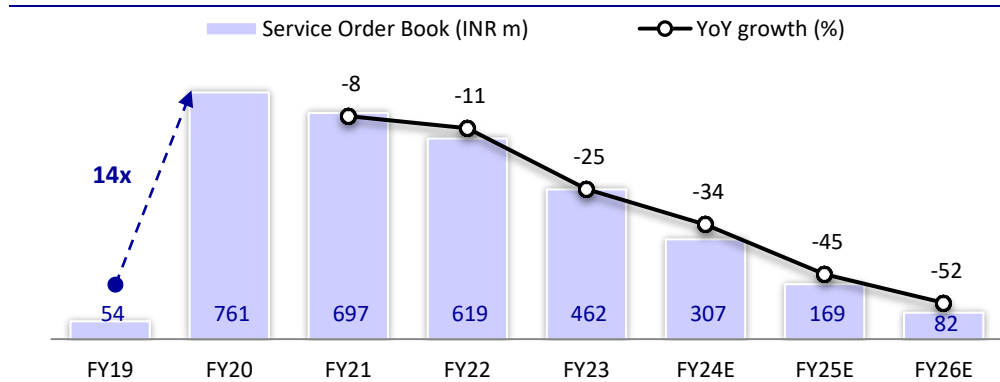
Source: MOFSL, Company

Exhibit 232: Service order inflows to clock 78% CAGR over FY23-26E



Source: MOFSL, Company

Exhibit 233: Service order book trend



Source: Company, MOFSL

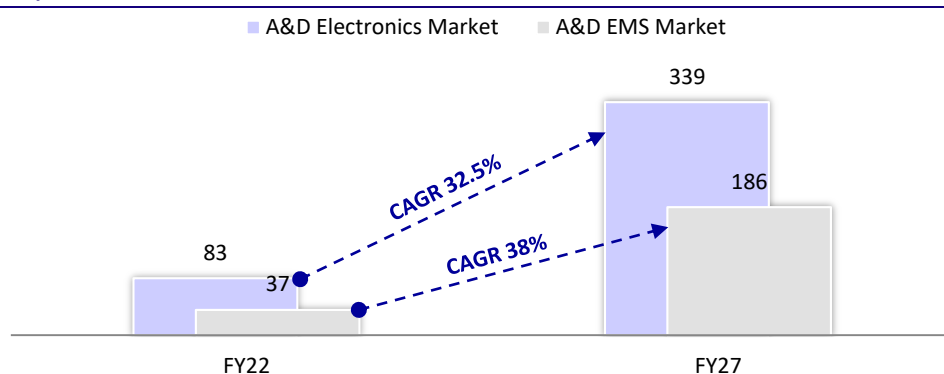
Set to capture its pie of rising A&D electronics market via robust executorial capacity

Strong traction in the Aerospace and Defense electronics market to aid growth

- DATAPATT's confidence of strong revenue growth also emanates from strong demand in the Indian Aerospace and Defense (A&D) electronics market.
- At present, Defense Electronics make up only ~25- 35% of the total cost of platforms used by the Indian armed forces. With the focus on modernization and technological upgrades, the share of Defense Electronics is likely to increase in the future.
- Further, over 60% of the electronics components used in the sector are supplied by foreign OEMs. Going ahead, with the government's focus on 'Make in India', the Indian Defense Electronics segment is likely to witness large-scale indigenization efforts over the next decade.
- Accordingly, the Indian EMS market for the A&D Electronics segment, which was valued at ~INR37b in FY22, is likely to witness robust growth with a CAGR of ~38%, reaching INR186b by FY27, according to an F&S industry report.

Indian A&D EMS market to reach INR186b by FY27 with a ~38% CAGR over FY22-27E

Exhibit 234: A&D EMS and electronics to witness strong growth over the next five years (INR b)



Source :F&S Industry Report, MOSL

- DATAPATT's primary focus lies in constructing entire systems, which positions it among an exclusive category of enterprises that go beyond being mere component manufacturers and instead offer complete solutions.
- Further, it is one of the few players that exclusively focuses on the A&D electronics market. Accordingly, we believe DATAPATT is well positioned to benefit from these sectoral changes.

Smartly structured business on reusable building block model

- Since inception, DATAPATT has focused on in-house development and manufacturing capabilities, driven by innovation, design and development efforts. However, it comes with a high development cost.
- Accordingly, the company has structured the business on a reusable building blocks model (i.e., using the foundation of own products in subsequent projects; Exhibit 235).

Leveraging a reusable building block model to crunch timelines and achieve cost competencies

- Historically, DATAPATT has developed several projects, such as military grade processor, modules, cockpit displays, actuator controllers and digital receivers, among many others, an aim to utilize these components in future projects.
- Subsequently, it has been able to utilize these pre-developed building blocks and sub-systems in the development of complete systems, thereby allowing for higher value addition while distributing development costs.
- DATAPATT's reusable building block model enables it to leverage existing competencies to further crunch the timelines and costs. Accordingly, the company is producing over 1,000 building blocks that can be used on multiple end systems.

Exhibit 235: DATAPATT's building block model

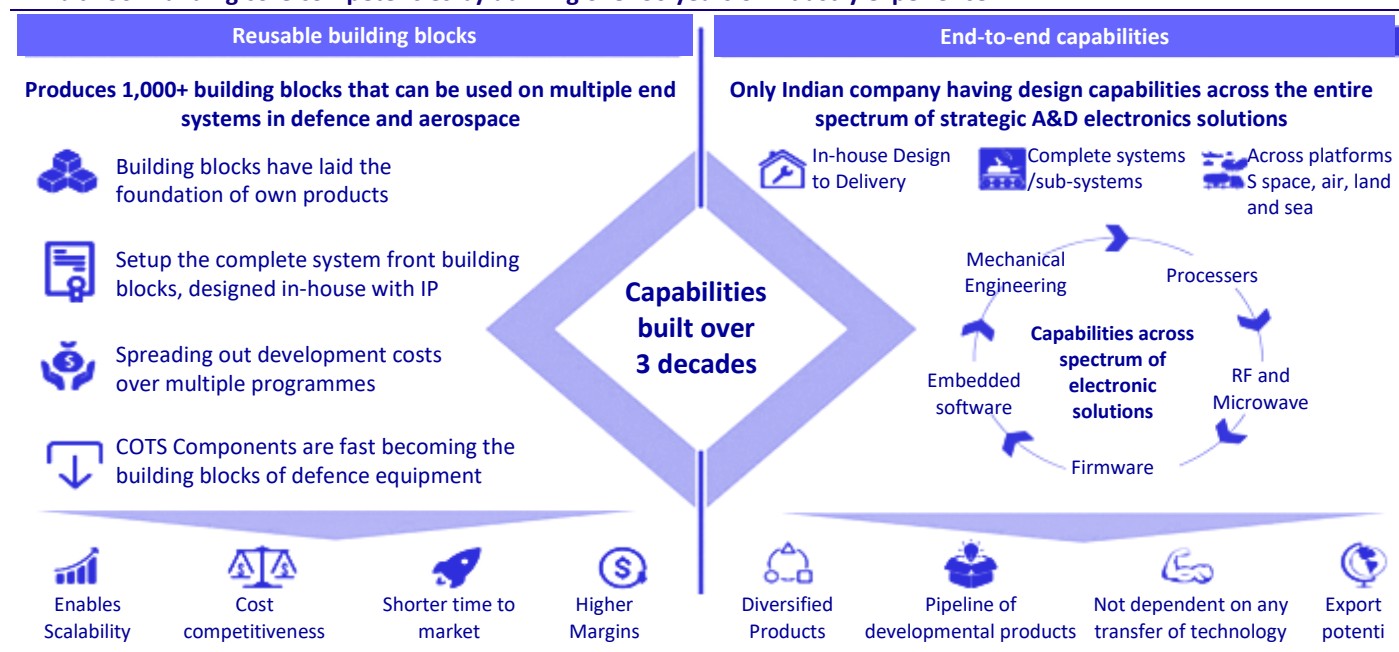
Track record of utilizing pre-developed building blocks in the development of complete systems	Present programs with building blocks designed and developed by DATAPATT
❖ Military grade processor modules	❖ Airborne phased array radar
❖ Cockpit displays	❖ Frequency hopping radio relays
❖ Actuator controllers for missiles and torpedoes	❖ Next generation EW products
❖ Flight control computers	❖ Integrated EW solution
❖ Digital receivers and	
❖ Up/Down converters for radars	

Source: Company, MOFSL

The end-to-end vertical integration across the entire spectrum of Aerospace and Defence platforms provides competitive advantage and a larger addressable market

Presence across spectrum and verticals provides competitive edge

- With over three decades of experience in the field, DATAPATT has developed proven in-house design and development capabilities, catering to the entire spectrum of Defense and Aerospace platforms – space, air, land and sea.
- DATAPATT is one of the few vertically integrated defense and aerospace electronics solutions providers (end-to-end vertical integration) with strong executional capabilities, right from the design to the delivery of the product.
- This provides it with a significant competitive advantage as compared to peers (which might opt for outsourcing at some stage of the development) in terms of overall development time and cost when bidding for projects.
- Apart from these benefits, DATAPATT's presence across the spectrum and verticals provides it with a much larger TAM (estimated ~USD4.65b by CY30; registering 9% CAGR over the CY20-30) and potential to bid for larger full-system contracts, thereby enabling scalability and sustainability for the business.

Exhibit 236: Building core competencies by utilizing over 30 years of industry experience

Source: Company, MOFSL

Robust engineering & manufacturing capabilities ensure timely execution

- DATAPATT's R&D and engineering proficiency is widely acknowledged in the Indian defense arena as well as few international customers. With R&D being a core competency, the company has spent aggressively on it in the last few years.
- Its electronics solutions are developed by specialist teams working on areas such as complex 20+ layer printed circuit board ("PCB") designs, field-programmable gate arrays ("FPGA") based firmware algorithms, device drivers, networking layers, application software, etc.
- Accordingly, the company employs over 700 qualified engineers as on FY23 and plans to hire ~100 more during FY24.
- Further, to achieve the scalability, the company has hired over 250 employees, taking the total strength to ~1,130 (including engineers) as on FY23, up 27% as compared to last year.
- In addition to this, it has expanded its manufacturing and testing facilities in Chennai and bolstered its system integration facility (doubling the manufacturing space and infrastructure for a capital outlay of INR450m from IPO proceeds).
- Thus, strong **R&D** enables the company to keep up with the dynamic market conditions, while the growing **engineering capabilities**, coupled with its **expanded manufacturing capacities**, provide a strong platform to the company to execute better and faster.

Exhibit 237: Expansion of manufacturing facility at Chennai, India

Strong R&D, expansion of manufacturing capacities and growing engineering capabilities aid faster execution



←----- Expansion -----→	←--- Existing Facility Enhancement ---→
<ul style="list-style-type: none">❖ Large Systems Integration Hangar❖ Complete Radar Integration❖ Electronic Warfare Vehicle Integration❖ Additional Test Facility❖ Augmented Environmental Test Infrastructure	<ul style="list-style-type: none">❖ Augmented Design & Development Facility❖ Additional Space For Design and Development Resources❖ Clean Room for Satellite Integration❖ Additional EMS Line❖ Multi Ton material handling"

Source: Company, MOFSL

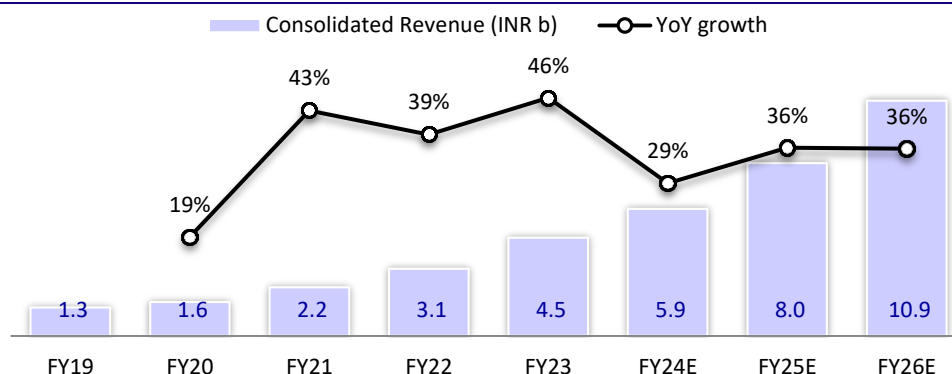
Robust earnings, improving balance sheet to drive returns

Strong revenue growth led by healthy order flows

Strong order inflows, improved executional ability to drive sales; favourable operating leverage to inch up margin profile

- DATAPATT is one of the fastest-growing companies in the Defence and Aerospace electronics sector in India, with a 36% revenue CAGR over FY19-23, led by healthy order inflows across categories.
- Going ahead, we expect the momentum in order inflows to continue (cumulative orders of ~INR34.1b over FY23-26E) as the company expands its product portfolio and gain competitive advantage by leveraging its existing capabilities.
- Management aims to execute ~50% of the orders in hand (as on FY23) by FY24, with the rest to be executed in FY25 (except few minor orders). We expect order execution (revenues) of INR5.9b/INR8b in FY24/FY25.
- Factoring in the robust executional capabilities, we expect the order book to grow to INR18.7b by FY26 with a book-to-bill ratio of 1.7x.

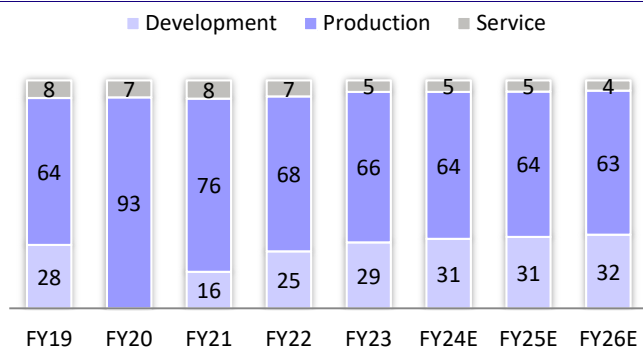
Exhibit 238: Revenue CAGR of ~33% over FY23-26E



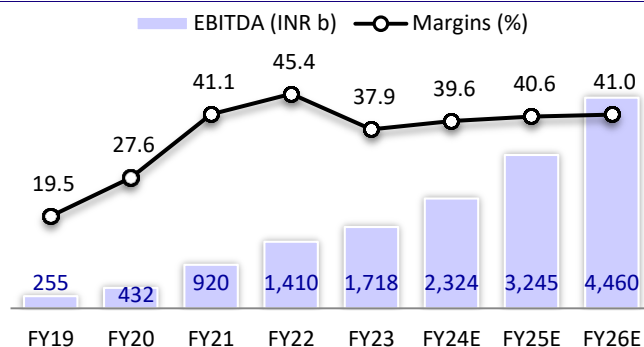
Source: Company, MOFSL

Margins to improve on account of operating leverage

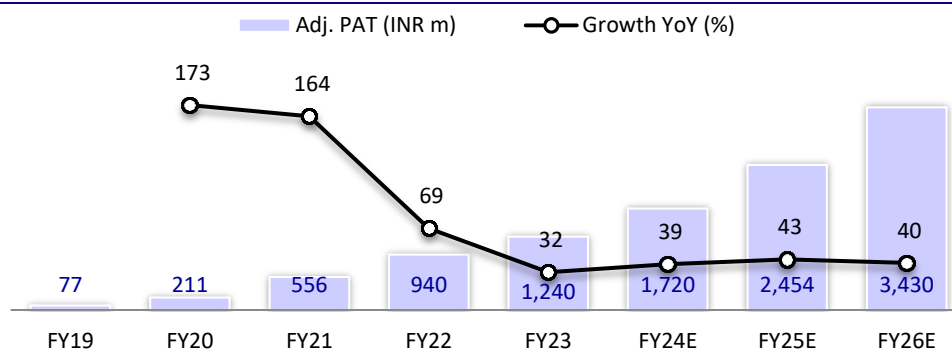
- Margins for DATAPATT vary over the period, depending on the contracts executed by the company.
- Generally, DATAPATT enjoys higher margins for contracts related to the supply of proprietary products developed in-house as compared to integration contracts with lower value addition.
- Over the past few years, the company's EBITDA margins has improved significantly (from 19.5% in FY19 to 37.9% in FY23), despite stable gross margins (62.7%/62.3% in FY19/FY23), aided by favorable operating leverage. Employee expenses/other expenses as a % of sale declined from 28.0%/15.2% in FY19 to ~17.5%/6.9% in FY23.
- Going ahead, we expect an EBITDA CAGR of ~37% over FY23-26, with EBITDA margins improving to ~41% by FY26E.
- Further, the Adj. PAT is expected to register ~40% CAGR over FY23-26 as the interest cost is expected to decline on back of repayment of debt.

Exhibit 239: Revenue mix (%)

Source: MOFSL, Company

Exhibit 240: EBITDA margin trend

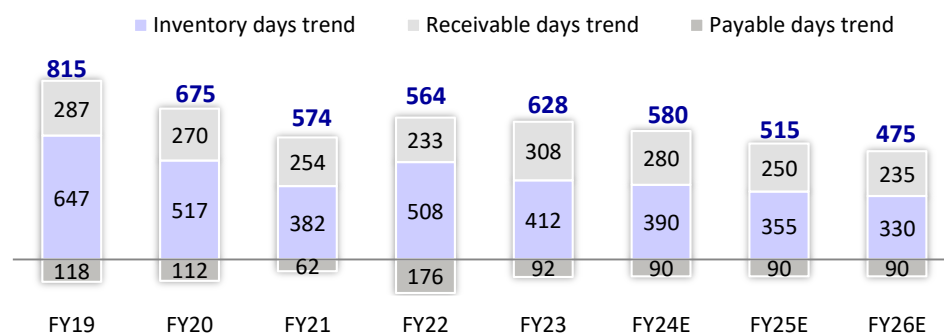
Source: MOFSL, Company

Exhibit 241: Adj. PAT trend

Source: Company, MOFSL

Normalization of inventory to improve working capital days...

- DATAPATT has high working capital requirement due to its complex and elongated manufacturing operations.
- Net working capital days stretched to 628 days in FY23; primarily due to rising inventory/receivable days (from 382/254 days in FY21 to 412/308 days in FY23) considering the growing scale of business and the need for stocking raw materials due to the shortage of semi-conductors in the industry.
- Going ahead, we expect the inventory levels to come down on the back of stability in global supply chains and improved availability of semi-conductors.
- Further, receivable days at the year-end are inflated considering the fact that the bulk of revenues comes from the last quarter.
- In FY23, the inflated receivable was attributable to a Precision Approach Radar project, for which a major part of outstanding was recovered in Apr'23.

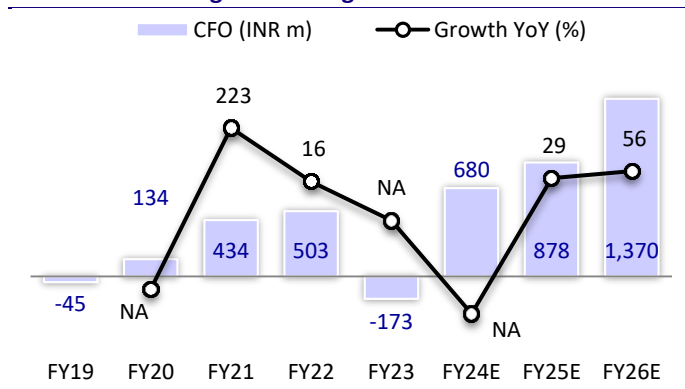
Exhibit 242: Working capital days trend

Source: Company, MOFSL

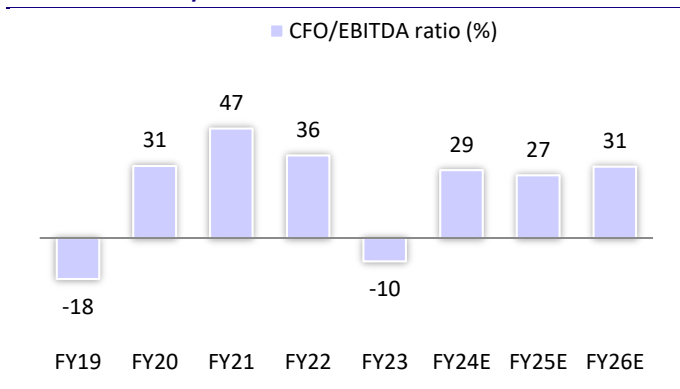
Declining net working capital days (~153 days over FY23-26E) leads to improved cash flow for the company (CFO/EBITDA ratio expected to reach ~31% by FY26E)

...leading to higher cash flow for the company

- DATAPATT generated negative CFO of INR173m in FY23 on account of heightened working capital requirement. However, the company has witnessed a gradual improvement in its cash generation ability for the last three years (Positive cash flow from operation of INR134m/INR434/INR503m in FY20/FY21/FY22)
- CFO/EBITDA ratios stood at ~31%/47%/36% in FY20/FY21/FY22.
- Going ahead, factoring in the strong growth trajectory and an easing working capital scenario, we expect CFO/EBITDA ratio to be ~31% in FY26.

Exhibit 243: Strong Cash flow generation

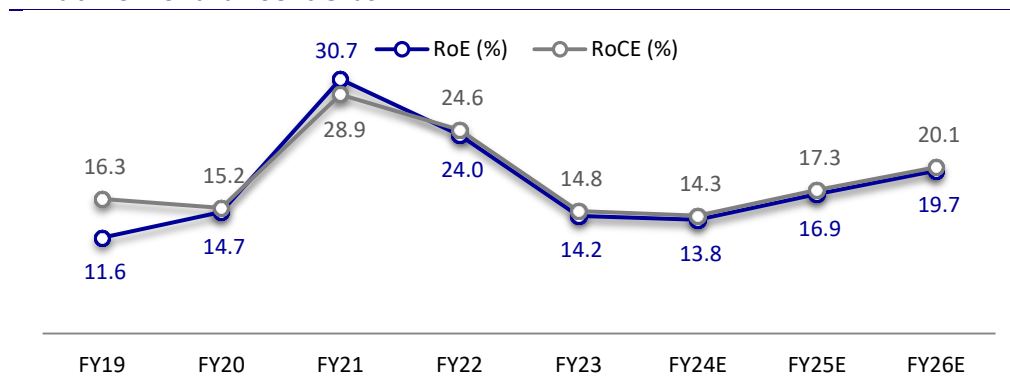
Source: MOFSL, Company

Exhibit 244: CFO/EBITDA ratio

Source: MOFSL, Company

Return ratios to improve on robust earnings

- RoE improved from ~11.6% in FY19 to 14.2% in FY23.
- As per Dupont analysis, RoE improvement was primarily led by an increase in net profit margins (from 5.9% in FY19 to 27.3% in FY23). Asset turnover and Financial leverage declined from FY20 levels.
- Asset turnover declined to ~0.4x in FY23 vs. 0.7x in FY19, as the company has raised capital through IPO and QIP. However, Fixed Asset T/O has increased from 3.1x in FY19 to 3.9x in FY23, indicating improving plant productivity and efficiency in operations.
- Going forward as well, further improvement in the net profit margins (to 31.5% in FY26) will be the key reason for improvement in ROE to 19.7% in FY26 from 14.2% in FY23.

Exhibit 245: RoE and RoCE trends

Source: Company, MOFSL

Valuation and view

Poised for growth; capturing its share in USD2b opportunity pie

Robust earnings growth momentum (~40% CAGR over FY23-26E) led by strong order book, healthy order inflows, improving margin profile and continued momentum in new product development.

- DATAPATT, being one of the fastest-growing companies (36% CAGR over FY19-23) in the defence and aerospace electronics sector in India, is set to capture a larger share of pie on the back of its extensive experience (over three decades) and strong core competencies in the field.
- The company is end-to-end vertically integrated (from design to deployment) and operates across the spectrum in the defense and aerospace verticals, leading to large TAM of ~USD2b as on CY20 (expected to reach ~USD4.5b by CY30 with a 9% CAGR over the period).
- Going ahead, we expect DATAPATT to strongly grow its earnings on the back of 1) faster execution of orders in hand due to enhanced manufacturing capabilities and experienced team; 2) healthy revenue growth visibility in the medium to long term led by strong order inflows, especially in development contracts; 3) continued momentum in new product development led by infusion of funds (INR5b QIP) and its building block model; and 4) Strong import substitution and export opportunities.
- Currently, DATAPATT trades at 33x FY26E EPS. Factoring in the current growth opportunities and potential in the aerospace & defense electronics sector, we expect its revenue/EBITDA/PAT to report a CAGR of ~34%/37%/40% over FY23-26. We anticipate the stock to trade at rich valuations on account of the current growth opportunities in the sector, while its higher working capital days pose a major concern. **We initiate coverage on the stock with a Neutral rating and a TP of INR2,270 (premised on 37x FY26E EPS).**

Key Risks

- Possible delays in key government programs in the space and defense sectors due to fiscal constraints
- Long gestation period for development contracts
- High working capital requirement
- Competition from large global players

Exhibit 246: Comparative valuation

Peers	CMP (INR)	TP (INR)	MCap (INR b)	EPS			P/E			RoE (%)			RoCE (%)		
				FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E	FY24E	FY25E	FY26E
Data Pattern	2,028	2,270	113.5	30.7	43.8	61.3	66.0	46.3	33.1	13.8	16.9	19.7	14.3	17.3	20.1
Kaynes	2,669	3,100	157.1	29.0	43.8	61.5	92.2	61.0	43.4	16.1	20.3	22.9	16.0	20.0	22.7
Avalon	529	730	34.5	11.7	18.4	24.4	45.1	28.8	21.7	13.3	17.8	19.5	12.1	16.7	19.1
Syrma SGS	639	775	113.0	9.2	13.7	19.3	69.8	46.7	33.0	10.0	13.3	16.2	9.7	13.5	16.4
Cyient DLM	687	870	54.4	9.0	16.4	24.7	76.2	41.9	27.8	12.2	12.6	16.3	10.3	11.9	15.9
Dixon*	5,336	NA	308.1	68.6	93.1	122.3	77.7	57.3	43.6	26.2	28.1	28.6	NA	NA	NA
Amber*	2,972	NA	95.7	62.0	90.4	116.1	48.0	32.9	25.6	10.3	13.1	15.0	NA	NA	NA

Note: CMP as on Oct 13, 2023

Source: MOFSL, Company, *BBG

ESG initiatives



Environmental initiatives

- The company has taken significant steps to minimize its environmental impact, by focusing on reducing GHG emissions and optimizing energy and water consumption. The company has installed a 30 kW Solar Power System on their new building, generating approximately 1900 kWh per day.
- The company practices Zero Liquid Discharge. It uses recycled water for gardening, which prevents environmental discharge. Regular lab testing ensures water quality.

CSR initiatives

- Education: The company is building a specialized school that includes accommodation for individuals with Autism, ADHD, Intellectual, and Learning Disabilities.
- HealthCare: The Company has created a fund to offer secure and easily accessible care for underprivileged children born with cleft and facial abnormalities.

Governance

- As of Jun'23, the board comprised eight directors, including four independent directors and two woman directors.
- The company's non-executive directors are accomplished experts with extensive knowledge and substantial experience in various functional domains, including business strategy, financial governance, and corporate governance, among others.

Bull and Bear cases



Bull Case

- ✓ In our bull case, we assume a revenue CAGR of 35% over FY23-26 on the back of higher production and development orders.
- ✓ We expect margins to expand by ~340bp to ~41.3% over FY26, led by operating leverage.
- ✓ We estimate a robust CAGR of 41% in EPS over FY23-26.

Bear Case

- ✓ In our bear case, we assume a revenue CAGR of 31% over FY23-26.
- ✓ Margins are likely to expand by ~310bp from the current level to 41% in FY25.
- ✓ We expect a CAGR of 37% in EPS over FY23-26.

Exhibit 247: Bull and Bear Case Scenario (INRm)

	Particulars	FY24E	FY25E	FY26E	CAGR (FY24-26E, %)
Bear case	Revenue	5,714	7,620	10,147	31
	EBITDA	2,237	3,056	4,160	34
INR1940	EPS	29.5	41.1	56.9	37
Base case	Revenue	5,866	7,994	10,877	34
	EBITDA	2,324	3,245	4,460	37
INR2270	EPS	30.7	43.8	61.3	40
Bull case	Revenue	5,943	8,104	11,036	35
	EBITDA	2,367	3,331	4,558	38
INR2820	EPS	31.3	45.0	62.6	41

SWOT analysis

- ✓ Strong in-house design, engineering and manufacturing capabilities
- ✓ Vast number of products designed in India for all platforms across spectrum
- ✓ Robust domain capability in Radars, Electronic warfare, Communication systems, Avionics & Satellite Systems
- ✓ Certified manufacturing and testing infrastructure fulfilling international benchmarks.

S

STRENGTH



- ✓ Uncertainty regarding order inflows
- ✓ Long gestation period for development of new products
- ✓ High requirement of working capital

W

WEAKNESS



- ✓ Strong domestic demand along with huge import replacement and export opportunities
- ✓ India spends over INR1t per annum on defense, which is expected to gradually increase
- ✓ Growing participation from domestic private sector in the defense supply chain amid favorable policies

O

OPPORTUNITY



- ✓ Competition from large global players and small domestic suppliers
- ✓ Possible delays in key government programs in the space and defense sectors due to fiscal constraints
- ✓ Delays in commercialization of product development on account of tedious and time-consuming approval process

T

THREATS



Management team



Srinivasagopalan Rangarajan
MD & Chairman

He has 30+ years of experience in business development, corporate affairs and finance. He has received several prestigious awards, including the Project Leader Award from the PMA in 2018, Silver Sticon 2019 from Raja Muthiah Mandram, Madurai, and the Professional Excellence Award at the Corporate Governance Summit by the Institute of Directors, Tamil Nadu region in 2019.



Rekha Murthy Rangarajan
Whole time Director

She has 22+ years of experience in administration, facility maintenance, human resource and development, process engineering, and special projects. She previously worked with Sterling Computers Limited. She received the Mercedes Benz Ritz Woman of Merit Award in 2015 and the Dr. KCG Verghese Excellence Award from the Hindustan Group of Institutions in 2017.



Vijay Ananth
Whole time Director

He has 20+ years of experience in software engineering and product management. He started as a software engineering trainee at the company's erstwhile subsidiary in Sep'98. Over the years, he progressed through various roles within the organization.



Desinguraja Parthasarthy
Chief Technology Officer

He holds a bachelor's degree in Electronics and Communication Engineering from the University of Madras. With 32 years of experience in Product Development, he joined the company's erstwhile subsidiary as an Engineer, Research and Development, in Dec'89. He has since been promoted to various roles, and currently serves as the Chief Technical Officer.



Venkata Venkatachalam
Chief Financial Officer

He holds a bachelor's degree in Commerce from Madurai Kamaraj University and is a fellow member of the Institute of Chartered Accountants of India. With more than two decades of experience in the finance sector, he started at the company as Manager, Finance, in Nov'00 and was subsequently promoted to General Manager, Finance, in Apr'19.



Thomas Mathuram Susikaran
Senior Vice president

He has a bachelor's degree in Electrical and Electronics Engineering from Madurai Kamaraj University and a master's degree in Electrical Engineering from the Indian Institute of Technology, Madras. With 21+ years of experience in business development and marketing, he joined the company's erstwhile subsidiary as Senior Manager, Marketing, in Sep'00.

Financials and valuations

Consolidated - Income Statement

(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Total Income from Operations	1,311	1,561	2,240	3,109	4,535	5,866	7,994	10,877
Change (%)	NA	19.1	43.5	38.8	45.9	29.4	36.3	36.1
RM Cost	489	561	704	861	1,709	2,138	2,878	3,916
Employees Cost	367	411	472	604	795	1,009	1,351	1,816
Other Expenses	199	157	144	233	312	396	520	685
Total Expenditure	1,055	1,129	1,320	1,698	2,816	3,543	4,748	6,418
% of Sales	80.5	72.4	58.9	54.6	62.1	60.4	59.4	59.0
EBITDA	255	432	920	1,410	1,718	2,324	3,245	4,460
Margin (%)	19.5	27.6	41.1	45.4	37.9	39.6	40.6	41.0
Depreciation	59	55	56	66	84	132	147	168
EBIT	197	377	864	1,344	1,634	2,192	3,098	4,292
Int. and Finance Charges	108	133	145	110	77	85	94	103
Other Income	15	41	26	40	92	195	280	402
PBT	104	284	745	1,274	1,649	2,302	3,284	4,591
Total Tax	27	74	190	334	409	582	830	1,161
Tax Rate (%)	25.6	26.0	25.4	26.2	24.8	25.3	25.3	25.3
Reported PAT	77	211	556	940	1,240	1,720	2,454	3,430
Adjusted PAT	77	211	556	940	1,240	1,720	2,454	3,430
Change (%)	NA	173.4	163.9	69.1	31.9	38.7	42.7	39.8
Margin (%)	5.9	13.5	24.8	30.2	27.3	29.3	30.7	31.5

Consolidated - Balance Sheet

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Equity Share Capital	17	17	17	104	112	112	112	112
Total Reserves	1,312	1,518	2,062	5,641	11,559	13,228	15,631	19,011
Net Worth	1,329	1,535	2,079	5,745	11,671	13,340	15,743	19,123
Total Loans	601	606	372	92	7	7	7	7
Deferred Tax Liabilities	9	8	9	-8	0	0	0	0
Capital Employed	1,940	2,148	2,460	5,830	11,678	13,347	15,750	19,130
Gross Block	423	447	425	634	1,176	1,287	1,469	1,665
Less: Accum. Deprn.	59	113	93	159	243	375	523	690
Net Fixed Assets	365	334	332	475	933	911	946	975
Capital WIP	0	0	0	173	14	103	121	124
Total Investments	0	0	0	0	557	557	557	557
Current Investments	0	0	0	0	557	557	557	557
Curr. Assets, Loans&Adv.	2,410	2,620	2,954	6,411	12,847	14,823	17,870	22,568
Inventory	867	794	737	1,198	1,930	2,285	2,799	3,540
Account Receivables	1,029	1,156	1,559	1,983	3,825	4,500	5,475	7,003
Cash and Bank Balance	3	15	88	1,771	5,445	5,985	6,799	8,218
Loans and Advances	511	655	569	1,460	1,647	2,053	2,798	3,807
Curr. Liability & Prov.	835	805	826	1,230	2,671	3,047	3,743	5,094
Account Payables	159	173	120	416	431	527	710	966
Other Current Liabilities	606	506	560	570	2,107	2,347	2,798	3,807
Provisions	71	126	146	244	134	173	236	321
Net Current Assets	1,575	1,815	2,128	5,182	10,175	11,776	14,127	17,475
Appl. of Funds	1,940	2,148	2,460	5,830	11,678	13,347	15,750	19,130

Financials and valuations

Ratios

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Basic (INR)								
EPS	9.1	24.8	65.4	18.1	22.1	30.7	43.8	61.3
Cash EPS	16.0	31.2	71.9	19.4	23.6	33.1	46.4	64.3
BV/Share	156.3	180.6	244.6	110.7	208.4	238.2	281.1	341.5
DPS	0.0	0.0	0.0	0.0	0.7	0.9	0.9	0.9
Payout (%)	0.0	0.0	0.0	0.0	3.2	2.9	2.1	1.5
Valuation (x)								
P/E	223.8	81.9	31.0	112.0	91.6	66.0	46.3	33.1
Cash P/E	127.1	65.0	28.2	104.6	85.8	61.3	43.7	31.6
P/BV	13.0	11.2	8.3	18.3	9.7	8.5	7.2	5.9
EV/Sales	13.6	11.4	7.8	33.3	23.7	18.2	13.3	9.6
EV/EBITDA	69.8	41.3	19.0	73.4	62.6	46.1	32.7	23.5
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FCF per share	-6.5	14.4	45.2	2.3	-9.9	8.6	12.1	20.9
Return Ratios (%)								
RoE	11.6	14.7	30.7	24.0	14.2	13.8	16.9	19.7
RoCE	16.3	15.2	28.9	24.6	14.8	14.3	17.3	20.1
RoIC	15.1	13.7	28.6	31.7	25.7	26.5	30.9	34.7
Working Capital Ratios								
Fixed Asset Turnover (x)	3.1	3.5	5.3	4.9	3.9	4.6	5.4	6.5
Asset Turnover (x)	0.7	0.7	0.9	0.5	0.4	0.4	0.5	0.6
Inventory (Days)	647	517	382	508	412	390	355	330
Debtor (Days)	287	270	254	233	308	280	250	235
Creditor (Days)	118	112	62	176	92	90	90	90
Leverage Ratio (x)								
Current Ratio	2.9	3.3	3.6	5.2	4.8	4.9	4.8	4.4
Interest Cover Ratio	1.8	2.8	6.0	12.2	21.2	25.8	33.1	41.7
Net Debt/Equity	0.5	0.4	0.1	-0.3	-0.5	-0.5	-0.5	-0.5

Consolidated - Cash Flow Statement

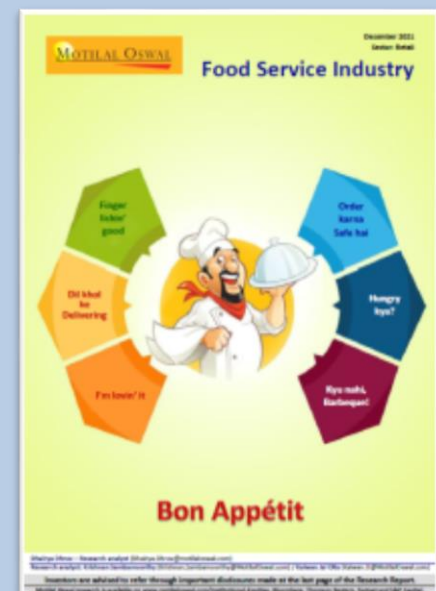
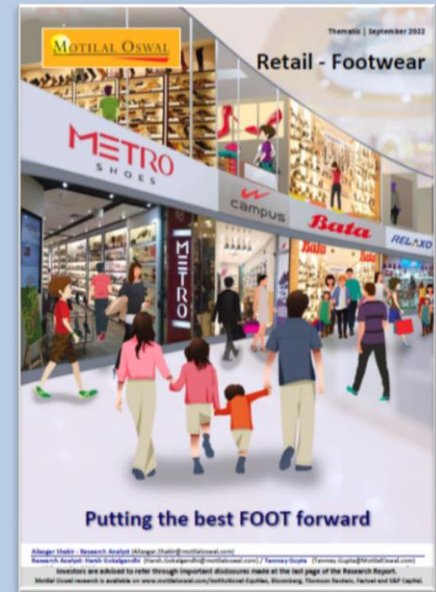
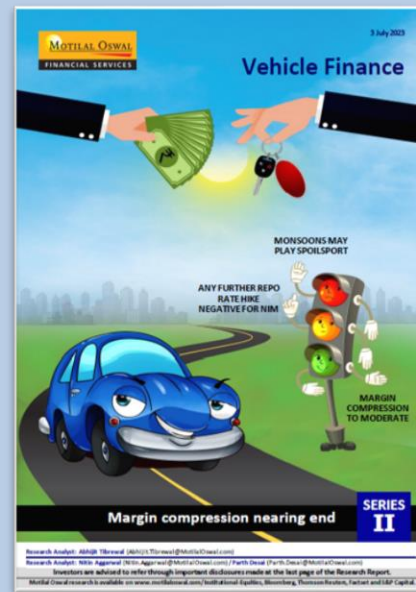
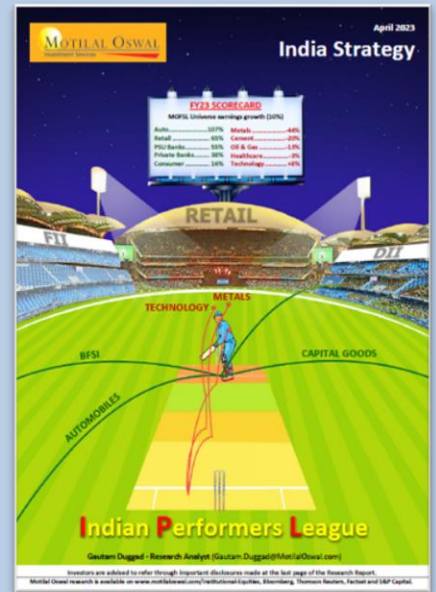
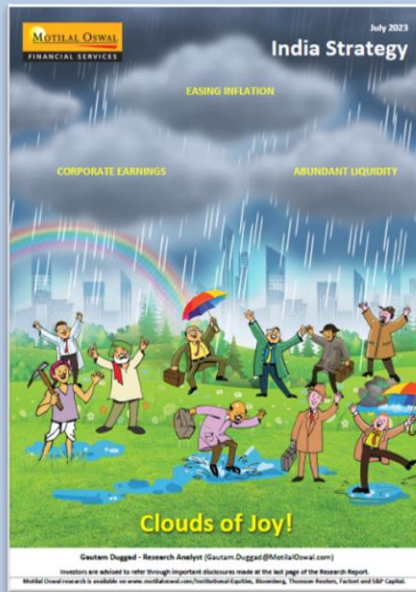
(INR m)

Y/E March	FY19	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
OP/(Loss) before Tax	104	284	745	1,274	1,649	2,302	3,284	4,591
Depreciation	59	55	56	66	84	132	147	168
Interest & Finance Charges	93	108	123	70	-15	-110	-186	-300
Direct Taxes Paid	-11	-28	-190	-284	-409	-582	-830	-1,161
(Inc)/Dec in WC	-289	-283	-299	-624	-1,482	-1,061	-1,537	-1,928
CF from Operations	-45	136	435	503	-173	680	878	1,370
Others	0	-2	-1	0	0	0	0	0
CF from Operating incl EO	-45	134	434	503	-173	680	878	1,370
(Inc)/Dec in FA	-10	-12	-50	-382	-383	-200	-200	-200
Free Cash Flow	-55	123	384	121	-555	480	678	1,170
(Pur)/Sale of Investments	0	0	0	0	0	0	0	0
Others	15	26	137	-796	-1	195	280	402
CF from Investments	4	14	88	-1,178	-384	-5	80	202
Issue of Shares	0	0	0	3,000	5000	0	0	0
Inc/(Dec) in Debt	27	-132	-300	-283	-85	0	0	0
Interest Paid	0	0	-145	-89	-77	-85	-94	-103
Dividend Paid	-4	-4	-3	-111	-39	-50	-50	-50
Others	0	0	0	-159	-568	0	0	0
CF from Fin. Activity	23	-136	-449	2,359	4,231	-135	-144	-153
Inc/Dec of Cash	-18	12	73	1,683	3,675	540	813	1,419
Opening Balance	21	3	15	88	1,771	5,445	5,985	6,799
Closing Balance	3	15	88	1,771	5,445	5,985	6,799	8,218

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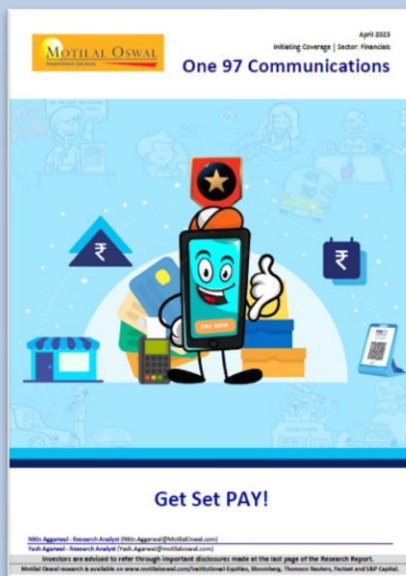
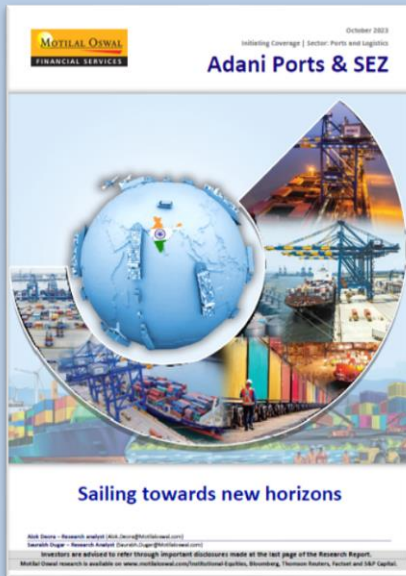
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