IPO Note

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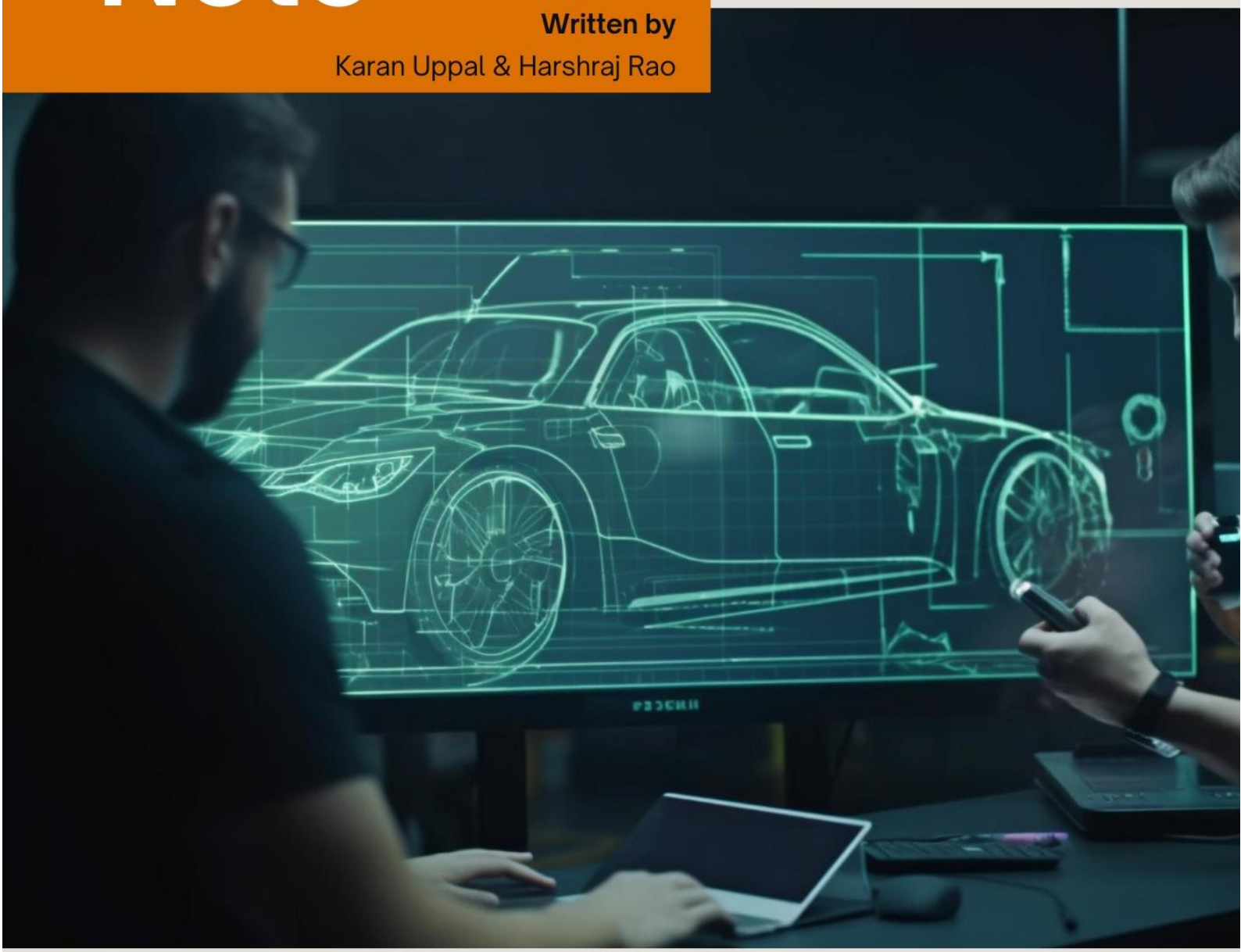
Written by
Karan Uppal & Harshraj Rao



TATA

TATA TECHNOLOGIES

Riding on the Strong Auto ER&D Wave

PhillipCapital

Tata Technologies Ltd

Riding on the strong automotive ER&D wave

INDIA | IT SERVICES | IPO NOTE

21 November 2023

Tata Tech is the third-largest Indian pure-play ER&D player after LTTS and Cyient

Tata Tech is the third-largest pure-play ER&D services provider from India with a revenue run rate of US$ 547mn for FY23, behind LTTS (US$ 990mn revenue) and Cyient (US$ 632mn). It is a subsidiary of Tata Motors, which currently holds 64.8% (pre-offer shareholding) stake. Out of Tata Tech's total revenue, c.70% comes from its automotive vertical – where it has a strong foothold and competes with key players – KPIT Tech, Tata Elxsi, LTTS, HCL Tech, Altran, Alten and others. Of its revenue, c.10% is from aerospace, transportation, construction and heavy machinery verticals. It has a marquee list of clients – more than 35 traditional automotive OEMs and tier-1 suppliers; more than 12 new energy vehicles companies within the auto vertical, including anchor clients (Tata Motors, JLR), Vinfast, Honda, Ford; and, key clients in aerospace – Airbus, Cabin Interiors and Engineering Solutions, ST Engineering Aerospace. However, client concentration (top-5/10 at 71%/80% of H1FY24 revenue) is higher than pure-play ER&D services players. EBIT margins at 16.5% are lower than Tata Elxsi (28%) and LTTS (18.5%), but higher than KPIT Tech (14.5%) and Cyient (13.7%).

Auto ER&D spend zooming; legacy growth in mid-single digits; new-age CAGR at 12-14%

Consulting firm Zinnov pegs the market size of outsourced automotive ER&D at US$ 18-20bn in 2022, which is c.10% of total automotive ER&D spend and 16-18% of overall outsourced ER&D spend. While the total auto ER&D spend is well distributed across three geographies, outsourced auto ER&D spending is dominated by Europe at 75-80% of total spend. APAC and North America form the remaining 20-25% of spending. As per Zinnov, outsourced auto ER&D spending should grow faster (11% CAGR) than overall ER&D spend (at 5% CAGR) in next four years to reach US$ 27-29bn, driven by: (1)need for faster rollout of new products by OEMs, (2) lack of skilled talent in new-age areas, and (3) rising software content in cars. Body-engineering is the largest component of outsourced auto ER&D spending – comprising almost 40% of spend, an area in which Tata Tech has a strong foothold. The rest of the spending is in new-age areas such as ADAS, hybrid & electric mobility, infotainment & connected, and safety systems. As per Zinnov, traditional areas like body engineering are likely to grow in mid-single digits over the next four years, while new-age areas will grow at a much higher c.12-14%.

Like its peers, auto ER&D remains a strong growth engine for Tata Tech

Within ER&D services, the auto vertical is seeing strong growth, as OEMs are pressing ahead with their announced transitions to EVs and the autonomous vehicles space. Tata Tech, deriving c.70% revenue from autos vertical, should benefit from this up-cycle. Its auto vertical has grown strongly at 44%/27%/15% in FY22/FY23/H1FY24. Tata Tech has traditionally been strong in body engineering, but it is adding capabilities in high-growth areas like EVs development, connected and autonomous cars, embedded electronics, etc. The company has the highest client concentration (top 2/top10 39%/80% of services rev) amongst Indian ER&D services peers. Recent weakness in one of the large clients in H1FY24 can impact its near-term performance. We forecast c.14% revenue CAGR in services and 15% in overall revenue over FY23-26, lower than KPIT Tech's 26% revenue CAGR, as in our view, Tata Tech's exposure to body engineering is higher than KPIT's. On margins, we believe its SG&A is likely to inch up in the medium term, as the company diversifies its revenue away from top-5/10 clients; strong margins expansion looks difficult from current levels.

Valuation at 25x FY25 PE – at discount to Indian ER&D peers

Tata Tech's IPO is coming in at a PE of 25/21x FY25/26 on our estimates, lower than Indian ER&D service providers that trade at 41x/ 35x median PE. We believe Tata Tech can be a beneficiary of strong momentum in Auto & Aero ER&D spends in near to medium term. We recommend subscribing to the IPO. Risks include (1) Slowdown in any of the top-10 clients, (2) heightened competitive intensity and (3) margins pressure due to higher SG&A spends.

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IPO details	
Issue opens	22nd November, 2023
Issue closes	24th November, 2023
Pre - issue equity shares	405.67 mn
Price band	Rs 475 -500
- Fresh issue	NA
- OFS	60.85 mn
Total number of shares offered for sale	**60.85 mn**
Issue size	Rs 29bn - 30bn
Post- issue equity shares	405.67 mn
Market cap	Rs 193bn - 203bn

KEY FINANCIALS

Rs mn	FY24E	FY25E	FY26E
Net Sales	52,810	60,489	69,098
EBIT	8,954	10,328	11,937
Net Profit	7,063	8,156	9,466
EPS, Rs	17.4	20.1	23.3
PER, x	28.7	24.9	21.4
EV/EBIT, x	21.6	18.6	15.7
P/BV, x	5.5	4.5	3.7
ROE, %	19.1	18.1	17.3

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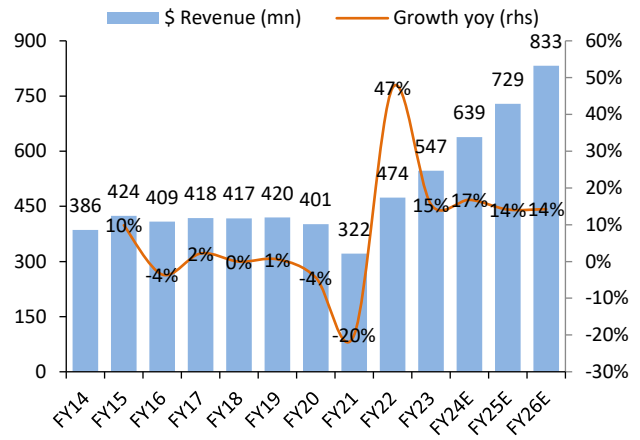
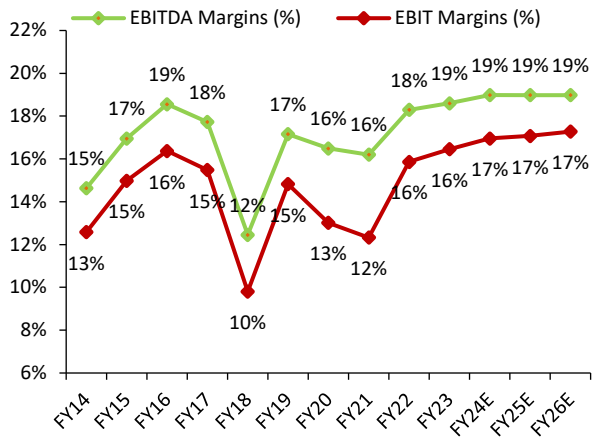
Tata Technologies – Key charts

Revenue (USD mn) growth: FY22-23 was the best for the co



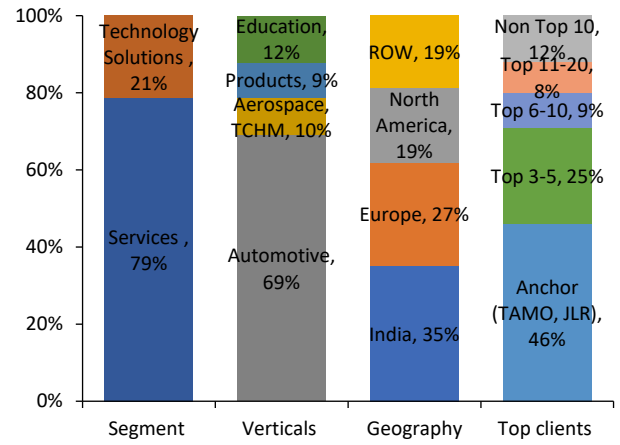
Source: Company, PhillipCapital India Research

EBIT and EBITDA margins: Recovered from FY21 lows



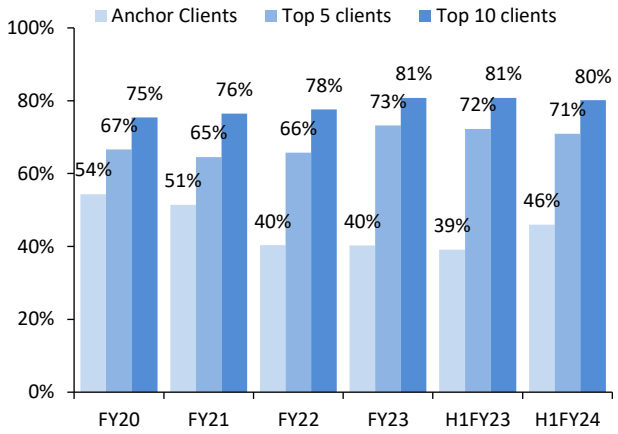
Source: Company, PhillipCapital India Research

Revenue split across categories (H1FY24)



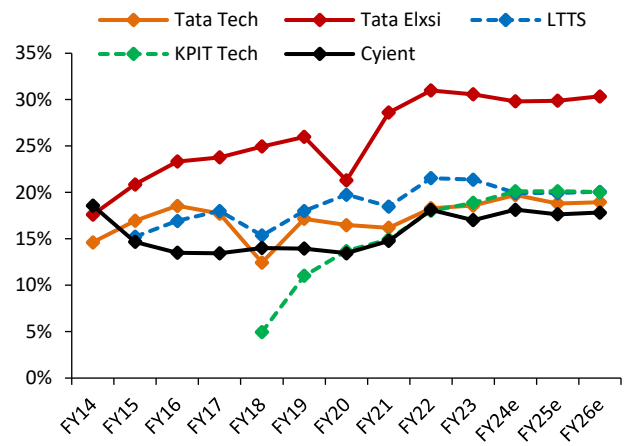
Source: Company, PhillipCapital India Research

Client concentration stays one of the highest in ER&D services



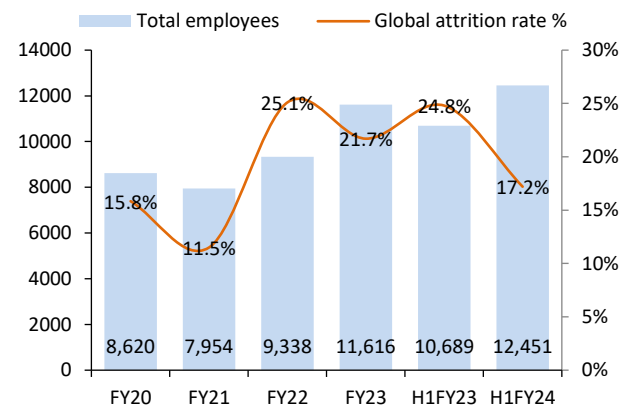
Source: Company, PhillipCapital India Research

Tata Elxsi has consistently delivered best margins amongst ER&D players; Tata Tech is in the mid-range



Source: Company, PhillipCapital India Research

Tata Tech: Employees and attrition rate (%)



Source: Company, PhillipCapital India Research

Tata Technologies IPO – Key Details

- **Issue size**: Rs 29-30bn
- **No of shares offered:** 60.85mn (c.15% of total)
- **OFS:** Entire issue is OFS.
- **Utilization of proceeds:** Since the entire issue is OFS, company will not receive any proceeds from the offer.
- **Selling Shareholders:** Tata Motors Limited (up to 11.4%), Alpha TC Holdings Pte. Ltd (up to 2.4%), Tata Capital Growth Fund I (up to 1.2%).
- **Market cap on listing:** Rs 193-203bn

Tata Tech IPO – Key details

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Post- issue equity shares	405.67 mn
Market cap	Rs 193bn - 203bn

Source: Company Data, PhillipCapital India Research

Shareholding structure – pre/post IPO

Shareholders	Pre – IPO (mn)	OFS (mn)	Post IPO (mn)	Pre IPO (% of Total)	Post IPO (% of Total)
Tata Motors Limited **(Promoter)**	262.8	46.3	216.6	64.8%	53.4%
Tata Motors Finance Limited **(Promoter)**	8.1		8.1	2.0%	2.0%
Alpha TC Holdings Pte. Ltd.	29.4	9.7	19.7	7.3%	4.9%
Tata Capital Growth Fund I	14.7	4.9	9.9	3.6%	2.4%
Other/Public Investors	90.5		151.4	22.3%	37.3%
Total	**405.7**	**60.9**	**405.7**	**100.0%**	**100.0%**

Source: Company Data, PhillipCapital India Research

Third-largest pure-play ER&D services player

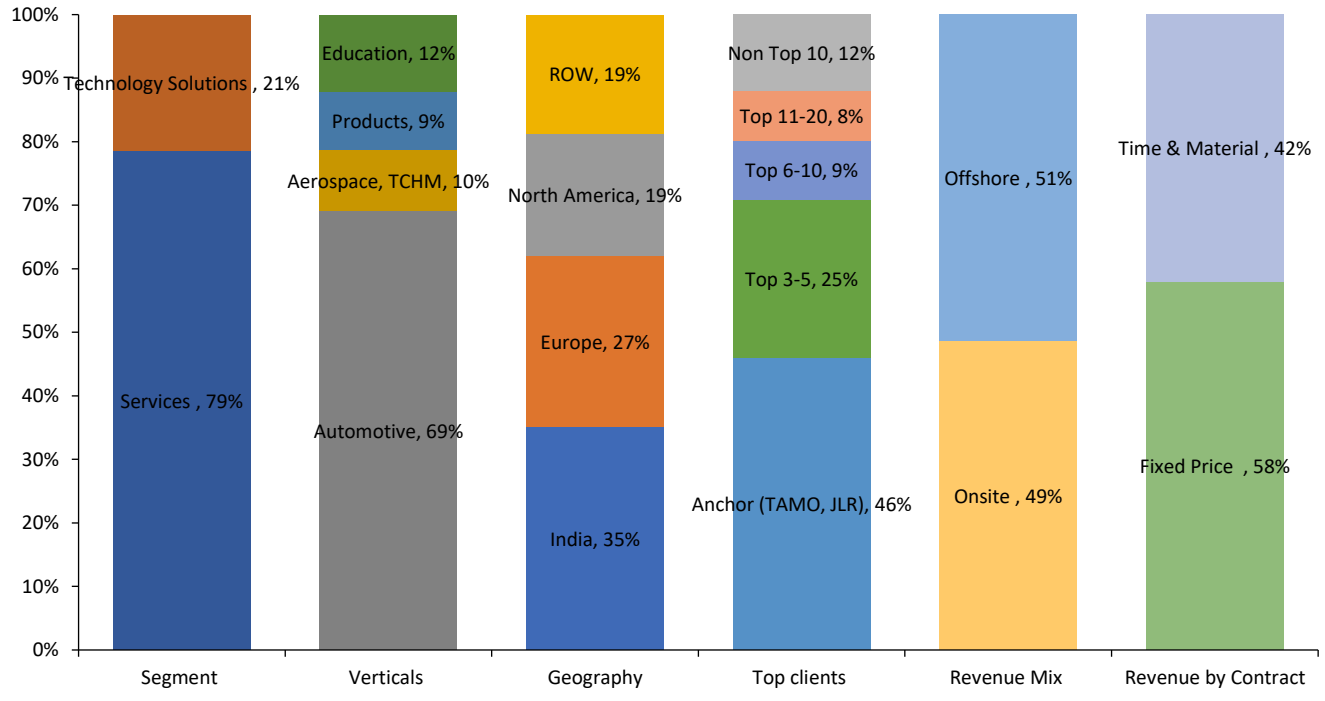
- Third-largest pure-play ER&D (Engineering, Research, and Development) services provider from India
- Revenue of US$ 547mn for FY23 (US$ 307 in H1FY24), after LTTS' US$ 990mn and Cyient's US$ 632mn.
- Was incorporated as 'Core Software Systems Private Limited' on 22 August 1994. Renamed 'Tata Technologies Limited' in 2001.
- Subsidiary of Tata Motors, which currently holds 64.8% (pre-offer) stake.
- Automotive vertical contributes 71% of its revenue in FY23 (60% in H1FY24) where it has a strong foothold and competes with key players such as KPIT Tech, Tata Elxsi, HCL Tech, Altran, Alten, and other smaller players.

Tata Tech mainly has two lines of business:

(1) **Services (79% of revenue, H1FY24):** Outsourced engineering services for automotive, aerospace and construction & heavy machinery clients.

(2) **Technology Solutions (21% of revenue, H1FY24):** This includes: (1) reselling PLM software and providing value-added services such as consulting, implementation, systems integration and support that manufacturing companies deploy to conceive, develop, build and service new products, and (2) the education business where the company provides reskilling/up-skilling solutions in manufacturing pertaining to the latest engineering and manufacturing technologies to public-sector institutions, private institutions, and enterprises – through its proprietary iGetIT platform.

Revenue split across categories (as of H1FY24)



Source: Company Data, PhillipCapital India Research

Marquee clientele: As of September 30, 2023, Tata Tech's clients are comprised of more than 35 traditional automotive OEMs and tier 1 suppliers and more than 12 new energy-vehicle companies. Its client portfolio includes anchor clients – Tata Motors and JLR, leading traditional OEMs (Airbus, McLaren, Honda, Ford, and Cooper Standard), tier -1 suppliers, and new energy vehicle companies such as VinFast; others include Cabin Interiors and Engineering Solutions, ST Engineering Aerospace. Key accounts comprise seven out of the top-10 and 12 of the top-20 global automotive ER&D spenders and five out of the 10 prominent new energy ER&D spenders globally.

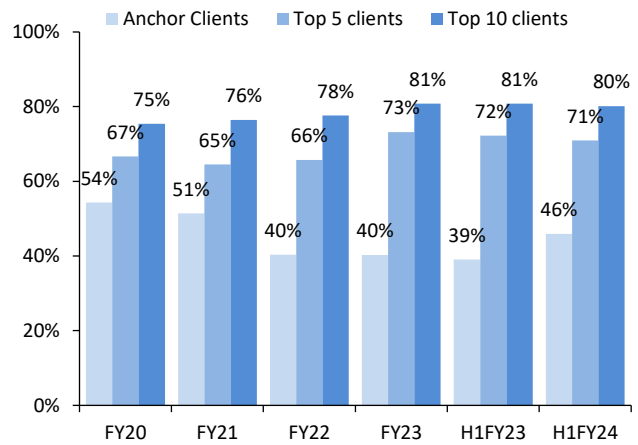
Client portfolio includes anchor clients, Tata Motors and JLR, leading traditional OEMs like McLaren, Honda, Ford, and VinFast, among others

Key accounts comprise 7 out of the top-10 and 12 of the top-20 global automotive ER&D spenders and 5 out of the 10 prominent new energy ER&D spenders globally

Anchor clients: Tata Tech has a strong relationship with its anchor clients (Tata Motors and JLR) with 40% of services revenue in FY23 (46% in H1FY24) coming from these two accounts. It has been working with JLR since 2010. Specific offerings such as full vehicle proposition and light weight structures (esp. for EVs) have been incubated and developed with Tata Motors and JLR. While anchor clients remain important for Tata Tech, they have not been a major growth driver for the company from FY20 to FY23. Revenue contribution has fallen from 54% of revenue in FY20 to 40% in FY23. However, in H1FY24, it bounced back to 46% with anchor clients growing 36% yoy, significantly above the company's overall growth of 15% yoy in USD terms.

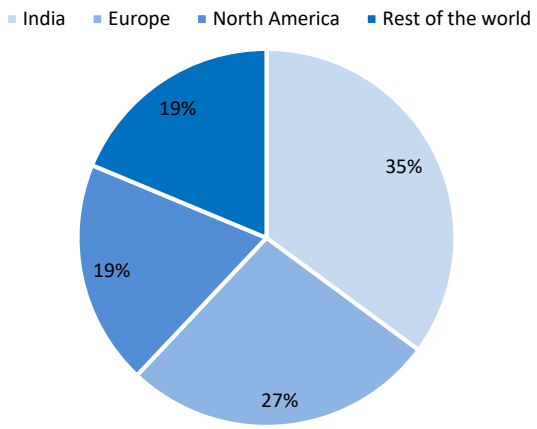
Tata Tech derives 80% of revenue from its top-10 clients, where anchor clients (Tata Motors and JLR) contribute 46% of revenue and Vinfast (Vietnam-based, new-age OEM) contributes substantially within the top 3-5. Unlike its peers, who are more focused on North America and Europe, Tata Tech has higher contribution from India and RoW than its peers given its exposure to Tata Motors and Vinfast.

Top-5, top-10 clients (in services)



Source: Company, PhillipCapital India Research

Revenue by geography (H1FY24)



Source: Company, PhillipCapital India Research

Three acquisitions so far

In its 29 years of existence, Tata Tech has completed three acquisitions to expand capabilities in automotive & aerospace ER&D services and to expand its delivery footprint in Europe.

- In 2005, Tata Tech expanded through the acquisition of INCAT International plc, a global product solutions and services provider serving the automotive and aerospace industries worldwide.
- In 2013, it acquired Cambric Corporation, adding Romanian delivery centres to its portfolio, and expanding industrial machinery engineering capabilities.
- In 2017, it acquired Escenda Engineering AB in Sweden, further expanding its global footprint.

Tata Tech – key acquisitions

Year	Name	Country	Verticals	Description	Consideration (US$mn)
2005	INCAT International	UK	Automotive and aerospace	Global products, solutions and services provider serving the automotive and aerospace industries; Incat services customers in North America, Europe and Asia-Pacific in the automobile, aerospace and engineering industries.	NA
2013	Cambric Corp	US	Industrial machinery	Cambric is a US-headquartered company with a significant footprint in Eastern Europe and has three development centres in Romania catering to some of the world's marquee heavy machinery, agricultural, off-highway and automotive companies.	32.5
2017	Escenda Engineering	Sweden	Automotive	Swedish engineering and design specialist; Escenda, based in Gothenburg, is a leader in product engineering and design for the country's world leading automotive sector.	10.0

Source: Company Data, PhillipCapital India Research

Facilities: 19 delivery centres across key locations

Tata Tech's registered office is in Pune. The company has 19 delivery centres spread across key locations in India such as Pune, Thane, Bangalore, and Gurgaon, as well as a global presence in China, Germany, Japan, Romania, Singapore, Sweden, Thailand, United Kingdom, United States of America, and France.

Tata Tech – Employee split – onsite & offshore – as of September 30, 2023

Source: Company Data, PhillipCapital India Research

Services: Auto ER&D contributes majorly to services

Within services, Tata Tech provides outsourced engineering services and digital transformation services to automotive, aerospace and construction heavy machinery clients. It helps its clients conceive, design, develop and deliver improved products. Automotive contributed 71% of its revenue in FY23 while aerospace, construction heavy machinery contributed c.10%. Within automotive, Tata Tech provides engineering services to global auto OEMs and their tier-1 suppliers. The company leverages its expertise in auto ER&D to serve global clients in aerospace and construction heavy machinery.

Tata Tech mainly has two lines of business: (1) ER&D Services (79% of revenue, H1FY24), and (2) technology solutions (21% of revenue, H1FY24).

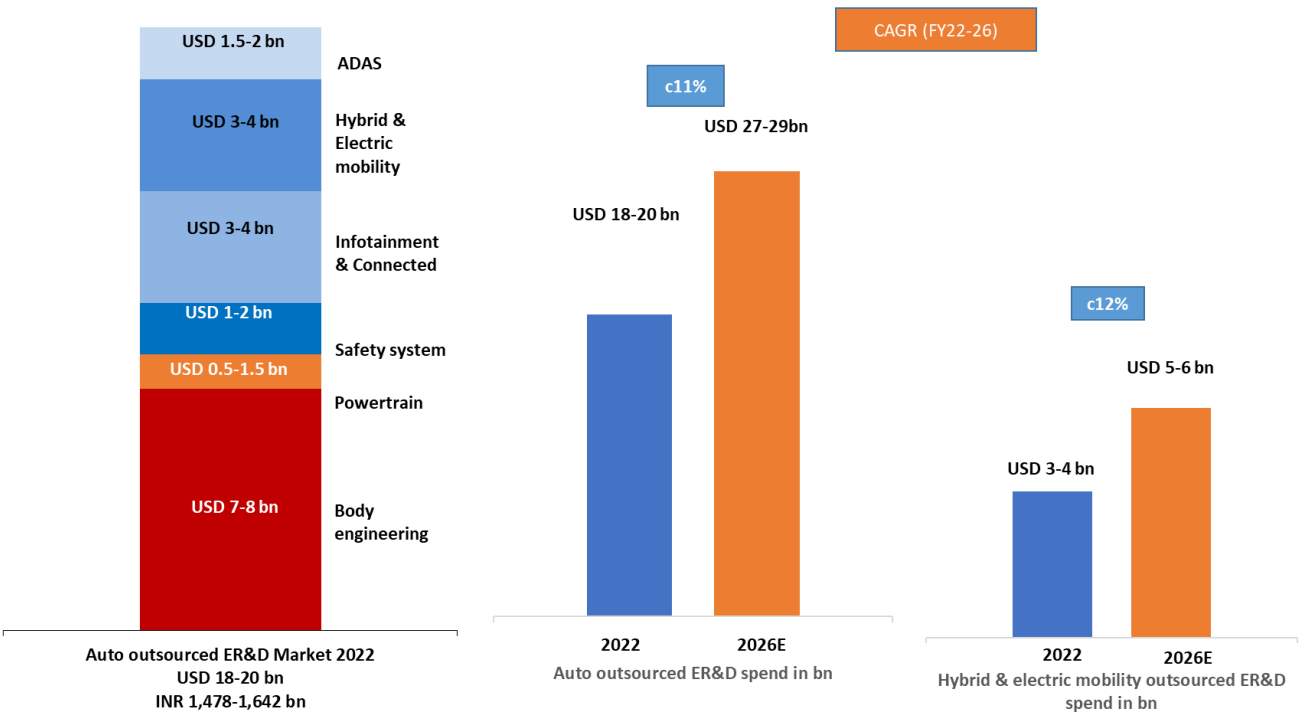
Automotive: Service offerings more focused on body engineering; successfully transitioning to EV development

Tata Tech's automotive ER&D (Engineering, Research, and Development) services span the entire automotive value-chain and include concepts such as design and styling, tearing down and benchmarking ("TDBM"), vehicle architecture, body engineering, chassis engineering, virtual validation, ePowertrain electrical and electronics, connected, manufacturing engineering, test and validation and vehicle launch.

Diversifying into connected cars and autonomous systems from traditional stronghold of body engineering

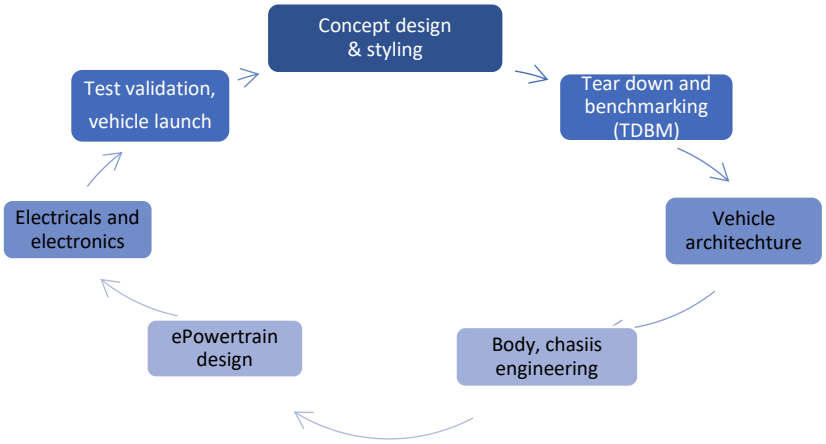
Tata Tech has traditionally been strong in body engineering, the largest pie of outsourced auto ER&D spending (see chart below) – 40% of total spend. As auto OEMs focus on new-age ACES initiatives, they seek to outsource body-engineering segments completely to third-party service providers. The company is also expanding its capabilities and offerings into new-age areas such as connected cars, L2 and L3 autonomous driver assistance systems, embedded electronics, EV development design, vehicle engineering and integration, prototype build & test program management. A significant part of its automotive revenue (46% of services revenue in H1FY24) came from anchor clients – Tata Motors and JLR. Apart from them, the company has clients such as Vinfast, McLaren, Honda, Ford within automotive, and Airbus, Cooper Standard in aerospace.

Automotive addressed spend: Body engineering is the largest outsourced segment; new-age areas are growing much faster than the overall market



Source: Tata Technologies, PhillipCapital India Research

Tata Tech's auto ER&D service offerings – from concept design to vehicle launch



Source: Company Data, PhillipCapital India Research

Expertise in EV development; specializes in light-weighting solutions

One common requirement of all EVs is a lightweight body structure, given additional weights of batteries. Tata Tech has an established a presence in this segment and offers solutions in light-weighting that help auto OEMs in faster product development and to launch products within competitive timelines. For example, under Tata Tech's expertise, JLR adopted aluminium and lightweight steel for its EVs. Such reference-able projects have strengthened its relationships with established OEMs and have led to fresh client acquisitions in new energy vehicles companies.

Tata Tech's prowess in EV development for traditional and new age auto OEMs is one of its strong USPs. It offers end-to-end solutions for EV development – starting from vehicle concept and engineering design, product benchmarking, and electric vehicle modular platform (eVMP) for accelerating product development timelines. It has been ranked first among all India-based global ER&S service providers, and second globally for electrification services in CY22 Zinnov Zones.

Some of its notable electrification projects include: eMo (2010-11), JLR electrification (mild hybrids) (2013-2014), Polestar 1 (2016), Chinese OEM EV programs (2017-18), a project for a North American EV manufacturer (2018), a Chinese OEM EV program (2018), Tata Motors Tigor ICE to EV (2019-20), Tata Tiago ICE to EV (2023), a British OEM EV program (2020-21) and VinFast VF 8 and VF 9 (2022-23).

Tata Tech's eVMP platform helped Vinfast launch EVs in record time

Tata Tech's eVMP (electric vehicle modular) platform helps OEMs (traditional and new age OEMs) in faster compatibility checks to support multiple system selections, high uniformity, scalability, and de-risking through virtual validation. The virtual-platform approach reduces development timelines and improves cost competitiveness. Tata Tech's platform provides go-to-market systems and solutions for new energy vehicle companies that do not have their own BEV platform. It also reduces time-to-market, allows rapid configuration, and can be modified to a client's specification.

Tata Tech's eVMP platform accelerates EV development, thus reducing time-to-market and enhancing cost competitiveness

Tata Tech leveraged its eVMP platform to accelerate the development timeline for VinFast, which resulted in a significant reduction in the latter's product development time for its BEV – in record time of 22 months vs. traditional vehicle development timelines of 36-48 months. Tata Tech was involved in taking full ownership of the electrical and embedded design, development, full system integration, build, and after-launch support.

Tata Tech Service Offering

Areas of Expertise	Description	Digital/Mechanical Engineering	Work Done For
Concept design	INCLUDING ideation, concept design, studio engineering, surface design (computer aided styling (CAS) and Class-A) and prototyping	Digital	Swedish Luxury OEM
Tear Down and Benchmarking	Dis-assembling and carrying out competitive benchmarking of vehicles, should cost studies, value analysis and value engineering (VAVE) studies for cost and weight optimization, alternative material studies and proposals and maintaining correlated databases of materials, parts and assemblies	Mechanical	Tata Motors
Vehicle Architecture	Development of the vehicle architecture (base layout structure of the vehicle) based on the overall attributes from marketing, the regulatory requirements for target markets, competitive benchmarks to output the initial engineering concept and high-level engineering	Digital & mechanical	VinFast
Body Engineering	Detailed engineering of all body parts (mainly divided into interiors including HVAC, exteriors, body-in-white, and closures), design failure mode and effect analysis studies, geometric dimensioning and tolerancing studies, supplier management for full service suppliers, material studies and alternative material proposals, computer aided engineering studies and vehicle crash including passive and active safety	Digital & Mechanical	Chinese new energy OEM
Chassis Engineering	Including the design and development of chassis systems such as brakes, steering, suspension, wheels and types and powertrain systems like engine, cooling, fuel and transmission	Mechanical	British Luxury OEM
Virtual Validation	Including CAE virtual simulation of components, sub-systems, systems and full vehicle analysis for durability, fatigue, crash and visual simulation.	Digital	VinFast
ePowertrain	Design and development of components like inverters, DC-DC convertors, high-power electric motor, electric drive unit) and mounting, power delivery module (PDM), embedded software development and testing, application and integration of components (motors, batteries, invertors) and systems into vehicles and machines and calibration activities	Digital & Mechanical	British Tier 1
Electrical and Electronics	Electrical architecture system design, circuit schematic design, simulation, wiring harness 3D routing, diagnostics, electrical and electronics integration and supplier management	Digital & Mechanical	VinFast
eVMP	Electric Vehicle Modular Platform (eVMP) – for accelerating product development timelines for new age OEMs which don't have BEV platform	Digital	VinFast
Build and Test	Including support for building prototypes, soft tooling of parts, supplier management and integration support and testing the prototypes for assembly and full vehicles including climate tests. Includes leveraging test facilities at external partners to support full vehicle testing.	Mechanical	Tata Motors
Product Launch	Including support during the launch phases of the vehicle, vehicle integration support, supplier interaction for issue resolution and concurrent engineering to fix assembly issues, feedback and implementation of design changes	Digital & Mechanical	Swedish luxury manufacturer

Source: Company Data, PhillipCapital India Research

Examples of work done

Year	Category	Client	Work done
2016	Hybrid car development	Swedish premium car OEM (maybe Volvo)	▪ Taking full ownership of vehicle engineering, design and development, developing the execution model for the turnkey program delivery and the required full system integration. ▪ Delivered all the top-hat engineering, complete with build and launch support and complete electrical integration
NA	**Special Vehicle (SV) Programmes**	**JLR**	▪ Engineer and deliver multiple Special Vehicle ("SV") programs. ▪ Tata Tech global delivery model and capabilities enabled the client to optimize resources and enabled them to deliver multiple vehicle programs simultaneously.
NA	integration between applications from PLM to digital commerce	North American EV Startup	▪ A North-American EV start-up specializing in sport utility vehicles, and pick-up trucks engaged co to help them build the complete enterprise architecture with integration between applications from PLM to the digital commerce platform, including an ERP software. ▪ Able to achieve this due to our technical expertise in PLM, ERP software and MES combined with our deep understanding of the automotive industry
2021-23	Converting ICE vehicles to EV	**Tata Motors**	▪ Complete ownership for design, packaging and integration of EV components like battery, motor, charging socket and respective electronics in the base car. ▪ Company not only converted the vehicle into an EV, but also engineered it to ensure it that it met the stringent Global New Car Assessment Programme (GNCAP) 4 star safety ratings. The project was completed in 18 months and complied with all of the client's quality requirements. ▪ To date, co has completed and launched two ICE to EV conversion vehicles – Tata Tigor EV (2021) and Tata Tiago EV (2023)

Source: Company data, PhillipCapital India Research

Tata technology – key platforms / IPs

Key Platforms/IP	Vertical	About the platform
EVMP – Electric Vehicle Modular Platform	Automotive	▪ eVMP is an accelerator to enable creation of scalable and flexible vehicle platforms for OEMs. ▪ Virtual platform approach helps in reducing development timelines, improving cost competitiveness, parts and scalability and de-risking through virtual validation. ▪ The company's platform provides go-to-market systems and solutions for new energy vehicle companies without their own BEV platform.
AMP.IoT – Industrial IoT	Manufacturing	▪ AMP.IOT is an IOT platform for improving traceability and efficiency in manufacturing operations, enabling plant monitoring and setting up a command center.
TRACE – Predictive Maintenance Solution	Automotive	▪ TRACE is connected vehicle cloud platform to provide solutions across safety, vehicle management, remote applications, fleet management, OEMs, navigation and entertainment.
iGetIT – Upskilling platform	Education	▪ iGetIT platform is an industrial up-skilling platform offered to enterprise clients and public sector institutions in India to train engineering, polytechnic and industrial training institute (ITI) students. ▪ The platform has over 25,000 hands-on exercises and over 2,000 courses across various skill sets, including design thinking and multiple computer aided design ("CAD") software.

Source: Company Data, PhillipCapital India Research

Successfully diversified its portfolio, with a focus on EV development

Tata Technology has historically been very strong in traditional area of body engineering, and this expertise has helped it to win large deals beyond the Tata Motors and JLR ecosystem. As per our interaction with Zinnov, the company has successfully pivoted from a pure-play mechanical/body engineering player, by adding capabilities in the EV development. It has a relatively diversified portfolio of late, expanding its capabilities in new-age areas such as ADAS, infotainment and connected, and software development. As per Zinnov, the key prime differentiator for Tata Tech is its electrification capabilities (body light-weighting, battery management system or BMS, e-powertrain design, etc.) which is likely to set it apart from other automotive ER&D players.

Automotive ER&D a key catalyst due to heightened spending and disruption…

Automotive ER&D has been the key growth driver for the company in last two years with company's contribution from automotive vertical increasing from 67% of revenue in FY20 to 71% as of FY23. In H1FY24, the company's auto vertical grew 15% yoy in USD revenue terms after growing at 44% / 27% yoy in FY22/23. Its growth in automotive is in line with other ER&D players, who are also seeing strong momentum, given heightened spending by auto OEMs and tier-1s, driven by the disruption that the industry is going through.

….within which Vinfast was/is a key driver for Tata Tech in FY22/23 and anchor clients in H1FY24

We believe a key driver of the company's growth in last two years is Vinfast, one of its top-5 clients. For Vinfast, Tata Tech had been engaged in multiple full-vehicle turnkey models such as VF6, VF7, VF8 and VF9. While anchor clients remain important for the company, they have not been growth drivers since the last three years; their revenue contribution has fallen to 40% in FY23 from 54% in FY20. However, in H1FY24, anchor clients have grown 36% yoy in USD revenue, higher than company's growth of 15% during the same time.

Excluding Vinfast and anchor clients, Tata Tech's presence in other auto OEMs remains small compared to peers, which we believe is an opportunity for it to cross sell and upsell its services.

Automotive has been key growth driver in services

	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Revenue (in US$mn)						
Services segment	**330**	**258**	**356**	**437**	**209**	**241**
Automotive	269	212	305	388	184	212
Others (Aerospace, TCHM)	61	46	50	49	25	29
Growth (% yoy)						
Services segment		**-22%**	**38%**	**23%**		**15%**
Automotive		*-21%*	*44%*	27%		15%
Others		*-25%*	*9%*	-1%		17%

Source: Company Data, PhillipCapital India Research

Revenue (in US$mn)	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Anchor	179	133	143	176	82	111
Top 3-5	41	34	90	144	69	60
Top 5 clients	220	167	234	320	151	171
Top 6-10 clients	29	31	42	33	18	22
Growth (% yoy)						
Anchor		-26%	8%	23%		36%
Top 3-5			167%	59%		-13%
Top 5 clients		-24%	40%	37%		13%
Top 6-10 clients			37%	-21%		24%

Source: Company Data, PhillipCapital India Research

Aerospace – smaller exposure versus peers

Tata Tech has been serving aerospace customers for many years, but its exposure to this vertical is smaller than some its peers such as Cyient and HCL Tech. Traditionally, this has included product and tooling design, interiors & seating layouts, and enterprise optimization through PLM (Product Lifecycle Management) and ERP (Enterprise Resource Planning) deployment services. More recently, the company has leveraged its deep automotive domain knowledge in manufacturing tooling to enter the aerospace MRO (Maintenance, Repair, and Overhaul) sector. Current aerospace engineering services include concept design, concept and feasibility studies (fuselage, wings, empennage, landing gears, control surfaces and engine parts), industrialization, luxury customization, detail design, virtual validation, MRO/tooling, manufacturing support, sales and aftermarket service and technical publications.

In last two years, TCHM and aerospace have grown lower than overall services

Its clients are primarily tier-1 suppliers and OEMs. For example, Tata Tech has been selected as an Engineering, Manufacturing, Engineering, and Client Services Strategic Supplier ("EMES3") by Airbus, a significant feat for the company, given relatively smaller presence in the vertical.

With aerospace, opportunities for ER&D services providers include – (1) focus on narrow-body aircrafts by OEMs presenting large-body engineering opportunities, a mature segment in outsourcing, (2) passenger aircraft to freight aircraft conversion, (3) asset tracking, and (4) digital MRO. As air travel keeps growing, the aerospace industry continues to embrace more digitalization and advanced technologies, increasing opportunities for players like Tata Technologies.

Competition: Within aerospace, Tata Tech faces competition from Indian ER&D services providers such as Cyient & HCL Tech, European Service providers like Alten, Akka, & Capgemini, and other unlisted players.

Transportation and construction heavy machinery - TCHM

In the TCHM vertical, the company provides services to equipment manufacturers on an extensive range of products, including earth moving and construction equipment, mining, agricultural and forestry heavy machinery. The company is a specialist in mechanical engineering, product design, electrical, electronics and embedded design, control systems, powertrain and hydraulics. It provides support and solutions in areas such as styling, benchmarking, concept design, detail design and validation, electrical development, hydraulics development, vehicle integration, powertrain integration, cabs and bodies, manufacturing support, engine installation, machine localization, powertrain development, emission compliance, hydraulic systems, electrical system and structures.

Tata Tech is also leveraging its expertise in automotive ER&D to win business in TCHM

Others: Apart from Aerospace and TCHM, the company is also developing additional offerings to expand our operations across other relevant industries, such as industrial and medical equipment sectors.

Competition: Within TCHM, Tata Tech faces competition from LTTS from Indian pure-play ER&D players.

Aerospace and TCHM performance volatile vs. automotive

	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Revenue (in US$mn)						
Services segment	**330**	**258**	**356**	**437**	**209**	**241**
Automotive	269	212	305	388	184	212
Others (Aerospace, TCHM)	61	46	50	49	25	29
Growth (% yoy)						
Services segment		**-22%**	**38%**	**23%**		**15%**
Automotive		*-21%*	*44%*	27%		15%
Others		*-25%*	*9%*	-1%		17%

Source: Company Data, PhillipCapital India Research

Revenue (in US$mn)	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Anchor	179	133	143	176	82	111
Top 3-5	41	34	90	144	69	60
Top 5 clients	220	167	234	320	151	171
Top 6-10 clients	29	31	42	33	18	22
Growth (% yoy)						
Anchor		-26%	8%	23%		36%
Top 3-5			167%	59%		-13%
Top 5 clients		-24%	40%	37%		13%
Top 6-10 clients			37%	-21%		24%

Source: Company Data, PhillipCapital India Research

Technology solutions – volatile performance

Within technology solutions, the company has two revenue streams – products and education business.

Within products, the company resells third-party software applications, primarily product lifecycle management (PLM) software of Dassault Systems, Siemens, and Autoworks, and provides value-added services such as consulting, implementation, systems integration and support. The revenue has been seen a flattish trend (annualized revenue of around US$ 60mn) in the last three years (see table below) as this is a low-end software reselling work as compared high end ER&D services and also has low margins with limited bargaining power from service providers in terms of increases in prices or upselling or cross-selling opportunities.

Within education, the company focuses on addressing academia and corporate skilling requirements by leveraging its manufacturing domain knowledge and the iGetIT offering (online learning platform). It helps its clients (enterprise clients, PSU, state govt institutes like ITIs) to train their employees/students on latest manufacturing technologies. Its iGetIT platform is based on a blended learning methodology that offers self-paced courses on more than 2,000 mechanical computer aided design ("MCAD"), PLM and niche skill sets. Tata Tech is the only company within Indian IT and ER&D services to be engaged in education, given the volatile nature of the business and no certainty on renewals (see table below).

Technology solutions – volatile performance due to education sub segment

Technology solutions	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Technology solutions Revenue (USD mn)	**72**	**63**	**118**	**109**	**31**	**66**
Products	68	57	**58**	**61**	**24**	**28**
Education	3	6	**60**	**48**	**8**	**37**
Technology solutions segment (yoy %)		**-12%**	**87%**	**-7%**	**-**	**109%**
Products		*-16%*	*1%*	*6%*	-	*21%*
Education		*80%*	*939%*	*-20%*	-	*373%*

Source: Company Data, PhillipCapital India Research

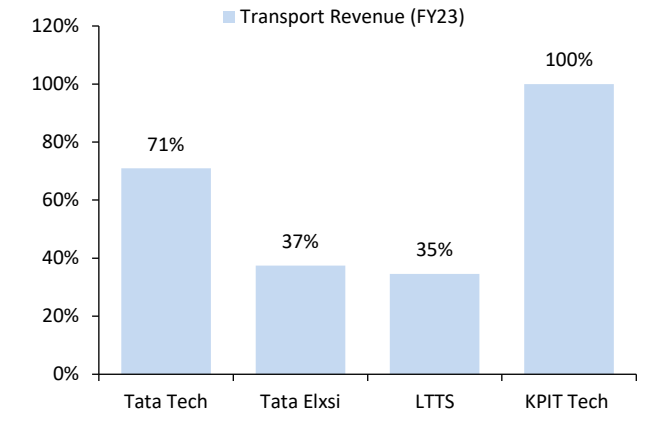
ER&D services: Revenue growth peer comparison

Tata Tech is not as diversified as peers; high auto vertical concentration

Tata Tech is primarily is focused on its automotive vertical, which generates 71% of its revenue – very similar to KPIT Tech. As the R&D spending within automotive is concentrated within the top 20-25 OEMs, there is high client concentration in both KPIT Tech and Tata Tech. Other ER&D players are much more diversified in terms of verticals, resulting in low client concentration. Tata Technologies is the third largest pure play ER&D player in terms of revenue size after LTTS and Cyient.

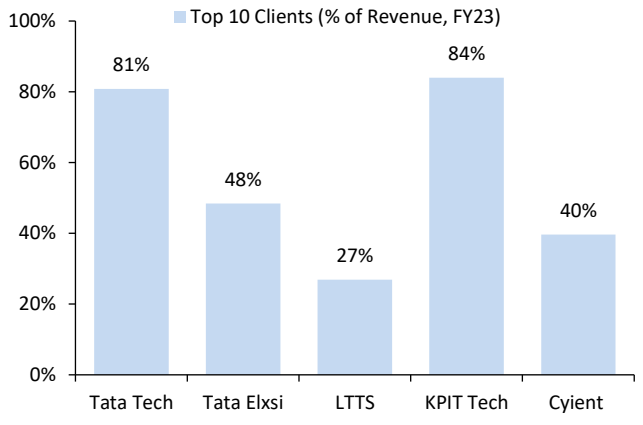
Tata Tech has historically underperformed peers on growth

Tata Tech, KPIT Tech highly dependent on transport revenue



Source: PhillipCapital India Research, Company Data

Client concentration remains high in Tata Tech / KPIT Tech



Source: PhillipCapital India Research, Company Data
Note: For KPIT Tech, its Top 25 client concentration

Higher dependence on anchor clients and one vertical led to underperformance…

Historically, Tata Tech has underperformed other pure play ER&D service providers. From FY14-20, its revenue has been in the range of US$ 380-420mn where others have outgrown it significantly. From FY14-23, its USD revenue CAGR was just 4% as compared to 6-17% CAGR for its peers (as per available data). We believe the likely reasons for Tata Tech's low growth are: (1) high dependence on anchor clients (Tata Motors and JLR), (2) high concentration in just one vertical (automotive) as compared to other peers who are diversified, and (3) focus on body engineering, a low growth area as compared to advanced areas like embedded engineering, autonomous driving, connected car, EV development etc.

…but in the last two years, with changes, revenue growth has picked up significantly

In the last two years, we have seen a significant pickup in its revenue growth, as the post pandemic recovery was quite strong across the board for ER&D players. The company successfully transitioned from being a body engineering player to adding capabilities in new-age areas such as ePowertrain, body light weighting, end-to-end product development for new age OEMs, and added clients such as Vinfast which also resulted in strong growth.

Revenue size – Tata Tech is the third-largest pure-play ER&D services player after LTTS and Cyient

Revenue (US$mn)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24e	FY25e	FY26e
Tata Technologies	**386**	**424**	**409**	**418**	**417**	**420**	**401**	**321**	**473**	**547**	**639**	**729**	**833**
LTTS		428	468	484	580	723	787	737	880	990	1,163	1,288	1,432
Cyient (Services)	363	447	432	483	546	580	551	461	504	632	724	804	900
KPIT Tech				164	207	271	304	275	328	418	583	700	839
Tata Elxsi*	128	139	164	184	215	228	226	247	331	390	441	534	632

Source: Company Data, PhillipCapital India Research; *Tata Elxsi - Bloomberg Consensus estimates for FY24-26

Tata Tech has underperformed its peers on growth from FY14-21, but FY22-23 growth was strong

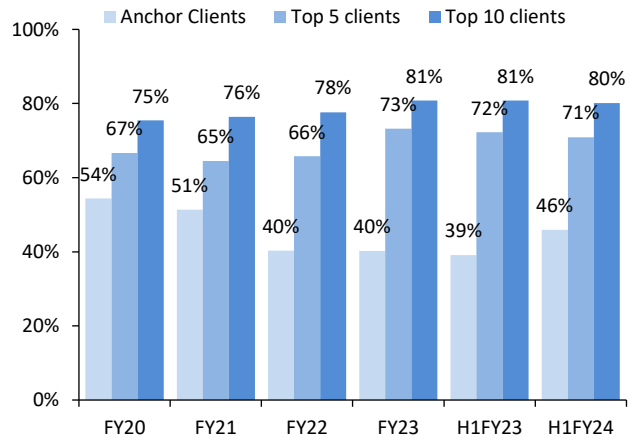
Revenue growth (% yoy)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24e	FY25e	FY26e
Tata Technologies		9.9%	-3.6%	2.2%	0.0%	0.6%	-4.4%	-20.0%	47.3%	15.5%	16.8%	14.1%	14.2%
LTTS			9.4%	3.4%	19.9%	24.6%	8.8%	-6.4%	19.5%	12.4%	17.5%	10.8%	11.2%
Cyient (Services)		23.0%	-3.3%	11.9%	12.8%	6.4%	-5.1%	-16.3%	9.2%	25.6%	14.5%	11.0%	11.9%
KPIT Tech					26.4%	30.9%	12.1%	-9.6%	19.5%	27.4%	39.4%	20.0%	20.0%
Tata Elxsi*		8.3%	18.3%	12.0%	17.0%	6.2%	-0.9%	9.0%	34.2%	17.7%	13.2%	21.0%	18.4%

Source: Company Data, PhillipCapital India Research, *Tata Elxsi - Bloomberg Consensus estimates for FY24-26

Top client concentration remains high in Tata Tech

Tata Technologies has one of the highest client concentrations amongst global pure-play ER&D service providers and highest amongst Indian ER&D service providers. In FY23, significant part of automotive revenue was from anchor clients – Tata Motors and JLR. Vinfast has become a key client in last two years and also is one of the top-5 clients of the company. Apart from that, the company has clients such as McLaren, Honda, Ford within Automotive and Airbus, Cooper Standard within Aerospace, but their contribution remains low currently.

Tata Tech client concentration remains highest amongst Indian ER&D service providers



Source: Company Data, PhillipCapital India Research

Top 3-5 clients driving majority of growth for the company over last two years; Anchor clients grown well in H1FY24

Revenue (in US$mn)	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Anchor	179	133	143	176	82	111
Top 3-5	41	34	90	144	69	60
Top 5 clients	220	167	234	320	151	171
Top 6-10 clients	29	31	42	33	18	22
Growth (% yoy)						
Anchor		-26%	8%	23%		36%
Top 3-5			167%	59%		-13%
Top 5 clients		-24%	40%	37%		13%
Top 6-10 clients			37%	-21%		24%

Source: Company Data, PhillipCapital India Research

Top client revenue concentration (within services)

Client Concentration (services, USD mn)	FY20	FY21	FY22	FY23	H1FY23	H1FY24
Anchor	179	133	143	176	82	111
Top 3-5	**41**	**34**	**90**	**144**	**69**	**60**
Top 5 clients	**220**	**167**	**234**	**320**	**151**	**171**
Top 6-10 clients	29	31	42	33	18	22
Top 10 clients	**249**	**198**	**276**	**353**	**169**	**193**
Top 11-20	27	22	33	33	15	19
Top 20 clients	276	219	309	387	184	212
Non Top 20	54	39	46	51	25	29
Total Services segment (US$mn)	330	258	356	437	209	241

Source: Company Data, PhillipCapital India Research

Top clients are driving the growth in Tata Tech

Client Concentration, Growth YoY	FY21	FY22	FY23	H1FY24
Anchor	**-26%**	**8%**	**23%**	**36%**
Top 3-5		167%	59%	-13%
Top 5 clients	-24%	40%	37%	13%
Top 6-10 clients		37%	-21%	24%
Top 10 clients	**-21%**	**40%**	**28%**	**14%**
Top 11-20		53%	0%	23%
Top 20 clients	**-21%**	**41%**	**25%**	**15%**
Non-Top 20		18%	10%	18%
Services segment total	**-22%**	**38%**	23%	15%

Source: Company Data, PhillipCapital India Research

Vinfast is driving the growth in the last two years

Vinfast, a Southeast Asian electric vehicle OEM, has been a client of Tata Tech since 2018. However, in last few years, it has ramped up significantly and has become one of its top-5 clients, contributing 73% of revenue (in FY23, of which anchor-client contribution is at 40%. This suggests top 3-5 clients contributed c.33% of revenue. In its DRHP, Tata Tech has mentioned that it has been instrumental in the development of Vinfast's key models – i.e., VF6, VF7, VF8, VF9.

Some of the work done by Tata Tech for Vinfast:

- **EV development leveraging eVMP Platform:** Tata Tech leveraged its eVMP platform to accelerate the development timeline for VinFast. This has resulted in material reduction in product development time for first BEV – among the fastest in the industry for VinFast.
- **Product simulation:** Computer Aided Engineering (CAE) including CAE virtual simulation of components, sub-systems, systems and full vehicle analysis for durability, fatigue, crash and visual simulation (digital mock-up and analysis).
- **Electrical and electronics** – including electrical architecture system design, circuit schematic design, simulation, wiring harness 3D routing, diagnostics, electrical and electronics integration and supplier management (e.g., VinFast).

Expect mid-teens growth over FY23-26

We are assuming revenue growth of 12% in services for FY24, down from 23% yoy growth in FY23. Recent weakness in one of the large clients in H1FY24 can impact near-term performance of the company. Growth will remain strong in FY25-26 due to positive ER&D spending environment in auto and aero verticals, where we expect growth within its key clients including anchor clients to remain strong. We forecast c.14% revenue CAGR in services and 15% in overall revenue over FY23-26, lower than KPIT Tech's 26% revenue CAGR, as in our view, Tata Tech's exposure to body engineering (a legacy area) is higher than KPIT's. Excluding auto, we expect decent momentum in aerospace and TCHM verticals. Technology solutions remains volatile.

Tata Tech revenue projections

Revenue Projection (US$mn)	FY20	FY21	FY22	FY23	FY24E	FY25E	FY26E
Services Revenue	**330**	**259**	**356**	**437**	**491**	**566**	**654**
yoy%		-21.6%	37.6%	23.0%	12.2%	15.4%	15.4%
Technology solutions	**72**	**63**	**118**	**109**	**148**	**162**	**179**
yoy%		-12.0%	86.9%	-7.2%	35.0%	10.0%	10.0%
Total Revenue	**401**	**322**	**474**	**547**	**639**	**729**	**833**
Yoy %		-19.9%	47.3%	15.5%	16.8%	14.1%	14.2%

Source: PhillipCapital India Research, Company Data

ER&D services margins: Peer comparison

Tata Tech's EBITDA margins have been stable at 16-18% in last few years. Within ER&D, Tata Elxsi leads the pack with highest margins (28% EBIT margins vs. 13-19% for others), as it works in advanced areas within automotive, media and healthcare verticals.

EBIT Margins comparison across pure play ER&D players

EBIT Margins (%)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Tata Technologies	**12.6%**	**15.0%**	**16.4%**	**15.5%**	**9.8%**	**14.8%**	**13.0%**	**12.3%**	**15.9%**	**16.5%**
Tata Elxsi	13.1%	17.9%	20.9%	21.6%	23.1%	24.4%	18.6%	26.2%	28.8%	28.0%
LTTS		13.4%	15.0%	16.1%	13.0%	16.0%	16.5%	14.5%	18.3%	18.5%
KPIT Tech						7.1%	8.7%	8.4%	13.1%	14.5%
Cyient *	15.3%	12.1%	10.6%	10.8%	11.3%	11.5%	9.2%	10.1%	13.9%	12.8%

Source: Company Data, PhillipCapital India Research, *Cyient including DLM

Tata Tech's SG&A (Selling, General, and Administrative) expenses reveal two interesting facts: (1) one of the lowest SG&A (as % of revenue) amongst peers excluding sub-contracting costs, and (2) highest sub-contracting costs (as % of revenue) amongst peers. Historically, Tata Tech has been dependent on anchor clients – Tata group companies – so the need for investing in sales and marketing was not very strong in our view. But as the company diversifies away from anchor clients and expands its relationship with top auto OEMs, as well as grows in emerging areas such as aerospace, TCHM (Transportation, Construction, and Heavy Machinery), medical etc., we believe investments in SG&A, particularly S&M (Sales and Marketing) are likely to increase.

SG&A comparison: Tata Tech has one of the lowest SG&A expenses (excluding-sub con)

SG&A as % of Rev. (ex-Sub con)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Tata Technologies	**8%**	**8%**	**8%**	**10%**	**11%**	**11%**	**10%**	**8%**	**8%**	**9%**
Tata Elxsi	30%	25%	19%	18%	17%	17%	15%	11%	11%	13%
LTTS			15%	15%	12%	9%	9%	7%	7%	8%
KPIT Tech						23%	12%	12%	12%	13%
Cyient	18%	23%	22%	21%	21%	21%	21%	19%	19%	
Average SG&A	19%	18%	16%	16%	16%	16%	14%	12%	12%	11%
Median	18%	23%	17%	16%	15%	17%	12%	11%	11%	11%

Source: PhillipCapital India Research, Company Data

SG&A comparison (including sub con)

SG&A as % of Rev.	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Tata Technologies	23%	22%	23%	25%	26%	24%	21%	19%	19%	22%
Tata Elxsi	30%	25%	23%	22%	21%	21%	20%	15%	17%	19%
LTTS		28%	19%	17%	16%	13%	13%	12%	12%	11%
KPIT Tech					25%	24%	20%	19%	16%	17%
Average SG&A	27%	25%	22%	21%	22%	21%	18%	16%	16%	17%
Median	27%	25%	23%	22%	23%	23%	20%	17%	16%	18%

Source: PhillipCapital India Research, Company Data

Sub-contracting costs for Tata Tech are higher than peers; proportion to remain same

Sub-contracting costs depend on external factors (visa, higher onsite presence demanded by clients, attrition levels in the industry) and internal factors like the company's talent strategy (for example, dedicated onsite delivery centres vs. relying on temporary sub-contractors). In the past, Tata Tech has operated at 10-14% (as % of revenue), which in all likelihood will remain the same in the near to medium-term. Interestingly, for KPIT Tech, which is one of the closest peers of Tata Tech, sub-contracting remains one of the lowest amongst its peer set. KPIT Tech has invested in

dedicated delivery centres in onsite locations where the company has deployed its own employees (Indians + locals), resulting in lower sub-contracting expenses.

Subcontracting costs – Tata Tech's remain the highest amongst pure-play ER&D players

Sub Con/ outsourcing cost as % Rev.	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Tata Technologies	**15.7%**	**14.2%**	**14.5%**	**14.6%**	**14.5%**	**12.6%**	**10.7%**	**10.1%**	**11.3%**	**12.9%**
Tata Elxsi	0.0%	0.0%	4.2%	4.3%	3.7%	3.9%	4.4%	3.9%	5.6%	5.4%
LTTS			3.6%	2.8%	3.2%	3.9%	4.2%	4.2%	4.4%	3.6%
KPIT Tech							7.7%	7.3%	4.0%	4.5%
Cyient	2.9%	7.5%	7.5%	8.5%	9.0%	9.9%	10.5%	12.0%	10.5%	
Average Sub Con Costs	6.2%	7.2%	7.5%	7.5%	7.6%	7.6%	7.5%	7.5%	7.2%	6.2%
Median	2.9%	7.5%	5.9%	6.4%	6.3%	6.9%	7.7%	7.3%	5.6%	2.9%

Source: Company Data, PhillipCapital India Research

Operating leverage may not lead to higher EBITDA/EBIT margins; to remain flat

The current revenue exposure, especially high client concentration requires Tata Tech to incur additional investments in key sales people onsite and lateral talent who have good relationships with traditional and new-age automotive OEMS, conduct marketing events showcasing its capabilities and service offerings, participate in industry exhibitions, travel of senior management to customer locations to build relationships with new and existing clients, etc. Hence, we believe SG&A is likely to rise in next two to three years for the company – so, operating leverage from strong growth in the next few years may not result in an expansion in margins. We are forecasting EBITDA/EBIT margins to stay largely at 19%/17% levels for next three years.

Tata Tech's technology solutions (reselling of PLM - Product Lifecycle Management - software to manufacturers and education business) operates at lower margins compared to the services business, which results in lower margins at the company level.

Tata Tech: EBITDA margins are lower than Tata Elxsi, LTTS

EBITDA Margins (%)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24e	FY25e	FY26e
Tata Technologies	**14.6%**	**17.0%**	**18.6%**	**17.7%**	**12.5%**	**17.2%**	**16.5%**	**16.2%**	**18.3%**	**18.6%**	**19.0%**	**19.0%**	**19.0%**
Tata Elxsi*	17.6%	20.9%	23.3%	23.8%	25.0%	26.0%	21.3%	28.6%	31.0%	30.6%	29.8%	29.9%	30.3%
LTTS		15.2%	16.9%	18.0%	15.4%	18.0%	19.8%	18.5%	21.5%	21.4%	19.9%	19.9%	20.1%
KPIT Tech					4.9%	11.0%	13.7%	15.0%	18.0%	18.9%	20.1%	20.1%	20.0%
Cyient#	18.6%	14.7%	13.5%	13.4%	14.0%	14.0%	13.5%	14.8%	18.1%	17.0%	18.1%	17.6%	17.8%

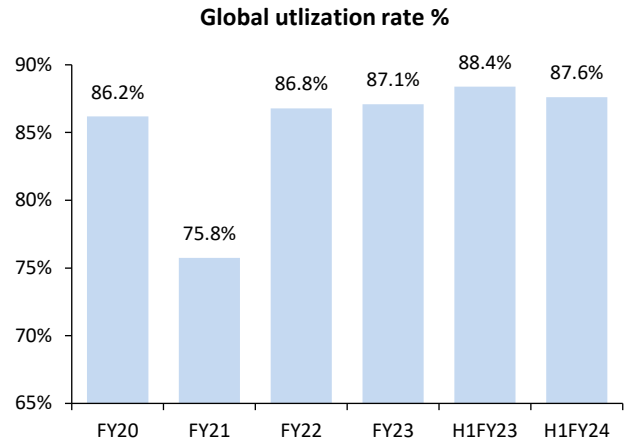
Source: Company Data, PhillipCapital India Research, *Bloomberg Consensus estimates for FY24-26, #Cyient including DLM

Tata Tech's EBIT margins are lower than Tata Elxsi, LTTS

EBITDA Margins (%)	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24e	FY25e	FY26e
Tata Technologies	**12.6%**	**15.0%**	**16.4%**	**15.5%**	**9.8%**	**14.8%**	**13.0%**	**12.3%**	**15.9%**	**16.5%**	**17.0%**	**17.1%**	**17.3%**
Tata Elxsi*	13.1%	17.9%	20.9%	21.6%	23.1%	24.4%	18.6%	26.2%	28.8%	28.0%	27.2%	27.4%	27.8%
LTTS		13.4%	15.0%	16.1%	13.0%	16.0%	16.5%	14.5%	18.3%	18.5%	17.2%	17.3%	17.7%
KPIT Tech					1.6%	7.1%	8.7%	8.4%	13.1%	14.5%	16.1%	16.5%	16.8%
Cyient#	15.3%	12.1%	10.6%	10.8%	11.3%	11.5%	9.2%	10.1%	13.9%	12.8%	14.4%	14.2%	14.6%

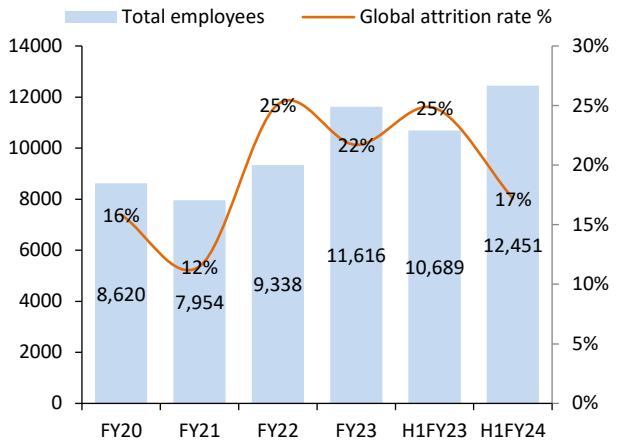
Source: Company Data, PhillipCapital India Research; *Bloomberg Consensus estimates for FY24-26, #Cyient including DLM

Utilization rate seems peaked out



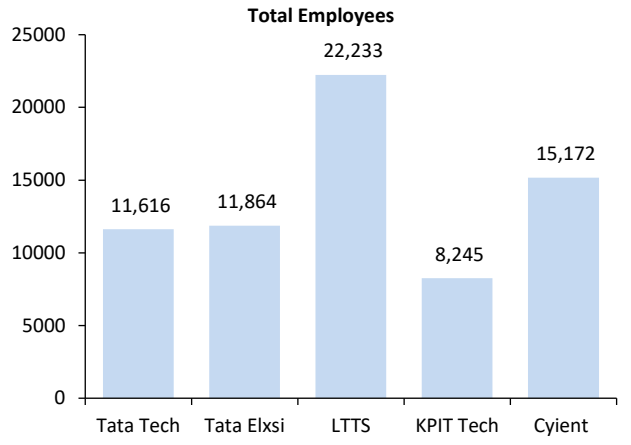
Source: Company, PhillipCapital India Research

Attrition rate (%) has fallen



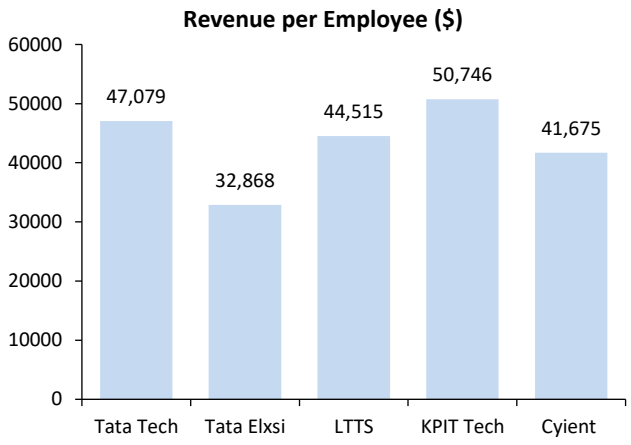
Source: Company, PhillipCapital India Research

Total employees (FY23)



Source: Company Data, PhillipCapital India Research

Tata Tech's revenue per employee (FY23) is high, likely due to Tech Solutions



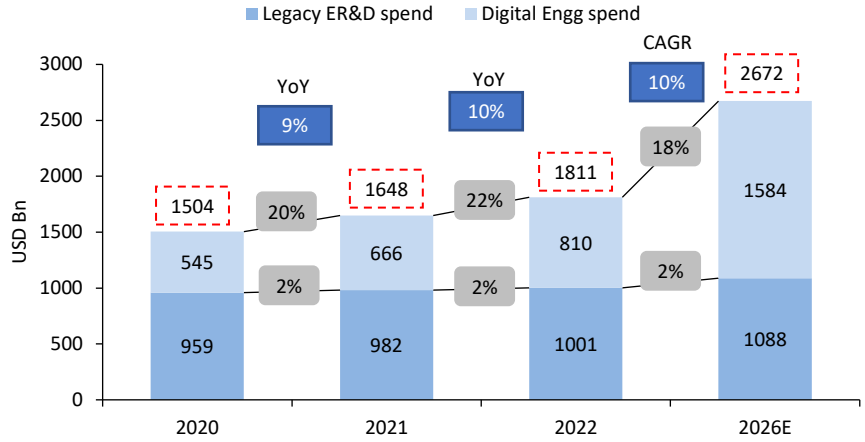
Source: Company Data, PhillipCapital India Research

Global ER&D spending to reach US$ 2.7tn by CY26

ER&D spending remains robust in automotive and aerospace

As per Zinnov, global ER&D spending is likely to touch US$ 2.7tn by 2026, a 10% CAGR over c.US$ 1.8tn in CY22. Digital engineering, with 18% CAGR over CY22-26, will be the prime driver of overall ER&D market growth, while legacy ER&D spending will remain largely flat at 2% CAGR. Growth will be fuelled by factors such as growing product complexity, focus on sustainability, shorter innovation cycles with faster time to market, need for digitally connected value chains (via 'Digital Threads') and service-led business models. With the current macro uncertainty, ER&D spending is impacted in software & internet, consumer, and retail verticals, while it remains robust in other verticals such as automotive and aerospace.

Global ER&D spend is expected to reach US$ 2.7tn by CY26

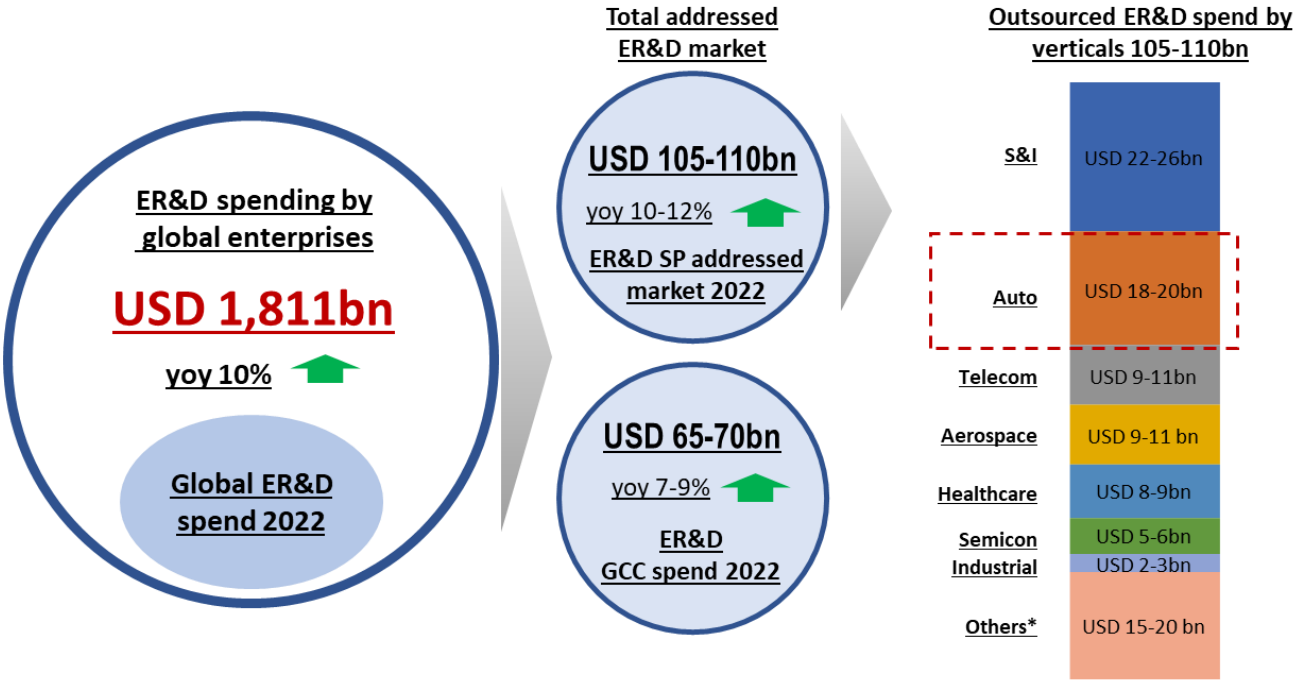


Source: Zinnov, PhillipCapital India Research

Outsourcing remains low in ER&D

- Out of the global ER&D spending of US$ 1.8tn by enterprises in CY22, only US$ 180bn was sourced spend, divided into ER&D Service Providers addressed spend at US$ 110bn and ER&D GCC spend at US$ 70bn.
- There are three key growth drivers for outsourcing ER&D spending – need for skilled talent at scale, shortening product development timelines, and cost savings.
- In terms of geographies, in 2021, western European service providers account for the largest share of the outsourced ER&D market at c.34%, followed by Indian service providers at c.23%.
- In the last four years, the outsourced market for Indian service providers saw 14-16% CAGR, growing 2x more than their western European counterparts. In terms of verticals, 'software and internet' is the largest, followed by automotive.

Outsourced ER&D market size at USUS$ 110bn; automotive is the second largest vertical



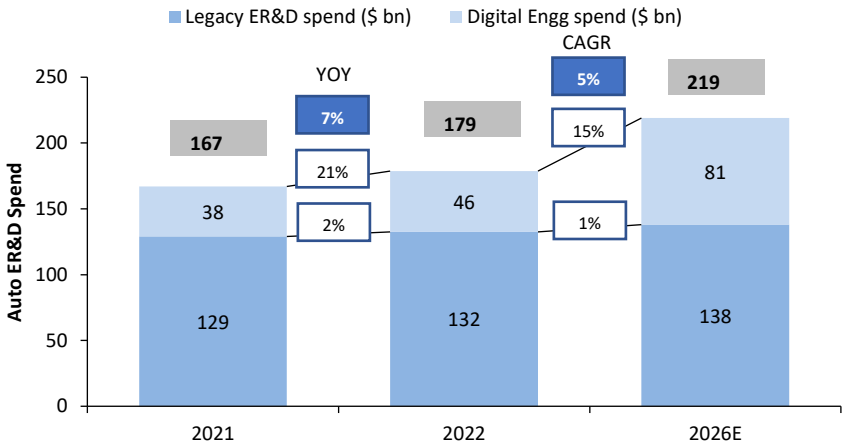
S&I: Software and Internet; Others include BFSI, Retail, Hospitality, Consumer Electronics, etc
Source: Zinnov, PhillipCapital India Research

Automotive ER&D spending is in the fast lane

- Automotive ER&D spending: Zinnov pegs global automotive ER&D spending at US$ 180bn in 2022 (c.10% of the global ER&D market size) and expects 5% CAGR over 2022-26 to touch US$ 219bn.
- Legacy engineering: Within the overall market, legacy engineering spending accounts for a large chuck at 75% or US$ 132bn. This includes traditional areas such as body engineering, powertrain design, etc.
- Digital engineering: Digital engineering spending accounts for 25% at US$ 46bn, which includes areas such as autonomous driving, infotainment, connected and telematics, hybrid and electric, embedded engineering, and digital manufacturing – among others.
- Legacy growth to be flattish, growth drivers for digital engineering: Zinnov expects digital engineering spending to grow at 15% (vs. just 1% growth in legacy spending) over the next four years, as demand for autonomous, connected, and electric technologies is growing fast due to increasing pressure from regulators on passenger safety and emissions, and the overall disruption caused by these technologies in the automotive world.

While legacy engineering growth remains flat, digital engineering is expected to drive growth over the next four years

Global auto ER&D spending (2022-26): Push in new-age areas such as SDV and EV is accelerating spending



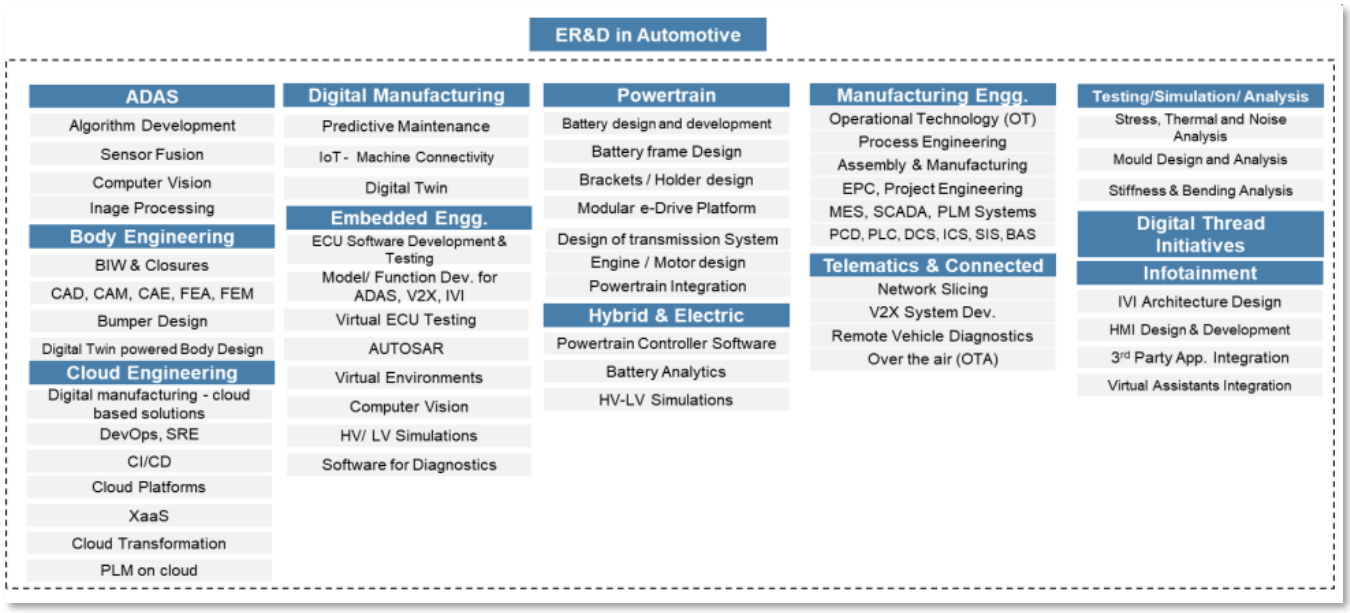
Source: Zinnov, PhillipCapital India Research

Top-20 auto ER&D spenders

Top 20 Auto ER&D Spenders	ER&D Spend 2022 (in $ bn.)
Volkswagen group	22.3
General motors	10.8
Toyota Motor	10.0
Ford Motor Company	8.6
BMW	7.8
Robert Bosch GmbH	7.7
Honda Motor	7.4
Mercedes-Benz Group AG	6.6
Stellantis NV	6.1
Denso	4.5
Nissan Motor	4.4
Tesla Motors	3.4
Continental AG	3.4
ZF Group	3.3
SAIC Motor	3.2
BYD Co Ltd H	3.0
Hyundai Motor	2.9
Renault	2.5
Volvo	2.4
Valeo	2.2

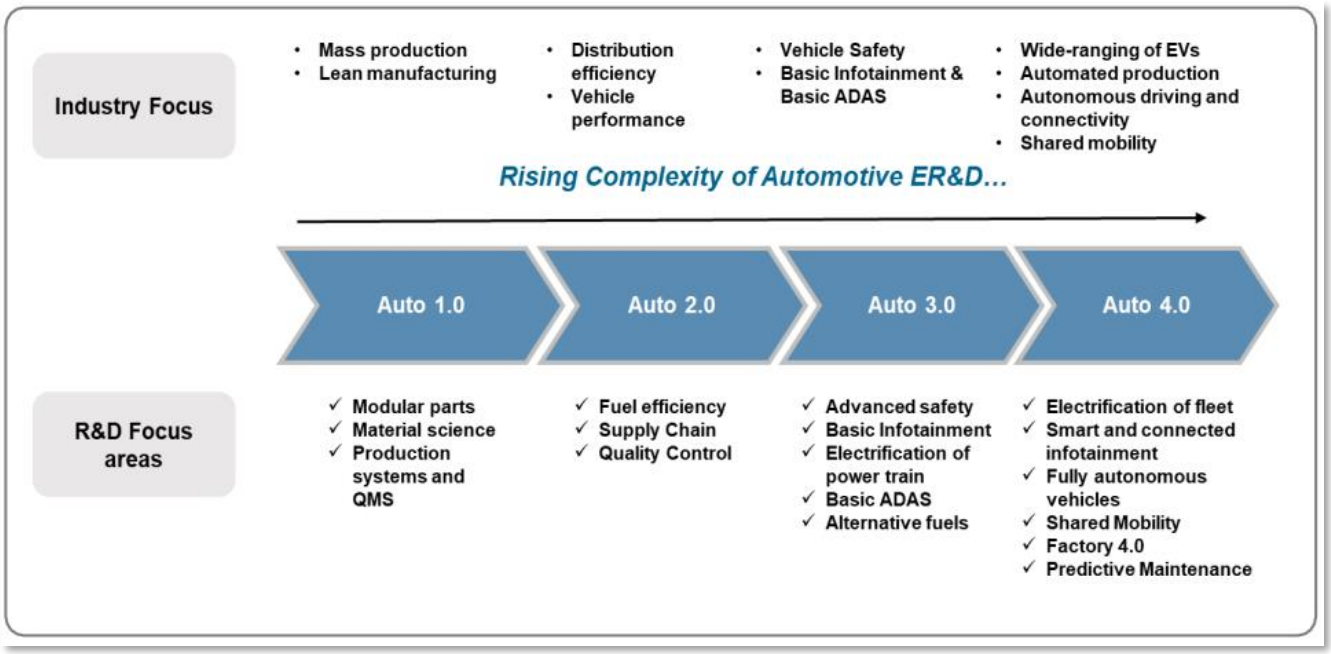
Source: PhillipCapital India Research, Company Data

ER&D in automotive



Source: PhillipCapital India Research, Company Data

R&D focus areas



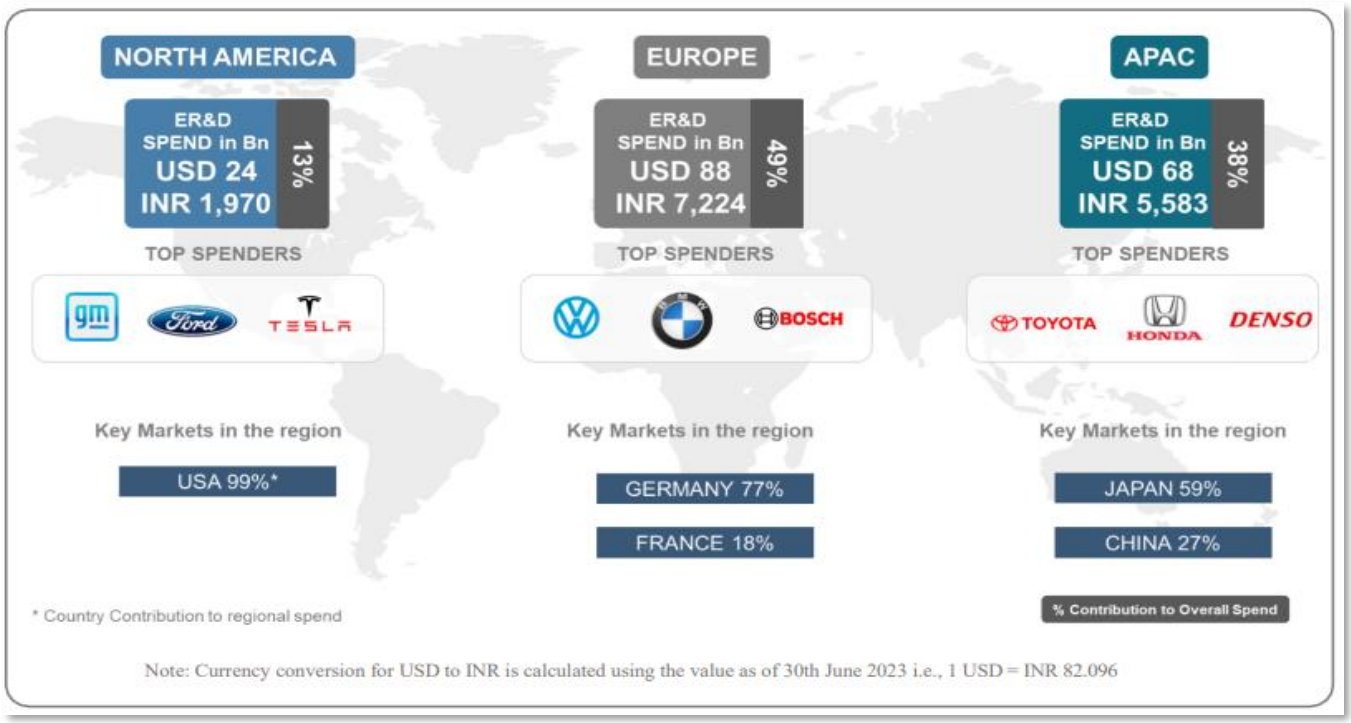
Source: PhillipCapital India Research, Company Data

Europe accounts for the largest share in total auto ER&D spend

- **Europe** accounts for the largest share at 49% of total ER&D spend at US$ 87bn in CY22 followed by APAC at US$ 68bn (38% share) and North America at US$ 24bn (13% share).
- Within Europe, **Germany** retains a lion's share (77% share of Europe) of the market mainly because iconic OEMs like Daimler AG, BMW AG, and Volkswagen AG are based out of Germany.
- **France** is the second-largest market with key players like Renault and Valeo.
- Within APAC, **Japan** is the highest spender with major players like Toyota, Honda and Nissan.

- **China** is the largest market for BEVs and is emerging as a fast-growing market with presence of OEMs such as BYD and Nio – causing the country's R&D expenditure to increase.
- In **North America**, Ford and GM are the top spenders, and new-age firms such as Tesla are investing rapidly in this region.

Europe and APAC are the biggest spenders, accounting for 80%+ of total auto ER&D spending



Source: Zinnov, PhillipCapital India Research

Outsourced auto ER&D spending is 10% currently

Zinnov pegs the automotive outsourced market at US$ 18-20bn in 2022, which is c.10% of total automotive ER&D spend and 16-18% of overall outsourced ER&D spend. Outsourced ER&D spending should grow faster (c.10% CAGR) than the automotive ER&D spending at 5% CAGR over the next four years.

What is driving higher outsourcing?

With increasing adoption of digitization and high demand for technologies such as autonomous driving, connected car and its features, better UI/UX on infotainment, and shift towards electric vehicles, there is a shortage of skilled talent to work with these technologies. Auto OEMs are struggling to hire talent in these new-age areas, especially at a larger scale, leading to an inability to build scalable engineering teams. This results in delays in product launches, which is a very critical deliverable for OEMs. This has driven them towards outsourcing their needs to specialized ER&D providers.

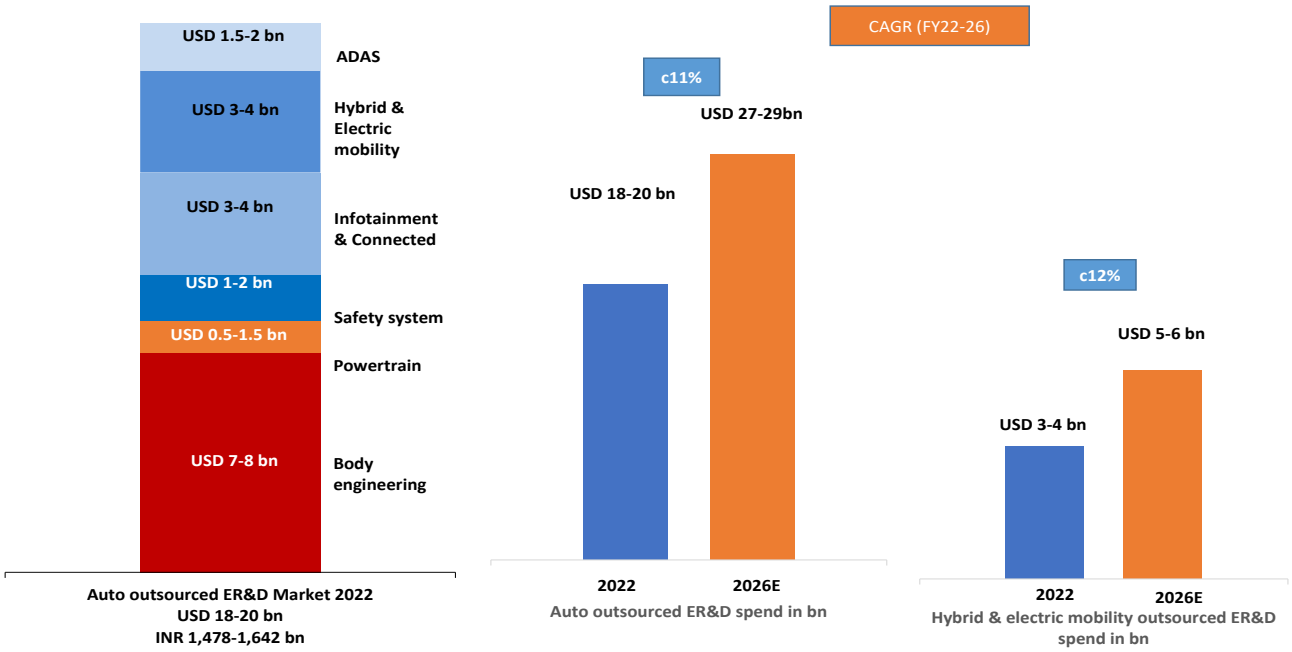
Rising demand for advanced automotive technologies, coupled with a shortage of skilled talent are driving higher outsourcing of ER&D spending

Within the US$ 18-20bn automotive outsourced spending, almost 40% is in legacy areas such as body engineering – which entails designing parts of a car body using CAD/CAM software. The rest of the spending is in new-age areas such as ADAS, hybrid and electric mobility, infotainment and connected, and safety systems.

As companies focus on ACES initiatives, they seek to outsource body engineering segments completely to third-party service providers. In the outsourced market, hybrid and electric mobility is likely to be the fastest growing sub-segment, with enterprises looking to work with third-party ER&D services providers that have full-body EV capabilities. Traditional OEMs typically look to have higher autonomy over the product-development process for new models, as it is core to the enterprise. However, once

the first model is out, their propensity to outsource work to the ESP ecosystem is higher. As per Zinnov, multiple new-age OEMs (for example - Canoo, Fisker, Li Auto, Nikola, NIO and Rivian) have also collaborated with and outsourced work to ER&D service providers for new products, as they focus on reducing product development time and cost.

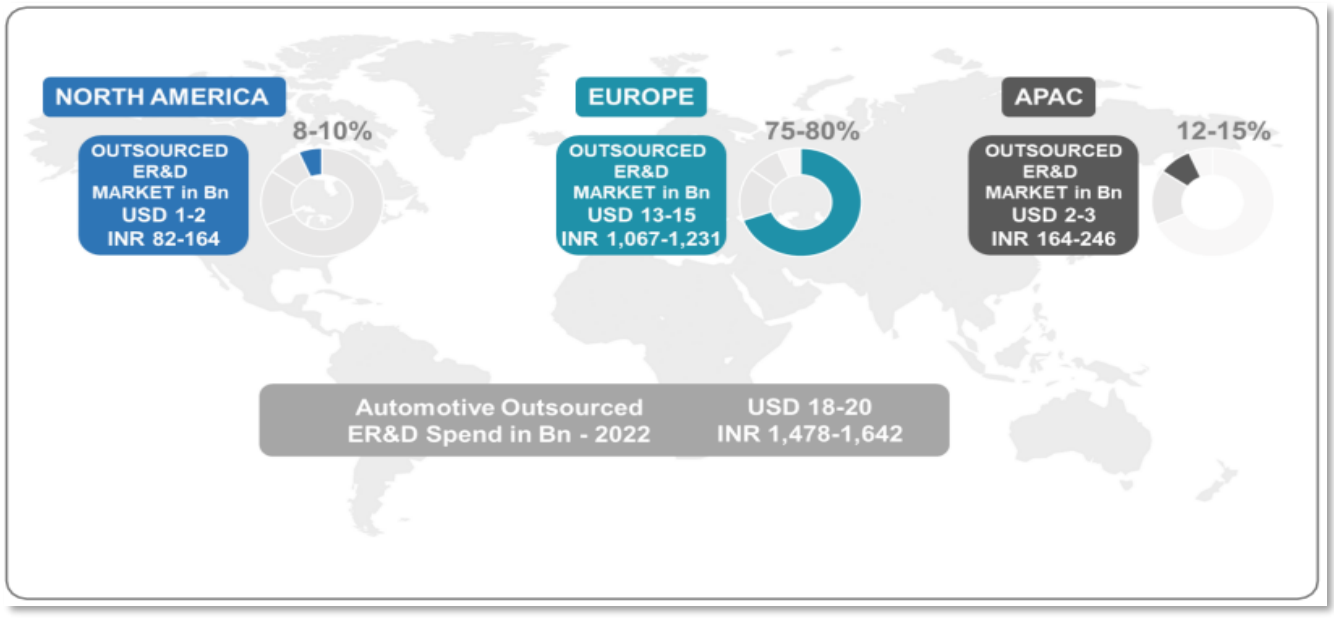
Automotive addressed spend: Body engineering is the largest outsourced segment; new-age areas are expected to grow faster than the overall market



Source: Tata Technologies, PhillipCapital India Research.

While total auto ER&D, the spend is well distributed across Europe and APAC, while outsourced ER&D spending is dominated by Europe at 75-80% of total spend. German OEMs such as Volkswagen Group, Daimler and BMW are some of the biggest outsourcers in the areas of body engineering. APAC and North America form the remaining 20-25% of outsourced ER&D spending.

Outsourced ER&D spending in auto is dominated by Europe at 75-80% of total spends



Source: Zinnov, PhillipCapital India Research

Tata Tech - management overview

Warren Harris is the Chief Executive Officer and Managing Director of Tata Tech

- Education: He holds a bachelor's degree in engineering (technology) from the University of Wales Institute of Science and Technology, the University of Wales. He holds a doctorate in philosophy (honoris causa) from Amity University, Uttar Pradesh. He has completed the advanced management programme from Harvard Business School. He is a chartered mechanical engineer registered with and a member of the Institution of Mechanical Engineers.
- Experience: He has been with Tata Tech since October 1, 2005. In his previous role, Warren was the CEO of UK based INCAT International that specialized in automotive and aerospace engineering services, the company which Tata Tech acquired in 2005.

Key senior leaders in Tata Tech

Name	Designation	Experience / background
Nachiket Paranjpe	**President – Automotive Sales**	• Joined Tata Technologies Europe Limited, one of Tata Tech's subsidiaries in 2019. • He is responsible for sales and client engagement at JLR. • Previous Role: Was associated with KPIT Technologies GmbH as head of Germany automotive integrated business unit.
Sriram Lakshminarayanan	**President and CTO**	• Responsible for leading the practice organization, strategic monetization of intellectual property and assets as well as the products business. • Previous Role: He was with Complete Business Solutions (India) Limited as a senior application developer and IBM India Private Limited as an executive.
Aloke Palsikar	**Executive VP and Head – Aerospace and Industrial Heavy Machinery Sales**	• Responsible for global sales for non-automotive industry verticals • Previous Role: He was with Siemens Limited as chief manager – marketing, Larson & Toubro Infotech Limited (LTI) as assistant general manager, Tech Mahindra Limited as global competency head and Satyam Computer Services Limited as assistant vice president
Prahalada Rao	**President Client Partner – Tata Motors**	• Joined Tata Technologies as the President and Client Partner for the organization's Tata Motors Ltd. (TML) SBU division in June 2021. • Previous Role: Before joining Tata Technologies, Prahalada worked at Mahindra & Mahindra for over 27 years in various managerial and leadership roles in areas extending from business strategy, product development, and digital transformation to change management. In his last role at Mahindra & Mahindra, Prahalada headed the Business Strategy, Transformation & Planning division, Auto & Farm sector.
Geena Binoy	**Executive VP and Global Head – Digital Enterprise solutions**	• Responsible for global delivery for digital enterprise solutions • Previous Role: She was with Tata Motors Limited.
Shailesh Saraph	**Executive VP and Global Head – Engineering, R&D**	• Responsible for the global delivery for engineering services across the company. • Previous Role: He was with Tata Motors Limited.
Pawan Bhageria	**President – (HR, IT, Facility and Education)**	• Responsible for delivery leadership, sales, client leadership for services and education and global human resources leadership. • Previous Role: He was with General Motors Technical Centre India Private Limited as regional manager – information technology.

Source: Company Data, PhillipCapital India Research

Valuation

- **Valuation:** At the upper end of the price band (Rs 500), Tata Tech IPO is coming in at a valuation of 25/21x FY25/26 EPS, lower than Indian ER&D Service providers – which trade at 41x/ 35x median FY25/26 PE (see table below). The lower valuations capture the historical underperformance of the company, which improved starting FY22, and the weakness in one of its top clients, which could impact near-term performance.
- **Indian vs. global ER&D valuations:** Indian pure-play ER&D players trade at significant premiums (3x higher multiples) to European pure-play ER&D players (see table below). We believe that better digital engineering capabilities, higher offshore presence ensuring competitive pricing, better client relationships (Fortune 500-1000 clients) and larger talent availability with high-end skill sets in India has resulted in higher growth rates and margins for Indian ER&D players vs. their European counterparts. We believe that structural pillars of Indian ER&D industry remain intact and valuations will continue to be at premium to European peers.
- **Revenue, margins and PAT assumptions:** We are factoring in 15% USD revenue CAGR over FY23-26. Within that, we are forecasting services revenue CAGR at 14% and technology solutions revenue CAGR at 18%. We are keeping EBITDA/EBIT margins largely at 19%/17% for the next three years, as we believe Tata Tech may accelerate investments in SG&A and onsite hiring to diversify revenue away from top clients. This results in PAT CAGR of 15% over FY23-26, lower than other Indian ER&D players (see table below)
- **Risks:** (1) Slowdown in any of the top 10 clients can impact the company significantly, given high concentration. (2) Heightened competitive intensity from larger players like Accenture, Infosys, Capgemini, HCL Tech, etc. (3) Margins declining from FY23 levels because of high investments in SG&A and onsite hiring.

ER&D players (Indian and global): Revenue, EBITDA, PAT growth comparison

				Revenue CAGR (%)		EBITDA CAGR (%)		PAT CAGR (%)	
	Currency	Market Cap (mn)	EV (mn.)	FY20-23	FY23-FY26	FY20-23	FY23-FY26	FY20-23	FY23-FY26
Indain ER&D Players				*USD Rev CAGR*					
Tata Tech	INR	NA	NA	11%	15%	20%	17%	35%	15%
Tata Elxsi*	INR	5,19,049	5,09,637	20%	17%	41%	18%	43%	18%
LTTS	INR	4,77,015	4,61,621	8%	13%	16%	11%	13%	14%
KPIT Tech	INR	4,30,653	4,26,000	11%	26%	29%	29%	37%	34%
Cyient^	INR	1,99,918	2,01,452	5%	12%	17%	17%		26%
Global ER&D Players*				CY19-22	CY22-25	CY19-22	CY22-25	CY19-22	CY22-25
Alten (Euro mn.)	EUR	5,227	4,375	13%	7%	36%	-2%	41%	-9%
AFRY (SEK mn.)	SEK	14,360	19,322	6%	8%	6%	9%	6%	19%
Bertrandt Ag (Euro mn.)	EUR	577	670	-2%	10%	2%	14%	-18%	37%
Tietoevry (Euro mn.)	EUR	2,952	3,459	19%	1%	22%	4%	34%	12%
Edag Engg Group (Euro mn.)	EUR	392	589	1%	5%	11%	8%	60%	10%
Indian ER&D Median				**11%**	**15%**	**20%**	**17%**	**36%**	**18%**
Global ER&D Median				**6%**	**7%**	**11%**	**8%**	**34%**	**12%**
Overal ER&D Median				**9%**	**11%**	**18%**	**13%**	**35%**	**17%**

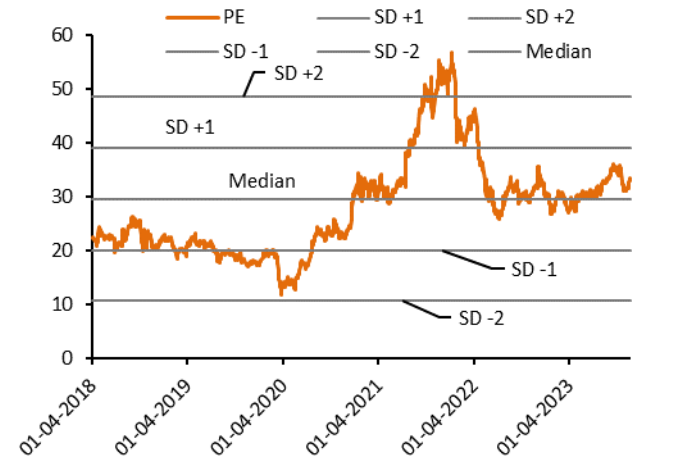
Source: PhillipCapital India Research, Bloomberg, Company Data;
*Global ER&D players and Tata Elxsi – Bloomberg consensus estimates
^Cyient – Revenue, EBITDA, PAT CAGR are for Cyient DET business

ER&D (Indian and global): Valuation snapshot

	EV/Sales			EV/EBITDA			PE		
	FY1e	FY2e	FY3e	FY1e	FY2e	FY3e	FY1e	FY2e	FY3e
Indian ER&D Players									
Tata Elxsi	14.0	11.6	9.8	46.8	38.9	32.4	60.6	49.3	41.4
LTTS	4.8	4.4	3.9	24.1	21.9	19.6	36.2	31.9	27.8
KPIT Tech	8.8	7.4	6.2	43.9	36.9	30.9	74.7	57.3	47.0
Cyient	3.4	3.1	2.7	16.6	15.4	13.6	29.8	26.3	22.5
Global ER&D Players									
Alten	1.1	1.0	0.9	9.5	8.5	7.7	19.2	16.5	15.1
AFRY	0.7	0.7	0.7	7.1	6.7	6.1	12.0	10.4	8.8
Bertrandt	0.6	0.5	0.5	6.3	5.1	4.6	19.1	13.0	10.5
Tietoevry	1.2	1.2	1.1	7.9	7.4	7.1	13.1	12.3	11.2
Edag Engg. Group	0.7	0.7	0.6	6.1	5.6	5.2	12.7	11.3	10.2
Indian ER&D Median	**6.8**	**5.9**	**5.1**	**34.0**	**29.4**	**25.2**	**48.4**	**40.6**	**34.6**
Global ER&D Median	**0.7**	**0.7**	**0.7**	**7.1**	**6.7**	**6.1**	**13.1**	**12.3**	**10.5**
Overal ER&D Median	**1.2**	**1.2**	**1.1**	**9.5**	**8.5**	**7.7**	**19.2**	**16.5**	**15.1**

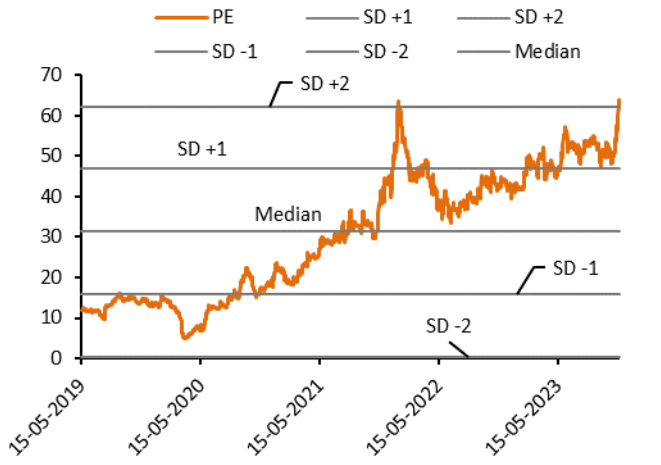
Source: Company Data, PhillipCapital India Research, Bloomberg
Data updated as of 20th Nov, 2023

LTTS PE band chart



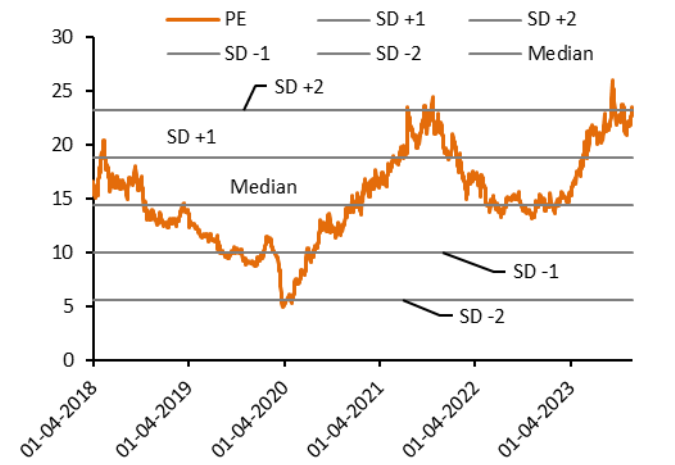
Source: PhillipCapital India Research, Company Data

KPIT Tech PE band chart



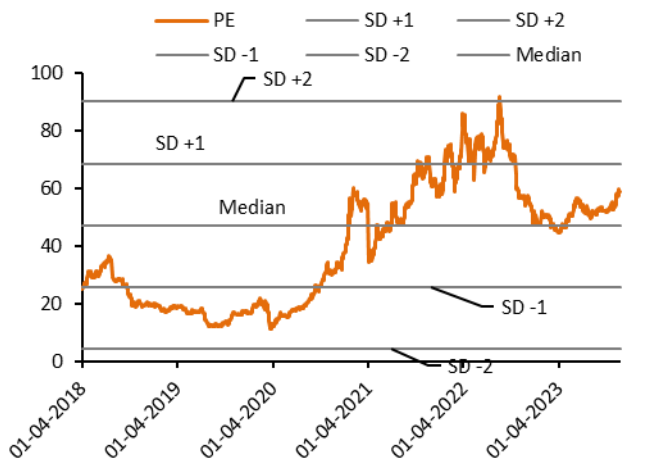
Source: PhillipCapital India Research, Company Data

Cyient PE band chart



Source: PhillipCapital India Research, Company Data

Tata Elxsi PE band chart



Source: PhillipCapital India Research, Company Data

Appendices

Appendix 1: SWOT analysis of Tata Tech

Key strengths, weaknesses, opportunities and threats of Tata Tech

Strengths

- **Strong visibility:** Auto ER&D is one of the fastest-growing areas within ER&D services. Large traditional OEMs and new-age OEMs are investing significantly in upgrading to ACES tech and SDV-related areas. Growth visibility will be strong for the next 3-5 years.
- **Leader in ER&D services:** Tata Tech is positioned in the "leadership zone" by Zinnov Zones for ER&D services ratings in 2022 for the **sixth consecutive year**.
- **Ranked ahead of Indian peers in auto ER&D:** Tata Tech ranked first among India service providers and third globally among rated service providers by Zinnov.
- **Leader in electrification:** Tata Tech ranked first among India-based ER&D service providers and second globally for electrification services in 2022.
- **Part of Tata Group:** Tata Group branding help win new clients and higher multiples.
- **Anchor clients'** contribution is falling in the last 3 years to 46% in H1FY24 from 54% in FY20. It used to be close to 70% in 2012-14, as per our checks.

Weakness

- **Volatile and low growth pre FY22:** FY14-22 USD revenue CAGR is just 2.6%.
- **EBITDA margins** lower than Tata Elxsi and LTTS. At par with KPIT Tech.
- **Low diversification:** No other vertical major revenue contributor apart from auto. LTTS, Tata Elxsi and Cyient have much more diversified verticals.
- **Products:** Has been flattish since the last 3-4 years. Reseller of PLM software products has typically lower margin business as compared to ER&D services.
- **Education:** Volatile business dependent on private and govt. entities. Have to deal with multiple people in the govt. for getting contracts. No annuity contracts result in volatility in this business.
- **3 Tata cos in the same business:** TCS, Tata Elxsi and Tata Technologies are three cos from Tata group offering ER&D services. Although service offerings are different, this can potentially lead to confusion for clients and for investors.
- **Client concentration:** Top 5/10 clients contribute 71%/80% of revenue in H1FY24 – in services business. This is the highest client concentration amongst pure-play ER&D services player in India.

Opportunities

- Can be the biggest player in auto ER&D, surpassing KPIT Tech as it diversifies revenue away from its top-3 clients.
- **Aerospace** can be a big opportunity for Tata Tech, as current spending environment remains conducive.
- **Education:** Probably the only player in education, providing skill training to employees in new manufacturing and engineering tech.

Threats

- **Competition getting aggressive:** Large players like KPIT are gaining a higher share of SDV-related opportunities where deal sizes are high. HCL Tech recently acquired ASAP group to expand in auto ER&D services.

Financials

Income Statement

Y/E , Rs mn	FY23	FY24E	FY25E	FY26E
Net sales	**44,142**	**52,810**	**60,489**	**69,098**
Growth, %	25.1	19.6	14.5	14.2
Employee expenses	-19,295	-23,525	-27,474	-32,023
Other Operating expenses	-16,638	-19,260	-21,534	-23,959
EBITDA (Core)	**8,209**	**10,026**	**11,481**	**13,115**
Growth, %	27.2	22.1	14.5	14.2
Margin, %	**18.6**	**19.0**	**19.0**	**19.0**
Depreciation	-946	-1,072	-1,153	-1,178
EBIT	**7,264**	**8,954**	**10,328**	**11,937**
Growth, %	29.7	23.3	15.3	15.6
Margin, %	**16.5**	**17.0**	**17.1**	**17.3**
Interest paid	-180	-200	-200	-200
Other Non-Operating Income	877	663	747	884
Non-recurring Items	0	0	0	0
Pre-tax profit	**7,962**	**9,418**	**10,875**	**12,621**
Tax provided	-1,721	-2,354	-2,719	-3,155
Profit after tax	**6,240**	**7,063**	**8,156**	**9,466**
Others (Minorities, Associates)	0	0	0	0
Net Profit	**6,240**	**7,063**	**8,156**	**9,466**
Growth, %	42.8	13.2	15.5	16.1
Net Profit (adjusted)	**6,240**	**7,063**	**8,156**	**9,466**
Wtd avg shares (m)	406	406	406	406

Balance Sheet

Y/E , Rs mn	FY23	FY24E	FY25E	FY26E
Cash & bank	9,992	11,664	13,081	17,082
Marketable securities at cost	0	0	0	0
Debtors	11,062	13,745	17,401	20,824
Inventory	0	0	0	0
Loans & advances	4,902	4,902	4,902	4,902
Other current assets	12,018	14,614	18,391	22,884
Total current assets	37,975	44,925	53,775	65,692
Investments	0	0	0	0
Gross fixed assets	3,031	3,331	3,581	3,831
Less: Depreciation	0	0	0	0
Add: Capital WIP	0	0	0	0
Net fixed assets	3,031	3,331	3,581	3,831
Non-current assets	11,009	10,842	11,307	11,499
Total assets	**52,015**	**59,098**	**68,663**	**81,022**
Current liabilities	19,734	19,706	21,074	23,921
Provisions	233	281	322	368
Total current liabilities	19,967	19,987	21,396	24,289
Non-current liabilities	2,153	2,153	2,153	2,153
Total liabilities	22,120	22,140	23,549	26,442
Paid-up capital	811	811	811	811
Reserves & surplus	29,083	36,146	44,302	53,768
Minorities	0	0	0	0
Shareholders' equity	29,895	36,958	45,114	54,580
Total equity & liabilities	**52,015**	**59,098**	**68,663**	**81,022**

Cash Flow

Y/E , Rs mn	FY23	FY24E	FY25E	FY26E
Pre-tax profit	7,962	9,418	10,875	12,621
Depreciation	946	1,072	1,153	1,178
Chg in working capital	-4,760	-5,091	-6,489	-5,215
Total tax paid	-2,668	-2,354	-2,719	-3,155
Other operating activities	0	0	0	0
Cash flow from operating activities	**1,479**	**3,044**	**2,820**	**5,429**
Capital expenditure	-950	-1,372	-1,403	-1,428
Chg in investments	0	0	0	0
Chg in marketable securities	0	0	0	0
Other investing activities	0	0	0	0
Cash flow from investing activities	**-950**	**-1,372**	**-1,403**	**-1,428**
Free cash flow	529	1,672	1,417	4,001
Equity raised/(repaid)	393	0	0	0
Debt raised/(repaid)	-84	0	0	0
Dividend (incl. tax)	0	0	0	0
Other financing activities	459	0	0	0
Cash flow from financing activities	**769**	**0**	**0**	**0**
Net chg in cash	1,298	1,672	1,417	4,001

Valuation Ratios

	FY23	FY24E	FY25E	FY26E
Per Share data				
EPS (INR)	15.4	17.4	20.1	23.3
Growth, %	42.8	13.2	15.5	16.1
Book NAV/share (INR)	73.7	91.1	111.2	134.5
CFPS (INR)	3.2	5.5	6.3	11.7
DPS (INR)	-	-	-	-
Return ratios				
Return on assets (%)	13.5	12.9	12.9	12.8
Return on equity (%)	20.9	19.1	18.1	17.3
Return on capital employed (%)	22.1	20.0	19.0	18.3
Turnover ratios				
Asset turnover (x)	4.8	3.8	3.0	2.7
Sales/Total assets (x)	0.9	1.0	0.9	0.9
Sales/Net FA (x)	14.6	16.6	17.5	18.6
Working capital/Sales (x)	0.2	0.3	0.3	0.4
Fixed capital/Sales (x)	-	-	-	-
Receivable days	91.5	95.0	105.0	110.0
Inventory days	-	-	-	-
Payable days	66.8	55.0	45.0	45.0
Working capital days	68.2	93.7	118.4	130.4
Liquidity ratios				
Current ratio (x)	1.9	2.3	2.6	2.7
Quick ratio (x)	1.9	2.3	2.6	2.7
Dividend cover (x)				
Net debt/Equity (%)	(26.2)	(25.7)	(24.2)	(27.4)
Valuation				
PER (x)	32.5	28.7	24.9	21.4
PEG (x) - y-o-y growth	0.8	2.2	1.6	1.3
Price/Book (x)	6.8	5.5	4.5	3.7
Yield (%)	-	-	-	-
EV/Net sales (x)	4.4	3.7	3.2	2.7
EV/EBITDA (x)	23.8	19.3	16.7	14.3
EV/EBIT (x)	26.8	21.6	18.6	15.7

Source: Company, PhillipCapital India Research

Rating Methodology

We rate stock on absolute return basis. Our target price for the stocks has an investment horizon of one year. We have different threshold for large market capitalisation stock and Mid/small market capitalisation stock. The categorisation of stock based on market capitalisation is as per the SEBI requirement.

Large cap stocks

Rating	Criteria	Definition
BUY	>= +10%	Target price is equal to or more than 10% of current market price
NEUTRAL	-10% > to < +10%	Target price is less than +10% but more than -10%
SELL	<= -10%	Target price is less than or equal to -10%.

Mid cap and Small cap stocks

Rating	Criteria	Definition
BUY	>= +15%	Target price is equal to or more than 15% of current market price
NEUTRAL	-15% > to < +15%	Target price is less than +15% but more than -15%
SELL	<= -15%	Target price is less than or equal to -15%.

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