

**STEPTRADE**  
— CAPITAL —

# **INDIAN CAPITAL MARKETS 2025**

NAVIGATING  
GROWTH,  
VOLATILITY &  
OPPORTUNITY

ANNUAL REPORT  
**2025 – 2026**



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## Disclaimer:

This document is for informational purposes only and should not be construed as investment advice or a stock recommendation. Past performance does not guarantee future results. Investors should exercise their own judgment and conduct independent due diligence before investing.



# I. Indian Capital Market:

## 2025 Performance & 2026 outlook:

In 2025, India's capital markets (Nifty-50) witnessed record-high, continued FPI outflows, strong DII buying support, and a robust pipeline of high-profile Mainboard IPOs. Large caps and Mid cap Indices ended with record high, while small caps & Micro cap underperformed in 2025, as FPIs sold aggressively in the broader market and DIIs concentrated buying in quality large caps. This led to narrow market breadth: headline indices were strong, but a sizeable part of the Nifty 500 and small & Micro cap universe remained under pressure.



### Indices performance:

During 2025, large-cap and mid-cap indices delivered positive returns, with the Nifty 50 up 10.5% and the NIFTY Midcap 100 rising 5.8%, closing near record levels, whereas small cap and micro-cap indices underperformed, with the NIFTY Smallcap 100 and NIFTY Microcap 250 declining by 5.6% and 9.95%, respectively.

**DII & FII activity:** During the calendar year, Foreign Institutional Investors (FIIs) remained net sellers, recording outflows of ~₹3,06,000 crore in cash segment; however, strong net buying of ~₹7,88,000 crore by Domestic Institutional Investors (DIIs)

provided meaningful support to the market.

**Primary Market activity:** IPO activity in India delivered a standout performance in 2025, positioning the country among the most active global equity capital markets. Total proceeds reached INR 1.87 lakh Cr, and the highest annual level since the 1980s.

The number of mainboard IPOs increased to 104 in 2025 from 91 in 2024, while total capital raised edged up to ₹1.76 lakh crore from ₹1.60 lakh crore and number of SME IPOs increased to 269 in 2025 from 240 in 2024, with total capital raised of ~11,400 Cr from ~8,800 Cr in 2024, up 31%

year-on-year growth.

### Sector wise performance:

PSU Banks, Metals, Auto and Financial Services, emerged as the leading sectors in the Indian equity market during CY2025, supported by infrastructure-led growth and improving bank asset quality. In contrast, IT, Realty, Media, FMCG, and Pharma underperformed, weighed down by global slowdown concerns and elevated valuations.





# India's 2025 Macro Economic Indicators:

**GDP Growth:** India's economy is projected to grow at a robust 7.4% in FY2025–26, revised estimate from the earlier estimate of 6.8%, supported by easing price pressures, according to the first advance estimates of GDP released by the National Statistics Office.

**CPI Inflation:** In 2025, India witnessed a largely benign inflation environment, with CPI moderating steadily through the year. Inflation stood at 4.26% in January and softened progressively to 2.1% by June, remaining well within the Reserve Bank of India's medium-term target of 4% ( $\pm 2\%$ ). The disinflationary trend strengthened further, with headline CPI easing sharply to 0.25% in October 2025—the lowest level recorded under the current CPI series.

**WPI Inflation:** Wholesale inflation also mirrored this moderation. WPI inflation eased from 2.31 per cent in January to a -0.32 per cent (provisional) in November 2025, underscoring overall softening price pressures across the economy.

**Fiscal Deficit:** The government aims to narrow the fiscal gap to 4.4% of GDP in FY26 from 4.8% in FY25. As of April–November 2025, the fiscal deficit

stood at approximately ₹9.76 trillion, which is about 62.3% of the full-year budget estimate for FY2025–26, widening from the previous year's 52.5%.

**Current Account Deficit (CAD):** India's current account deficit widened to \$12.3 billion, or 1.3 percent of GDP, in Q2FY26 from \$2.7 billion, or 0.2 percent of GDP, in Q1, driven by a wider trade deficit, even as the surplus from services and transfers increased. Based on first two quarterly performance, it is expected that CAD to remain at a modest ~1.0–1.3% of GDP during FY2025–26.

**Forex Reserve:** India's forex reserves stood at \$696.61 billion as of Dec 26, 2025, covering 11+ months of imports – world's 4th largest. However, the Indian rupee continued to face depreciation pressures in early 2026, with forecasts suggesting it may weaken further toward the low-₹90s against the US dollar amid capital flow volatility and external uncertainties.

**Currency Fluctuation:** The rupee slumped 5% in 2025 as persistent capital outflows from foreign investors, alongside heightened dollar demand from importers, made it one of the worst-performing Asian currencies. Major

institutions like UBS expect further modest weakening, with forecasts pointing toward USD/INR near ~92 by March 2026, reflecting structural pressures from capital flows and external sector dynamics.

**Repo Rate:** RBI cut repo rate by cumulative 125 bps to 5.25% during CY2025 (Jan'25:6.50% & Dec'25:5.25%) across 5 MPC meetings amid ultra-low CPI inflation (~2.5–3%, Oct low 0.25%), shifting to "accommodative" stance while keeping SLR steady at 18% and minor CRR tweaks.





# Key Growth Drivers in 2026:

**RBI's accommodative stance:** In 2025, the RBI cut the repo rate by 125 bps, adopting an accommodative stance marked by proactive rate reductions and ample liquidity, which supported economic growth. Alongside this, fiscal measures such as GST rationalisation, tax cuts, MSME support, and regulatory reforms by RBI and SEBI have strengthened the foundation for India's structural recovery.

**GST Rationalisation (GST2.0):** The previous four-tier GST structure (5%, 12%, 18%, 28%) was replaced with just three main rates: 5% (merit rate) for essentials and mass-consumption items, 18% (standard rate) for most other goods and services and 40% for sin and luxurious goods. GST reduction to support **consumption, ease cost pressures, and reinforce economic recovery**. The positive impact of GST rationalization can be seen across consumer discretionary companies.

**US Tariff resolution:** Resolution of tariff issues between the US and India could accelerate the recovery process. While post-Covid expectations were high for India to gain a larger share of global supply chains, elevated US tariffs and shifting geopolitical dynamics have posed challenges. However, government initiatives such as the PLI scheme and increased infrastructure spending, along with potential US tariff reductions, could help India secure a greater share of global trade.

**Domestic consumption & rural recovery:** Domestic consumption demand is expected to remain resilient, supported by premiumisation trends, a recovery in rural demand driven by agricultural activity, and fiscal support from state governments.

**Massive Capex drive:** Capital expenditure is expected to focus on infrastructure projects led by government spending, as well as investments in **energy, semiconductors, data centres, EMS and defence sectors**. Govt is planning to deploy highest ever capex for defence, railway and EMS sector.

**Energy Transition & Green Investments:** Policy support through Energy Storage Obligations (ESO) and renewable targets is catalysing investments in **renewables, BESS, EVs, and green hydrogen**, which should structurally reduce India's energy import dependence over the medium term.

**Digital & Technology Ecosystem:** Accelerating investments in data centres, fintech, cloud and AI-led services, coupled with ongoing digital formalisation, are expected to sustain strong growth momentum for IT services and digital infrastructure.





# Critical Risk factors to the Outlook:

**Despite the positive narrative, several risks warrant attention.**



## **US Tariff:**

Lack of meaningful resolution of tariff issues with the US could constrain India's export growth to the US market.



## **Elevated Valuation:**

Elevated absolute valuations in select sectors, combined with weak trailing returns, may act as a headwind for equity inflows. It cautions that valuations leave little room for disappointment.



## **FII Outflow and Currency Depreciation:**

FII outflows combined with currency depreciation represent a critical risk for India's capital markets, as sustained foreign selling can pressure equity valuations, increase market volatility, and weaken the rupee, which in turn raises imported inflation, complicates monetary policy, and dampens investor confidence—particularly in rate-sensitive and externally exposed sectors.

## **Key Events that can shape market sentiment in the year ahead:**

- Progress on the India-US bilateral trade agreement
- Union Budget-2026
- Continuity of consumption momentum beyond the festive season and the initial impact of GST cuts will also be critical indicators of demand resilience
- Outcome of State elections in Assam, West Bengal, Puducherry, Tamil Nadu, and Kerala
- Negotiations on the India-EU Free Trade Agreement



## II. Primary(IPO)market performance during 2025

India's equity capital markets remained among **the most active globally**. IPO activity delivered one of its **strongest years on record** in 2025, with issuers raising **INR 1.76 lakh Cr**, up 10% year-on-year and the highest annual total since records began in the 1980s.

The number of **mainboard IPOs** increased to 104 from 91 in 2024, while total capital raised edged up to **₹1.76 lakh crore from ₹1.60 lakh crore** and number of **SME IPOs** increased to 269 from 240 in 2024, with total capital **raised of ~11,400 Cr from ~8,800 Cr in 2024, ~30% year-on-year growth**.

However, 2025 marked a notable slowdown in listing-day gains and post-IPO performance. Return has gone down drastically, with average listing-day gains for **Mainboard IPO collapsing to ~9% in 2025 from ~29% in 2024**. The **SME IPO** market exhibited a comparable trend, with **average listing-day gains falling from ~60% in 2024 to ~12% in 2025**.

### **Post Listing Performance:**

Nearly half of the IPOs listed on the Mainboard and SME platforms in 2025 were trading below their issue

prices as of 31 December 2025, a trend also observed across IPOs listed over the past five years.

### **Sector wise fund raising:**

NBFC, E-commerce, Consumer electronics, Information technology, Healthcare & pharma and Fintech contributed highest to fundraising in 2025.

**Liquidity:** In 2025, Average IPO subscription in mainboard platform reduced slightly whereas average subscription on SME platform experienced significant drop due to increased investor scrutiny, tight SEBI regulations and steep high valuations.

### **Regulatory Developments for SME IPO:**

1. Profitability Requirement – Operating profits of at least Rs. 1 crore in 2 out of 3 preceding financial years.
2. Offer for Sale Limit – Maximum OFS component capped at 20% of total issue size.
3. Minimum investment – Minimum investment for an SME IPO was increased from 1 lot to 2 lots.
4. General Corporate Purpose – Amount allocated to GCP limited to 15% of issue size.

**Valuations:** Valuations of the NSE SME Emerge Index contracted drastically to 27.8x in Dec'25 from 148.76x in Dec'24, primarily on account of robust earnings growth by leading SMEs, and marginally due to the recent pullback in SME stock prices. Valuation of Micro cap 250 corrected marginally from ~30x as of 31<sup>st</sup> Dec, 2024 to ~27.6x as of 31<sup>st</sup> Dec, 2025.

**Return:** Microcap 250 Index and NSE SME Emerge index posted **meaningfully negative returns** in the past year due to **contraction in exports caused by US Tariffs, elevated valuation, increased investor caution for Micro cap, FII exit due to rupee depreciation and liquidity drying up**.





## Mainboard IPOs

In Mainboard IPO segment, 104 IPOs got listed in calendar year 2025 raising an amount of Rs. 1,76,181 crores. The average listing day gain in Mainboard segment was 9.44% in calendar year 2025.

### Top 10 Mainboard IPOs during 2025

The table below shows the top 10 IPOs of 2025 with highest listing gains and their current performance.

Company	Listing Date	Amount Raised (in Cr)	Total Subscription (in times)	Listing Day Gain	Current Performance
Highway Infrastructure Ltd.	12-Aug-25	130	67.91	72.50%	-16.59%
Urban Co.Ltd.	17-Sep-25	1,900	108.98	61.97%	29.56%
Aditya Infotech Ltd.	05-Aug-25	1,300	106.23	60.39%	120.56%
Meesho Ltd.	10-Dec-25	5,421	81.76	53.23%	62.34%
Quadrant Future Tek Ltd.	14-Jan-25	290	195.96	53.10%	16.98%
LG Electronics India Ltd.	14-Oct-25	11,607	54.02	48.24%	33.51%
PhysicsWallah Ltd.	18-Nov-25	3,480	1.92	42.42%	21.93%
GNG Electronics Ltd.	30-Jul-25	460	150.21	40.67%	29.89%
Stallion India Fluorochemicals Ltd.	23-Jan-25	199	188.32	40.00%	161.78%
Corona Remedies Ltd.	15-Dec-25	655	144.54	35.44%	30.49%

## SME IPOs

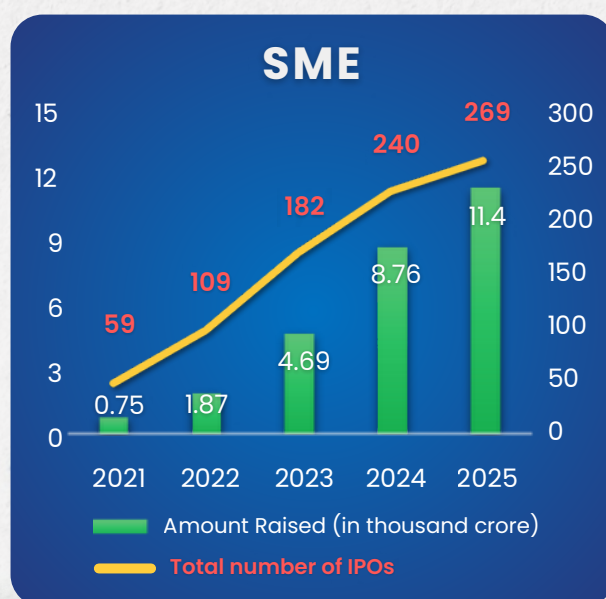
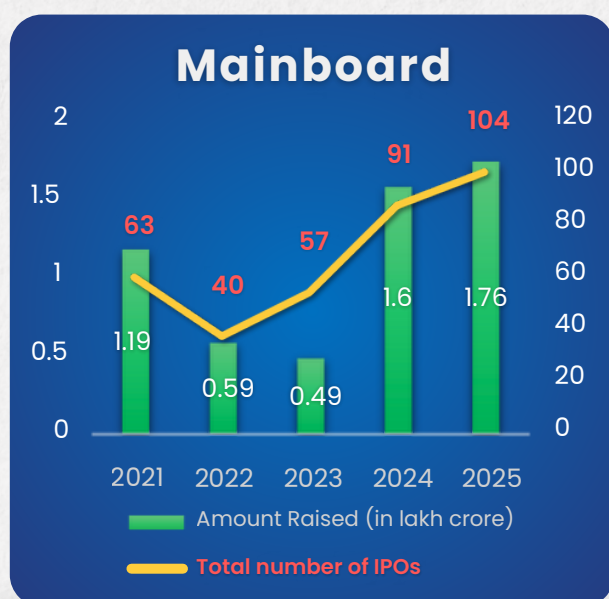
The calendar year 2025 clocked a total of 269 SME IPOs with fund raise of ~Rs. 11,400 Cr. The average listing day gain in **SME IPOs was ~12% in the calendar year 2025**. Out of the 269 IPOs, **19 IPOs closed their listing day with more than 90% gains**. The top 10 SME IPOs in 2025 listing day gain wise is given below along with their current performance.



## Top 10 SME IPOs during 2025

Company	Listing Date	Amount Raised (in Cr)	Total Subscription (in times)	Listing Day Gain	Current Performance
Anondita Medicare Ltd.	01-Sep-25	69	300.89	99.5%	601%
Fabtech Tech. Cleanrooms Ltd.	10-Jan-25	28	740.37	99.5%	265%
Cryogenic OGS Ltd.	10-Jul-25	18	694.9	99.5%	247%
Avax Apparels & Ornaments Ltd.	14-Jan-25	2	260.42	99.5%	219%
TechD Cybersecurity Ltd.	22-Sep-25	39	718.3	99.5%	225%
Exato Technologies Ltd.	05-Dec-25	37	947.21	99.5%	157%
Sawaliya Foods Products Ltd.	14-Aug-25	35	13.32	99.5%	165%
Airfloa Rail Technology Ltd.	18-Sep-25	91	301.52	99.5%	138%
Flysbs Aviation Ltd.	08-Aug-25	103	318.68	99.5%	134%
Infinity Infoway Ltd.	08-Oct-25	24	277.24	99.5%	144%

## IPO Fundraising during last 5 year





**Mainboard:** In Mainboard segment, there has been quite erratic performance in fund raise during last 5 years reflecting dynamic primary market conditions. **2024 and 2025 reflected recovery** in mainboard IPO activity, with the number of IPOs and total funds raised increasing steadily supported by improved domestic market sentiment, stable economic growth, and better valuation comfort.

**SME:** There has been a steady increase in **SME IPO activity in India between 2021 and 2025**, both in terms of the number of issues and the amount of funds raised. The number of SME IPOs rose from **59 in 2021 to 269 in 2025**, while total funds raised increased from **Rs. 750 Cr to Rs. 11,400 Cr**. This indicates a gradual expansion of the SME segment's participation in the primary market over the period.

## Sectoral Fund Raising

### Sectoral Fundraising IPO fundraise during 2025 (Mainboard):

The total amount raised by mainboard IPOs in 2025 is Rs.1.76 Lacs Cr. A total of 10 IPOs across 5 sectors contributed to ~42% of the total amount raised by Mainboard IPOs in 2025. The detailed information is provided in the table below.

Industry / Sector	No. of Issues	Amount (Rs.cr.)	Share of total amount raised
Non-Banking Financial Company (NBFC)	3	28,266	16.04%
E-Retail/ E-Commerce	2	12,699	7.21%
Consumer Electronics	1	11,607	6.59%
Financial Technology (Fintech)	3	11,345	6.44%
Financial Products Distributor	1	10,602	6.02%

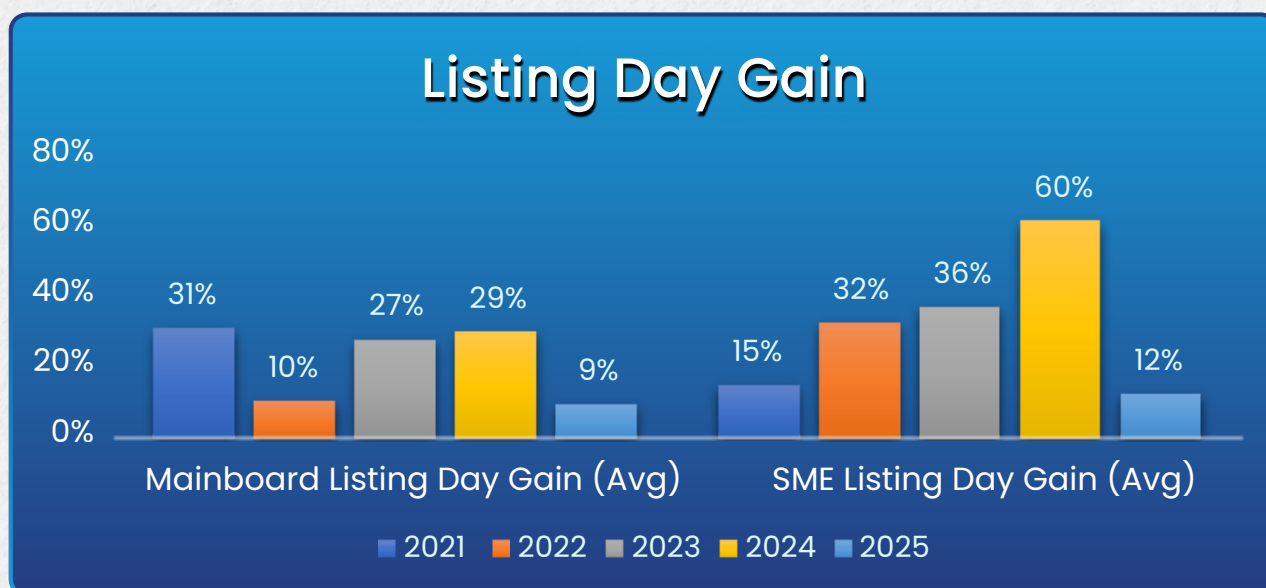
### Sectoral Fundraising IPO fundraise during 2025 (SME):

Out of ~11,400 crore raised by all SME IPOs in 2025, ~20% was contributed to by top 5 sectors, the details of which are provided in the table below.

Industry / Sector	No. of Issues	Amount (Rs.cr.)	Share of total amount raised
Civil Construction	15	630	5.53%
Logistics	15	542	4.75%
Agriculture	10	381	3.34%
Consumer Services	7	342	3.00%
Electrical Equipment	6	315	2.77%

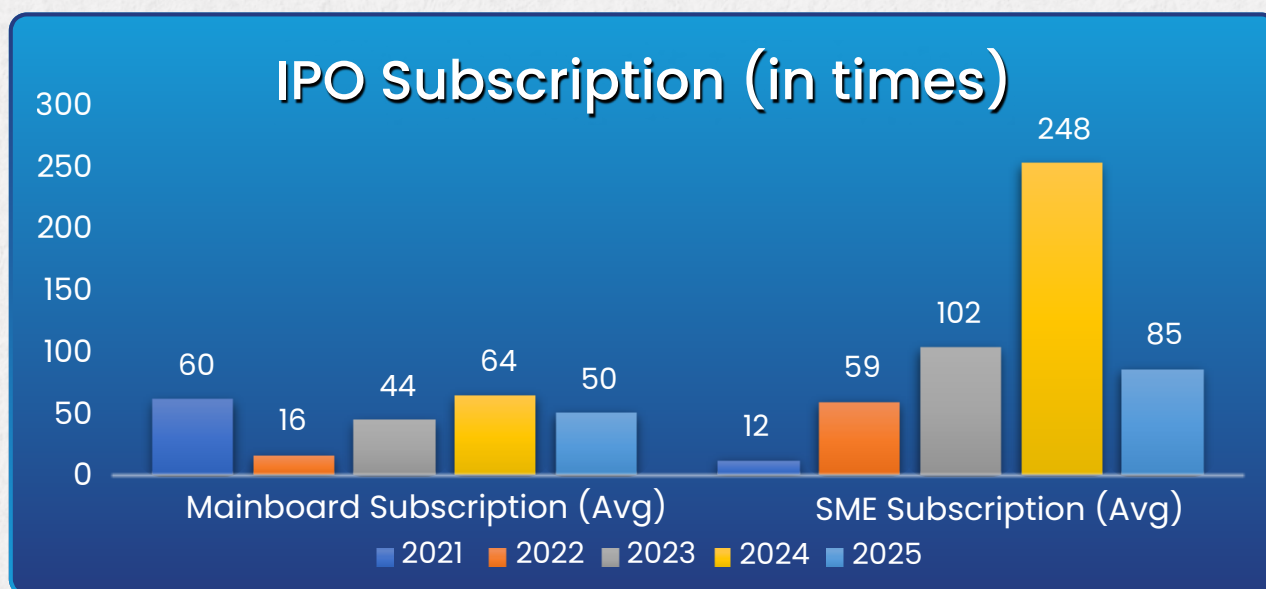


## Historical Listing Gain for Mainboard and SME IPOs:



Listing-day gains fell down sharply in 2025 due to elevated IPO valuation, increased Investor scrutiny, and moderate market liquidity.

## Historical IPO Subscription for Mainboard and SME IPOs:

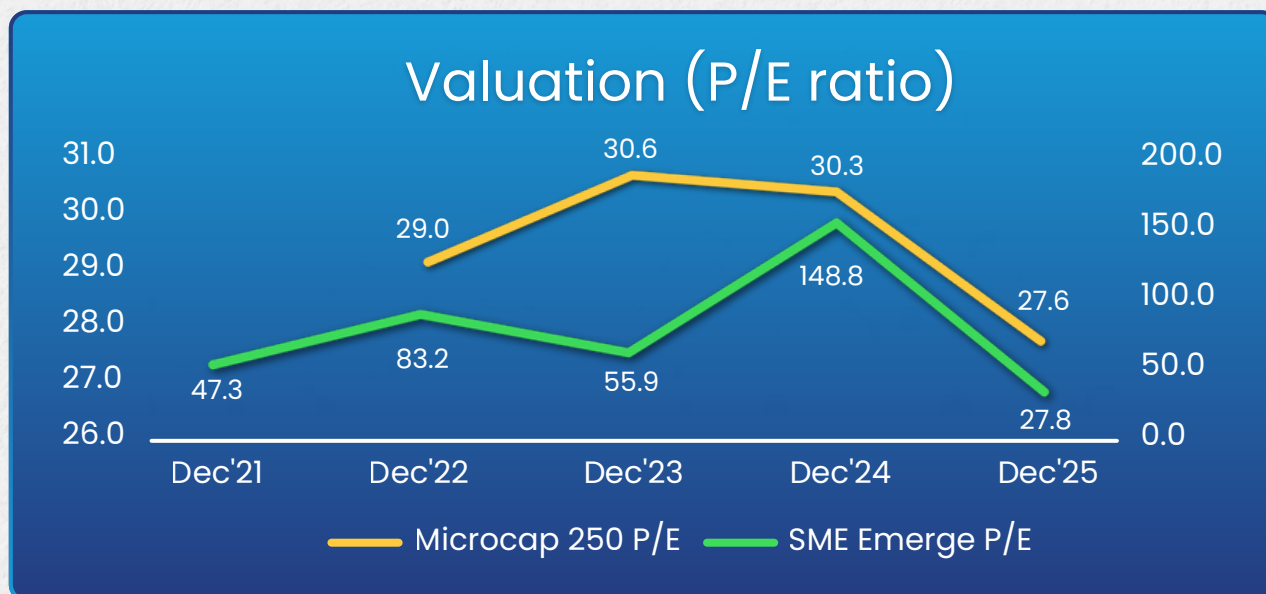


Subscription in Mainboard IPOs reflects shifts in institutional and retail risk appetite, shaped largely by global macroeconomic factors and domestic liquidity conditions. The levels show **cyclical sensitivity to liquidity**, but the post-2022 recovery is structurally healthier.

In SME segment, average subscription buoyed till 2024 and then drastically fell down during 2025. Enthusiasm tempered due to elevated IPO valuation, increased Investor scrutiny, moderate market liquidity and SEBI stricter regulations.



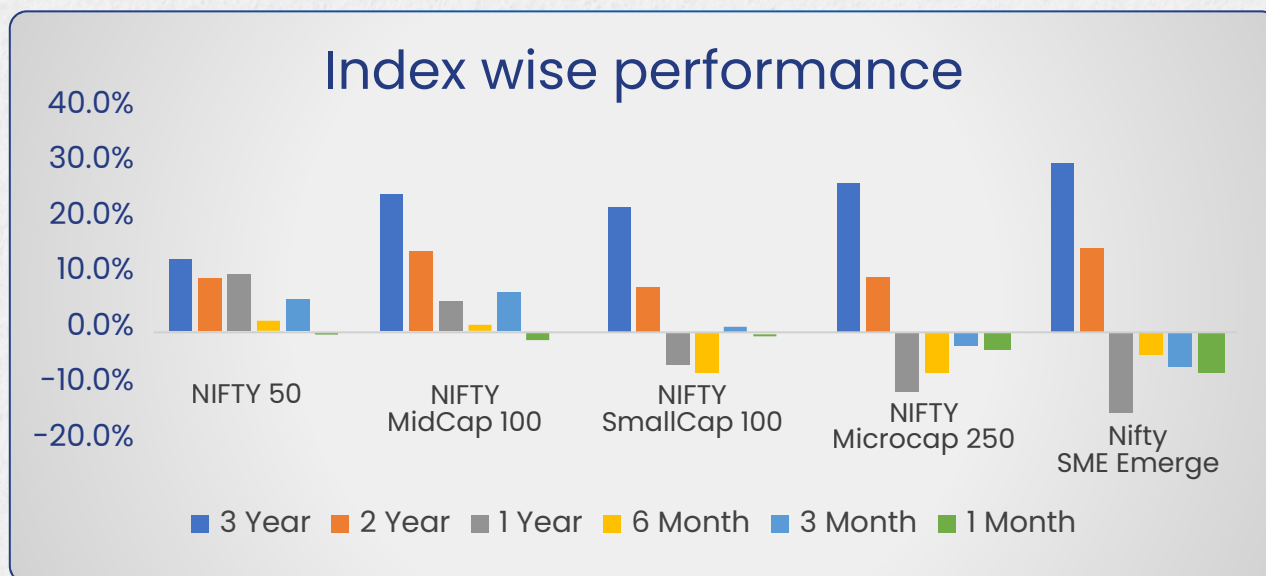
## Valuation of Microcap 250 Index and Nifty SME Emerge:



Valuations of the NSE SME Emerge Index contracted drastically to 27.8x in Dec'25 from 148.76x in Dec'24, **primarily on account of robust earnings growth by leading SMEs**, and marginally due to **the recent pullback in SME stock prices**.

Valuation of Micro cap 250 corrected marginally from ~30x as of 31<sup>st</sup> Dec, 2024 to ~27.6x as of 31<sup>st</sup> Dec, 2025.

## Return comparison (Indices wise):



Historically, Microcaps and SME stocks have given the highest returns over 3-year time frame showing **long-term wealth creation has been strongest in smaller companies**.

**Over the past 1-year, Nifty Microcap 250 index and Nifty SME Emerge index have given meaningfully negative returns**, reflecting **valuation reset and cautious approach**, hitting segments where optimism had run ahead of fundamentals.

First and last quarter of the calendar year, capital market faced **limited institutional support, drying up liquidity and underperformances** post listing in SME and Microcap indices.



## IPO Listing gain vs current Gain for last 5-year IPOs (MicroCap + SME):

Listing Day Gain	No. of IPOs	Percentage of IPOs
Less than Issue Price	142	21%
0% to 50%	349	51%
50% to 99%	85	12%
Above 99%	114	17%
<b>Total</b>	<b>690</b>	<b>100%</b>

In mainboard segment, IPOs which have raised amount less than Rs. 1,000 crores are considered.  
In SME segment, all those IPOs have been considered where QIB participated

Current Performance	No. of IPOs	Percentage of IPOs
Less than Issue Price	313	45%
0% to 50%	162	23%
50% to 99%	69	10%
Above 99%	146	21%
<b>Total</b>	<b>690</b>	<b>100%</b>

In mainboard segment, IPOs which have raised amount less than Rs. 1,000 crores are considered.  
In SME segment, all those IPOs have been considered where QIB participated.  
Current performance is calculated as price change between issue price and market price on 31<sup>st</sup> Dec, 2025

The five-year analysis of IPO performance reveals that nearly 30% of IPOs achieved listing-day gains of over 50%, with an equivalent proportion sustaining gains above 50% as of 31 December 2025.

Further, around 20% of the companies were listed below issue price and post listing around 45% of the companies turned negative as of 31<sup>st</sup> Dec, 2025.





# REVOLUTION FUND

Open ended Category III AIF

**OBJECTIVE:** Provide investors access to booming SME and MicroCap Market Investment to generate sustained capital appreciation through superior returns overtime.

## INVESTMENT STRATEGY

- i) 50% Anchor Investment
- ii) 30% Listed Investment
- iii) 20% QIB Investment

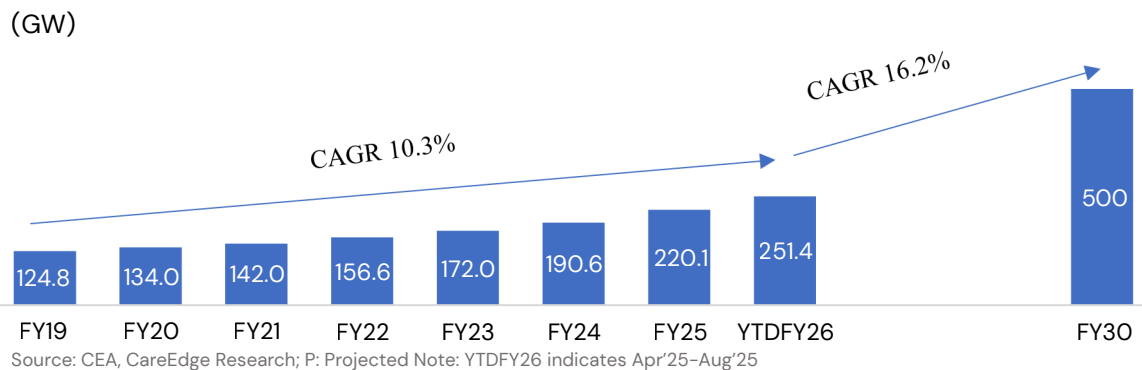
FUND SIZE	FUND TENURE	DRAWDOWN PERIOD
Open-ended scheme of the Trust having a minimum Corpus of INR 20 Crores and targeting to raise 500 Crores	No definite end date	100% at the time of Investment



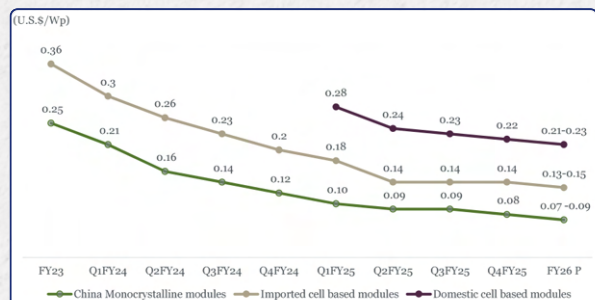
### III. Sector-wise performance across key sectors in 2025:

#### Renewable Energy

- India's renewable energy (RE) sector has experienced robust expansion, with an ambitious national target of **500 GW of non-fossil fuel capacity by FY30**, the sector is poised to accelerate further, registering a projected **CAGR of ~16.2% between Aug-25 and FY30**.

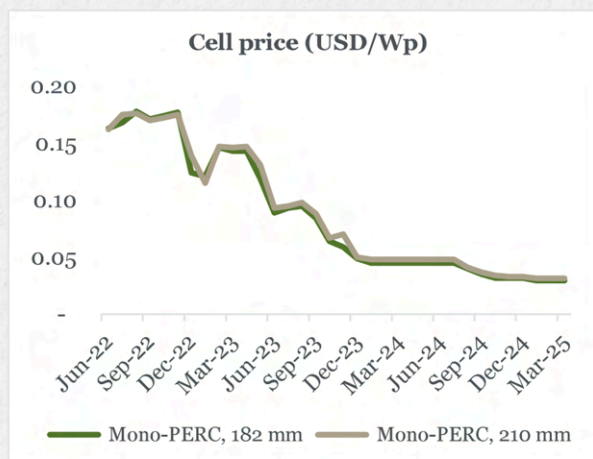
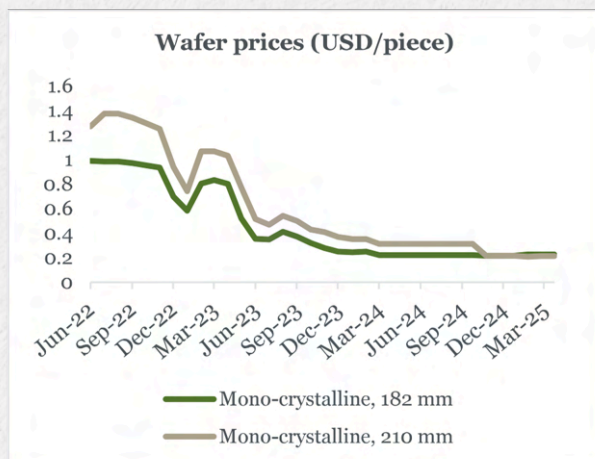


- India **crossed 250 GW milestone of non-fossil power installed capacity in August, 2025**. The total non-fossil power installed capacity has reached 262.74 GW in November, 2025 which is 51.5% of the total installed electricity capacity in the country (509.64 GW). Solar installed capacity touches 132.85 GW as India adds nearly 35 GW; Wind reaches 54 GW after 5.82 GW increase.
- The capex required for renewable power projects ranges from **₹4.1–4.5 crore/MW for solar**, **₹6.0–8.0 crore/MW for onshore wind**, **₹13.7 crore/MW for offshore wind**, **₹6.0–20.0 crore/MW for hydro**, and around **₹9.0 crore/MW for bioenergy projects**.
- India's indigenous **solar module manufacturing capacity** under ALMM has reached **~144 GW per annum**, with ~81 GW added in CY2025 alone, nearly doubling YoY compared to ~41 GW added in 2024. (source: [www.pib.gov.in](http://www.pib.gov.in))
- The MNRE notified ALMM List-II for solar cells on 31 July 2025, under which **~24 GW of solar cell manufacturing capacity** has been enlisted so far. (source: [www.pib.gov.in](http://www.pib.gov.in))





- Below graph shows the significant fall in the prices of wafer and cells:



## Source-Wise Composition of India's RE Capacity:

- India's renewable energy capacity mix in FY25 is dominated by solar at ~48% (up from 23% in FY19) and projected to surpass 60% of the RE mix by FY30., followed by wind at ~23%, large hydro at ~22%, bioenergy at ~5%, and small hydro power at ~2%. (source: CEA, CareEdge Research)



## Growth Drivers:

- Government Policy Support** – Schemes such as PM-KUSUM, Rooftop Phase-II, and the **₹24,000 crore PLI program**, along with high BCD of 25% on cells and 40% on modules, are driving domestic solar manufacturing.
- Rising Energy Demand** – Rising power demand is accelerating renewable adoption.
- Sustainability** – Net-zero goals are driving renewable investments.
- Renewable Purchase Obligation (RPO)** – RPO mandates 43.33% renewable energy by FY2030, supported by RECs and ISTS charge waivers to improve compliance.
- PM-Surya Ghar: Muft Bijli Yojana** – Launched in February 2024 with ₹75,021 crore outlay, the scheme boosts rooftop solar adoption by offering up to 300 free units per month and subsidies up to ₹78,000.







## Recent Developments:

- The potential for **oversupply of photovoltaic module in the local market** has made banks and other lenders to make cautious decisions.
- **Gujarat launched an Integrated Renewable Energy Policy 2025 aiming for 100 GW of RE by 2030**, with special focus on BESS integration, grid stability, and ease of doing business.
- The Delhi government is scaling rooftop solar under PM Surya Ghar while investing ₹17,000 crore in grid and T&D upgrades to support rising power demand.
- **India adds record 44.5 GW Renewable Energy Capacity** (~35 GW Solar, ~6 GW Wind) in 2025 (till Nov-2025), nearly doubling annual additions.
- The government **reduced GST on solar cells, modules, inverters**, and related equipment **from 12% to 5%**.
- Solar **cells will be added under ALMM and mandatory from June 1, 2026, requiring domestic sourcing for most projects**.
- Under PM Surya Ghar Muft Bijli Yojana, rooftop solar installations have crossed 25 lakh households, **with a target of 1 crore households by FY2026–27** supported by an outlay of ₹75,021 crore (*Source: TOI*).
- Nearly **24 lakh households** have adopted rooftop solar until December 2025 under **PM Surya Ghar** with installation capacity of **7 GW** of clean energy and **₹ 13,464.6 Cr Subsidy released**.
- As of 31st October 2025, **55 solar parks** with a combined sanctioned capacity of **40 GW** approved across 13 Indian states.





## Defence

- India's defence sector is entering a multi-year upcycle driven by **rising capital outlay, indigenous manufacturing** under **Aatmanirbhar Bharat**, and **shift from imports to domestic manufacturing and exports**.
- While India has historically been **one of the world's largest arms importers**, it is undergoing a structural shift in its defence ecosystem—from a **65:35 import-to-domestic manufacturing mix to approximately 35:65**. This transition underscores a meaningful reduction in import dependence and reflects India's steady progress toward self-reliance in defence production.
- Although Russia continues to be India's largest defence supplier, its share has declined sharply from 72% in 2010–14 to 36% in 2020–24. Over this period, India has significantly diversified its supplier base, with France and Israel emerging as key partners, accounting for ~31% and ~11% of imports respectively.

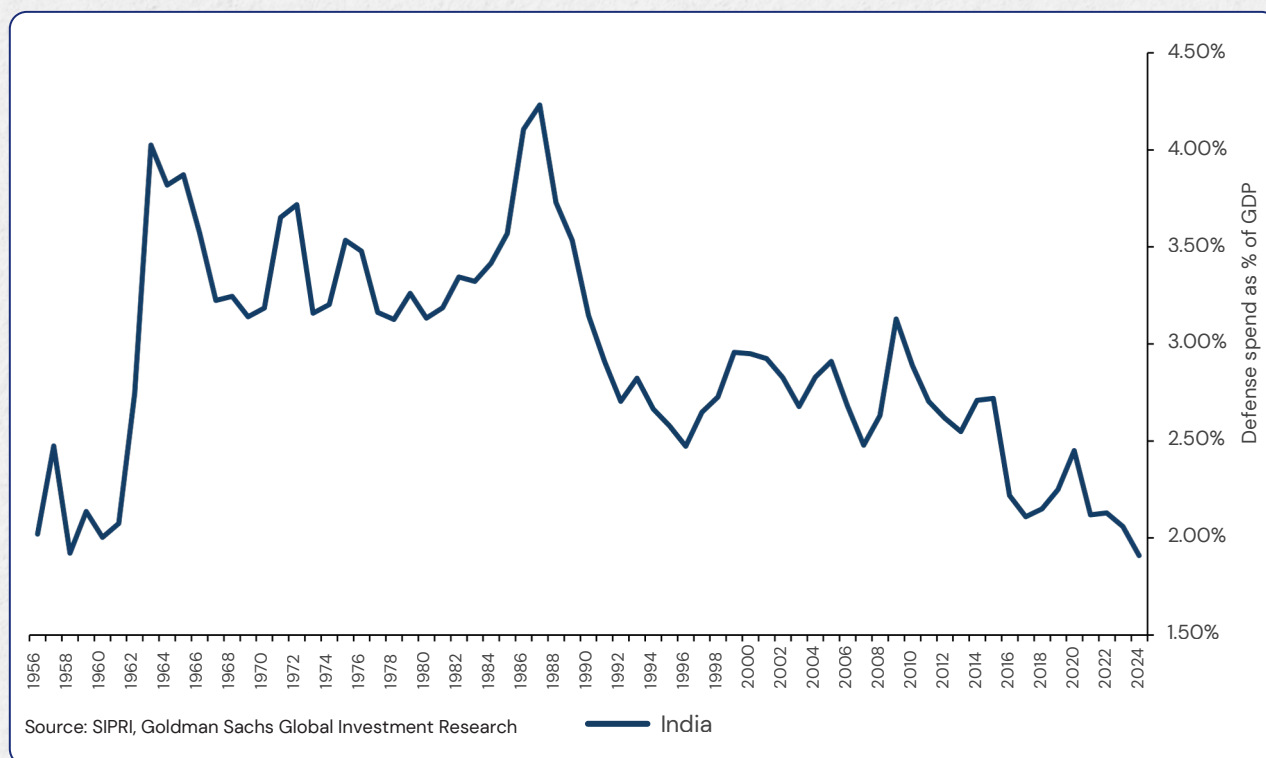
### Budget & Capital Outlay:

- India's FY26 defence budget is ₹6.81 lakh crore (+9.5% YoY, ~1.9% of GDP), including ₹1.80 lakh crore for capital expenditure (₹1.12 lakh crore domestic procurement), ₹3.11 lakh crore for revenue, and ₹1.60 lakh crore for pensions, with additional allocations of ₹26,800 crore for R&D (+12.4% YoY) and ₹11,000 crore for Agnipath (+84.6% YoY).



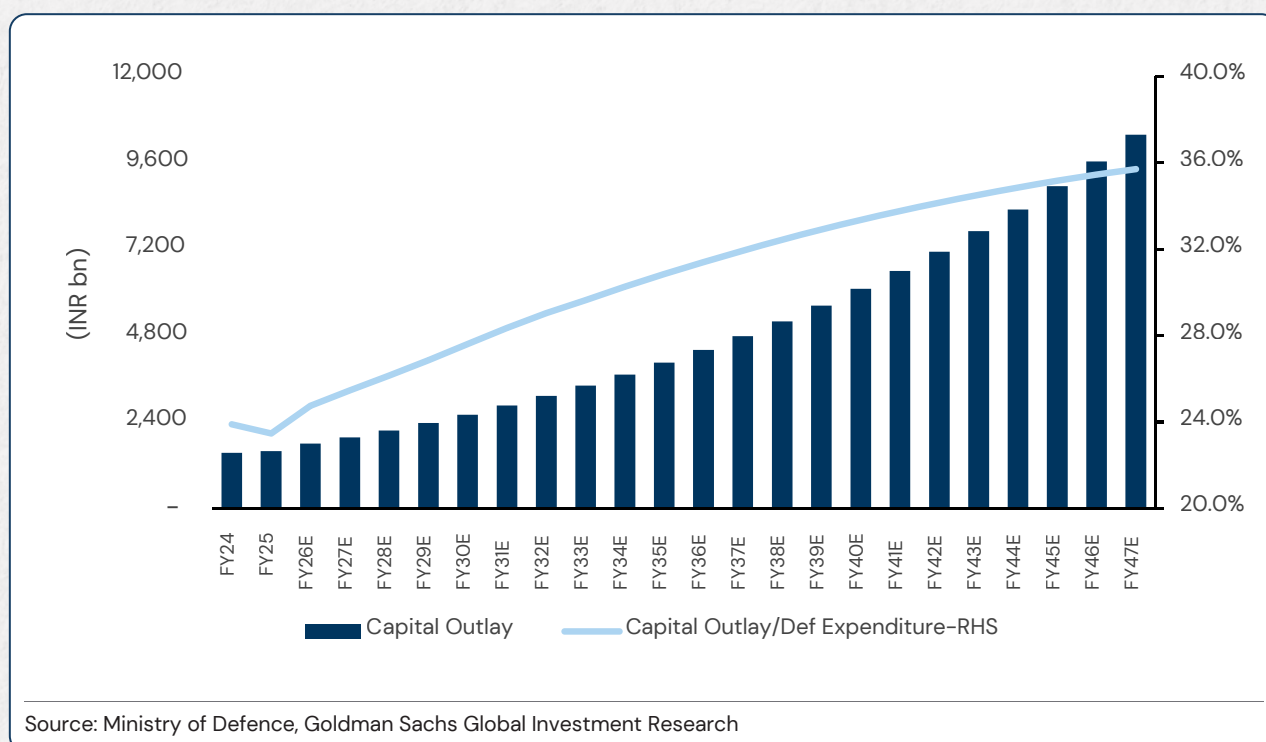


## Historical Defence budget as a % of GDP:



## Capital Outlay:

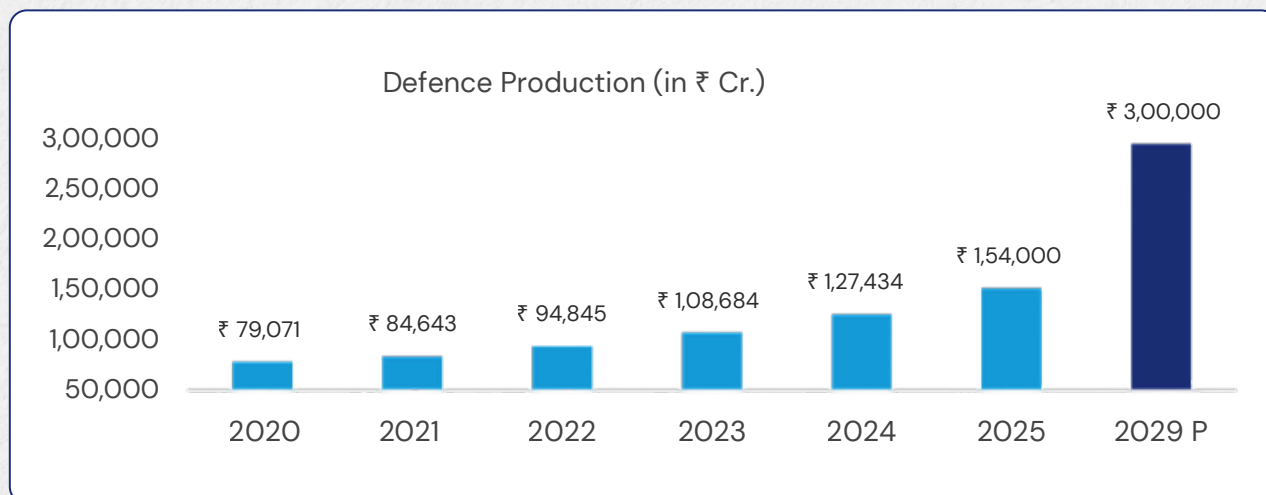
- In FY26, capital outlay was ~26.5% of the defence budget (₹1.80 lakh crore) and is projected to grow over sixfold by FY47, rising from 26% to 36% of total allocation (Source: Goldman Sachs).



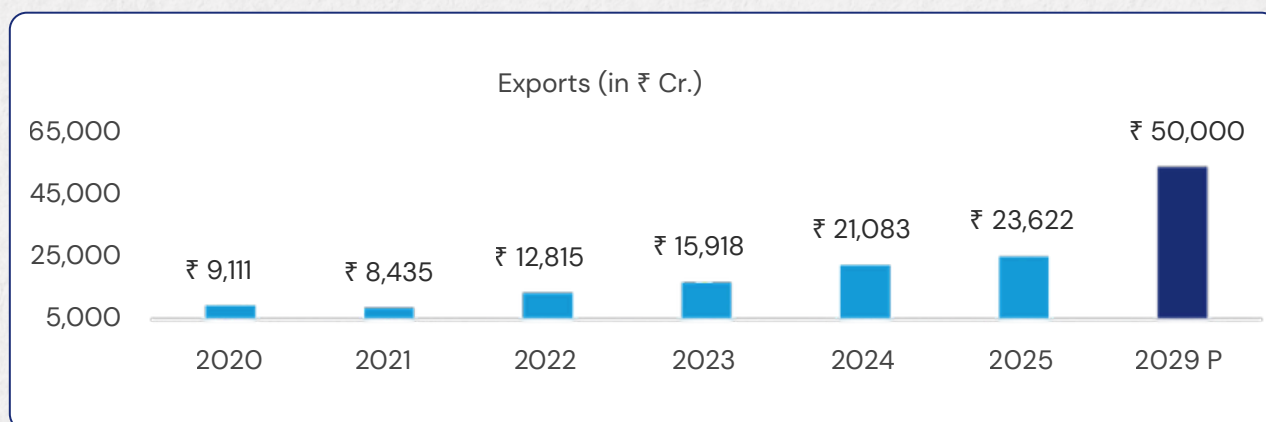


## Production & Exports:

- India's defence production **clocked historical high of ₹1.54 lakh crore in FY25** (~14% CAGR) **where private sector contributed 23%** and DPSUs contributed 77%, and **production is targeted to reach ₹3 lakh crore by FY29.**



- India's defence exports increased from ₹9,111 crore in FY20 to **₹23,600 crore in FY25** (~21% CAGR) **where private sector contributed ~65%** and **DPSUs contributed ~35%**, with a target export of ₹50,000 crore by FY29.



### Key Growth Drivers:

- Import substitution & indigenisation
- Rising capital outlay & modernisation and private sector participation
- Policy support: DAP, iDEX, Make-in-India, FDI reforms
- Expanding global demand (NATO, ReArm Europe)

### Challenges:

- Heavily reliant on foreign technology for critical aircrafts & aircraft engines and missiles and other critical equipment.
- Execution delays, PSU dominance
- High working-capital intensity



## Recent Developments:



DAC clears ₹80,000 crore procurement proposals which includes pinaka rocket system, radars, astra mk2 & other missiles and advanced communication systems



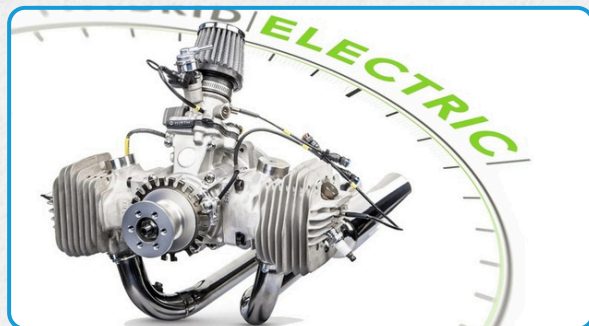
Potential deal of Akash SAM export to Philippines.



CCS approves 6 Netra Mk2 (~₹19k-₹20k cr) & 97 Tejas Mk1A (~₹62,370 cr)



India signed a government-to-government agreement with France in April 2025 to procure 26 Rafale-M carrier-based fighter jets for the Navy at an estimated cost of ₹63,000-64,000 crore.



Russia agreement: local UAV engine production



BrahMos export deals (~₹4,000 cr) to Vietnam & Indonesia.



French firm Safran to co-develop 120kN jet engine for AMCA



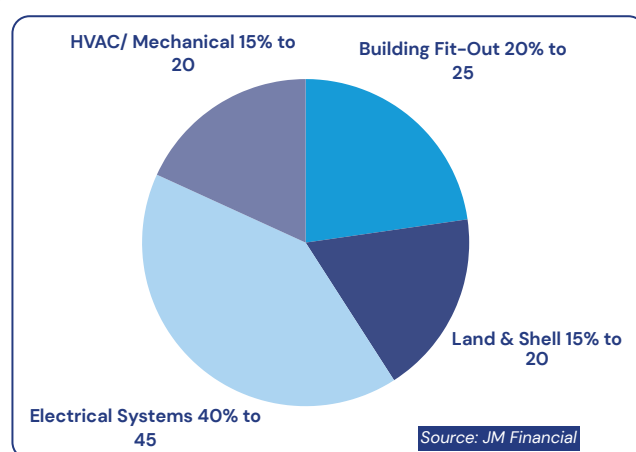
## Data Centre

- During 2025, India's data centre sector emerged as one of the most **strategically important and capital-intensive segments** within the country's digital infrastructure landscape as the **demand for secure, low-latency, and high-availability data centre capacity is expanding**.
- Unlike prior cycles that were largely metro-centric and colocation-driven, the **current phase is characterised by hyperscale-led expansions, rising power densities, multi-campus developments, and deeper integration with power, network, and sustainability ecosystems**.
- India's **Data centre capacity totalled 1.53 GW as of September 2025 with 130 data centers**, which is expected to reach **more than 5 GW by 2030 and capital expenditure is projected to reach 20–22 billion USD**. (Source: CBRE & JM Financial)
- The colocation data centre capacity in India was **in the range of 900–1000 MW in 2025 which is expected to grow at a CAGR of 28% till 2030 reaching 3,500 MW**.





## Capex Breakup:



- India is one of the affordable places in the world to build a data center with **estimates of average capital expenditure required to be at least ~46.5 crores INR (5.4 million USD) per MW capacity** according to JM Financial.

## State wise government support:

	Maharastra	Karnataka	Haryana	Uttar Pradesh	West Bengal	Telangana	Tamil Nadu
Stamp Duty Exemption							
Development/FSI related incentives							
Capital Subsidy							
Electricity Duty Exemption							
Power Subsidy							
Infrastructure Support							
Tax Benifits							
Green Incentives							
Ease of Approvals							

■ - Incentive Provided  
■ - Incentive Not Provided

Source: JM Financial





# Railways

- Indian Railways sector has been driven by **heavy capital infusion and technology driven infrastructure growth**. The focus during the year was on structural transformation like **Safety, Speed, Electrification, Dedicated Freight Corridors**, modern rolling stock, high-density network expansion and **station redevelopments**.
- The government budgeted a **capital expenditure of Rs. 2.65 lakh crore in 2025–2026** budget keeping it same as the previous year's allocation. India has world's **4<sup>th</sup> largest rail network** in the world with **69,800 km of track route**. Railway achieved a **historic freight loading milestone in 2025**, crossing **1 billion tonnes (1,020 MT)**.

## Critical Milestone:

### Connectivity

- Bairabi Sairang 51km line in Mizoram.
- 272 Km Udhampur–Srinagar–Baramulla Link.
- 55.63% physical progress in Mumbai–Ahmedabad High Speed Rail Project.
- New Pamban Bridge.

### Passenger Trains

- 15 new Vande Bharat trains taking total to 164.
- 13 Amrit Bharat trains taking total to 30.
- Two Namo Bharat Rapid Rail Services in Gujarat and Bihar.
- 4,224 LHB coaches produced; 18% up from previous year.

### Logistics and Freight

- 1337 Km of Eastern DFC and 1506 km of Western DFC.
- DFCs carried an average of 403 trains per day.
- 25 Gati Shakti Cargo terminals commissioned.
- 33,703 wagons produced between January & November.

### Kavach 4.0

- Commissioned on major corridors i.e. Delhi–Mumbai route, Delhi–Howrah route, Vadodara–Ahmedabad section.
- Total 738 route km commissioned with Kavach 4.0.

Source: PIB, Railway Ministry–  
Year end review– 2025





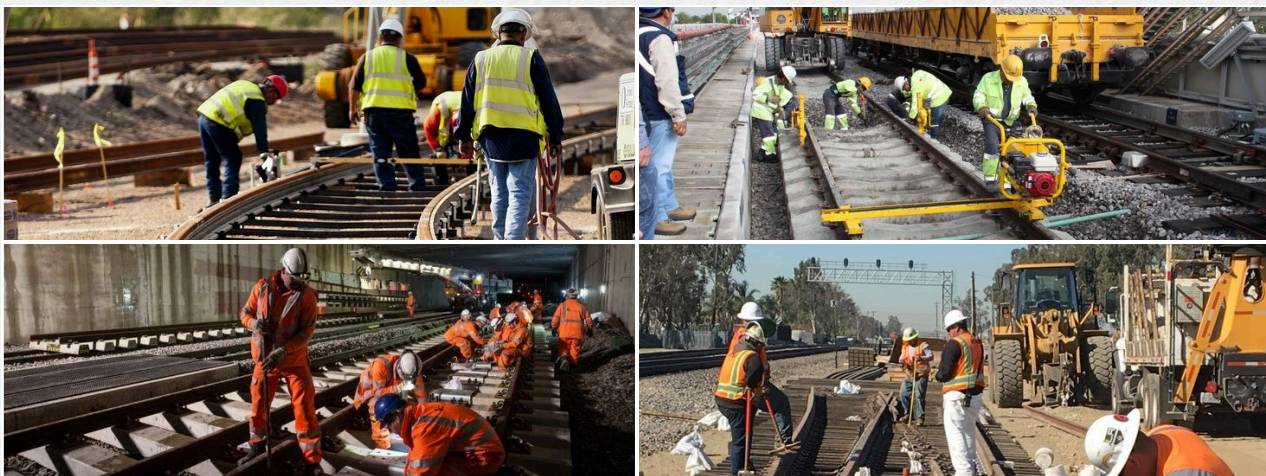
## Speed:

- Over **83,000 track kilometres**, representing about **79% of the Indian Rail network**, now support **sectional speeds of 110 kmph** and above. (Source: PIB)
- 23,000 track km is capable of sectional speed above 130 kmph. (Source: PIB)



## Railway Line Developments:

- **900 km of new railway lines** commissioned between April and November.
- Renewed 6,880 track kilometres with new steel rails, 7,051 track kilometres of complete track renewal and renewal of 9,277 turnout sets.
- **99.2% of Broad-Gauge** network has been electrified.
- Under Amrit Bharat Station Scheme (**ABSS**), 1,337 railway stations were identified for redevelopment out of which **155 stations have been fully modernised**.



Entering 2026, Indian Railways boasts upgraded infrastructure, expanded services, and a defined plan for further modernization. With ongoing emphasis on safety, sustainability, passenger comfort, and freight efficiency, it continues to provide a reliable, inclusive, and future-ready transportation network for the nation.



## Water Infrastructure

- India is entering a multi-decade water infrastructure super-cycle driven by acute **water scarcity, urbanisation, industrial growth** and tighter environmental regulations.
- Nearly **66% of the population is water-stressed**, per-capita water availability has fallen from 1,800 m<sup>3</sup> (2001) to ~1,486 m<sup>3</sup> (2025), and only **~30% of wastewater is currently treated**.
- With **4% of global water resources supporting 16% of the world's population**, water demand projected to rise from 710 BCM (2010) to 1180 BCM (2050). Water infrastructure has become **non-discretionary national capex**, similar to highways and power.
- To address this gap, the Government has created a visible **₹7+ lakh crore multi-year capex pipeline** through schemes such as **Jal Jeevan Mission (₹67,000 Cr)**, **AMRUT 2.0 (₹2.99 lakh Cr)**, **Namami Gange (₹42,500 Cr)** and **Pradhan Mantri Krishi Sinchayee Yojana – Accelerated Irrigation Benefit Programme (PMKSY & AIBP) (₹93,068 Cr)**, along with desalination and CETP programs.
- The market is expected to grow from **USD 10.4 bn (2024) to USD 17.9 bn by 2029 (~12% CAGR)**, making water infrastructure one of India's largest and most under-penetrated long-term compounding opportunities.





## Key Government Initiatives Driving Sector Growth:

Government Spending					
Scheme	Launch Year	Total Outlay	Focus Area	Key Objectives	Current Progress / Impact
Jal Jeevan Mission (JJM)	2019	₹67,000 Cr	Rural Drinking Water	100% tap water to rural households by 2028	Tap water coverage increased to ~80% (2024); 15.44 Cr households
AMRUT 2.0	2021	₹2.99 Lakh Cr	Urban Water & Sewerage	Universal sewerage, septage mgmt, water body rejuvenation	Tap water coverage to 70%, sewerage to 62%
Namami Gange	2014	₹42,500 Cr	River Cleaning & STPs	Rejuvenation of River Ganga	488 projects initiated; 303 completed
PMKSY & AIBP	2015	₹93,068 Cr	Irrigation Infrastructure	Expand irrigation & water-use efficiency	25.8 lakh ha irrigation potential created

## Ministry of Jal Shakti – Key Water Infrastructure Highlights (2025):



### Urban Wastewater & Ganga Rejuvenation (NMCG):

513 projects | ₹42,019 Cr sanctioned, covering 6,560 MLD STP capacity and 5,220 km sewers. In 2025, 39 projects completed; 34 new awarded (₹2,368 Cr) – ensuring sustained STP and sewer EPC demand.

### Mega Irrigation & River Linking (PMKSY / AIBP):

Ken–Betwa Link: ₹44,605 Cr (completion by 2030). 66 projects completed; 26.7 lakh ha created; ₹55,116 Cr released.

### Groundwater Sustainability (Atal Bhujal):

25 lakh sq km aquifers mapped; 448.5 BCM recharge. 8,203 GPs, 70,000+ wells, ₹3,505 Cr utilised, institutionalising digital groundwater infra.



# Battery Energy Storage System (BESS)

- The Battery Energy Storage System (BESS) sector is emerging as a critical pillar of India's **clean energy transition** by supporting grid stability and renewable integration.
- As of July 2025, BESS projects with a cumulative installed capacity of 204.5 MW / 505.6 MWh were operational in the country, representing a relatively low level of deployment. With a multi-fold growth, BESS capacity is expected to reach 47.2 GW by FY32. (source: NEP plan 2022).
- **Upcoming projects:** As of July-25, around **12,500 megawatt (MW)** capacity of Battery Energy Storage System (BESS) projects are currently under the **tendering process**, and an additional **3,300 MW is in the pipeline** as per CEA, which shows exponential growth in BESS projects.
- The capex required for **1 MWh** standalone BESS facility ranges from **₹1.1 to ₹1.5 crores**. (source: SCRIBD).
- A BESS consists of **battery modules, inverters, BMS, thermal systems, transformers, switchgear, fire suppression**, and digital monitoring, with monetization via Contracted or Merchant Revenue Models.
- BESS offers benefits such as grid stability, reliable power backup, and reduced carbon footprints.



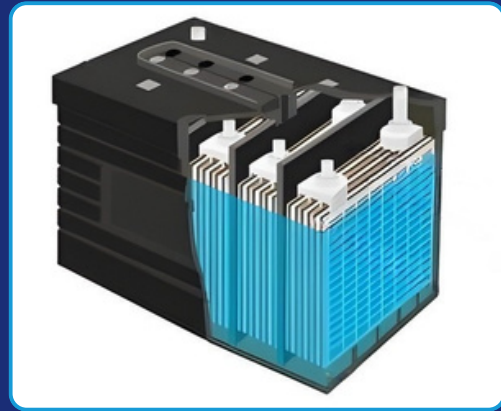


**BESS technologies vary by application, cost, and performance:**



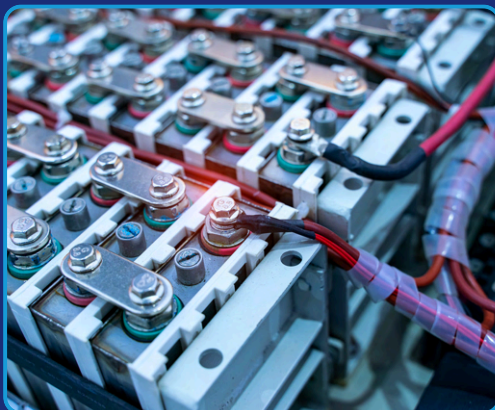
### **Lithium-ion**

Dominant technology; high energy density, long cycle life; EV sector consumes ~60% of global Li-ion output.



### **Lead-acid**

Low cost,  
Shorter life,  
used mainly for backup.



### **Sodium-sulfur & sodium-ion**

Emerging alternatives for grid-scale storage.

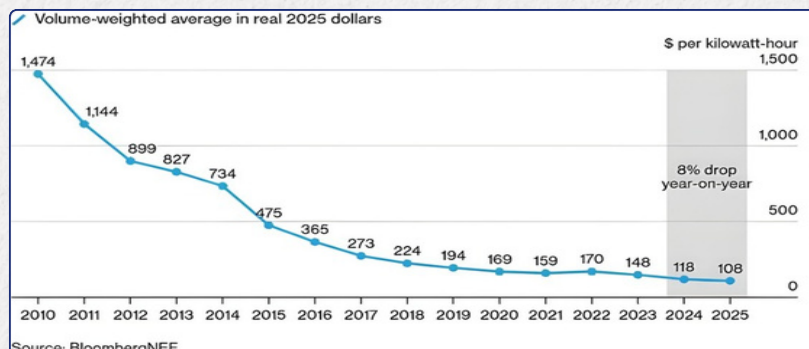


### **Solid-state**

High energy density and safety, currently too expensive.

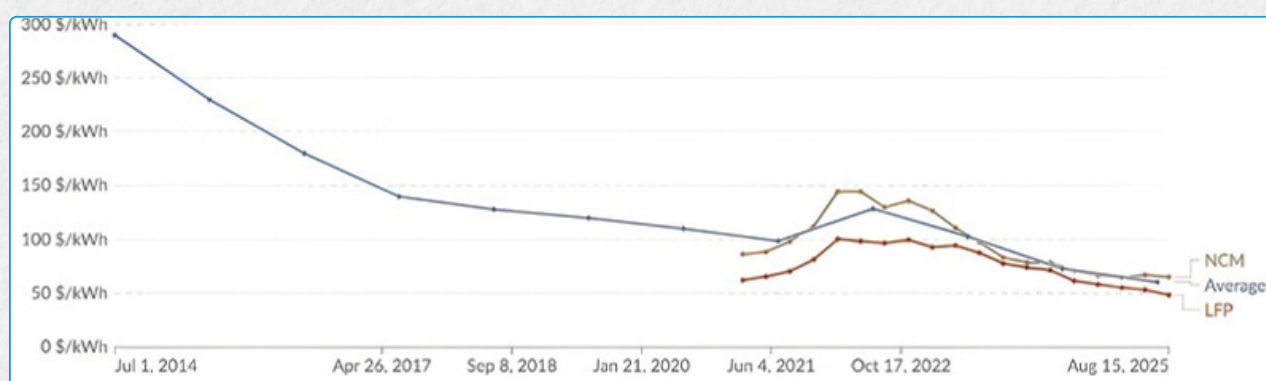


## BESS economics have improved sharply due to battery cost deflation:



- Global price for LFP cell is between \$70/kWh to \$75/kWh.
- The lithium-ion battery pack fall to \$108/kWh in 2025 (8% drop YoY).

- LFP and NMC prices have seen a correction of ~16% and ~2% respectively.



## LFP vs NMC Differentiation:

Parameter	LFP (Lithium Iron Phosphate)	NMC (Nickel Manganese Cobalt)
Energy Density (cell level)	~150–180 Wh/kg	~200–250 Wh/kg
Relative Cost (cell material basis)	Lower (approx ~\$75–100/kWh)	Higher (approx ~\$100–140/kWh)
Cycle Life (to ~80% capacity)	~3,000–5,000+ cycles	~1,000–2,500 cycles

## Government Policy Support:

- **Production Linked Incentive (PLI):** The National Programme on Advanced Chemistry Cell (ACC) Battery Storage scheme has a total budgetary outlay of ₹18,100 crore in 2021 to establish 50 GWh of domestic Advanced Chemistry Cell manufacturing capacity.
- **Viability Gap Funding (VGF):** Ministry of Power approved ₹3,760 crore for 13,220 MWh BESS in Sep-2023 and additional ₹5,400 crore for 30 GWh BESS in Jun-2025 via the Power System Development Fund (PSDF) to make projects financially viable.
- **ISTS waiver:** The ISTS waiver for co-located BESS projects commissioned by June 2028 provides 12 years of transmission charge exemption.





## Key Growth Drivers:

- Rapid renewable capacity addition (500 GW target by 2030)
- Falling battery costs & technology improvements
- Strong policy support (PLI, VGF, ISTS waiver)
- Rising EV penetration & charging infrastructure demand

## Recent Developments:

The Indian Ministry of Power has ordered all battery energy storage system (BESS) projects supported under the viability gap funding (VGF) scheme to meet a minimum 20% local content threshold, aiming to boost domestic manufacturing and innovation.

Adani Group plans 15 GWh BESS by FY27, scaling to 50 GWh, and is developing India's largest single-site BESS (1,126 MW / 3,530 MWh at Khavda).

Avaada to invest ₹36,000 Cr in Gujarat for 5 GW solar, 1 GW wind, and 5 GWh BESS projects.

Reliance NU Suntech signed a 25-year PPA with SECI for a 930 MW solar + 1,860 MWh BESS project.

Tata Power Renewable Energy (TPREL) secured its first standalone BESS project (30 MW / 120 MWh in Kerala) with NHPC.





## E-Waste Recycling

- India's recycling industry is entering a multi-decade structural growth phase driven by **rising electronics and EV penetration**, rapid digitization, **tightening environmental regulation** and India's strategic push to secure critical minerals.
- India generated more than **~14 lakh tonnes of e-waste in FY25**, making it the **third-largest e-waste generator** globally. While approximately **~70% of this waste was recycled**, over **90%** continues to be **handled by the informal sector**, creating substantial scope for formalisation and growth of organised recyclers.
- The average life of electronic devices has fallen by **20–40% over the last decade**, structurally expanding the waste base.
- Lithium-ion batteries have a typical lifecycle of about **5–6 years**, after which they need to be replaced. Battery recycling therefore becomes critical to recover **lithium, cobalt, nickel and manganese** for reuse in new batteries—especially as India has **limited domestic reserves** of these critical minerals and is heavily **import-dependent**.

# E-WASTE RECYCLING





## National E-Waste Generation (CPCB):

FY	E-Waste Generated (Source:www.pib.gov.in)	% Collected, Dismantled & Recycled / Disposed
FY24	12.54 lakh tonnes	61.94%
FY25	13.98 lakh tonnes	70.71%
YoY Growth	~11.5% increase	14.16%

## Capacity:

The reported processing capacity of 322 registered e-waste recyclers as on 09.02.2025 is 22,08,918 MTPA and processing capacity of 72 registered refurbishers is 92,042 MTPA. (Source: [www.pib.gov.in](http://www.pib.gov.in))

## Material Value & Recycling Economics:

Segment	Key Economics
PCBs	~30% metal by weight, including precious & rare metals
E-waste composition	Ferrous ~35%, Non-ferrous ~20%, Plastics ~35%, Precious metals <5%
Li-ion batteries	Cathodes alone account for >50% of battery cell cost
Urban mining	1 million phones contain ~24 kg gold, 16,000 kg copper, 350 kg silver & 14 kg palladium

## Regulatory & Policy Landscape:

**Policy & Formalization Tailwinds:** E-Waste and Battery Waste Management Rules, 2022 mandate **EPR-led recycling, digital certificate trading**, and strict recovery targets (**80%+ by FY26–27**) with penalties for non-compliance, **structurally shifting waste flows to authorized recyclers**.



### 1. E-Waste (Management) Rules, 2022 – Tightening Phase

- Coverage: 106 EEE categories under Extended Producer Responsibility (EPR).
- Key 2025 changes:
  - Bulk consumers must route e-waste only through CPCB-registered recyclers.
  - Digital EPR certificate trading fully operational.
  - Higher recovery targets: ≥60% of prior-year sales by weight, increasing annually.
  - Penalties: ₹1 lakh – ₹1 crore per violation.
- Amendments: Refrigerant-specific compliance for RAC equipment enforced.

### 2. Structural Industry Themes

- Critical minerals recovery: E-waste positioned as a domestic source of Cu, Au, Ag, Li, Co, Ni.
- Capex requirement: ~₹50,000 crore needed to scale national recycling infrastructure.
- Formal capacity gap: Organized recyclers handle <50% of national e-waste.
- Technology adoption: AI dismantling, hydromet recycling, blockchain traceability, digital collection platforms.

### 3. Compliance & Risk Environment

- Mandatory CPCB portal registration for all producers and recyclers.
- Compulsory digital EPR certificate trading.
- Stricter audits and penalties raise compliance costs but structurally benefit organized players.
- OEM legal challenges ongoing, potentially impacting certificate pricing and contracting models.

## Key Beneficiaries:

Company	Strategic Positioning	Capacity (MTPA)	Expansion (MTPA)
Eco Recycling (Ecoreco)	Oldest organized e-waste recycler; PCB precious metal recovery	31,200	–
Namo e-Waste Mgt	Pure-play formal e-waste recycler	42,900	25,000
Cerebra Integrated Technologies	e-waste recycling, refining and refurbishment	40,000	56,000
Gravita India	Battery & non-ferrous metal recycling	3,33,659	3,70,000
Pondy Oxides & Chemicals	Secondary lead & Li-ion battery recycling	–	–
Jain Resource Recycling	E-waste, batteries & non-ferrous scrap	–	–



# Semiconductor

A **semiconductor** is a material typically **silicon or gallium** whose electrical conductivity can be deliberately controlled by adding impurities (a process called **doping**), **applying electric fields**, or **varying temperature**.

## Why Are Semiconductors Important?

They are the building blocks of all electronic circuits and devices, including:

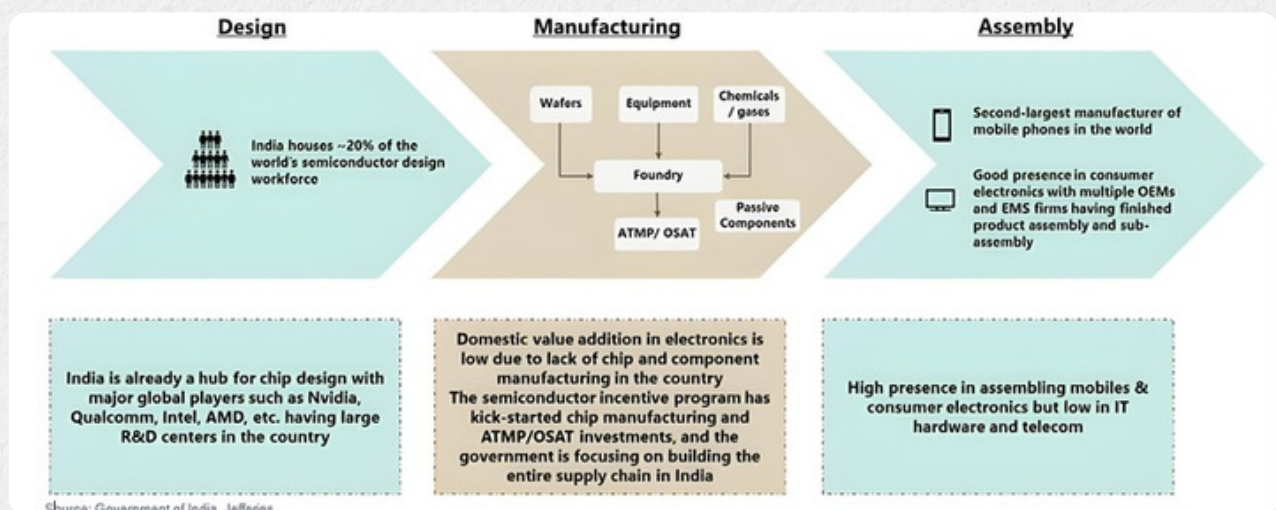
Computers and smartphones

Televisions and radios

Automobiles (especially EVs)

Solar cells

In 2025, India's semiconductor sector enters a pivotal long-term shift from major consumer to emerging player in the global semiconductor value chain. India has shifted to **fabrication, assembly, testing, packaging (ATMP), and OSAT**.



## First Indigenous Chip Launched

India's first indigenous semiconductor chip was unveiled at Semicon India 2025 known as **Vikram 32-bit processor**, developed by **ISRO's Semiconductor Laboratory**.

### Central Government Support

- **Semicon India Program:** India's **Rs. 76,000 crore** national mission to build a robust domestic semiconductor and display manufacturing ecosystem, providing significant financial incentives (like **50% capital support**) for setting up designing, foundry, ATMP and OSAT facilities.
- Policy emphasis in 2025 clearly favoured **assembly, testing, marking, and packaging (ATMP)** as the fastest scalable segment.

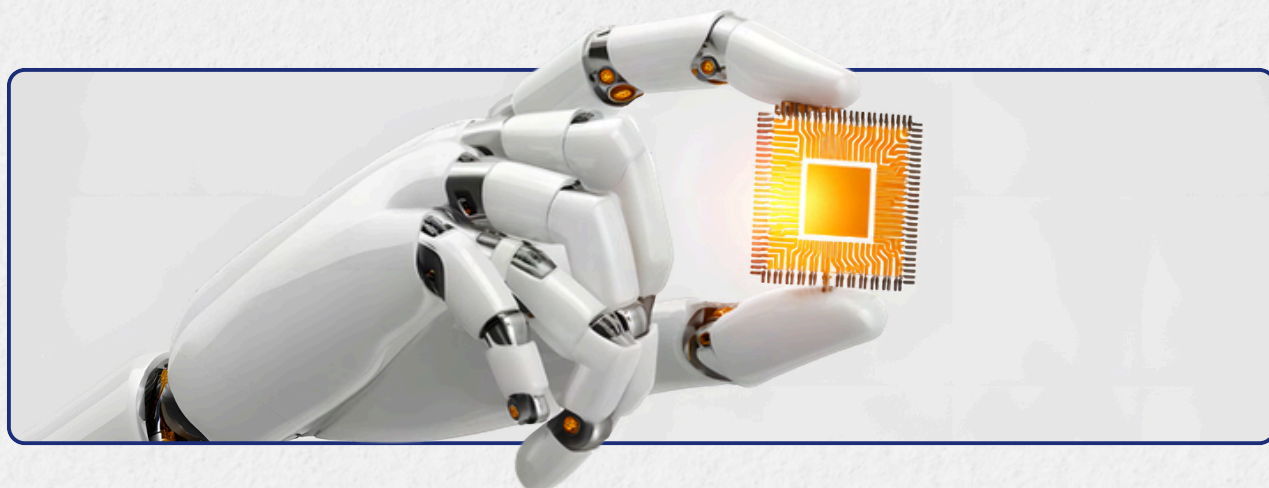


## State Government Support

- State governments such as Gujarat, Tamil Nadu, Karnataka, Telangana, and Assam aligned their policies with the central framework. **Gujarat** government provides additional 20% fiscal support leading to effective support of **70%**. Hence, **4 out of 5 semiconductor facilities are situated in Gujarat**.

## 5 Ongoing Semicon Projects:

	Tata Electronics	Tata Electronics	Micron Technology	CG Power	Kaynes
Investment	Rs910bn / \$11bn	Rs270bn / \$3.3bn	Rs225bn / \$2.8bn	Rs76bn / \$0.9bn	Rs33bn / \$0.4bn
Type	Foundry	OSAT	ATMP	OSAT	OSAT
Partnership	Powerchip Semiconductor Manufacturing Corp (PSMC), Taiwan	NA	NA	Renesas Electronics Corporation, Japan and Stars Microelectronics , Thailand	Globetronics, Malaysia, and Aptos Technologies, Taiwan
State	Dholera, Gujarat	Morigaon, Assam	Sanand, Gujarat	Sanand, Gujarat	Sanand, Gujarat
Technology / product	Analog and logic chips on 28-110nm technologies	Packaging technologies such as flip chip and ISIP (integrated system in packaging)	Assembly and testing for DRAM and NAND flash	Legacy packages such as QFN and QFP to advanced packages such as FC BGA, and FC CSP	Wire bond Interconnect, Substrate Based Packages
Segments	Computing, communications , automotive, IoT, and data storage markets	Automotive, electric vehicles, consumer electronics, telecom, mobile phones, etc.	Data centers, smartphones, notebooks, and IoT devices for both domestic and international markets	Consumer, industrial, automotive and power applications	Industrial, automotive, electric vehicles, consumer electronics, telecom, mobile phones, etc.





# Electronic System Manufacturing

- India is rapidly emerging as a **preferred global manufacturing and export hub for Electronics**, driven by a combination of strategic **government policies like PLI and a skilled workforce, and infrastructure that is outpacing competitors.**
- **Electronics production** increased nearly six-fold from ₹1.9 lakh crore in 2014–15 to **₹11.3 lakh crore** in 2024–25 and **exports** reached **3.27 lakh crore** increased nearly eight-fold from 38,000 crore in 2014–15. (source: [www.pib.gov.in](http://www.pib.gov.in))
- India's electronics exports are growing rapidly witnessing a CAGR of ~26% over FY16–25.
- Key segments where India has made notable strides include **mobile manufacturing, RAC manufacturing, and PCB assembly.**

## Central Government Support:

GST reductions on appliances such as TVs, ACs, washing machine, refrigerators, and dishwashers, which are now taxed at 18% (down from 28%).

## Mobile manufacturing:

India is the **second-largest mobile phone producer** in the world, with **~99% of mobile phones sold in India being locally made.** Mobile phone **exports** rose 127 times from ₹1,500 crore in 2014–15 to **₹2 lakh crore in 2024–25.**

## RAC manufacturing:

India's CBU imports **reduced from 35% to 5% over FY19–25**, increasing **value addition to ~70%, from 30% in FY19.** It is expected to ~90% by FY27E with compressors, copper tubes, and aluminum coils locally manufactured.

## PCB assembly (PCBA):

India saw significant growth in B2B and B2C PCBA demand due to increased import duties. Mobile **PCBA imports** have significantly **reduced from ~Rs 300 bn FY18 to almost nil in FY25.** It is expected PCB and other passive components to be locally manufactured with a components policy now in place.

## Semiconductors:

India's semiconductor market to grow at 13%, reach Rs 8,951 bn (USD 103.4 bn) by 2030. Five landmark projects have received approval, with a total combined investment of ~Rs 1,520 bn.



## Key important milestones for the Indian electronics industry:

- India is the second-largest mobile-phone producer in the world. (~325 mn mobile mfg in FY25)
- In 2014, India had just two mobile manufacturing units; today, it has 300+ units.
- India produced **mobile phones** worth about **₹5.45 lakh crore** (₹5,45,000 crore) in FY 24-25. This is an approximate 28-fold increase compared with ₹18,000 crore in FY 2014-15.
- India has achieved near self-reliance in mobile production- from importing 78% of its requirements in 2014-15 to manufacturing almost all devices domestically today.

## Existing Supply chain in India:

Segment	Product	Design	Component mfg.	Final assembly/ sub-assembly
Mobile	Smartphones	Minimal to no presence	Production of mechanical and composites (casing, cable and box content etc.). <ul style="list-style-type: none"><li>Tata Electronics for iPhone casing (10–15% BoM).</li><li>Coring has also announced manufacturing of cover glass with Optimus infracom.</li><li>Dixon joined hands with HKC for display modules.</li></ul>	Assembly: (~325 Mn mobile mfg./assembled in FY25)  Sub-assembly: battery pack and charger – largely localized; camera module and display module – ~25% localization.  Companies like Dixon, DBG and TATA are doing assembly/ sub-assembly for mobile phones.
Consumer electronics	TV	Limited design capabilities with players like Dixon.	Open cells (~60% BoM) are primarily imported.	Multiple EMS (e.g. Dixon, Amber, PGEL) / OEMs (e.g. Samsung) do finished product assembly/ sub-assembly.  Display is the largest component, sub-assembled in India for TV.
	Air conditioners	Home-grown OEMs such as Blue-Star, Godrej Appliances have established some design and engineering capabilities	Through-hole components, electro-mechanical components are manufactured.	
	Refrigerator			
IT hardware	Laptop	Minimal presence (VVDN technologies, CDAC)	Primarily import dependent	>80% of laptops consumed domestically are imported.
	Servers			
Telecom	4G/5G RAN, Antenna, xPON, FTTH, Others <sup>1</sup>	Outgoing design efforts by a consortium led by TCS.	Primarily import dependent	>40% of total imports are from China.  E.g. Optimus, Dixon, etc. are domestic players doing assembly.



# Capital Goods & Electrical Equipment

- India's electrical equipment sector is entering a multi-decade structural growth cycle, driven by **grid modernisation, renewables, smart metering, data centres** and electrification.
- India's **500 GW renewable target** hard-codes long-term demand for **solar modules/cells, inverters, BESS, transmission lines, substations and transformers**.
- PLI incentives require indigenous solar cells, structurally forcing capex into domestic solar cell, module and upstream equipment manufacturing.
- Multi-Trillion Rupee Power Infrastructure Supercycle:** India plans **₹8–10 trillion of T&D investments during FY26–30**.
- Transmission lines, HVDC corridors, substations, smart grids and distribution upgrades are creating **10–15 years of order visibility** for **transformer, switchgear, conductor, cable** and automation OEMs.
- Policy Protection + Pricing Power:** ALMM, PLI, GST cuts, RDSS and localisation mandates are shifting India from **import dependence** to **domestic manufacturing champions**, improving margins, scale and global export potential.
- Industrial Electrification & Manufacturing Capex:** PLI-led manufacturing, **rail/metro and logistics** infrastructure are structurally increasing power intensity. This is driving sustained demand for motors, VFDs, MCC panels, industrial substations and harmonic filters.
- PM-KUSUM** facilitated close to **9.2lakh** standalone solar pumps under component B, boosting clean energy use in agriculture.

## Key Updates/Milestones of 2025:

Segment	Key Equipment	Capacity Increment (FY25-26 / CY2025)	Total Installed / Industry Capacity
Transmission (HVAC & HVDC)	Power & converter transformers, conductors, towers, insulators, CBs, OPGW, shunt & smoothing reactors, FACTS, DC breakers	+3,641 ckm (April–Nov'25)	4,98,015 ckm transmission network (as of Nov'25)
Substations	Power transformers, GIS/AIS switchgear, CT/PTs, busbars, SCADA, PLCC, capacitor & reactor banks	+60,260 MVA (April–Nov'25)	13,97,773 MVA transformation capacity (as of Nov'25)
Distribution	Distribution transformers, RMUs, HT/LT switchgear, UG cables, reclosers, SCADA/DMS	Structural expansion phase under RDSS & liberalisation	—
Smart Grid & Metering	Smart meters, feeder & DT meters	—	4.76 crore smart meters installed (Nov–25)
Solar PV Manufacturing (ALMM / PLI)	Solar modules & cells	+81 GW module capacity added in CY25, +16GW Solar cell capacity added in (FY25)	~144 GW module capacity p.a.; ~25 GW cell capacity listed
Data Centres	Dry-type transformers, UPS, DG sets, GIS, PDUs, bus ducts, substations, VFD cooling	~250–600 MW power capacity added in CY25	~1.3–1.6 GW DC power capacity





# REVOLUTION

FUND II

Closed ended Category III AIF

**OBJECTIVE:** Provide investors access to booming SME and MicroCap Market along with Pre-IPO Investment.

## INVESTMENT STRATEGY

- i) 25% Pre-IPO Investment
- ii) 50% Anchor & QIB Investment
- iii) 25% Listed Investment

FUND SIZE	FUND TENURE	DRAWDOWN PERIOD
INR 500 Crore	3 years from final close and extendable by 2 years	15 months from first close (5 drawdowns of Rs. 20 Lacs each and paid quarterly)



## IV. Future outlook for the key sectors under coverage in 2026

### Cloud Computing & AI

- India's cloud computing and artificial intelligence (AI) sectors are entering a sustained multi-year upcycle beyond 2025, driven by **enterprise digital transformation**, **government digitization initiatives** (including data localization), **rapid adoption of GenAI solutions**.
- **Market Size and Growth:** India's cloud computing market is expected to **reach USD 58.73 Billion** (INR 5.29 lakh crore) in 2030 **growing at a CAGR of 21.90%** from USD 21.82 Billion in 2025 as per Mordor Intelligence research.
- Software as a Service (SaaS) is the largest segment in the sector expected to grow at a CAGR of 18.2% between 2025 and 2030 reaching USD 37.33 Billion as per Grandview research.
- Infrastructure as a Service (IaaS) which involves providing computing infrastructure will be the fastest growing segment moving forward.
- Government estimates that **AI could add up to Rs. 1,42,390 crore** (US\$ 1.7 trillion) to the national economy by 2035, thus making it one of the most formidable growth drivers over the decade to come.

### **Key sectors Driving Cloud and AI Demand:**

#### Defence and Aerospace



- India's AI defence space is projected to grow at 28% CAGR between 2025 and 2030.
- Autonomous systems, drone swarms, loitering munitions, and unmanned tanks.

#### Internet of Things



- High frequency data generation must be stored, processed, and analysed centrally.
- Cloud helps data storage and real time dashboards.

#### Generative AI



- Global capability centers, enterprises are fine tuning LLMs, domain specific GenAI models are being trained.
- GenAI requires thousands of GPU hours which is offered on demand by cloud.

#### Healthcare



- AI used in medical imaging, health analytics and clinical decision support
- Cloud computing used for hospital IT systems, health data platforms.



Retail & E-commerce		<ul style="list-style-type: none"> <li>• Retail space is shifting to omnichannel, personalisation, real-time inventory visibility.</li> <li>• AI is used for recommendations, dynamic pricing, demand forecasting.</li> </ul>
Online Gaming		<ul style="list-style-type: none"> <li>• Online gaming is a volume driver for cloud IaaS as it requires autoscaling virtual machines, low latency networking.</li> <li>• Cloud helps in Esports live streaming for video encoding, content delivery networks, viewer analytics.</li> </ul>
Agriculture		<ul style="list-style-type: none"> <li>• Cloud helps in storing land records data, crop sown, weather, satellite imagery and integrate data from states, satellites.</li> <li>• AI helps analyse soil data, crop stage, detection of pests/diseases, fertiliser recommendations.</li> </ul>
Robotics		<ul style="list-style-type: none"> <li>• Warehouses, logistics space, manufacturing shop floors are rapidly adopting autonomous mobile robots.</li> <li>• High performance compute is necessary for training and improving robots with multiple simulations.</li> </ul>

## Investment Themes:

Cloud Infrastructure	Generative AI	Security & Privacy	SaaS Platform
<ul style="list-style-type: none"> <li>• Data Center capacity expected to grow at a CAGR of 25–30% 2025–2030.</li> <li>• Fiber backhaul for data center connectivity</li> <li>• Edge computing driven by latency requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• AI Models that can generate text, image, code.</li> <li>• India has 22 official languages and hundreds of dialects.</li> <li>• Embedded AI modules like chatbots</li> </ul>	<ul style="list-style-type: none"> <li>• 87% of leaders in Indian organisations expect cybersecurity budgets to grow in coming year as per PwC.</li> <li>• Businesses are prioritising investments in AI technologies for cloud security.</li> </ul>	<ul style="list-style-type: none"> <li>• SaaS solutions in Fin-tech, Health-tech, Logistics required to embed AI for efficiency.</li> <li>• Customer Experience as a Service is growing with usage of predictive analytics.</li> </ul>

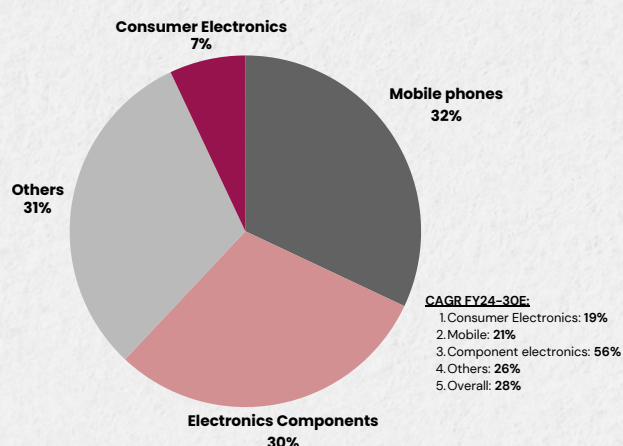
Rising investments in data centres, AI compute, and cloud-native platforms, coupled with India's deep talent pool and cost advantages, position the country as a critical global hub for AI development and deployment. Increased focus on security, compliance, and indigenous AI capabilities will drive sustained demand.



# Electronic System Manufacturing

- India's Electronics System Design & Manufacturing (ESDM) is aligned with the government's vision to achieve **USD 500 billion in electronics production by FY30**, supported by a decisive shift toward **component manufacturing, higher domestic value addition, and export-led growth**. (source: [www.pib.gov.in](http://www.pib.gov.in))
- Mobile Manufacturing:** Value addition in mobile manufacturing is expected to rise from ~23% to 40–50% with increasing component localization.
- Room Air Conditioners (RAC):** Value addition is expected to increase from ~50% to ~90% by FY27–28E with localization of key components. (source: ICRA). Manufacturing capacity of RAC is expected to expand by over 40–50% over the next two years from the current base of ~24–26 million units.
- Components:** Components' share of total electronics production is projected to rise from ~9% in FY24 to ~30% by FY30.

## Exhibit 3: Vision 2030 (USD 500bn) – higher focus on components and value addition



## Key Growth Drivers:

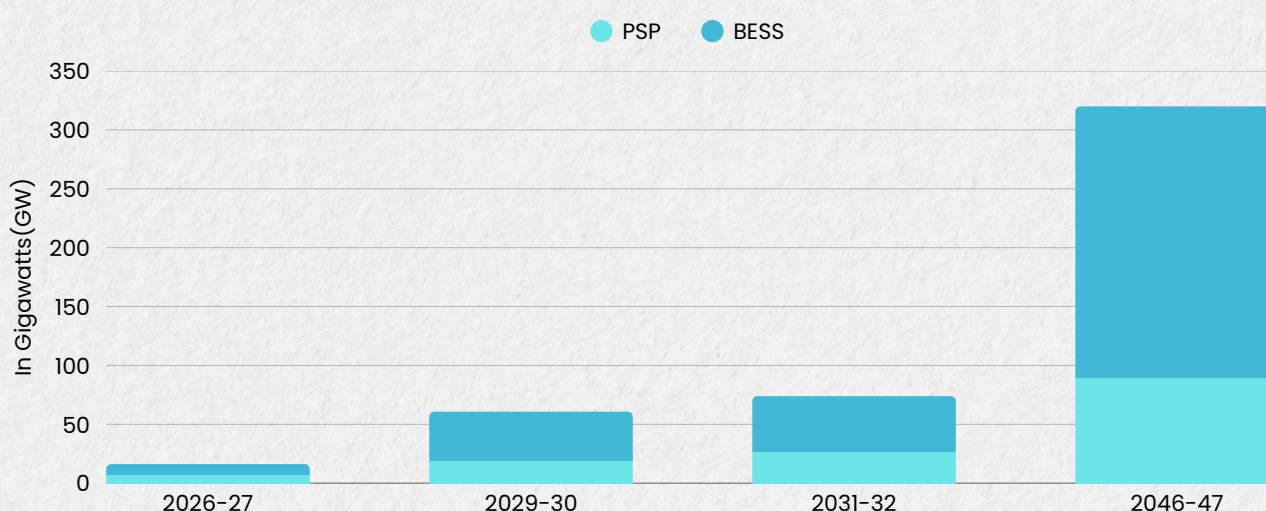
- PLI Scheme:** The PLI scheme for electronic components was launched in March 2025 with an **outlay of ₹22,919 crore over 6 years** to boost **component manufacturing and backward integration**.
- Attractive taxation:** 15% corporate tax for new units to make India attractive for global manufacturers.
- The government has recently cleared the Electronics Component Manufacturing Scheme (ECMS), which aims to attract investments of INR 60,000 crore.
- India allows **100% foreign direct investment (FDI)** in the ESDM sector through the **automatic route**, enabling global manufacturers to invest directly in electronics production and design without prior government approval
- Scheme for Promotion of Manufacturing of **Electronic Components and Semiconductors (SPECS)** offers a **25 percent financial incentive on capital expenditure** for producing key electronic goods.
- Recent Project approval for Component Manufacturing:** The Centre has approved 22 new proposals, including those from **Samsung, Foxconn, Tata Electronics, and Dixon**, for component manufacturing, involving **cumulative investments of nearly ₹42,000 crore**.



# Battery Energy Storage System (BESS)

- **Required Capacity:** As per National Electricity Plan (NEP) 2023 of Central Electricity Authority (CEA), the energy storage capacity requirement is projected to be **82.37 GWh (47.65 GWh from PSP and 34.72 GWh from BESS) in year 2026–27**. This requirement is further expected to increase to **411.4 GWh (175.18 GWh from PSP and 236.22 GWh from BESS) in year 2031–32** with investments worth ~4.8 lakh crore expected by 2032.
- **Capacity Expansion:** As per the National Electricity Plan, India's BESS capacity is projected to scale from about 8.68 GW (34.72 GWh) by FY 2026–27 to nearly 47.24 GW (236.22 GWh) by FY 2031–32, forming a major share of the total energy storage requirement alongside pumped storage.

ESS Capacity requirement



- As per National Electricity Plan (NEP) 2023 of Central Electricity Authority (CEA), the energy storage capacity requirement is projected to grow at a **CAGR of ~16%** distributed between PSP and BESS.
- **ESO:** A long-term trajectory for **Energy Storage Obligations (ESO)** has also been notified by the Ministry of Power to ensure that sufficient storage capacity is available with obligated entities. As per the trajectory, the **ESO shall gradually increase from 1% in FY 2023–24 to 4% by FY 2029–30**, with an annual increase of 0.5%. **This obligation shall be treated as fulfilled only when at least 85% of the total energy stored is procured from Renewable Energy sources on an annual basis.**

## Key Players in BESS Sector:

Company	Current BESS / Storage Capacity	Expansion / Target / Pipeline
JSW Energy	Locked-in: ~29.4 GWh (3.0 GWh BESS + 26.4 GWh pumped hydro)	The company aims to reach 30 GW of power generation and 40 GWh of storage by 2030
Adani Group	1,126 MW / 3,530 MWh (3.53 GWh) BESS at Khavda, commissioning by March 2026.	Expansion: 15 GWh by March 2027; 50 GWh by 2030.
Tata Power	120 MWh BESS project with NHPC in Kerala and received approval to install a 100 MW BESS in Mumbai	NA



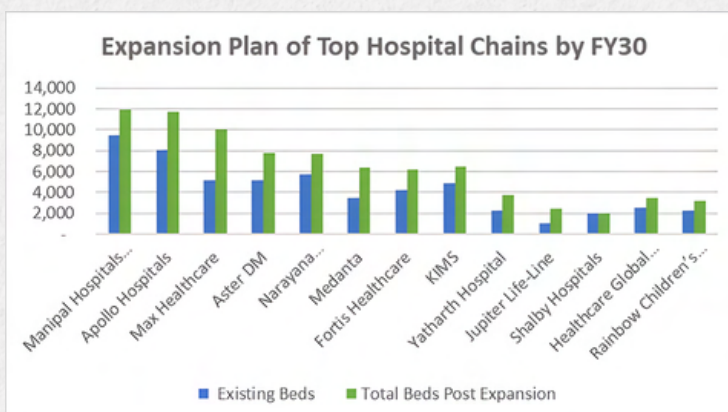
# Healthcare

## “A Structural, Insurance-Led, Infrastructure-driven Supercycle”

- **Multi-Decade Structural Growth Cycle:** India's healthcare sector is entering a multi-decade structural growth phase driven by massive infrastructure deficits, insurance formalisation, rapid chronic disease proliferation, and strong government backing.
- **Healthcare Spend Expansion Driving Market Size:** Healthcare spending is expected to rise from ~3.3% of GDP (2022) to ~5% by 2030, structurally expanding the addressable market across hospitals, diagnostics, renal care, med-tech and digital health platforms.
- **Fastest-Growing Healthcare Market:** India is already the fastest-growing large healthcare market globally, growing at ~17–22% CAGR, with total market size projected to expand from ~USD 372 billion (2024) to ~USD 1.5 trillion by 2030.
- **Private Sector Driving Organised Healthcare Growth:** With 63% private ownership, India's healthcare growth is increasingly led by corporate hospital chains.
- **GST Rationalisation Creating Structural Growth:**
  1. **Core Healthcare Services: Consultations, diagnostics, surgeries, hospitalisation and ICU care are fully exempt from GST**, ensuring affordability and sustained patient volumes.
  2. **Hospital Rooms & Ancillary Services: Non-ICU room rent above ₹5,000/day attracts 5% GST** (no ITC), while cosmetic and ancillary services are taxed at 18%, supporting higher ARPOB in premium hospitals.
  3. **Medicines & Consumables:** Most essential medicines, diagnostic kits and **consumables attract 5% GST**, with **selected life-saving drugs exempt**.
  4. **Health Insurance Reform:** Individual **health and life insurance premiums are GST-exempt**, structurally boosting insurance penetration and formalisation.

## Infrastructure Deficit: Multi-Decade Capex Visibility

- **Infrastructure Deficit:** India has only **~1.4 hospital beds per 1,000 people**, far below the **WHO benchmark of 3+**, and significantly lower than developed market averages of 3–8. This deficit is forcing long-cycle expansion in hospitals, ICUs, dialysis units and specialty centres.
- **Private player led expansion:** Large hospital chains have already announced **₹30,000+ crore capex plans to add 14,500+ beds by FY27**, with private hospitals adding **4,000+ new beds in FY26 alone**. With **3 million additional beds needed nationally**, infrastructure creation will remain a dominant investment theme for the next decade.



(Source: KPMG Report: Multi Speciality Hospitals in India)

- **Formalisation and Tier-2/3 Expansion:** Indian healthcare is shifting from an informal, metro-centric model to a formal, insurance-led national infrastructure platform. Hospital chains are expanding aggressively into **Tier-2/3 cities**, where regional players are growing ~2× faster (~27% CAGR) than national chains.

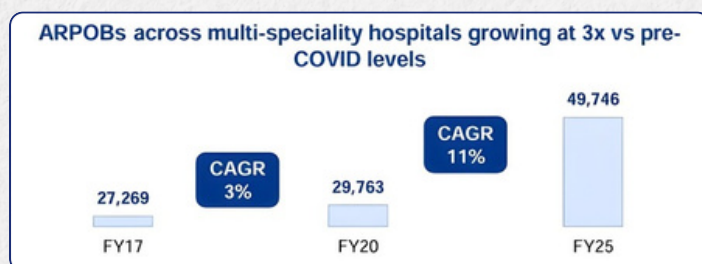


- **Government as Structural Partner:** FY26 healthcare allocation of ₹99,858 crore (+9.8% YoY), combined with **Ayushman Bharat, Digital Health Mission, MedTech Mitra** and **AI-driven health platforms**, is institutionalising demand while simultaneously lowering patient affordability barriers.

## Insurance – The Core Demand Multiplier

- Private health insurance coverage has expanded from **61 million (2014) to 312 million (2024)**
- Health insurance premiums are projected to grow from **USD 25 billion (FY24) to USD 45+ billion by FY29**
- Out-of-pocket expenditure has already declined from **59% to ~39% of healthcare spend**.
- This transition is converting discretionary healthcare into **assured, recurring institutional demand**, with **>70% of insured treatments routed through private hospitals**, structurally benefiting organised hospital chains and diagnostics platforms.

**Key Performance Indicator:** Average Revenue per Occupied Bed (ARPOB) growth has structurally accelerated from 3% pre-COVID to 11% post-COVID, driven by premiumisation and higher clinical intensity.



**Chronic Disease & Renal Care – The Next Wave:** India's shift towards lifestyle diseases has structurally transformed healthcare demand – NCDs have risen from ~63–66% of deaths in 2018–19 (and ~38% in the 1990s) to ~74% today, with ~77 mn diabetics and ~17–18% adult CKD prevalence – converting healthcare into lifelong, recurring consumption and locking in annuity-like growth for dialysis, renal, cardiac and oncology platforms, making specialty healthcare one of the most defensible long-term compounds.



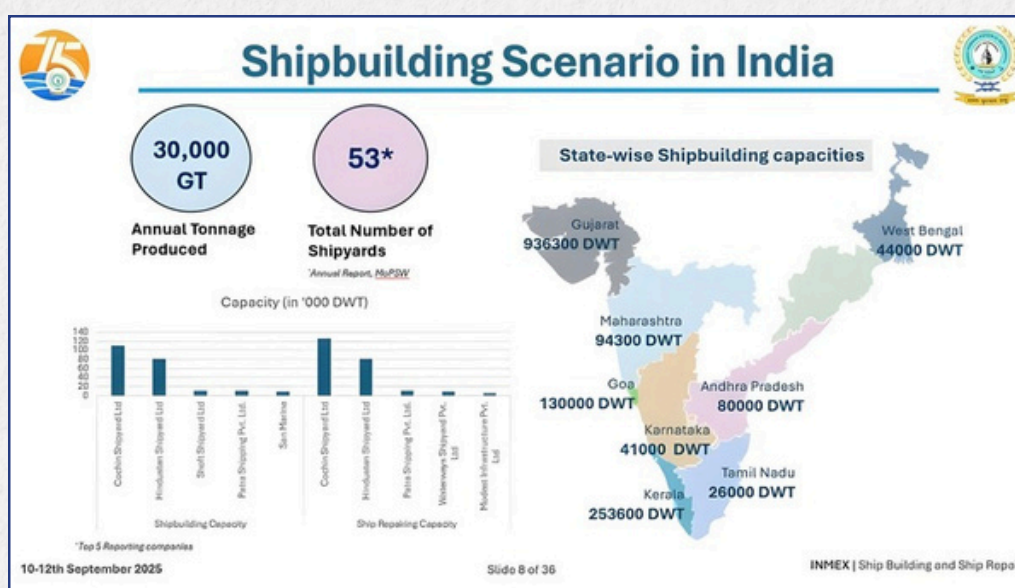


# Shipbuilding

- The Maritime **Amrit Kaal Vision 2047** projects about **₹80,00,000 crores** investments and 40 million jobs by 2047 a testament to the pivotal role shipping will play in India's journey towards becoming a developed nation. (source: INMEX SMM)
- The Maritime India Vision 2030 charts 150+ initiatives with projected investments of **₹3-3.5 lakh crore**, supported by a recent **₹69,725 crore** package for shipbuilding. (source: INMEX SMM)
- Currently India ranks **16th globally in shipbuilding capacity** and the country accounts for less than **2% of the global share**.
- India already commands a **25% share of the global ship recycling market** and is emerging as a cost-effective alternative for ship repair services.
- India's blue economy is central to its growth, with **95% of global trade by volume and 70% by value** moving by sea.
- India aims to rank among the top 10 nations in shipbuilding and repair. Annual ship production is targeted to increase from the current **30,000 GT to over 500,000 GT by 2030**.

## Shipbuilding Scenario in India:

- India's shipbuilding industry comprises of both private and public shipyards, with about **53 shipyards** and Shipbuilding assets (not including many minor boat yards) distributed on both the east and west coast.



- Below table shows top 2 companies in Shipbuilding & Ship Repairing Capacity in India (source: INMEX SMM):

Company Name	Shipbuilding Capacity	Ship Repairing Capacity
	Capacity (in '000 DWT)	Capacity (in '000 DWT)
Cochin Shipyard	110	125
Hindustan Shipyard	80	80



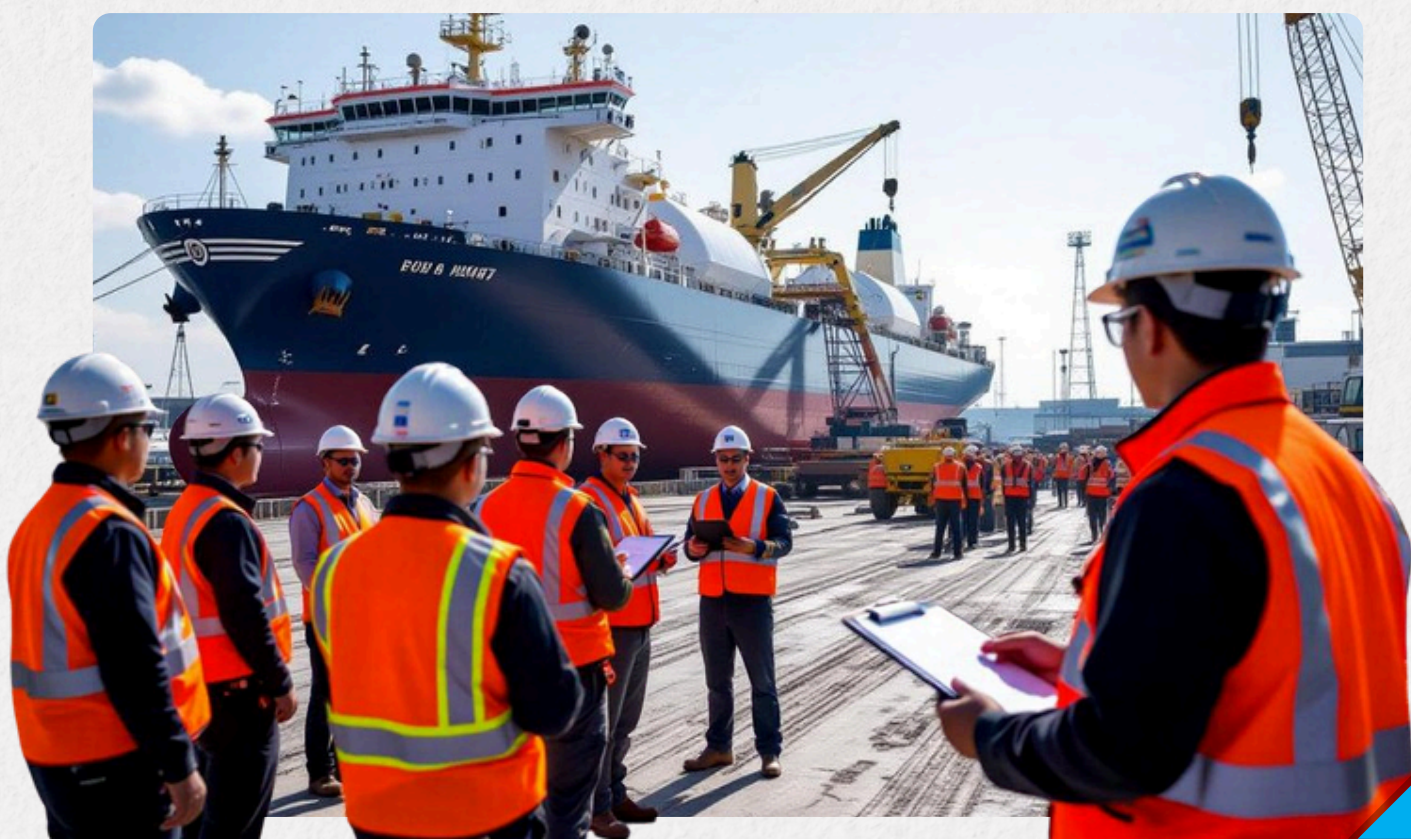
- The industry today exists as a largely monopsonist market for defence shipbuilding with a reasonably strong domestic demand, while not making any significant headway in commercial shipbuilding, with very little demand. Defence shipbuilding is **dominated by DPSUs and PSUs**, along with a small amount of work shared with private shipyards.
- However, despite a slew of efforts from the government to encourage private participation in defence shipbuilding and efforts to stimulate the supply side, the private industry has gradually waned over the last few years.
- The Indian shipbuilding industry is heavily dependent on imports of equipment and materials to the extent of 50%-60% of the material cost, which, in turn, typically constitutes 40%-50% of the cost of a ship.

## Key Growth Drivers:

- Maritime Development Fund (MDF): The proposed MDF will act as an anchor fund, enabling long-term investment in shipbuilding infrastructure and allied industries.
- Infrastructure Status: Infrastructure status for large ships enables easier financing, supporting domestic shipbuilding and fleet growth.
- The Shipbuilding Financial Assistance Scheme (SBFAS) has been extended to 2036 with a ₹24,736 crore corpus to support domestic shipbuilding, including recycling-linked incentives via shipbreaking credit notes.

## Recent Developments:

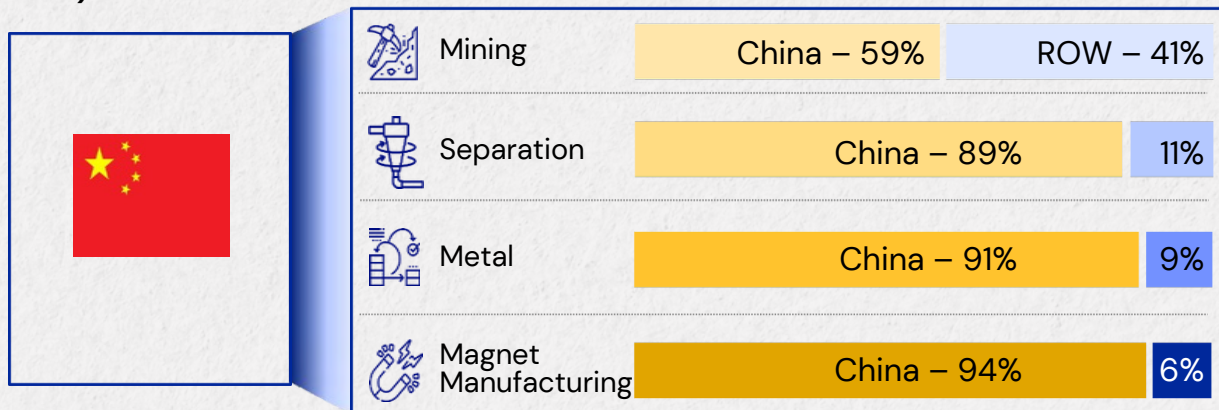
- India's government granted infrastructure status to "large ships" (generally over 10,000 GT under Indian flag/ownership, with lower thresholds for domestic-built/owned).
- States like Maharashtra have introduced dedicated policies — the Maharashtra Shipbuilding, Ship Repair, and Ship Recycling Facility Development Policy 2025 — to attract private investment, develop infrastructure, and align with national maritime goals.
- Major Indian shipyards like Cochin Shipyard Ltd (CSL) are expanding strategic partnerships — discussions to build a ₹10,000 Cr mega yard in Tamil Nadu with HD Hyundai — which could boost capabilities for large commercial vessels and global competitiveness.



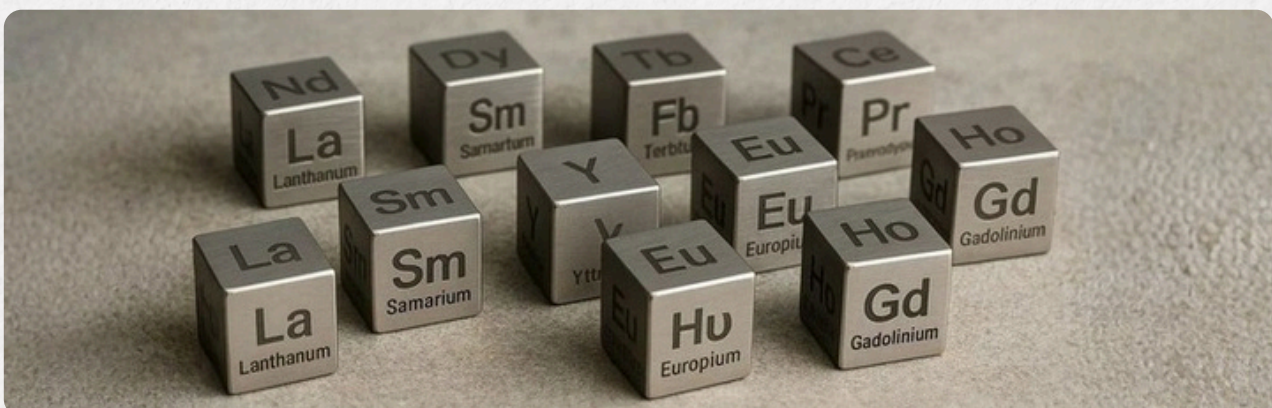


# Rare Earth Element

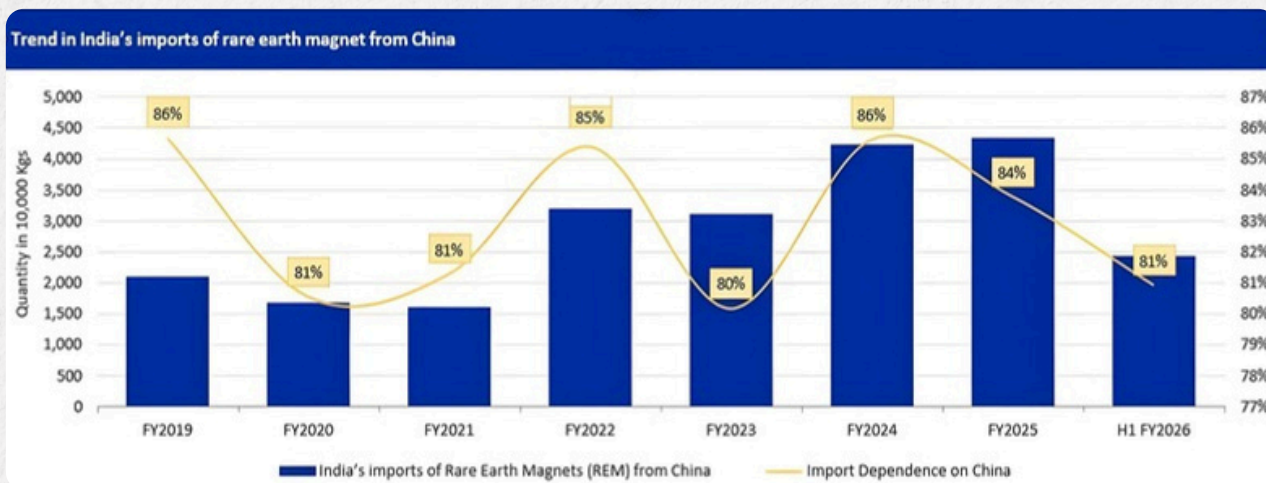
- **REE:** The global rare earth element (REE) industry is a small but strategically critical sector that underpins **clean energy, electronics and defence, with demand rising on EVs and wind turbine** while supply remains geographically concentrated and geopolitically sensitive.
- Rare earth elements (REEs) are **17 metals (15 lanthanides plus scandium and yttrium)** used mainly in high-performance magnets, catalysts, phosphors, polishing powders, and metal alloys.
- The highest-value use is **neodymium-iron-boron (NdFeB) permanent magnets for EV motors, wind turbines, industrial automation, robotics, electronics and defence systems;**
- **Global Reserve:** Global rare earth reserves are estimated around 90 million tonnes of REO equivalent, with China holding about 44 million tonnes, Brazil ~21 million tonnes, India ~6.9 million tonnes, Australia ~5.7 million tonnes and Russia ~3.8 million tonnes.
- **Global supply chain:** China dominates the global rare earth supply chain (China v/s ROW)



- **India Import dependency from China:** India's reliance on China for RE magnets has remained consistently high, **hovering around 80-85%**. This dependence underscores a strategic vulnerability, as these magnets are critical for advanced technologies. Since FY2022, demand has accelerated sharply, driven by the surge in **EV adoption and renewable energy applications**. Despite efforts to diversify, China continues to dominate the supply chain, making India's industrial growth closely tied to Chinese exports.
- **India reserve v/s Mining:** Government communications acknowledge that India currently contributes <1% of global REE mining despite holding roughly 8% of world reserves, which is driving the 2025 policy push.







- **PLI for Rare Earth Magnet:** The Union Cabinet approved a **PLI scheme** for sintered rare earth permanent magnets in late 2025, with outlay reported at roughly **₹7,280–7,350 crore** (about USD 800+ million). The scheme aims to **set up five greenfield plants of 1,200 tonnes per annum each**, targeting 6,000 tonnes per year of magnet capacity over a seven-year horizon.
- **National Critical Mineral Mission (NCMM), 2025:** The NCMM was launched in January 2025 with a budget of about **₹16,300 crore** to **secure long-term supplies of critical minerals**, including rare earth elements.
- **Strategic Stock Pile:** India is preparing a National Critical Mineral Stockpile (NCMS) to hold **at least two months' worth of rare earth elements** and other key materials, prompted by Chinese export curbs on rare earth magnets.

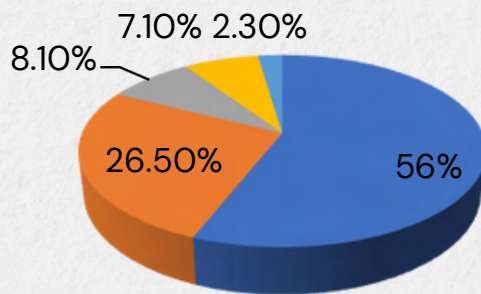




# Medical Devices

- The India medical devices market size was valued at **USD 19.11 Billion** in 2025 and is projected to reach **USD 31.85 Billion** by 2034 as per IMARC research. India is the fourth largest medical devices market in Asia after Japan, China, and South Korea and among the top 20 global medical devices markets in the world.

## Medical Device Sector Segments



Source: EY

- Electronic Equipment
- In-vitro Diagnostics
- Surgical Instruments
- Disposables &
- Consumables Implants

## Growth Drivers:

**Rising Prevalence of Chronic & Lifestyle Diseases:** Require regular diagnostics, monitoring and intervention devices (e.g., Glucose monitors, imaging equipment, cardiovascular implants).

**Healthcare Infrastructure & Medical Tourism:** Widening hospital networks, diagnostic centers and Tier-2/3 create demand for **imaging diagnostics, patient monitoring systems and consumables**.

**Digital & Remote Healthcare Technologies:** Demand for connected medical devices and **AI-enabled diagnostics**. Innovation in these subsegments will be a material growth contributor.

**Export Opportunities:** India will evolve into manufacturing and **export hub for consumables and med-tech devices**.

## Government Initiatives:

- The government has approved **3 Medical Device Parks in Uttar Pradesh, Madhya Pradesh and Tamil Nadu**. The civil construction of the three parks is at **final stages** and **194 medical devices manufacturers** have been allotted land in the three parks.
- The PLI scheme has a **budgetary outlay of Rs. 3,420 crore** and a five-year performance-linked incentive period from FY2022-23 to FY2026-27. It will promote **domestically manufactured medical devices priced 10-30% lower than imported products** and enable high-end device manufacturing, reduces import dependence, and expands margins for efficient players.



## Major Players in India:



### Medtronics India Pvt. Ltd.

- Indian Subsidiary of Medtronic plc., a global leader in medical technology headquartered in Ireland.
- Cardiovascular and Therapeutic Devices.



### Meril Life Sciences

- One of India's largest indigenous medical device manufacturer.
- India's first domestically developed bioresorbable scaffold used in coronary artery disease treatment.
- Invested Rs. 910 cr in FY25 to expand capacity under PLI.



### Abbott India Ltd.

- Portfolio of **cardiovascular interventional products** like drug-eluting stents.
- Continuous glucose monitoring systems such as the FreeStyle Libre range.



### Poly Medicure Ltd.

- Specialises in medical disposable devices.
- 9 manufacturing facilities in India.



### GE Healthcare India

- GE Healthcare USA operates in India through Wipro GE Healthcare Pvt. Ltd. as Joint Venture.
- Manufactures CT Scanners, Cath lab equipment, Ventilators.

- Overall, in the near future, **In-Vitro Diagnostics, Orthopaedic devices** like implants, fixation systems, **cardiovascular and therapeutic devices, smart wearables** will be fast growing segments. The next phase of growth is likely to be defined by **technology depth, regulatory compliance, and integration with global supply chains.**





# Semiconductors – Future Oil

- The semiconductor sector is expected to reach **USD 108 billion** by 2030 increasing from USD 54 billion in 2025 **growing at a CAGR of ~15%** as per UBS report.
- **Demand Drivers/User Industries:** Sector like electronics, Data centre, solar and Auto significantly contributes demand of semiconductor.



- Rising demand for consumer electronic devices due to improvement in standard of living.
- Rising demand for data centres in India
- Industrial automation
- Artificial Intelligence led processing

## Upcoming Semiconductor Projects for Foundry and OSAT/ATMP

Tata Electronics	Micron Technology	CG Power	Kaynes Semicon
<ul style="list-style-type: none"><li>• Fabrication ATMP</li><li>• Located in Dholera, Gujarat</li><li>• First commercial chip production late 2026</li><li>• 50,000 wafers per month</li></ul>	<ul style="list-style-type: none"><li>• ATMP Facility</li><li>• Located in Sanand, Gujarat</li><li>• Expected to start commercial production late 2026</li></ul>	<ul style="list-style-type: none"><li>• OSAT Facility</li><li>• Located in Sanand, Gujarat</li><li>• Initial operation expected to begin in 2026</li><li>• Full scale capacity in late 2026–2027 with 15mn chips per day</li></ul>	<ul style="list-style-type: none"><li>• OSAT Facility</li><li>• Located in Sanand, Gujarat</li><li>• Delivered initial samples in July, 2025</li><li>• Commercial production anticipated in 2026</li><li>• 6.3 mn chips/day</li></ul>

## Technological Innovations:

- India is moving from traditional Silicon based semiconductors to the latest Silicon Carbide based semiconductors. They operate at higher voltages, temperatures, and frequencies than traditional silicon enabling energy efficiency due to low energy loss benefitting EV, data centres, solar energy etc.
- 3D Glass packaging uses glass instead of silicon and vertical stacking enabling faster processing and reduced signal loss of data critical for AI, HPC and Data centres.
- Although India remains early in the maturity curve and with high capital requirement, the sector stands at a decisive inflection point where **ecosystem formation, anchor investments, and talent scaling are converging**. Semiconductors are no longer viewed as a peripheral manufacturing opportunity but as foundational infrastructure critical to national competitiveness, technology sovereignty, and long-term economic resilience setting the stage for a multi-decade investment cycle rather than a near-term capacity story.



# E-Waste & Battery Recycling Industry

## “Structural Circular Economy Opportunity”

- India’s recycling ecosystem is entering a **multi-decade structural growth phase** driven by electrification, digitalisation, renewable integration and tightening Extended Producer Responsibility (EPR) enforcement.
- The sector is transitioning from an informal, fragmented activity to a **formal, compliance-driven, technology-led circular infrastructure platform**.
- With over **90% of e-waste historically handled by the unorganised sector**, CPCB-led enforcement and mandatory registrations are structurally diverting waste flows toward authorised recyclers, improving volume visibility, pricing power and return profiles for organised players.

## Strong Market Growth Visibility

- According to India Ratings & Research, the **domestic e-recycling market is projected to grow at a ~14% CAGR to ₹1,726 crore by FY32**, supported by rising electronics penetration, faster replacement cycles, EV-linked electronics growth and stricter regulatory enforcement. India being the **third-largest global e-waste generator** ensures a structurally expanding feedstock base.

## EPR-Led Revenue Stability

- EPR has emerged as the **primary monetisation engine**, contributing **~25–30% of recycler revenues**, with fees nearly doubled. This is shifting earnings from volatile commodity-linked recycling to a **more stable, compliance-driven annuity-like income stream**, improving working-capital cycles and long-term return visibility.

## Battery Recycling – Exponential Upside

- Battery recycling is at a nascent stage but is set for **sharp scale-up post-FY27** as EV and stationary storage batteries reach end-of-life. **India’s Li-ion battery demand is projected to exceed 235 GWh by 2030**.
- The **Battery Waste Management Rules mandate 80–90% recovery and up to 20% recycled content by FY31**, structurally ensuring long-term volume and pricing visibility. Battery recyclers are emerging as **strategic secondary raw-material suppliers** to the EV and renewable ecosystem.





# Data Centres

- India's data centre sector in 2025 is characterised by rapid capacity expansion led by **colocation and hyperscale with capacity expected to increase from current operation 1.53 GW to 5GW, which indicates 25–30% CAGR, capital expenditure is projected to reach 20–22 billion USD.**(Source: CBRE & JM Financial).
- The capacity is decentralising beyond **Mumbai and Chennai** into cost-competitive and policy-supportive markets such as **Vishakhapatnam, Hyderabad, Pune, Noida**, and select coastal locations.

## Key value drivers:

- Cloud adoption
- AI workloads
- 5G-driven data consumption
- Digital public infrastructure



## Tailwind:

- Strong domestic and foreign capital inflows continue to support market expansion.
- Demand is shifting from colocation toward hyperscale and wholesale models, with **power access and operational capability becoming key competitive advantages.**

## Headwind:

- Sustainability and energy efficiency have become non-negotiable, driving renewable sourcing, advanced cooling, and tighter integration with power infrastructure, even as **grid readiness and talent availability emerge as binding constraints.**

## Pipeline Projects in India:

Amazon Web Services	<ul style="list-style-type: none"> <li>60,000 crore Investment in Telangana</li> <li>Signed MOU for 75,000 crore investment in Maharashtra</li> </ul>
Microsoft	<ul style="list-style-type: none"> <li>27,000 crore for AI Infrastructure and cloud computing capacity</li> </ul>
ST Telemedia Global Data Centers (STT GDC)	<ul style="list-style-type: none"> <li>MOU signed for investment of 3,500 crore to develop 100MW campus</li> </ul>
Sify Infinity	<ul style="list-style-type: none"> <li>50MW capacity in Vishakhapatnam investing around 1,500 crore</li> </ul>
Meta	<ul style="list-style-type: none"> <li>Partnership with Sift Technologies to set up 500 MW capacity.</li> <li>Sify is set to invest 15,266 crore.</li> </ul>
Google	<ul style="list-style-type: none"> <li>1.35 lakh crore investment in Andhra Pradesh.</li> <li>Initial capacity will be of 1GW.</li> </ul>

- Industry forecasts indicate that **AI-ready capacity will account for a growing share of new builds post-2026**, materially increasing capital intensity per MW but also improving pricing power and barriers to entry. Emerging hubs like Vishakhapatnam, Hyderabad, Noida are expected to enable geographic diversification of returns.





Closed-ended Category II AIF

**OBJECTIVE:** Provide investors access to scalable pre-IPO & late-stage growth opportunities within the Microcap Segment.

### **INVESTMENT STRATEGY**

- i) 40% Pre-IPO opportunities having potential to get listed in 6-18 months.
- ii) 40% Late-stage growth opportunities having potential to get listed in 18-36 months.
- iii) 20% Anchor/QIB and Listed Investment.

FUND SIZE	FUND TENURE	DRAWDOWN PERIOD
INR 500 Crore	5 years from first close	Upto 12 months from final close



## Research Team



**Ms. Kresha Gupta**  
AIF Fund Manager & Investment Committee



**Mr. Ankush Kumar Jain**  
AIF Fund Manager & Investment Committee



**Mr. Darshit Shah**  
Research Head – Listed Equities



**Mr. Aniket Madhwani**  
Equity Research Analyst



**Mr. Narayana Lodhavia**  
Equity Research Analyst



**Mr. Archit Agrawal**  
Equity Research Analyst



**Ms. Srishti Agarwal**  
Equity Research Analyst



# Contact Us

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1800 571 2929



[www.steptrade.capital](http://www.steptrade.capital)



[info@steptrade.capital](mailto:info@steptrade.capital)



726, Iconic Shyamal, Shyamal Cross  
Roads, 132 Ring Road, Shyamal, Ahmedabad, Gujarat-380015

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