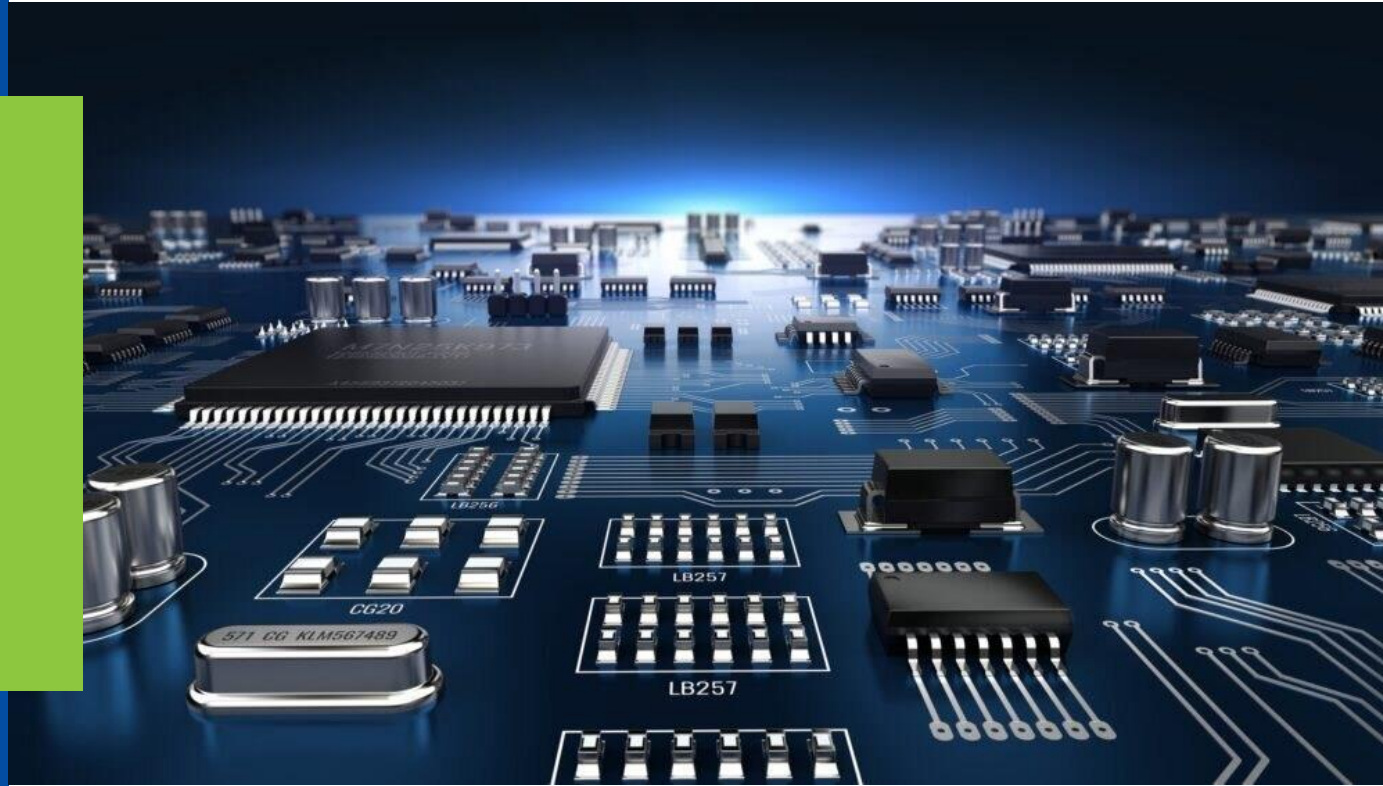
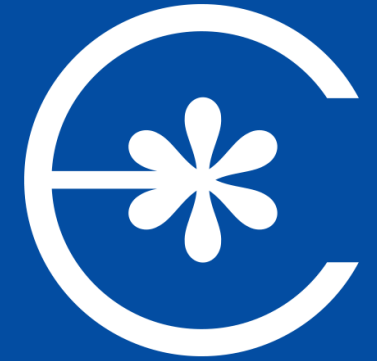




WWOWWO – EMS



Understanding the space



Understanding EMS – The backbone of the global electronics market

E

- **Electronics**

M

- **Manufacturing**

S

- **Services**

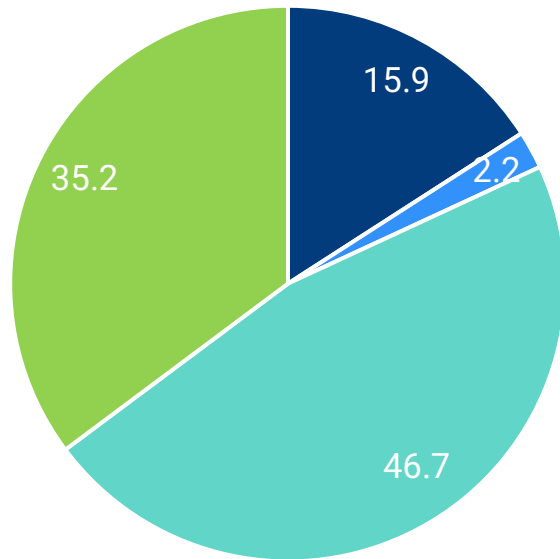
Operations of EMS companies can be divided into 3 categories:

1. **Original Design Manufacturing:** Companies manufacture products as per the specifications provided by the OEMs.
2. **Electronics manufacturing services:** It is the most prevalent model in India, where companies manufacture products based on customers' specifications.
3. **Job work:** Companies are only responsible for assembling the products. Very small-sized companies follow this model.

In **India**, companies in this industry offer **PCB* assembly**, **electronics box builds** and **contract manufacturing** of consumer electronics.

EMS market - India vs World

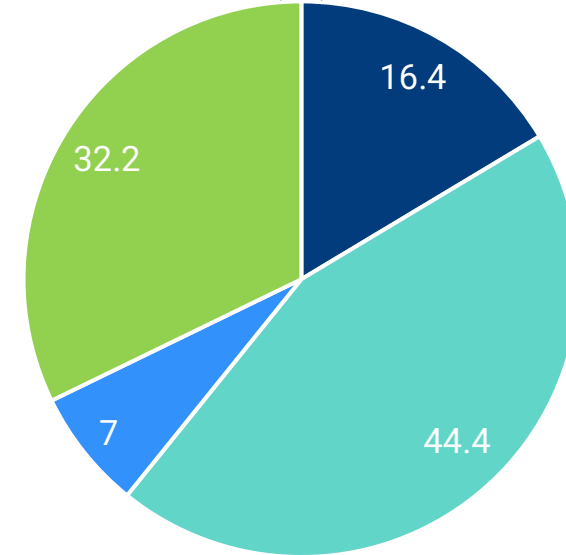
EMS market share in 2021 (%)



■ USA ■ India ■ China ■ ROW

India's share in the global EMS market is expected to increase by CAGR 32.3% between 2021 & 2026

EMS market share in 2026E (%)



■ USA ■ China ■ India ■ ROW

The **contribution** of domestic electronics production to **India's GDP** is expected to rise significantly, reaching **5.3% by FY27** from **2.8% in FY21**, indicating the sector's increasing importance to the overall economy.

Growth Drivers



What's driving the key EMS segment?

Applications

Key Growth Drivers

Mobiles

Declining prices and **increased mobile penetration** in rural India likely to drive the market over next few years.

CEA

Changing lifestyle and **higher spending capacity** are the key drivers for the growth of this sector that includes televisions, washing machines, refrigerators, cameras.

Industrial

Industry 4.0 and **smart manufacturing** will increase the use of electronic components, driving overall process efficiency.

Auto

Connected, autonomous and electric vehicles are the key trends driven by environmental sustainability and digitalization resulting in higher usage of electronic components.

IT

Availability of **broadband in remote areas** and post pandemic work-from-home culture / online education are creating opportunities for the IT hardware market in India.

Lighting

Energy efficiency regulations and **reduced prices** of LED light sources are the key drivers replacing conventional products with LED lighting.

Medical

Introduction of **advanced technologies, changing clinical needs**, new policies and regulations driving the sector to innovate and maintain their competitive advantage.

Factors driving the EMS market in India

Govt. Initiatives

Govt programmes like India semicon mission, PLI scheme, EMC 2.0 scheme & SPECS are key drivers for growth of EMS

China +1 Strategy

Companies and governments across the world are reducing their dependence on China

Import Substitution

Imports are expected to reduce from 21% to 13% of the Indian electronics market driving domestic manufacturing

Investments by Local & Global players

Make in India and Digital India programs boosting investments in manufacturing sector in India

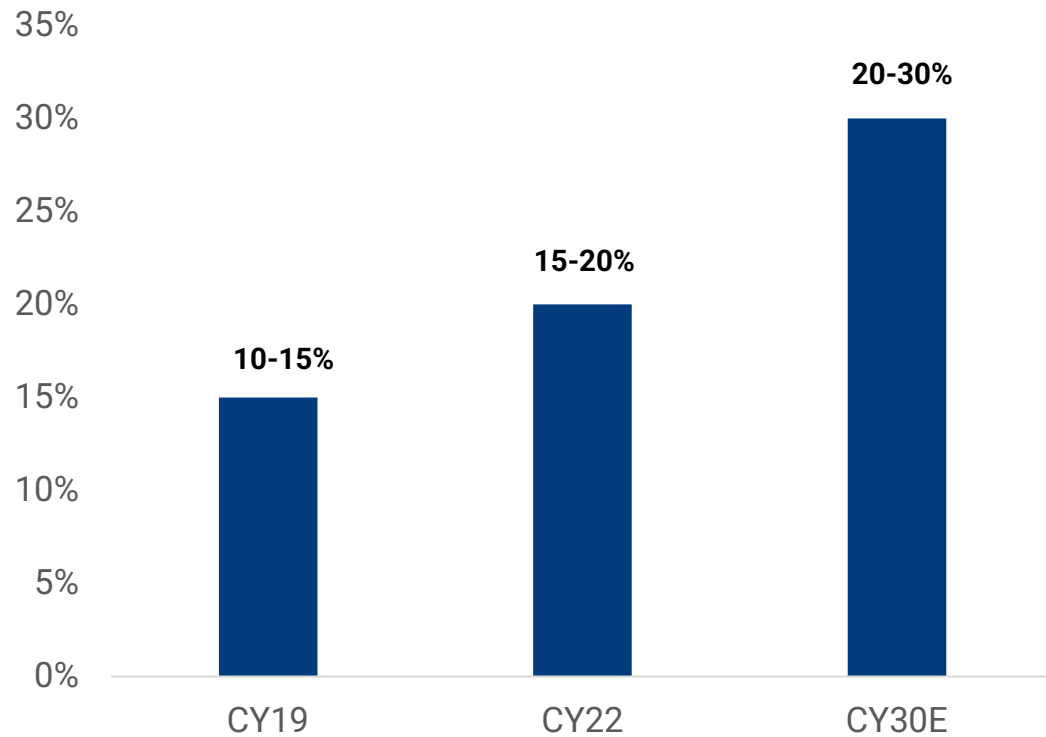
Eg Foxconn, Samsung

The consumption of electronics in India is poised to rise

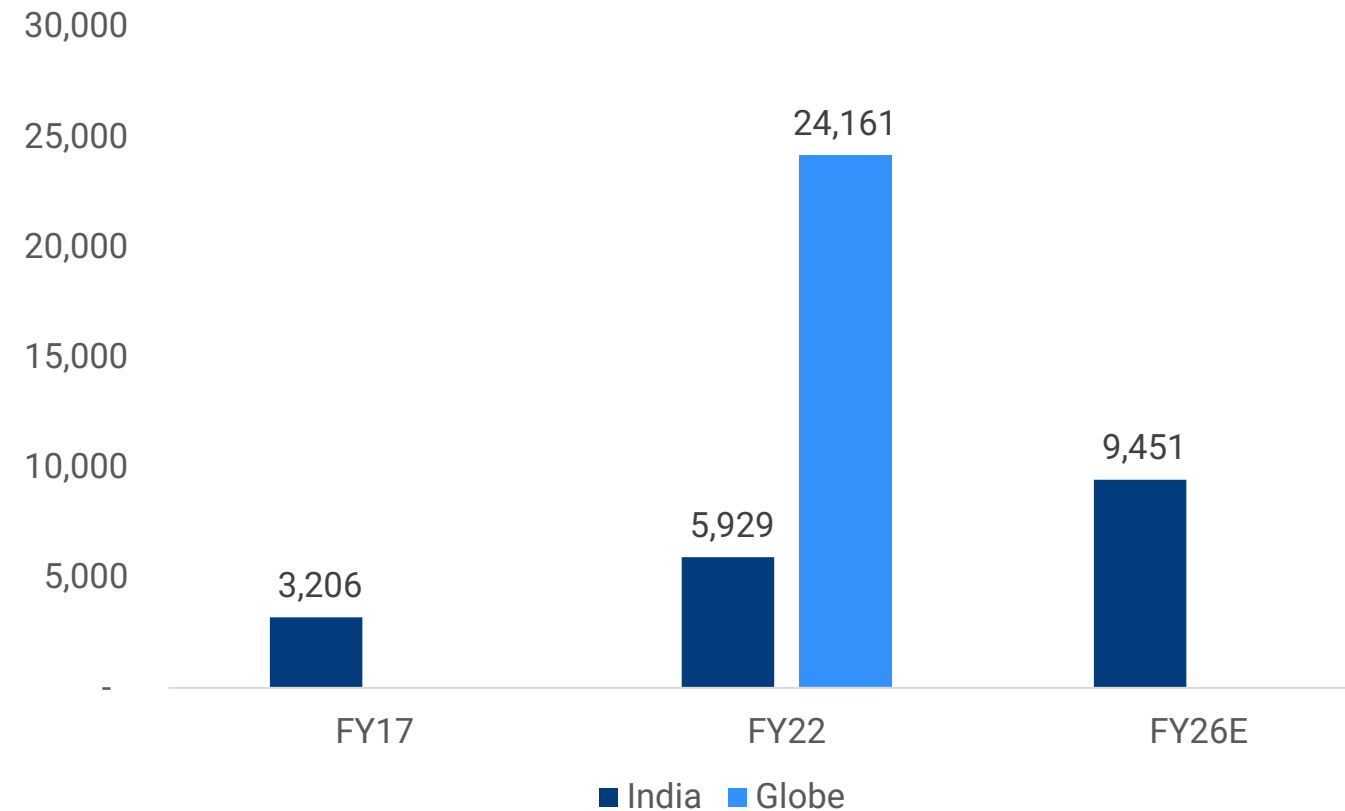
Electronics as a % of vehicle cost is only going to increase going forward

India's per capita electronics consumption is just ~1/4th of global consumption

Electronics as a % of Vehicle (4W) BOM cost

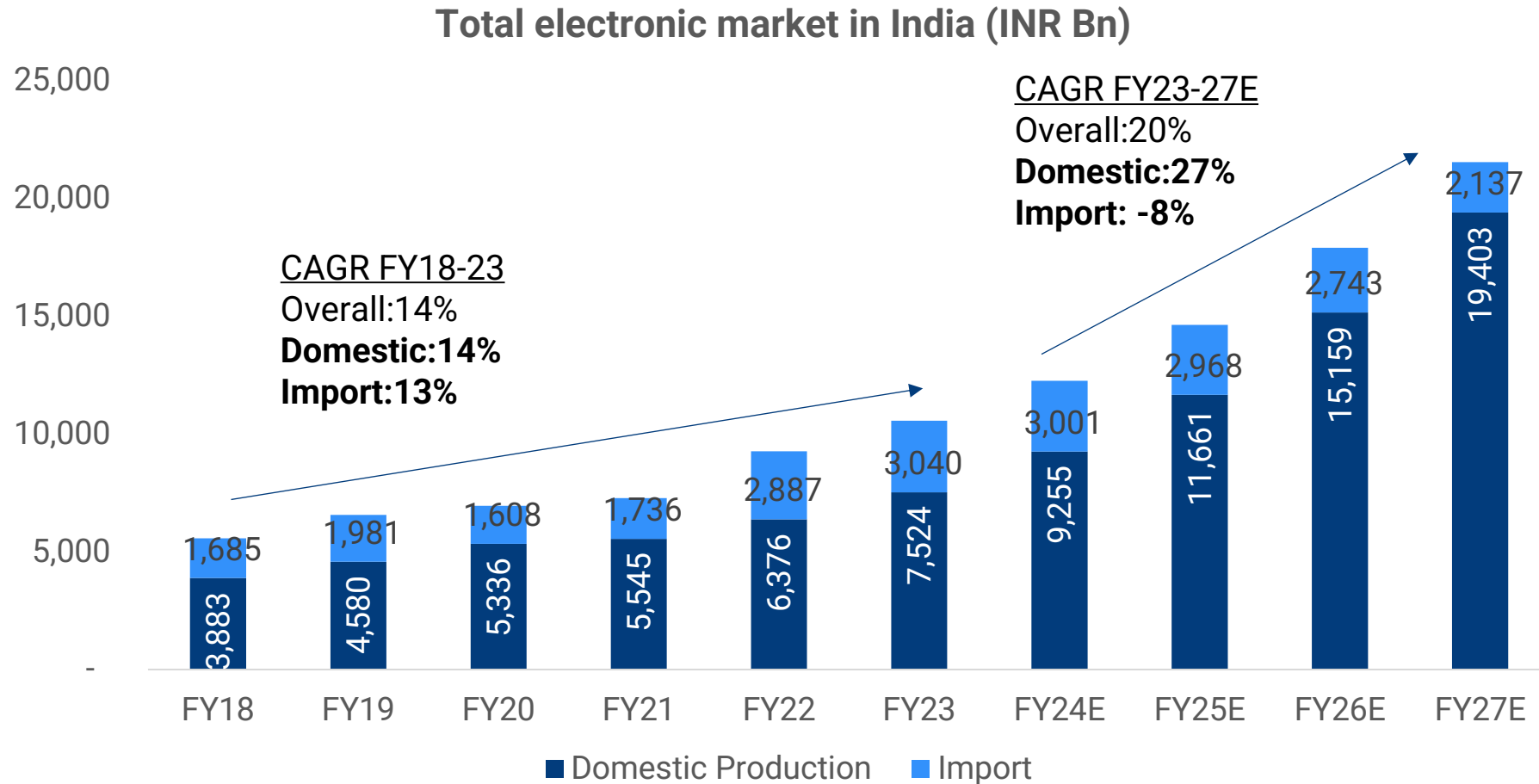


Per capita electronic consumption



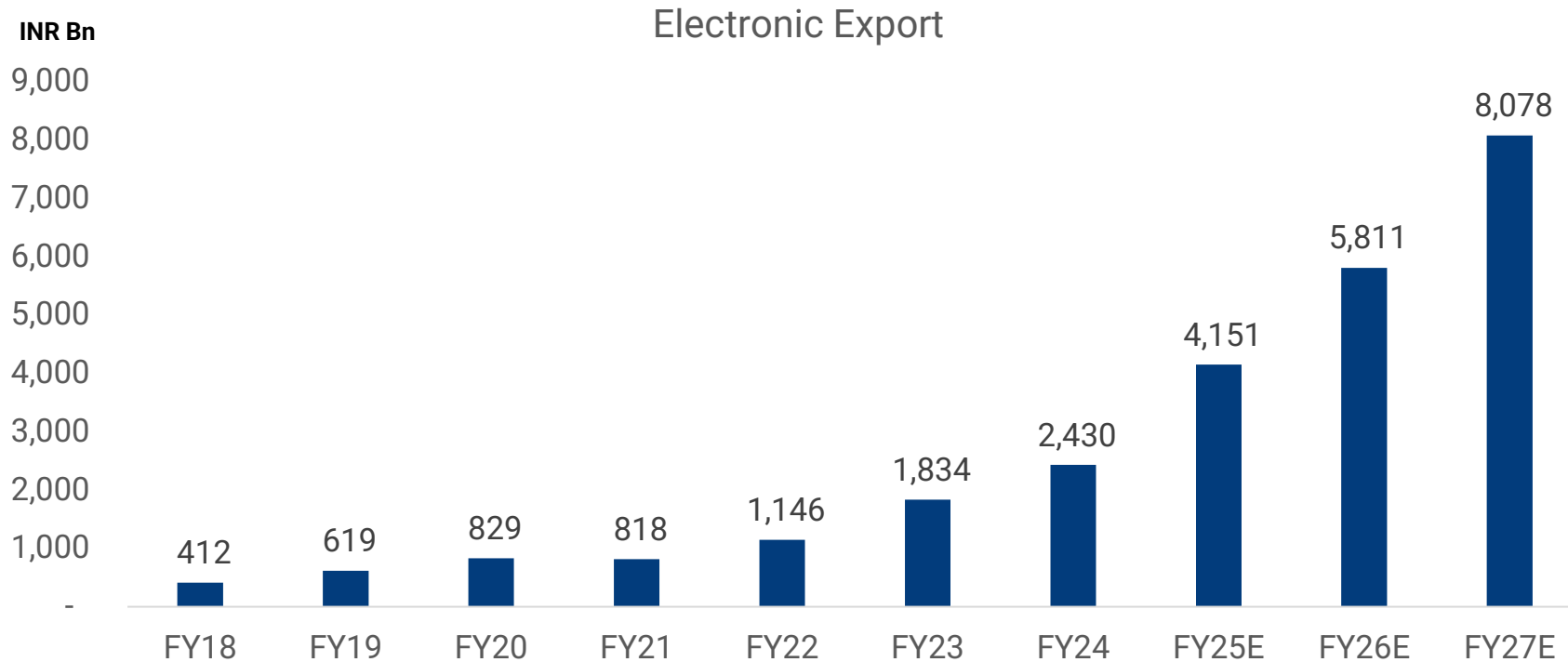
India's electronics industry is on the cusp of significant growth

To meet this rising consumption, we are relying more on domestic production compared to imports which are shrinking



Growing exports are also contributing to EMS growth

Electronic exports to see a meteoric rise



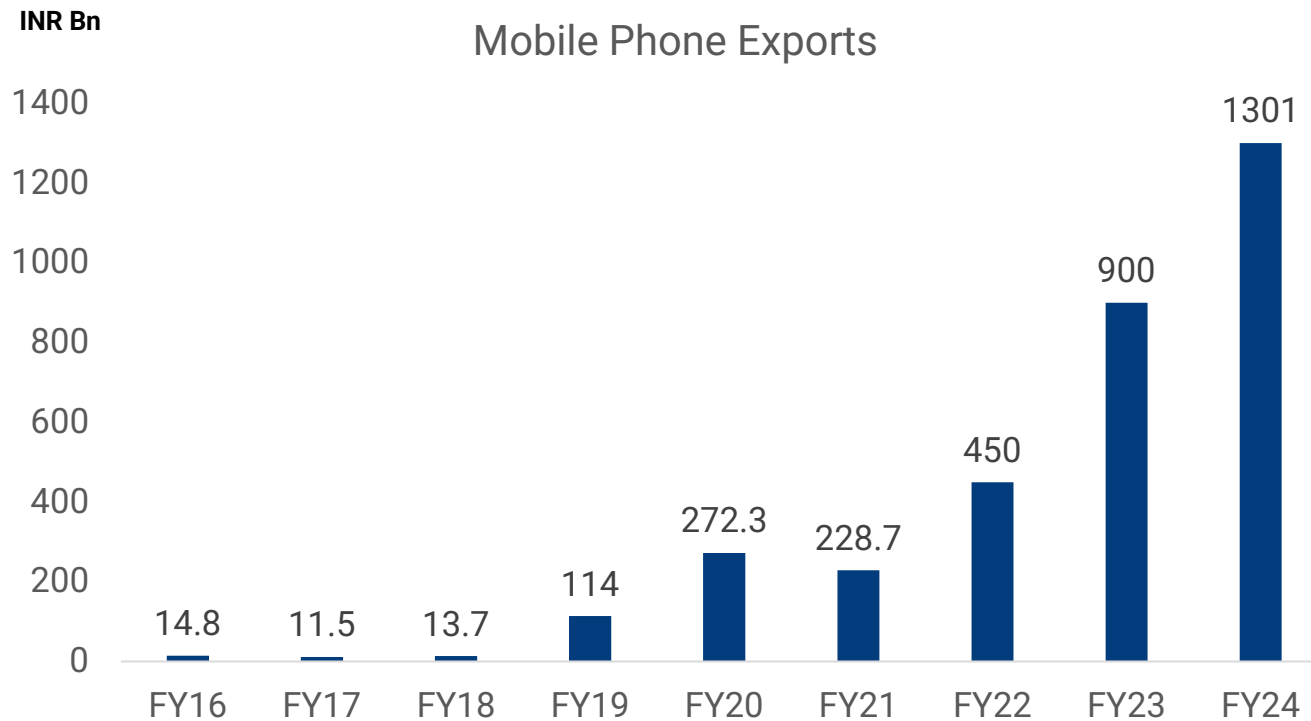
**Top 3 products
in exports**

1. Mobile Phones
2. Engine Control Units
3. Industrial Machinery

India's mobile phone exports surge post PLI scheme

India's mobile phone exports have grown at a CAGR of 75% since FY16

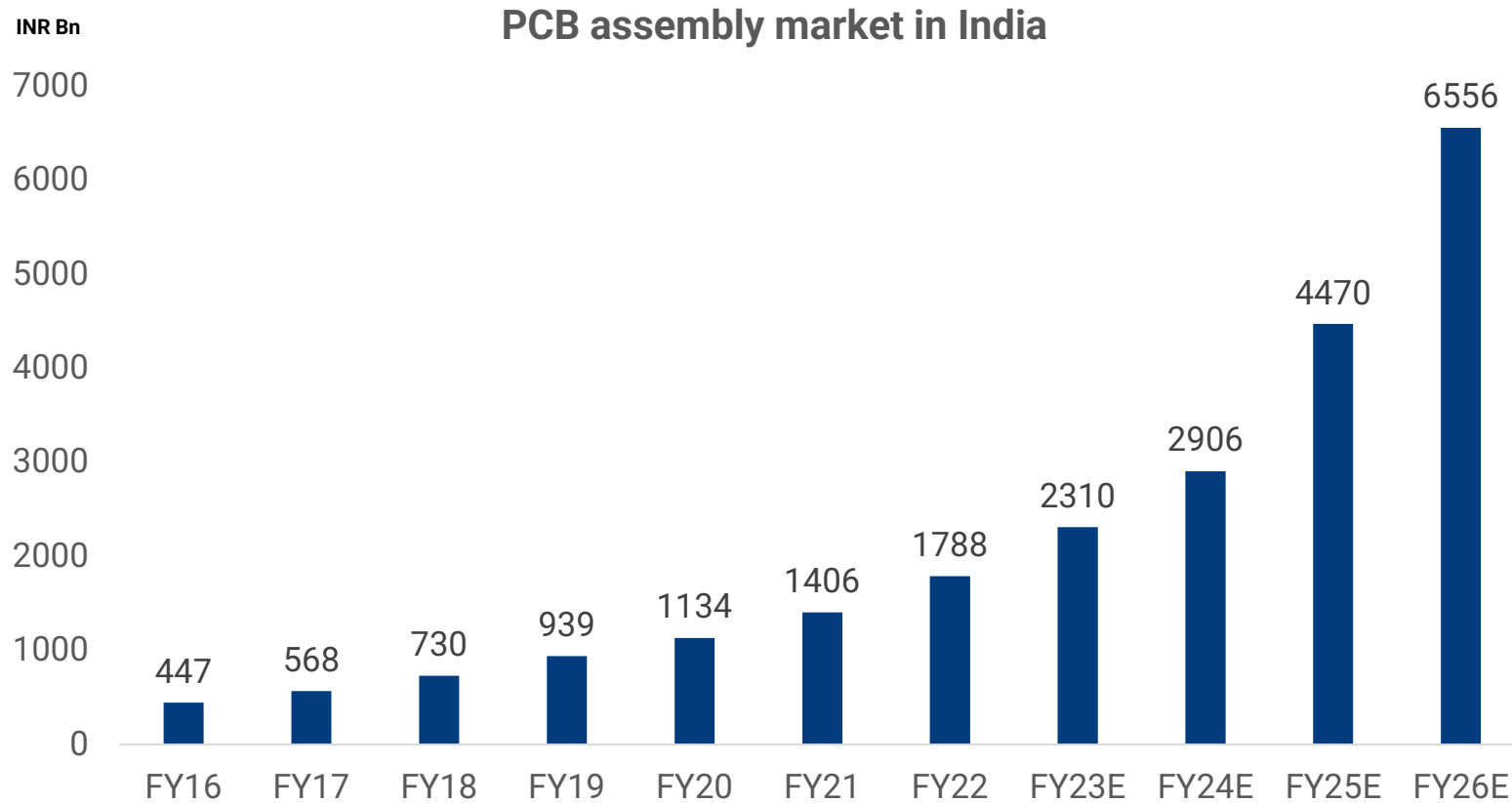
India's ranking - Mobile phone exports



FY	Rank
FY16	178
FY17	239
FY18	19
FY19	19
FY20	8
FY21	9
FY22	9
FY23	5

India's foray into PCBA

PCB assembly market in India to grow at a 36% CAGR over FY21-FY26E



PCB-The nucleus of any electronic item

Printed Circuit Board Assembly



PCB has critical components such as:

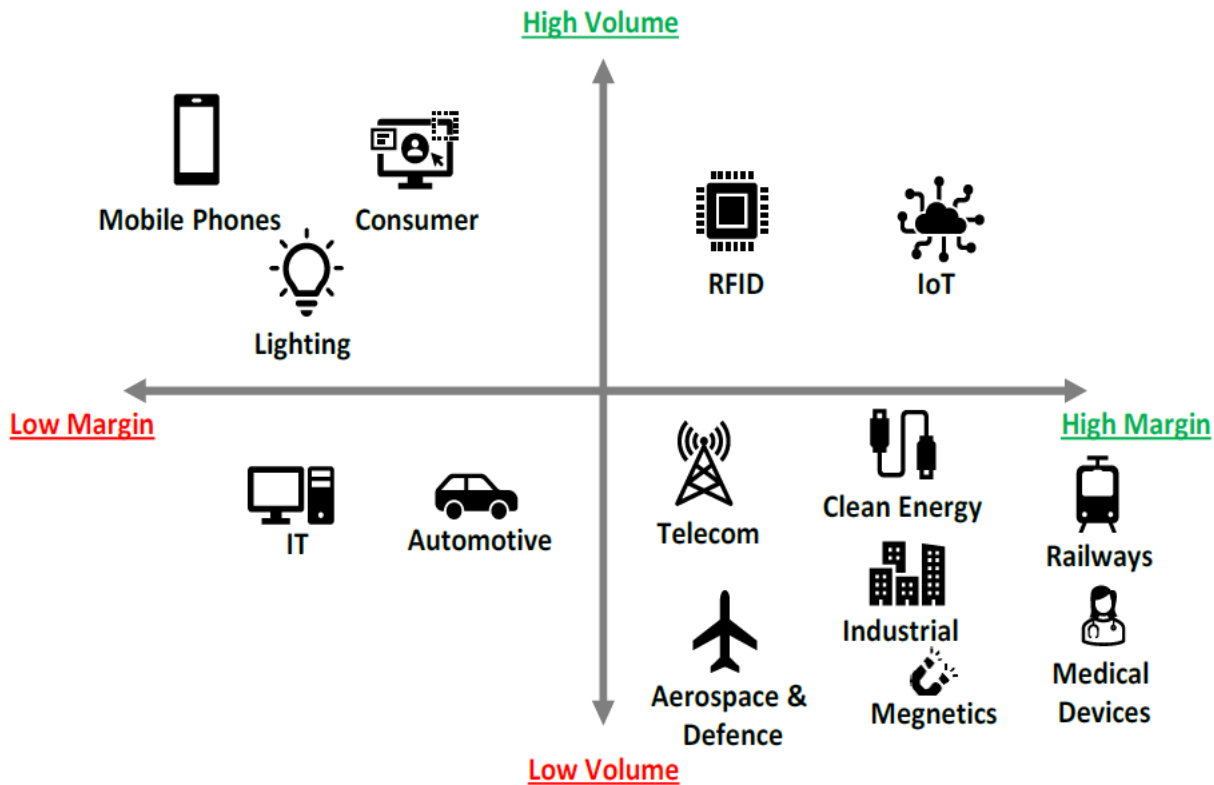
- * Flash memory
- * Application processors
- * Semiconductor-based active and passive sub-components

Market Segmentation

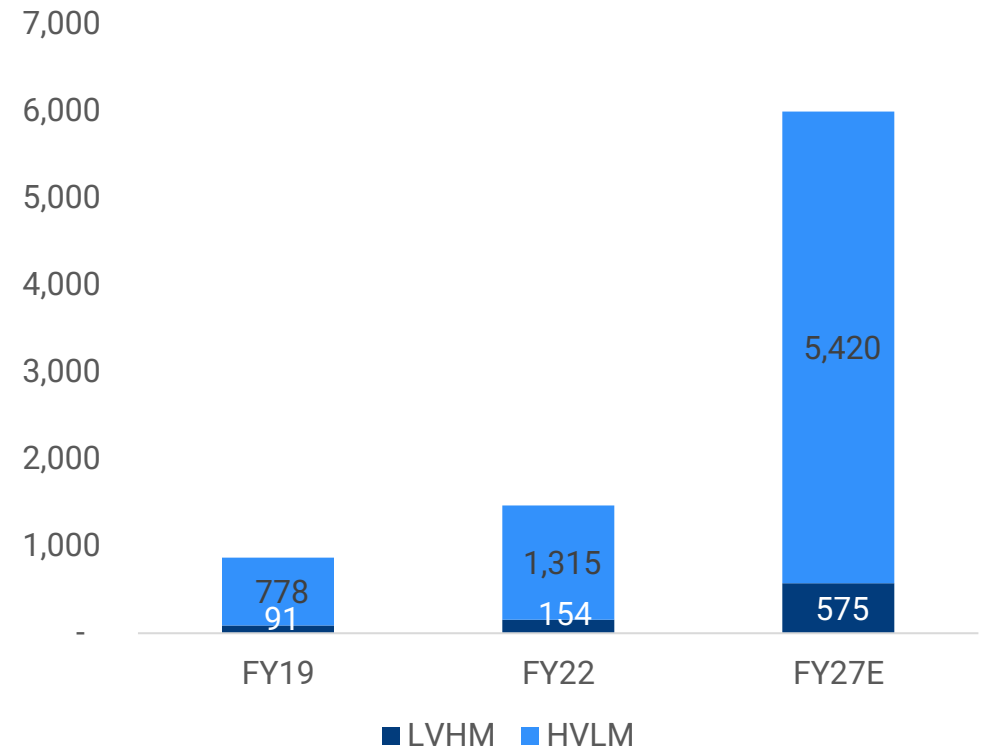


EMS market segment – HVLM vs LVHM

EMS Segment Matrix

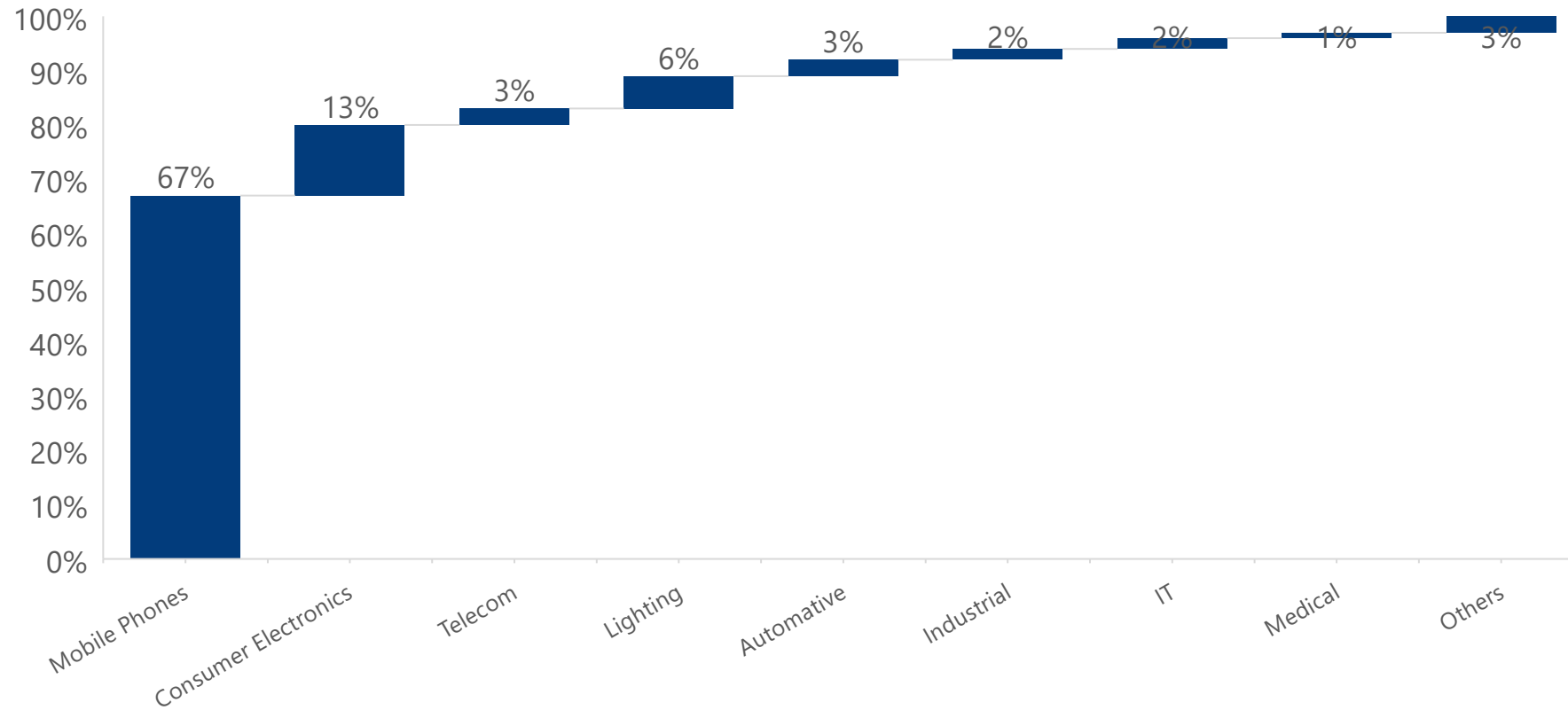


Indian EMS market segmentation by HVLM vs LVHM

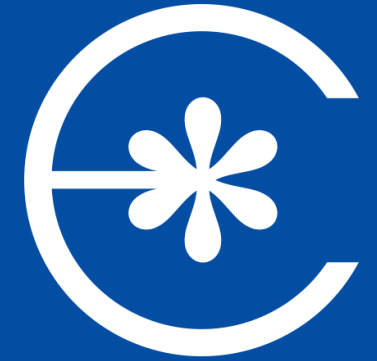


EMS market by key segment

The electronic market split by product segment



Key Players



Key players in the EMS space

Domestic players have a stronghold in CEA, Industrial, Automotive and Medical space

	Mobile Phones	CEA	Automotive	Industrial	Telecom	Aerospace & Defense	IT Hardware	Medical	Railway
Global players									
Foxconn	✓	✓	✗	✓	✓	✗	✓	✗	✗
Pegatron	✓	✓	✗	✗	✓	✗	✓	✗	✗
Jabil	✗	✓	✓	✗	✓	✓	✓	✓	✗
Wistron	✓	✗	✗	✗	✓	✗	✓	✗	✗
Flex	✗	✓	✓	✓	✓	✗	✓	✓	✗
Domestic players									
Kaynes	✗	✓	✓	✓	✓	✓	✓	✓	✓
Avalon	✗	✗	✓	✓	✓	✓	✗	✓	✓
Syrma	✗	✓	✓	✓	✓	✗	✗	✓	✗
Amber	✗	✓	✗	✗	✗	✗	✗	✗	✓
Dixon	✓	✓	✗	✗	✗	✗	✗	✓	✗
Elin Electronics	✗	✓	✗	✗	✗	✗	✗	✗	✗
Bharat FIH	✓	✓	✓	✗	✓	✓	✓	✗	✗
Cyient DLM	✗	✗	✗	✓	✗	✓	✗	✓	✗

Stock examples - EMS

Dixon Technologies Ltd.

Leader in EMS space in India.

Multiplier

Stock price has multiplied ~**5x** times in the past 3.5 years.

Competitive Advantage

- * Partnership with **Lenovo,Asus,HP,Acer** to manufacture Laptops in India.
- * Largest LED TV production capacity in India.

Growth drivers

- * USD 9 bn worth of imports, IT hardware is a key focus area for import substitution.
- * Government imposing restrictions on import of PCs and Laptop computers.



Kaynes Technology India Ltd.

Kaynes Technology is a leading end-to-end and IoT solutions-enabled integrated electronics manufacturer in India.

Multiplier

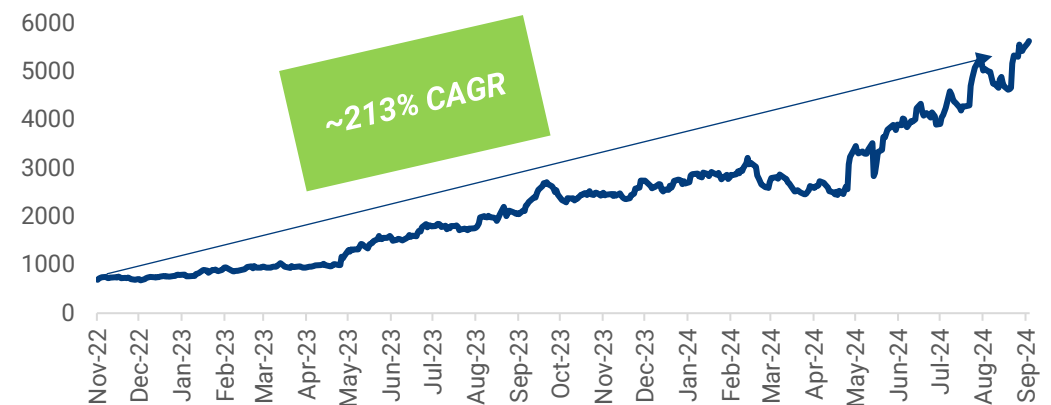
Stock price has multiplied **8x** times since inception.

Competitive Advantage

- * Kaynes boasts of a well-diversified business profile with a portfolio having applications across industry.
- * Kaynes has 350+ customers across 26 countries & has higher share of LVHM and does complex PCBA.

Growth Drivers

- * The company has recently ventured into semiconductor assembly and testing (OSAT), and high-density interconnect PCBs (HDI PCBs).



EMS players are experiencing robust revenue growth

EMS Players

Application Presence

Revenue CAGR (FY19-24)

DIXON Tech.

Mobile, CEA, Lighting, IT, Medical

43%

AMBER Entpr.

CEA, Auto

20%

ELIN Electr.

CEA, Lighting, Medical

5%

SYRMA SGS Tech.

CEA, IT, Auto, Industrial, Medical

53%*

CENTUM Electr.

Auto, Industrial, Medical

3%

CYIENT DLM

Industrial, Medical

20%

KAYNES Tech.

CEA, IT, Industrial, Medical

45%

EMS players in our portfolio

Stock	Fund	Weight%
Dixon Technologies (India) Ltd.	Edelweiss Flexi Cap Fund	1.81%
Dixon Technologies (India) Ltd.	Edelweiss Focused Fund	3.12%
Dixon Technologies (India) Ltd.	Edelweiss Mid Cap Fund	4.28%
Kaynes Technology India Ltd.	Edelweiss Mid Cap Fund	0.54%
Dixon Technologies (India) Ltd.	Edelweiss Multi Cap Fund	1.61%
Kaynes Technology India Ltd.	Edelweiss Multi Cap Fund	1.17%
Dixon Technologies (India) Ltd.	Edelweiss Small Cap Fund	1.87%
Avalon Technologies Ltd.	Edelweiss Small Cap Fund	0.88%
Dixon Technologies (India) Ltd.	Edelweiss Technology Fund	1.94%
Cyient DLM Ltd.	Edelweiss Technology Fund	1.14%

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