

ELECTRIC VEHICLES - THE BIGGEST REVOLUTION OF THE AUTOMOBILE INDUSTRY



- The automobile industry of India has been buzzing with new advancements, innovation and trends lately. The manufacturing landscape of EVs, which solely used to be dominated by the global automakers earlier, is also now seeing a diversification, as numerous Indian automakers now take a deep dive into the electric vehicle space, gazing into the growth aptitude that the industry has in store.
- A recent study has highlighted that by 2022, most consumers in India would consider buying an electric vehicle. This in itself is a key trend which is likely to trigger the growth of the EV segment in the country.
- Indian policymakers have been actively pushing EV adoption over the recent years, and multiple initiatives have also been introduced to develop domestic capabilities across the entire EV value chain. The battery price also has been expected to fall by more than 30% between 2018 and 2025, which will make electric vehicles (EVs) more affordable over the period of time. Besides this, the government of India has announced various tax cuts and subsidies to further encourage more and more people to buy EVs.
- India aspires to reach its vision of 100% Electric Vehicles by 2030. Surely, factors such as increasing government support, decreasing cost of technology, growing interest of the country in EVs, distressing pollution levels, etc would collectively fuel and accelerate India's transition to electric vehicles and enable the government to near its vision.

WHY ELECTRONIC VEHICLES?

A collection of circumstances has conspired to create an opening for electric mobility to enter the mass market. Those forces include:

- Climatic change: India has committed to cutting its GHG emissions intensity by 33% to 35% percent below 2005 levels by 2030.
- Advances in renewable energy: Over the last decade, advances in wind and solar electricity generation technologies have drastically reduced their cost and introduced the possibility of clean, low-carbon and inexpensive grids. India proposes to add 175 GW of renewable energy capacity by 2020 and to achieve 40 percent of its electricity generation from non-fossil sources by the same year.
- Rapid urbanization: According to a recent study by WHO, India is home to 14 out of 20 most polluted cities in the world. Electric vehicles (EVs) can improve that scenario by reducing local concentrations of pollutants in cities.

IS INDIA READY FOR THE REVOLUTIONALIZATION OF THE AUTOMOBILE INDUSTRY?

The answer is yes, India is well suited to adapt to the latest revolution of the Automobile Industry, we have shortlisted a few reasons for it:

- A relative abundance of exploitable renewable energy resources.
- High availability of skilled manpower and technology in manufacturing and IT software.
- An infrastructure and consumer transition that affords opportunities to apply technologies to leapfrog stages of development.
- A universal culture that accepts and promotes sharing of assets and resources for the overall common good.



VEDANTA LIMITED

SCRIPT NAME	VEDANTA LIMITED
BSE CODE	500295
NSE CODE	VEDL
CURRENT MARKET PRICE	257
TARGET PRICE	500/550/600+
POTENTIAL UPSIDE (%)	90%
TIME PERIOD	1 YEAR

Vedanta Limited is a subsidiary of Vedanta Resources Limited. The company is one of the world's leading diversified natural resource companies with business operations in India, South Africa, Namibia, and Australia. Vedanta is a leading producer of Oil & Gas, Zinc, Lead, Silver, Copper, Iron Ore, Steel, Aluminium & Power.

VEDANTA AND ALUMINIUM


Vedanta is the largest aluminium producer in India with a capacity of 2.3 and a 40% market share in India's aluminium industry. The company's plants are located strategically and get the advantage of power from captive power plants in Indian states of Chhattisgarh and Odisha.

Due to Aluminium's light weight and low cost, the demand for the metal is increasing in India boosted by increased investment in infrastructure, power and transportation. Government programmes such as 'Make in India' and 'Electricity and Housing' for all, will drive increased demand from the electrical power; transport and construction industries have been increasing opportunities for downstream industry in India to develop value added products, including alloys for defence and automobile applications. Vedanta's portfolio is focused more on the value-added products and demand for its rods, billets and rolled products is likely to increase substantially.

VEDANTA AND BALCO:

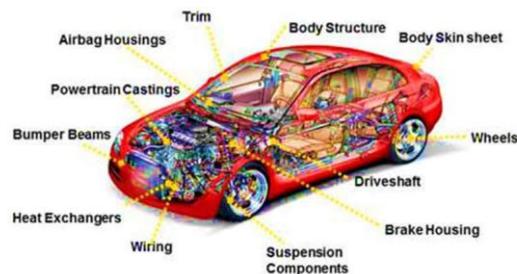
In 2001 Govt. of India disinvested 51% shares of Bharat Aluminium Company Limited (BALCO) to Sterlite Industries Limited a subsidiary of Vedanta Limited. BALCO operates through its plant at Korba in the state of Chhattisgarh. The plant has a smelter capacity of 5.70 Ltpa with capabilities to produce ingots, wire rods, billets, busbars, and rolled products. BALCO has a power generation capacity of 2010 MW and a bauxite Production capacity of 6.8 MT per annum from its two Bauxite mines at Mainpat & Kawardha which have a capacity of 4.5 MT & 2.3 MT, respectively. BALCO has a coal block at Chotia with a capacity of 17.7 MT per annum. BALCO has an NABL accredited Quality Laboratory for raw materials & finished goods.

Q4FY20 PRODUCTION UPDATE:

The company achieved India's highest aluminium production at 1,904 kt Record alumina production from its Lanjigarh refinery at 1,811 kt, up 21% against the previous year. The cost of production at the Lanjigarh refinery was the lowest on a quarterly basis at 258 \$/T. The cost of production for hot metal was significantly lower at US\$ 1,451 per tonne. The cost of production for alumina was 20% lower (US\$ 275 per tonne), due to benefits from increase in locally sourced bauxite.

INDUSTRY OUTLOOK:

Long-term demand for aluminium in India and the subcontinent will remain robust backed by increased industrial activity and government focus on infrastructure sector in the country. Several government initiatives like Make in India and Smart Cities project are expected to increase investment in the country. India's government is investing over US\$1 billion in its 'Make in India' initiative. The aluminium consumption rise in India is inevitable with these initiatives lined up in the country, which is in line with India's five-trillion-dollar economy vision. There is a huge potential for increasing aluminium usage in India in building and construction, automotive and packaging industries. As Vedanta, we continue to expand our VAP portfolio in line with evolving market demand, positioning us for growth in the Indian aluminium market.

USAGE OF ALLUMINIUM IN CARS:**Existing Aluminum Applications**

India only has 43 cars per 1000 persons of working age: the number being as high as 967 in the US. The statistics being much less than the rest of the world, India has a huge opportunity to leverage. Aluminium has been used in the automotive industry practically from day one, but the demand surged after the oil crisis of the 1970s.

Obsessed with fuel economy, car designers have started replacing heavy steel parts with lighter aluminium substitutes. Since then, the share of aluminium used has constantly been on the upside: from 35 kg per car in the 1970s to today's 210 kg. Experts project that by 2025 average aluminium content in a car will reach 250 kg. With development in automobile segment, the consumption of aluminium is bound to increase.

Aluminium consumption in India at 2.7 kg per capita is much below the global average of 11 kg per capita. Demand for the metal is expected to pick up as the scenario improves for user industries, like power, infrastructure and transportation.

WHY ALUMINIUM CONSUMPTION IN CARS NEEDS TO BE IMPROVED?

LIGHTWEIGHT-The average car weighs about 1300 kg. If there were no commercial limitations and as much aluminium as possible was used, it would weigh only 775 kg.

CARBON FOOTPRINT-Lowering automobile weight by 100 kg will equate to lower emissions of 9 grams CO₂ /km.

MILEAGE-100 kg less weight of car saves 0.35 litres of fuels per 100 km.

Indian cars lag behind in terms of aluminium metal usage in their body parts when compared to other developed economies and rest of the world. This poses an inherent opportunity to scale up the aluminium demand in car making in India which in turn is an effort to move towards a greener tomorrow with better vehicle performance.

THE FUTURE:

It is estimated that there will be about 40 million Electric Vehicles by 2030 across the world. The aluminium metal consumption has increased by 10 million tonnes which represents a ten-fold increase from 2017. The automotive future will be electrified, autonomous and efficient. Vehicles fuelled by electricity will be able to transform every aspect of transportation including fuel saving, carbon emission, costs, repair and driving habits. Aluminium metal consumption is expected to grow with Electric Vehicle revolution in India.

The consumption of primary aluminium, extrusions and rolled products by the EV industry will increase by many folds due to the advantages provided by aluminium such as light weighting the vehicles and improved battery technologies. As per market reports, currently plug-in hybrid and full battery Electric Vehicles use 25-27% more aluminium than the typical internal combustion engine (ICE) car. It is estimated that every 100kg weight reduction in EVs can increase mileage by 10-11%, lower battery cost by 20% and save 20% of worn-out cost. Hence pure aluminium producers and international LME prices are poised to benefit hugely from this revolution and currently have great potential upside.

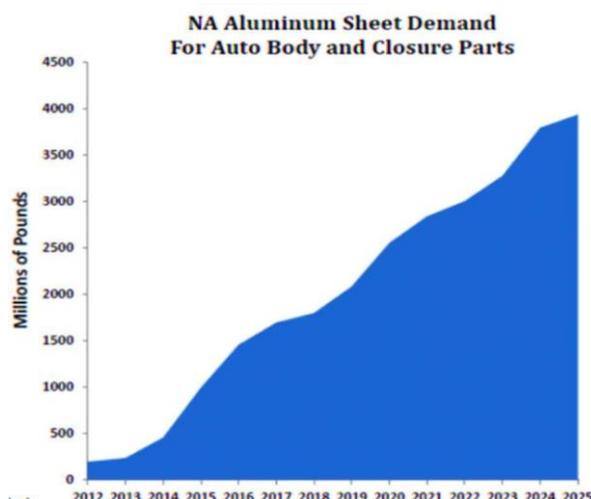
WHAT STEPS IS VEDANTA TAKING TO CAPTURE THE EV MARKET?

The global economy is swiftly moving towards a cleaner, greener and more sustainable lifestyle. With the growing popularity of EVs, OEMs worldwide are exploring new applications of aluminium. In the EV market, driving range is the biggest factor driving consumer preference. Therefore, the demand for lightweight battery casings and heat exchangers is expected to exponentially increase.

This will indirectly increase the demand for aluminium. Moreover aluminium is known for its Anti thermal and lightweight properties hence it is the ideal material for producing batteries as well. Simultaneously, the demand for aluminium will also rise due to the increasing EV infrastructure which are crucial for serving EVs. Vedanta is looking to expand and diversify its alloy portfolio in order to support manufacturing of cylinder heads, ABS brakes and certain other ancillaries where traditional materials can be substituted by suitable aluminium alloys to provide additional benefits such as light weighting and fuel efficiency. Vedanta is well equipped with next generation R&D facilities and technological prowess for developing customised high-performance alloys to automobile companies for their specific needs, Vedanta also has a robust after sales service which will further help the company.

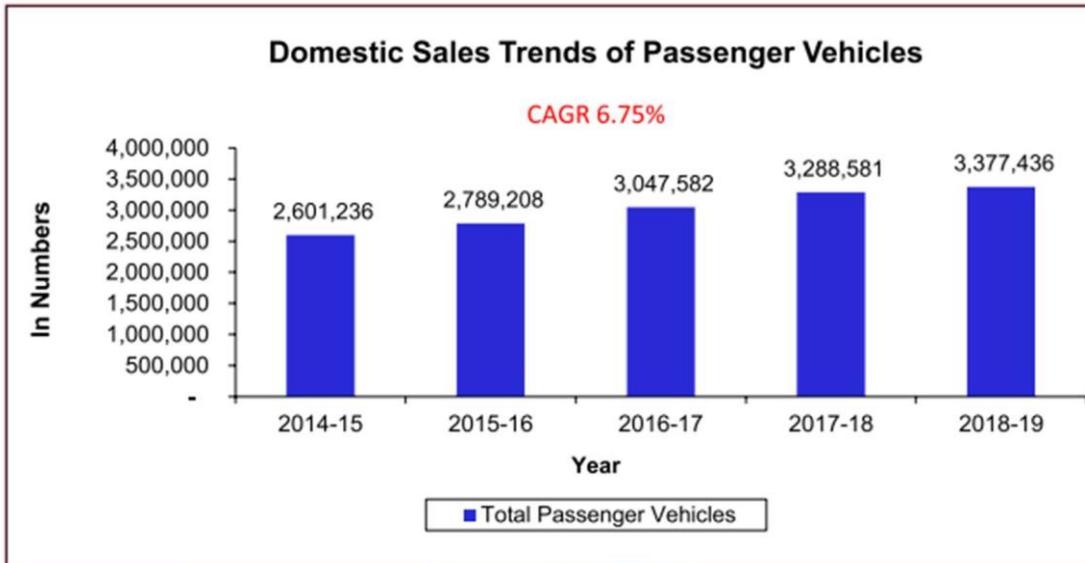
Vedanta also has plans of collaborating with the downstream industry in order to unlock the entire potential of usage of aluminium in the automobile sector. Vedanta Aluminium has one of the finest and best-in-class R&D setups among peers in the aluminium value chain. The company has already started collaborating with customers in the auto industry in order to develop customised aluminium alloys and products, catering to the ultimate objective of achieving desired light weighting for EVs and hybrids of the future.

Thus, there is no doubt that Vedanta is well placed to be a leading supplier for aluminium in the automotive industry and also benefit from the ever-increasing demand of aluminium in this space.

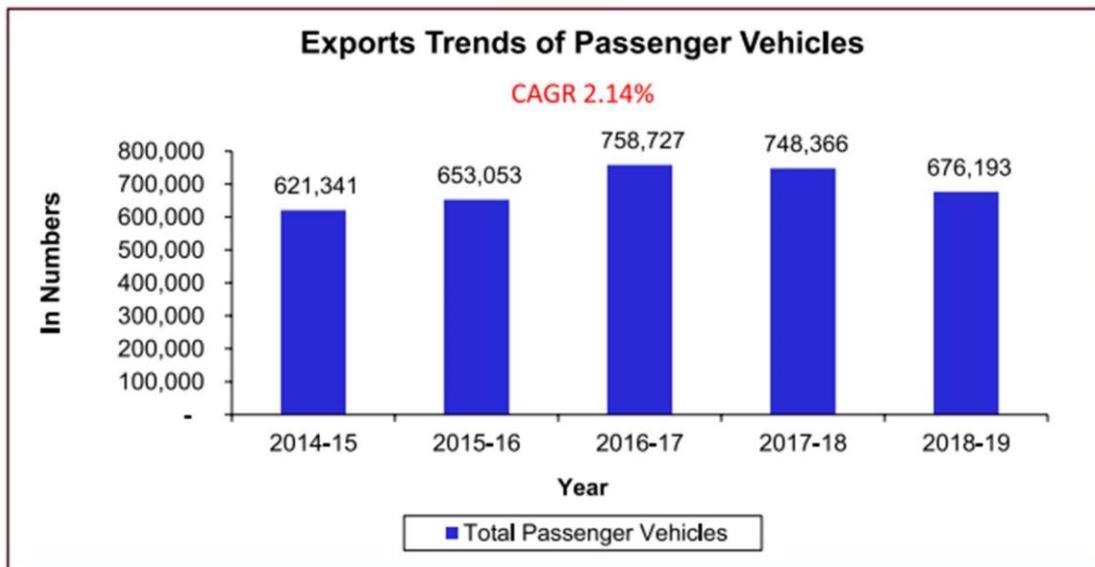
GRAPH:

SALES:

Category	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Passenger Vehicles	3,221,419	3,465,045	3,801,670	4,020,267	4,028,471	3,434,013
Commercial Vehicles	698,298	786,692	810,253	895,448	1,112,405	752,022
Three Wheelers	949,019	934,104	783,721	1,022,181	1,268,833	1,133,858
Two Wheelers	18,489,311	18,830,227	19,933,739	23,154,838	24,499,777	21,036,294
Quadricycle*		531	1,584	1,713	5,388	6,095
Grand Total	23,358,047	24,016,599	25,330,967	29,094,447	30,914,874	26,362,282

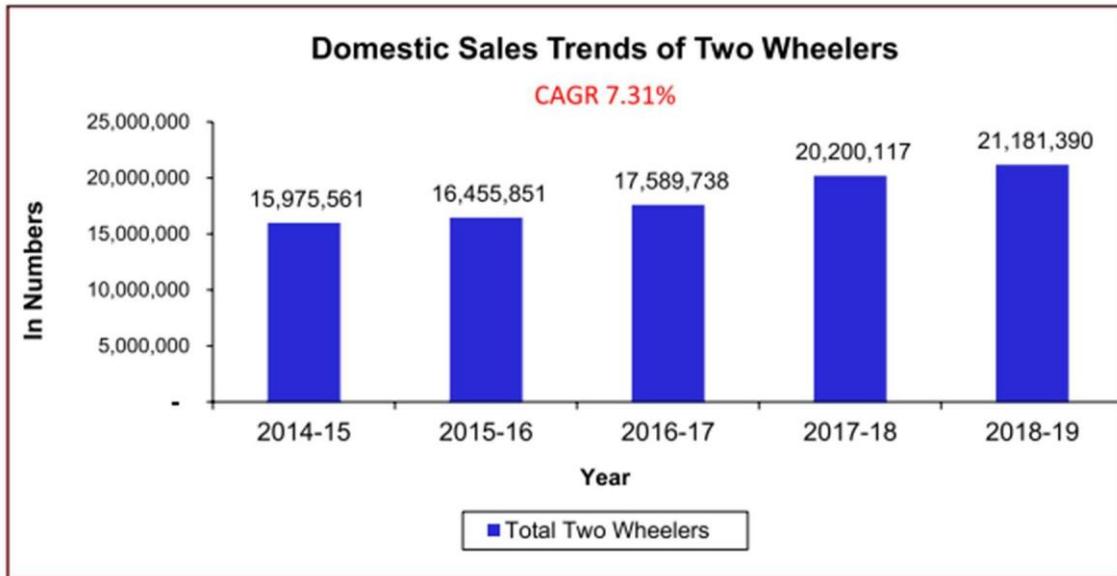
DOMESTIC SALES TRENDS:



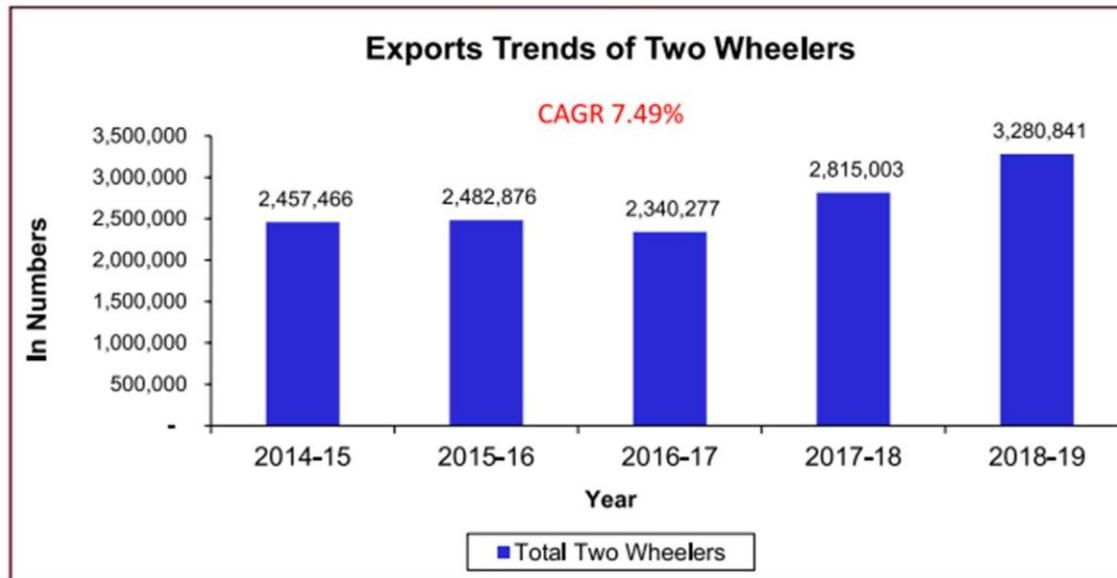
EXPORT TRENDS OF PASSENGER VEHICLES:



DOMESTIC SALES TRENDS OF TWO-WHEELERS:



EXPORT SALES TRENDS OF TWO-WHEELERS:



OUTLOOK OF THE ALUMINIUM INDUSTRY IN INDIA:

Aluminium is the second most used metal in the world after steel with an annual consumption of approximately 65 million tonnes (including scrap).

It is also the fastest growing metal which has grown by nearly 20 times in the last sixty years (compared to 6 to 7 times for other metals).

India is the fourth largest producer of aluminium in the world with a share of around 5.3% of the global aluminium output.

It has nearly 10% of the world's bauxite reserves and a growing aluminium sector that leverages this.

India also holds a fair advantage in cost of production and conversion costs in alumina. Moreover, rise in infrastructure development and automotive production are encouraging development in this sector within the country.

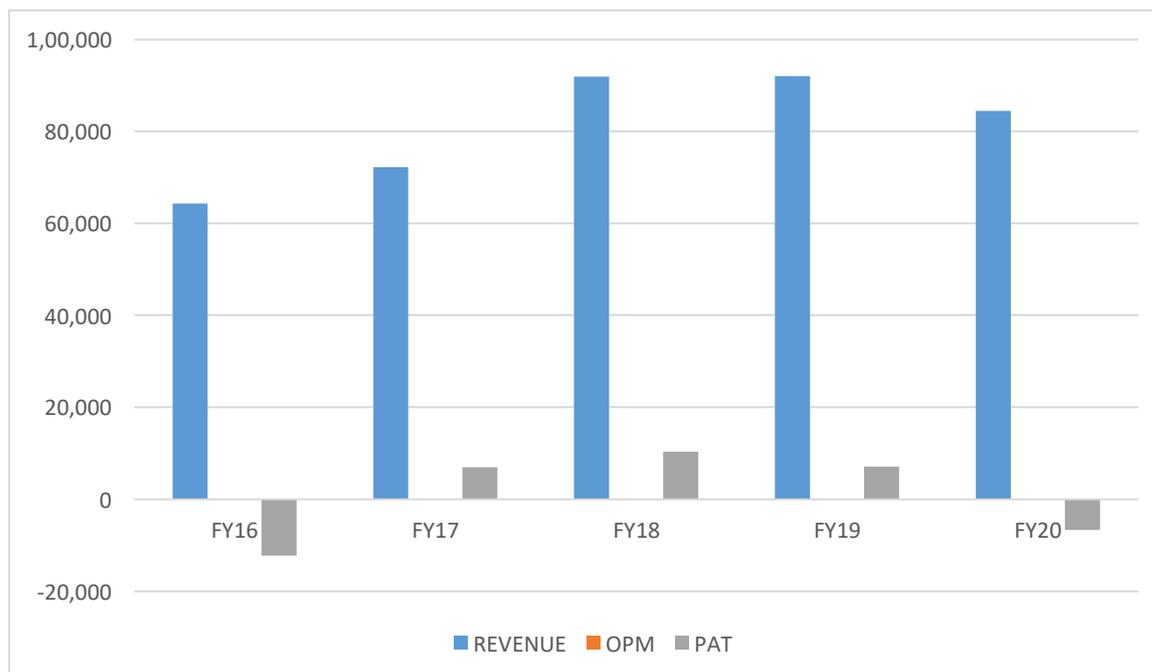
The Indian aluminium industry mainly consists of - primary aluminium, aluminium extrusions, aluminium rolled products and alumina chemicals. The industry meets the requirements of a wide range of industries including engineering, electrical and electronics, automobile and automobile components, etc.

The principal user segment of the aluminium industry in India continues to be the electrical and electronics sector followed by automotive, transportation, building, construction, packaging, consumer durables, industrial and defence.

100% FDI is allowed in the mining sector under the automatic route to explore and exploit all non-fuel and non-atomic minerals.

According to data released by Department for Promotion of Industry and Internal Trade (DPIIT), Indian metallurgical industries attracted Foreign Direct Investment (FDI) to the tune of US\$ 13.4 billion in the period April 2000–March 2020.

FINANCIALS:



FINANCIAL RATIOS:

YEAR	REVENUE	OPM	PAT
FY16	64,262	-29%	-12,270
FY17	72,225	29%	6,958
FY18	91,866	22%	10,342
FY19	92,048	25%	7,065
FY20	84,447	24%	-6,664

S.W.O.T ANALYSIS:

STRENGTHS

- Highly diversified business.
- Captive power generation units.
- high brand recall value.
- Strong assets – owns mines and manufacturing units in India and abroad.
- Strong financial position.
- Strong research and analysis team.
- Huge Barriers to entry such as Large economies of scale, high capital costs, scarcity of power, land and labour issues & Supply of primary aluminium is in excess as India is one of the largest producers of primary aluminium. However, due to limited scope of value addition within the country, primary aluminium producers export large quantities of primary aluminium products and companies import a sizeable quantity of downstream products.

WEAKNESSES

- Name involved in alleged illegal mining practices.
- Huge volatility in profit margins due to cyclical nature of business.
- The company is losing out on many opportunities as its Tuticorin Copper plant was closed in 2018 by a supreme court order and the plant contributed to 40% of India's production.
- Frequent Government intervention causes operational efficiency.
- The company has an extremely high promoter pledge of 99.99%, hence the company is always at a risk of a Hostile takeover.
- The company operates in the Mining Industry which is a sunset Industry due to depleting resources.
- The company is a capital-intensive Industry hence the company operates with huge leverage.

OPPORTUNITIES

- Development of nearby region to improve brand image among people.
- Worldwide expansion through London headquarters
- Growing demand of aluminium, zinc, iron and oil and gas present huge opportunities
- The company will benefit hugely from the Electronic vehicle revolution due to its dominant position in supply of Copper as well as aluminium in India.

THREATS

- Regulatory threats
- Depleting natural resources
- Better brand image of competitors
- ESG norms
- The oil and gas business of the company is at risk due to the huge transition happening to Renewable sources of energy.

AMARA RAJA BATTERIES

SCRIPT NAME	AMARA RAJA BATTERIES
BSE CODE	500008
NSE CODE	AMARAJABAT
CURRENT MARKET PRICE	808
TARGET PRICE	2000/2200/2400
POTENTIAL UPSIDE (%)	150%
TIME PERIOD	1 YEAR

Amara Raja Batteries Limited (ARBL) is one of the largest manufacturers of lead-acid batteries for both industrial and automotive applications. The company is one of the leading manufacturers of automotive batteries and Industrial batteries. The company manufactures Automotive and UPS batteries under the brand names of Amaron and PowerZone.

The company has a robust pan India sales distribution network, and its Major clientele includes Ford India, Honda, Hyundai, Mahindra & Mahindra, Maruti Suzuki, Ashok Leyland, and Tata Motors, Honda Motorcycles & Scooters India Private Ltd, Royal Enfield, Bajaj Auto Ltd and many more brands. The company is also a leading preferred supplier to telecom equipment manufacturers, UPS sector, Indian Railways and to the Power, Oil & Gas, Motive among other industry segments. Under the Industrial battery division Amara Raja operates under the brand names of Power Stack, Amaron Volt, Amaron Sleek, Amaron Vol, Amaron Brute and Amaron Quanta.

WHAT IS AMARA RAJA DOING TO BENEFIT THE MOST OUT OF THE ELECTRONIC VEHICLE STORY?

Amara Raja batteries had entered into a technology transfer agreement with the Indian Space Research Organization (ISRO) since early 2019. Amara Raja batteries has already invested Rs 20 crore into the hub, excluding technology transfer and bidding fees paid to the ISRO in January 2019. The agreement with ISRO for the lithium-ion cell technology transfer will be done without any royalty payment.

The ten companies that had bid to get a license only have to pay the bidding fees and technology transfer fees, Amara Raja on the other hand has already paid out the bidding and technology fee. According to Industry estimates and Mr Vijayanand (CEO Amara Raja batteries) lead-acid batteries will continue to grow at least for a few more decades and that lithium cells used in electric vehicles will take time to get commercial traction. Currently, the electric vehicle (EV) makers import the cells mostly from China.

LEAD ACID BATTERY: THE INDUSTRY OVERVIEW

Lead acid batteries have been into existence for more than 150 years and are being used extensively even today. The main reason for this is the reliability, cost effectiveness and the value for money that these batteries provide. The usage and demand for lead acid batteries is growing extensively due to the shift from nonrenewable sources of energy to renewable sources of energy, the demand for automobiles has been increasing at a rapid pace hence the demand for lead acid batteries is also increasing as well. Another reason that can be attributed to the growth of lead acid batteries is the ever-rising urbanization and Industrialization. Lithium batteries have built their presence and got a huge demand due to their application in Electronic vehicles however Lead acid batteries will always stay ahead due to their production costs, affordability and 99% recyclability.

However, the company will be deriving huge benefits out of the demand arising of Lithium-ion batteries due to the first Mover Advantage and technology expertise. Currently the Lead acid battery market is valued at \$5 billion and is expected to grow at a CAGR of 5-7%, however the market is expected to de grow due to falling Automobile sales, however a sharp rebound is expected from the next fiscal due to a sharp recovery expected in Automobile sales, with huge improvements in packaging, increasing capacities and efficiency the lead acid battery market is expected to witness growth from other sectors as well such as the electronic Vehicle Industry. Lead Acid batteries are found out to be the most efficient for storing energy generated from renewable sources of energy such as wind energy and solar energy.

In a recent study, Future Market Insights reported that Global Lead Acid Battery market is pegged to surpass a value pool of \$116.6bn by 2030. The report claims that stationary energy storage has enormous near-term potential. Businesses such as battery manufacturers, grid operators are set to establish collaborative relationships with solar power developers and energy service companies.



INDUSTRY STRUCTURE:

The lead acid battery market mainly caters to two segments:

a) The automotive segment. b) The non-automotive segment.

A) AUTOMOTIVE SECTOR

Amara Raja has been a pioneer in Automobile batteries, its flagship brand Amara Raja batteries is a market leader in the sector and has a huge distribution channel of 30,000 distributors with Pan India presence, the company has been a dominant player in the battery replacement market. Amara raja caters to the needs of all the Automobile companies, two wheelers, three wheelers and OE's. The company has shown robust growth over the last five years despite the dismal performance of the Automobile sector due to its focus on the battery replacement market. The company has two manufacturing facilities, one is in Tirupati and the second one is in Chittoor. During the year, the company bagged approvals from two large two-wheeler OE's. The company also emerged as the largest Automobile battery exporter of India.

B) NON-AUTOMOTIVE SEGMENT

The private label business was expanded by the team by adding new customers and secured sales and marketing license from an MNC based in India. The company strengthened its presence in the aftermarket segment as well, by increasing the warranty and decreasing claim settlement period. The slowdown in battery demand continued in the telecom sector for the third consecutive year. Despite this, the division performed well and increased its market share. The company regained dominance in battery supply via supplying batteries to India's largest tower company. The company took some progressive steps such as Commercializing a Fixed Energy Cost Model (FCM) by managing more than 500 sites for a leading telecom operator. Regarding the UPS sector, the Company's performance was particularly great with the strengthening of credentials at major UPS OEMs and in the fast-growing data center segment. Its growth exceeded the industry average, increasing the market share.

LI ION BATTERIES- The Company continued its efforts to expand the marketplace with its lithium-ion packs, which were launched in 2018-19. While several customers accepted the product for undertaking field trials, some placed direct orders for the product. This will give the Company rich insight into the product, its application, its challenges, and the overall market opportunity, and help explore opportunities to backward integrate in the same business space.

EV INDUSTRY IN INDIA:



The Union government is trying to encourage the adoption of electric mobility to reduce the dependence on crude oil imports and bring down pollution across cities. With its cleaner carbon footprint and reduced localized pollution, e-mobility can serve as a solution. Though the Indian Government laid out a broad plan in 2013 with the 'National Electric Mobility Mission Plan (NEMMP) 2020, e-mobility has seen better traction in the recent times with the Phase 2 of the FAME (Faster Adoption and Manufacturing of Hybrid and Electric vehicles) rolled out on 1st April 2019. The second phase aims at boosting electric mobility and increasing the number of electric vehicles in commercial fleets. This includes buses using EV technology, electric, plug-in hybrid, and strong hybrid four-wheelers as well as electric three-wheelers including e-rickshaws and electric two-wheelers. It also focuses on the establishment of charging infrastructure across multiple cities.

E-RICKSHAWS:

The Indian electric rickshaw market has witnessed significant growth in recently, owing to rising environmental awareness, government incentives and implementation of stringent regulations to curb environmental degradation. Analyzing the dominance of electric rickshaws, which cover 80% of the EV market in India, Frost and Sullivan has said in a recent report that e-rickshaws in India will grow to 1 million units by FY2025 from 0.4 million in FY2019. Around 72% of the electric rickshaws plying on Indian roads providing last mile mobility solutions to in Tier II and III cities, are 0-2 years old and approximately 98% of them are powered by lead acid batteries. It presents an interesting opportunity for Amara Raja batteries.

THE ELECTRIC VEHICLES MARKET GLOBAL POTENTIAL GRAPH:

The Electric Vehicle Battery Market's Enormous Potential

Size of the global electric vehicle battery market from 2016 to 2026 (in USD)

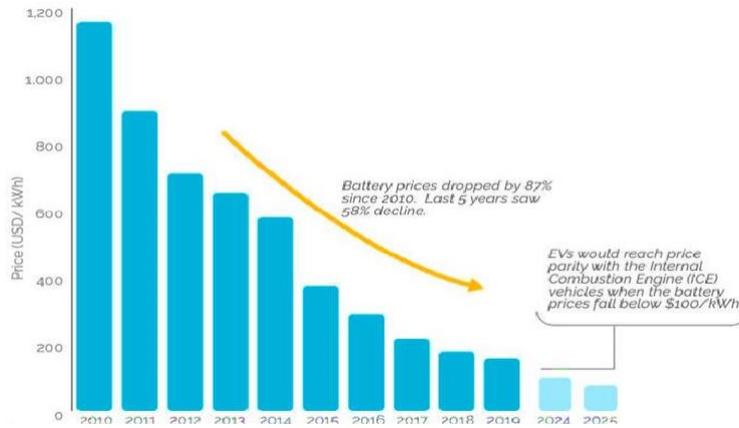


* Forecasts

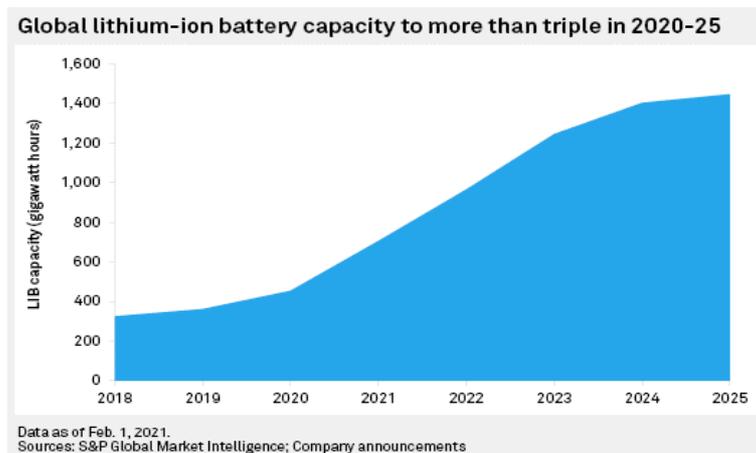
@StatistaCharts

Source: BIS Research

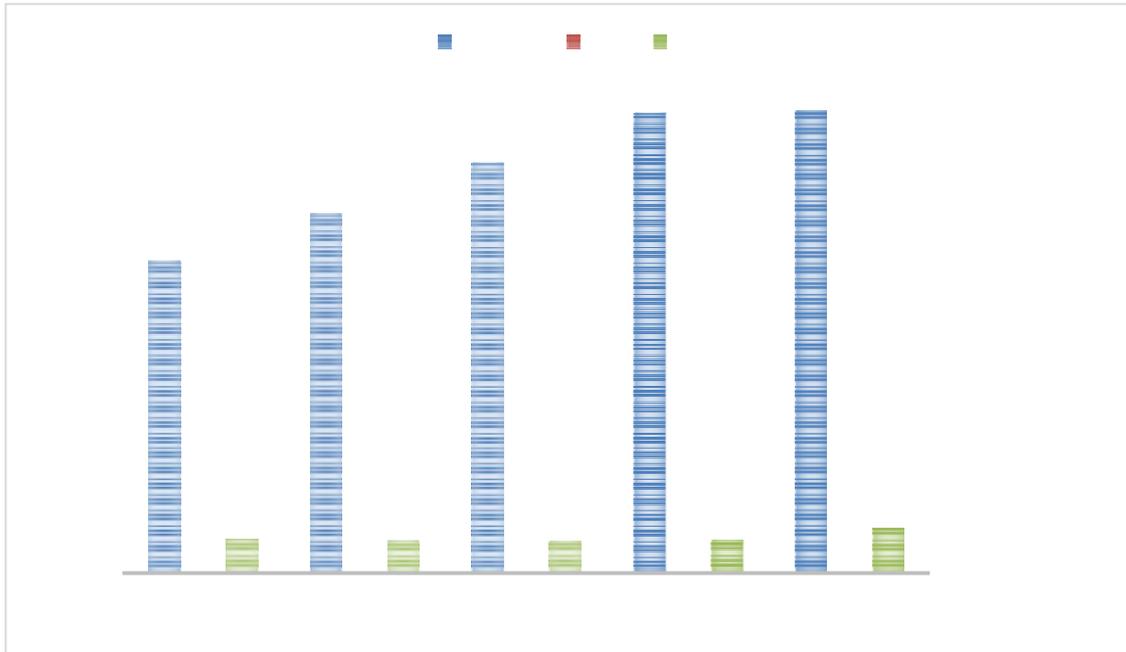
BATTERY PRICES GRAPH:



At half the weight and 2-3 times the power of traditional lead-acid, lithium-ion battery provides power no matter what type of electric vehicle you have. Lithium-ion batteries are the most common battery type used in modern electric vehicles. These batteries have higher energy density compared to lead-acid or nickel-metal hydride batteries. Their compact size makes them preferable in the automotive industry. It is expected global LIB production capacity to increase from 455 GWh in 2020 to 1,447 GWh in 2025, at a CAGR of 26%.



FINANCIALS:



FINANCIAL RATIOS

YEAR	REVENUE	OPM	PAT
FY16	4,618	18%	492
FY17	5,317	16%	478
FY18	6,059	15%	471
FY19	6,793	14%	483
FY20	6,839	16%	661

S.W.O.T ANALYSIS:

STRENGTHS:

- Strong leadership and management & The company has been Pioneer in manufacturing Lead acid batteries, automobile batteries.
- The Company has an advantage of huge economies of scale and is expanding by leaps and bounds, a third plant of batteries will be developed at Chittoor for producing batteries.
- The company has been continually grabbing market share from the unorganized sector.
- The company has a strong brand recall value.
- The company has a dominant position in after market batteries segment which is dominated by the unorganized sector.
- The company will get a first mover advantage as it has already started developing a lithium-ion plant through a technology transfer agreement with ISRO.

WEAKNESSES

- The company has a huge dependency on Lead acid batteries and gets most of its revenues from Lead acid batteries.
- The company has a huge dependency on the automobile sector which has shown sluggish growth over the last 4 years.
- The sectors where the company supplies batteries such as the telecom equipment sector, railways etc. have shown sluggish growth due to the covid crisis and are high working capital businesses.
- The company faces high competition from the unorganized sector.

OPPORTUNITIES

- The company has huge opportunities as the sector has started showing growth and has picked up nicely after the covid crisis. The lead acid Battery is expected to grow at a CAGR of 5-7% over the next 5 years, also the Industry has huge room for growth as majority of the battery replacement Industry is controlled by the Un organized player and the company has been continually grabbing market share from the unorganized Industry.

THREATS

- Raw material price fluctuations
- The company is heavily dependent on Lead acid batteries hence changing completely can be tough.
- Competition - Market share of the Company may shrink in the face of intensifying competition in the market from local and regional players.
- Technology - Constantly evolving technology may blunt the Company's product edge in the market.



02-05-2021

TATA MOTORS LIMITED

SCRIPT NAME	TATA MOTORS LIMITED
BSE CODE	500570
NSE CODE	TATAMOTORS
CURRENT MARKET PRICE	293
TARGET PRICE	600/700/800+
POTENTIAL UPSIDE (%)	1 YEAR
TIME PERIOD	



Tata Motors Group (Tata Motors) is a \$35 billion organization. It is a leading global automobile manufacturing company. Its diverse portfolio includes an extensive range of cars, sports utility vehicles, trucks, buses, and defense vehicles. Tata Motors is one of India's largest OEMs offering an extensive range of integrated, smart, and e-mobility solutions.

Tata Motors' presence indeed cuts across the length and breadth of India. Over 4 million Tata vehicles ply on Indian roads, since the first rolled out in 1954.

Tata Motors, the first company from India's engineering sector to be listed in the New York Stock Exchange (September 2004), has also emerged as an international automobile company. Through subsidiaries and associate companies, Tata Motors has operations in the UK, South Korea, Thailand, and Spain. Among them is Jaguar Land Rover, a business comprising the two iconic British brands that was acquired in 2008. In 2004, it acquired the Daewoo Commercial Vehicles Company, South Korea is second largest truck maker.

Tata Motors is also expanding its international footprint, established through exports since 1961. The company's commercial and passenger vehicles are already being marketed in several countries in Europe, Africa, the Middle East, South East Asia, South Asia and South America. It has franchisee/joint venture assembly operations in Kenya, Bangladesh, Ukraine, Russia, and Senegal.



02-05-2021

HOW WILL TATA MOTORS BENEFIT FROM EV PRODUCTION?



- In the last three years, the central government has repeatedly talked about moving away from fossil fuel based to renewable energy powered electric vehicles. Tata Motors' efforts in the EV space began with an EV version of its first passenger vehicle model – the Indica – in 2006. Since then, the EV projects were mainly developed for technology demonstration purposes. It was in September 2017 that an announcement of winning a bid to supply Tata EVs to Energy Efficiency Services Limited (EESL) that surprised many.
- With the Central, and many state governments also devising policies to adopt electric mobility, industry players like Tata Motors stand to benefit. The critical scale is still some time away though. Addressing challenges like charging infrastructure, higher acquisition cost compared to ICE vehicles, and creating more consumer awareness about the new technology will be crucial to pave the way for a better drive for the EV industry.
- Tata motors has the largest EV distribution network in the country and currently present in 51 cities, has 93 sales centers.
- Tata motors also has access to a huge public charging network with 3000+ AC chargers and 100+ charging points.
- The nexon EV and Tigor EV made up 70% of the total sales done by the Electronic vehicle Industry last year, the sales grew 4-4.5 times despite the EV Industry recording a decline of 15-20%.
- Tata Motors has set up Strong barriers against any Competition in the EV Industry due its tie up Tata power (EV infrastructure), Tata Chemicals (Battery manufacturing), Tata Autocomp systems (OEM supplier) and Tata Capital (EV financing).
- Tata Power, which currently has a presence in 65 cities in India with over 400 charging points now and is to have a footprint in over 100 cities with its Public Charging Network, is targeting setting up an EV charging infrastructure of over 700 charging stations across the country by December 2021. It has tie ups with Tata Motors, MG, and Jaguar Land rover.
- Tata motors gained a huge market share of 400 basis points (4%) which will further help Tata motors increasing EV sales.

TATA'S NEXON EV



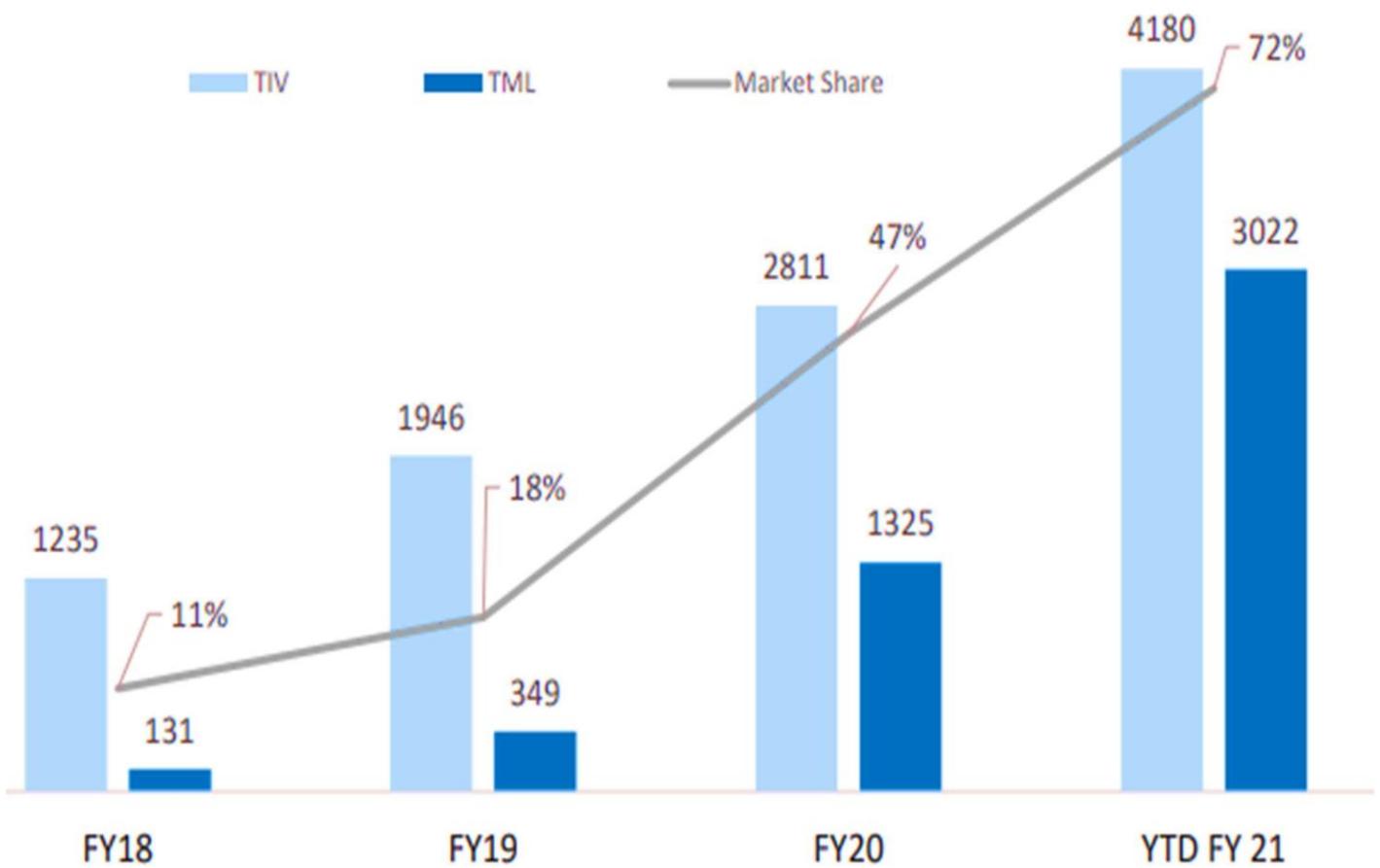
- As the Nexon EV, Tata's first electric vehicle (EV) model powered by its Zipton technology and aimed at the personal usage segment gains ground, the OEM sees the EV drive to get only bigger. The Nexon EV, which turned a year old on January 28 and is close to crossing the 3,000-units sales mark, could be followed by more models in the near future.
- The Nexon EV's real-world driving range of over 200km per charge is seen as a key factor for its market performance, in addition to the fact that it falls in the most favorable SUV segment.
- The Nexon EV has drastically increased its market share in the electronic private vehicles space from a mere 18% in FY 18 to a 72% in FY 20.
- The Nexon EV is the number one EV in India and has also won a EESL tender from the government for supply of 150 EV's.
- The Tata Tigor EV on the other hand is the number one EV in the fleet segment.
- The Nexon EV has a certified range of 312 km's.
- As per the company in the coming times, 5 to 6% of the total revenues will be spent on Capex, and the company will achieve a FCF breakeven for EV's by FY23 and will be report positive FCF's from there on.
- The Nexon EV is the most sold EV in India
- Tata motors sold more than 4000 units of the Nexon EV in the last 14 months.
- The nexon EV is the most affordable EV in India and is priced between 13-16 lakhs whereas Other EV's are priced above 20 lakhs.



02-05-2021

SALES PERFORMANCE GRAPH:

Sales Performance (as of Jan'21)





02-05-2021

MANUFACTURING CENTRES OF TATA MOTORS:

MANUFACTURING LOCATIONS (INDIA)

JAMSHEDPUR (JHARKAND)
LUCKNOW (UTTAR PRADESH)
UDHAM SINGH NAGAR (UTTRAKHAND)
SANAND (GUJARAT)
PIMPRI (PUNE)
DHARWAD (KARNATAKA)

MANUFACTURING LOCATIONS (OUTSIDE INDIA)

GAUTENG (SOUTH AFRICA)
BERRECHID (MORROCO)
NICCHELINO (ITALY)
CONVENTRY (UNITED KINGDOM)
BANGKOK (THAILAND)
JEOLLABOK (KOREA)



JAGUAR LAND ROVER RE – IMAGINE:



- Jaguar Land rover plan to go all electric by 2025.
- Land rover will be launching 6 pure play EV models by FY24.
- The company is targeting more than 10% Ebit margins as a plan of the strategy.
- A controlled capex of £2.5 billion will help the company in debt reduction and increasing cash flows by FY24 and becoming net debt free.
- The company will be focusing on profitable models such as the Land rover Velar, Range rover etc.

OFFICES IN UK:

Jaguar Land Rover offices in the UK



And worldwide

-  Portland, US
-  Changshu & Shanghai, China
-  Shannon, Ireland
-  Graz, Austria
-  Pune, India
-  Nitra, Slovakia
-  Itatiaia, Brazil

Source: Jaguar Land Rover

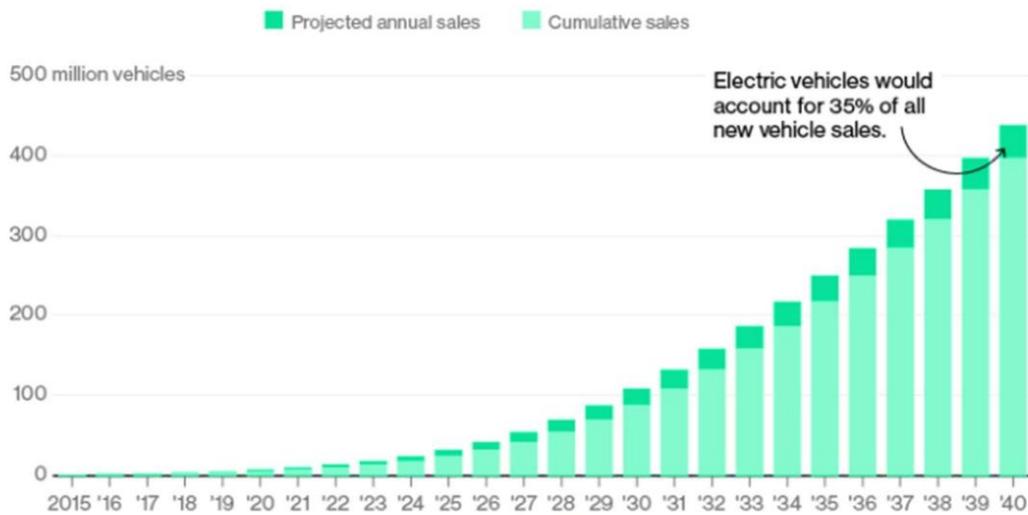


02-05-2021

PROJECTED SALES FOR ELECTRIC VEHICLES OVER THE NEXT 19 YEARS:

The Rise of Electric Cars

By 2022 electric vehicles will cost the same as their internal-combustion counterparts. That's the point of liftoff for sales.

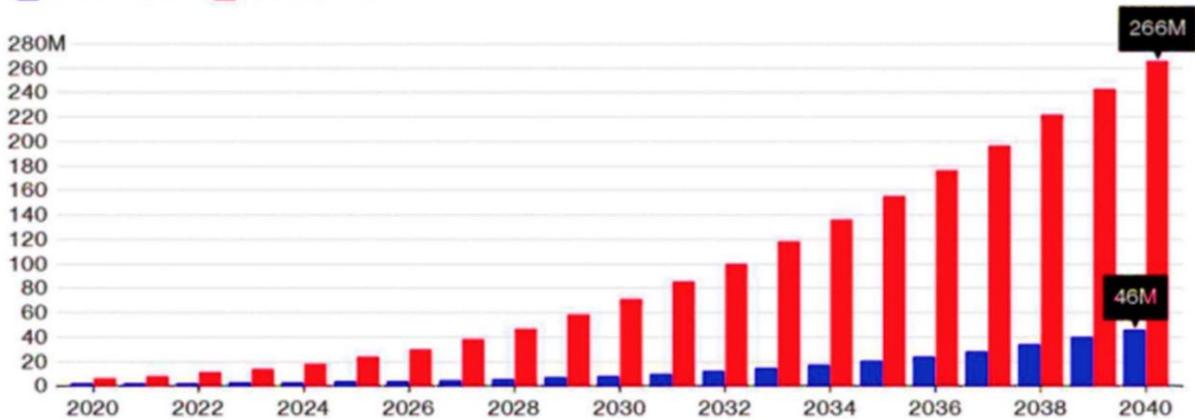


GROWTH EXPECTATIONS CHART:

Growing Expectations

OPEC's electric vehicle forecast grew by almost 500% last year

Legend: 2015 Forecast (blue), 2016 Forecast (red)



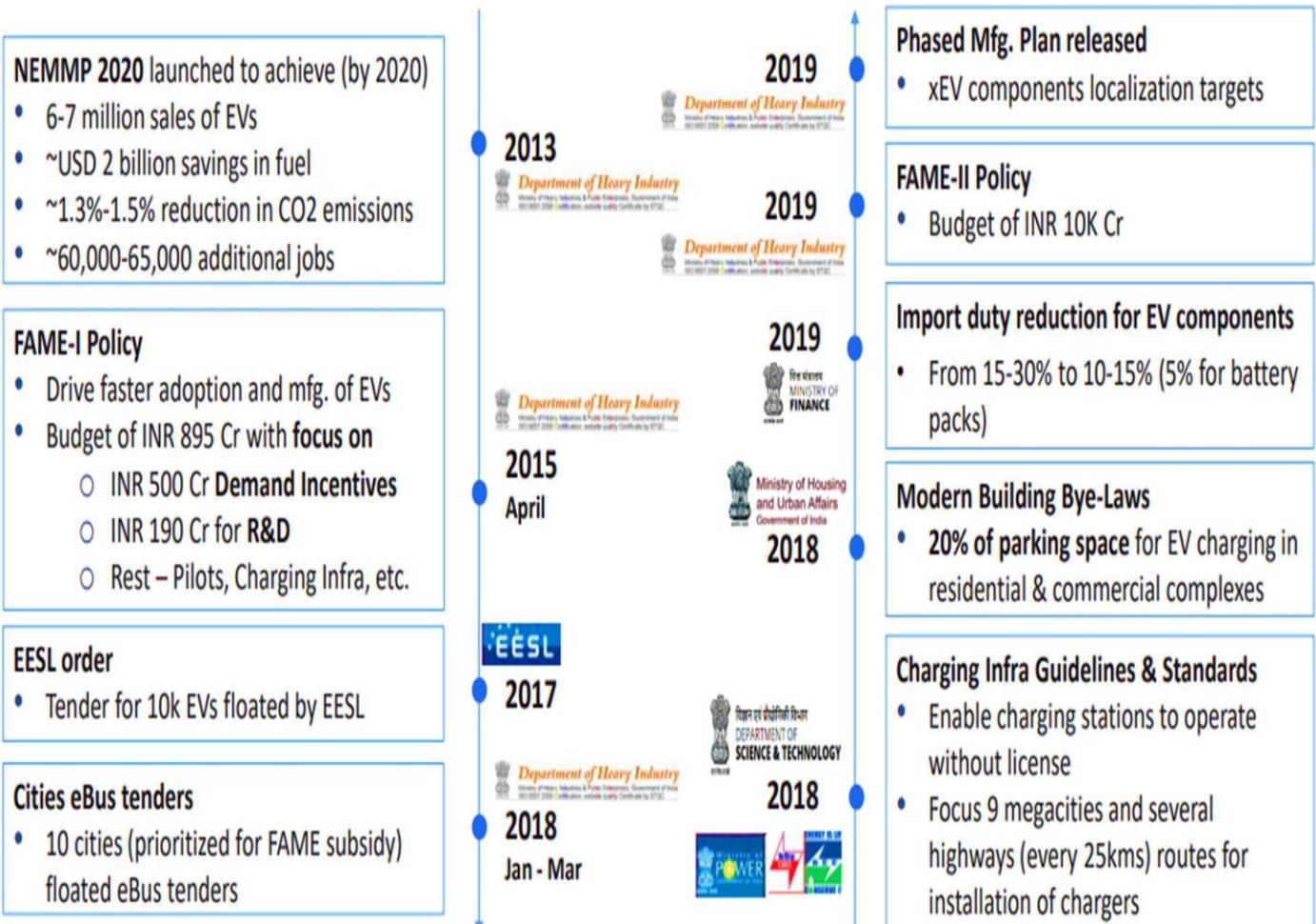


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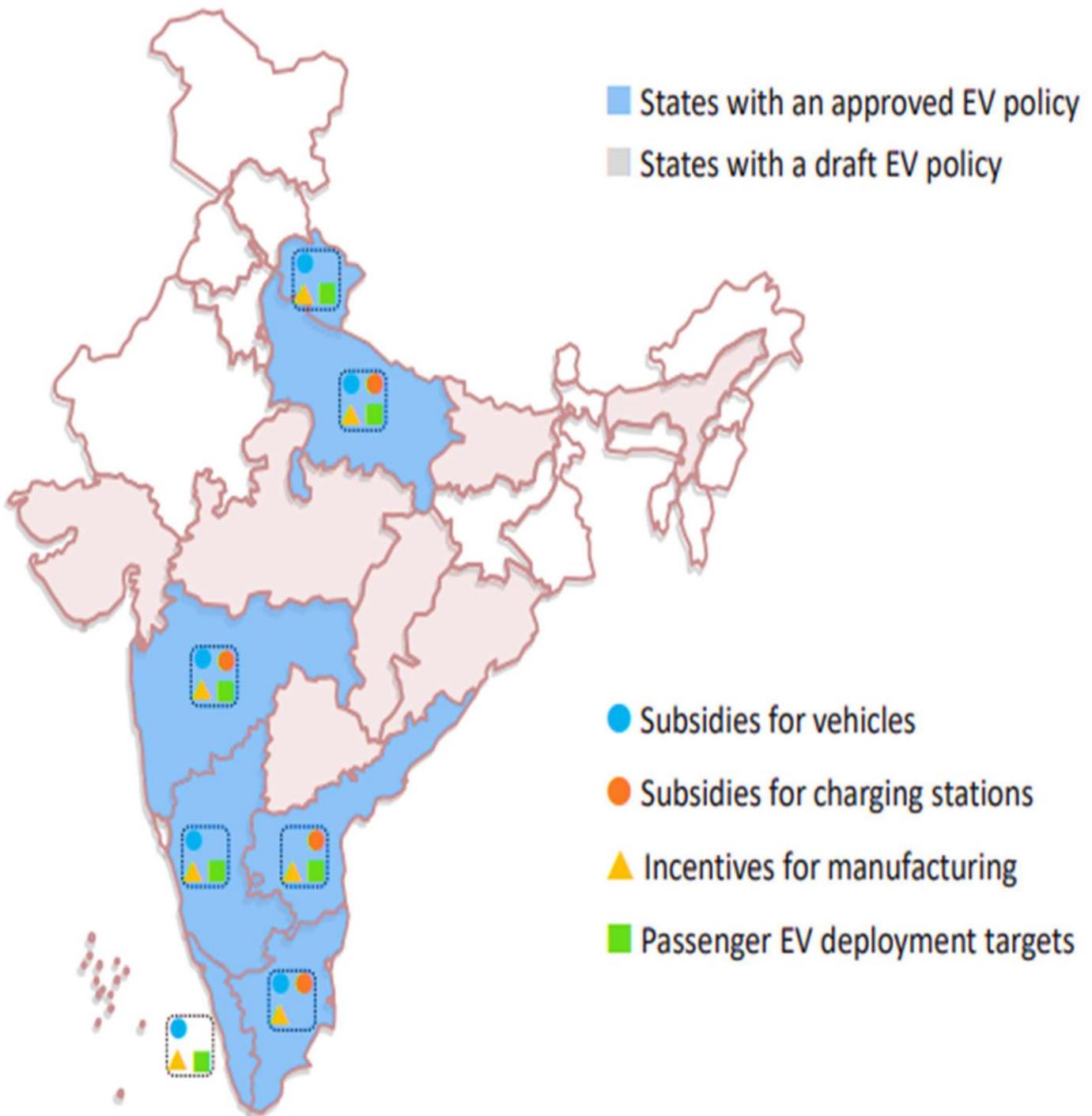
EV ADOPTION IN INDIA:



Government has shown strong intent towards driving EV adoption over the years



STATES WHICH HAVE ADOPTED THE ELECTRONIC VEHICLES:





02-05-2021

FOCUS ON RESEARCH AND DEVELOPMENT:

Tata Motors had emerged as the largest spender on R&D in FY20 with a total of Rs 3,100 crore. The amount was 7.10 percent of its total revenue. Among sectors, Automobile was the top contributor with spending Rs 11,100 crore on R&D followed by the pharmaceutical sector with Rs 10,600 crore spending, industrials + energy with Rs 8,200 crore and IT with Rs 2,300 crore of R&D spends This indicates the strong focus of the company of research and development.

RECENT DEVELOPMENTS IN TATA MOTORS:

- The company is working on Electrification of commercial vehicles as well, Centre had introduced the 'Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India' (FAME India) scheme to promote the manufacturing of electric and hybrid vehicle technology. Battery electric is suitable for a low range, about 300-400 km or below. For ranges above that it better to go with fuel-cell technology (the company will be launching electric commercial vehicles especially Pickup trucks using Fuel cell technology).
- The company has been working on hydrogen fuel technology; and had recently participated in a tender for such a company.
- The Delhi High Court on Wednesday stayed the operation of an order dated 1st March 2021 passed by Deputy Commissioner of GNCTD directing suspension of Tata Nexon EV as an eligible Electric Vehicle from the list of eligible models from availing subsidy under Delhi Electric Vehicle Policy.
- Tata Motors is optimistic that the supply constraint of semiconductors that has impacted its commercial vehicles production will be back to normal by the second half of the next fiscal, according to a senior company official.
- The Delhi High Court on Wednesday stayed the operation of an order dated 1st March 2021 passed by Deputy Commissioner of GNCTD directing suspension of Tata Nexon EV as an eligible Electric Vehicle from the list of eligible models from availing subsidy under Delhi Electric Vehicle Policy.
- Tata Motors expects to grow more than 36 per cent in Financial Year 2021-22 helped by its new models and the economy recovering after the coronavirus pandemic's economic impact, said a top executive of the company.
- In Q3FY21 Tata Motors saw its business grow by 54% in the domestic market. Additionally, it recorded its highest ever passenger vehicle sales in nearly nine years (107 months). It also saw its passenger vehicle sales soar to recording 119% growth in February 2021. Its commercial vehicle business also grew overall as well as in the domestic market.
- Tata Motors recently launched 10 new state-of-the-art full-range passenger vehicle showrooms in Delhi NCR, seven in Delhi, two in Gurgaon and one in Faridabad.



02-05-2021

SWOT ANALYSIS:

STRENGTH

- Brand Loyalty- TATA is regarded as one of the country's trusted brands for a century and has its presence worldwide. This is one of the competitive advantages for TATA Motors.
- Acquisition Strategies- Mergers and acquisitions, if adequately implemented, increase the profits due to the synergy effect. TATA Motors has the most significant history of acquiring Jaguar Land Rover, Daewoo, Hispano, etc., and making profits from those acquisitions.
- Strong Management team- MR. Guenter Butschek, the former COO of Airbus, heads Tata Motors and has a strong leadership team consisting of stalwarts like MR. N. Chandrasekaran, M. O. P Bhatt, etc., is the biggest asset in the tough times.
- Established distribution and service Network- TATA motors have a distributed service network across the country, with over 1600 workshops covering 90% of our country's districts.

WEAKNESSES

- Increase in Operation cost and reduced profits- Even though the acquisition of Jaguar and Landover was successful for the initial few years. It made the company more dependent on this subsidiary for its overall performance. This is decreasing the overall sales and profits of the company from last five years.
- Limited Presence compared to International Moto Manufacturers- TATA motors have a limited presence across the world than international competitors like Toyota, Honda, Volkswagen, etc.
- Limited its domestic market presence: Tata has not marked its presence in too many countries. Tata Motors must try to tap international markets.

OPPORTUNITY

- Shift focus on developing luxury car brands.
- TATA Motors is known for its low-cost cars. As they have acquired a good number of subsidiaries in last decade. They should take the leverage in developing.
- Increasing the cost of Research and Development
- TATA Motors products are seen as traditional models, though they tried to diversify to meet millennials' needs. Though the company is spending more than the industry average on Research and development, it is comparatively low with big players in the industry.
- Electric Vehicles are the demand of the new generation. Tata Motors must introduce new electric cars to compete with new emerging players.

THREATS

- The automotive industry is the oldest in our country. Big brands like Maruti, Mahindra & Mahindra, Hero, and Bajaj Auto are both experienced in the industry and innovative in their solutions.
- Aluminum and Steel Prices can be a major threat: Increasing world economic prices can be a major Threat. Steel and aluminum prices are steadily placing pressure on production costs.



03-05-2021

HINDUSTAN COPPER LIMITED

CMP	155
POTENTIAL UPSIDE	140%
TARGET	300/340/380
BSE CODE	513599
NSE CODE	HINDCOPPER
TIME FRAME	1 YEAR

Hindustan Copper Limited (HCL), a public sector undertaking under the administrative control of the Ministry of Mines, was incorporated on 9th November 1967. It has the distinction of being the nation's only vertically integrated copper producing company as it manufactures copper right from the stage of mining to beneficiation, smelting, refining and casting of refined copper metal into downstream saleable products.

The company is the only operating copper ore producing mining company in India. They are also the only vertically integrated producer of primary refined copper in India, Ministry of Mines (MoM), Government of India (GoI). India has a large imbalance between its copper smelting/refining capacity and its copper ore mining capacity. The refined copper production capacity in India for fiscal 2010 was more than 1 million tonnes of copper, requiring approximately 100 million tonnes of copper ore (assuming a copper content of 1%). The copper ore production in India for fiscal 2010 was approximately 3.21 million tonnes. As it is the only operating copper ore producing mining company in India and have access to over two-thirds of India's copper ore reserves, this presents an attractive growth opportunity for them.

The Company markets copper cathodes, copper wire bar, continuous cast copper rod and by-products, such as anode slime (containing gold, silver, etc.), copper sulphate and sulphuric acid. In normal practice, more than 90% of the sales revenue is generated from cathode and continuous cast copper rods. HCL's mines and plants are spread across five operating Units, one each in the States of Rajasthan, Madhya Pradesh, Jharkhand, Maharashtra and Gujarat as named below:

- Khetri Copper Complex (KCC) at Khetrinagar, Rajasthan.
- Indian Copper Complex (ICC) at Ghatsila, Jharkhand.
- Malanjkhand Copper Project (MCP) at Malanjkhand, Madhya Pradesh.
- Taloja Copper Project (TCP) at Taloja, Maharashtra.
- Gujarat Copper Project (GCP) at Jhagadia, Gujarat.



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MANUFACTURING LOCATIONS:

Khetri Copper Complex (KCC) ¹

State	Rajasthan
Inception	1967
Facility	Mining (underground), Beneficiation, Smelting & Refining
Product	Copper Concentrate & cathode
Capacity	Ore -1.4 mn tonnes p.a. Cathode - 31,000 tonnes p.a. (under s/down due to economic reasons)

Indian Copper Complex (ICC)

State	Jharkhand
Inception	1924, Nationalized in 1972
Facility	Mining, Beneficiation Smelting & Refining
Product	Copper concentrate, cathode, anode slime, sulphuric acid & copper sulphate
Capacity	Ore -0.6 mn tonnes p.a. Cathode - 18,500 tonnes p.a.

Gujarat Copper Project (GCP)

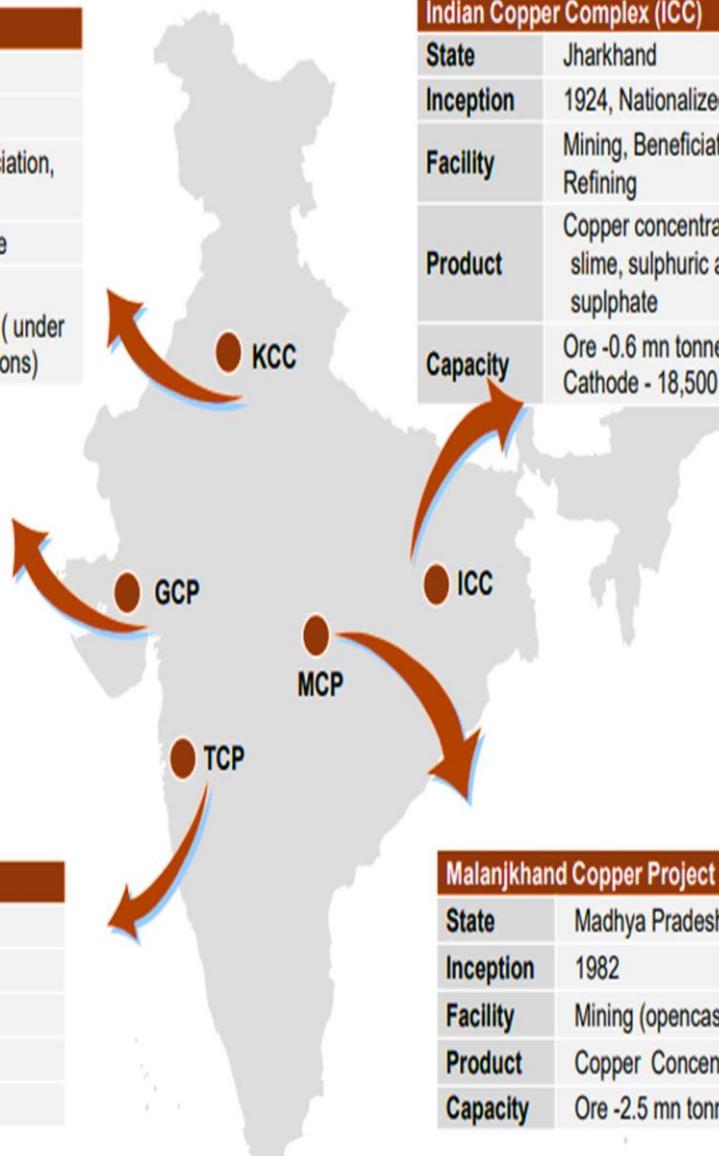
State	Gujarat
Acquisition	2015
Facility	Secondary smelting & Refining
Product	Copper cathode, anode slime
Capacity	Cathode – 50,000 tonnes p.a.

Taloja Copper Project (TCP)

State	Maharashtra
Inception	1988
Facility	Continuous casting
Product	Copper wire rod
Capacity	60,000 tonnes p.a.

Malanjkhand Copper Project (MCP)

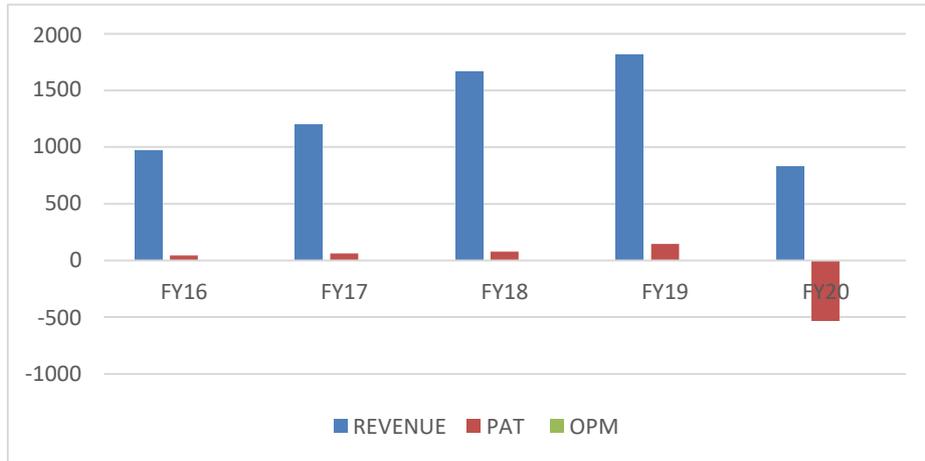
State	Madhya Pradesh
Inception	1982
Facility	Mining (opencast), Beneficiation
Product	Copper Concentrate
Capacity	Ore -2.5 mn tonnes p.a.





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FINANCIALS :



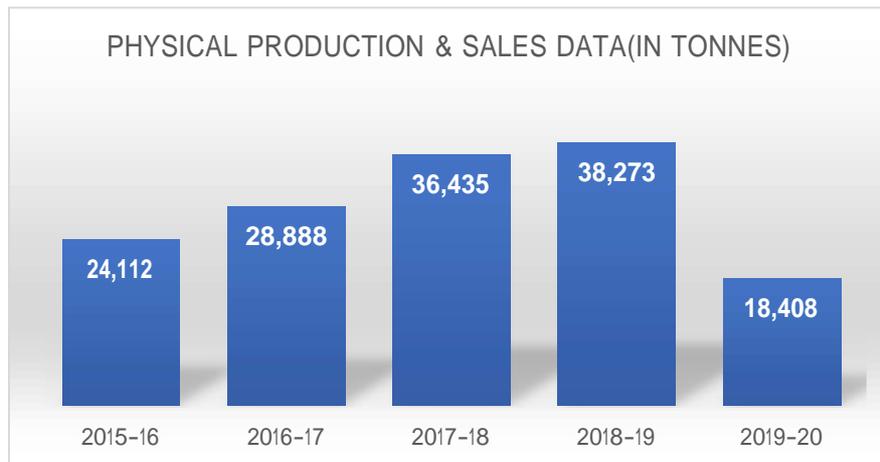
IMPORTANT FINANCIALS:

YEAR	REVENUE	PAT	OPM
FY16	971	43.66	11%
FY17	1203	61.94	18%
FY18	1670	79.61	16%
FY19	1816	145.51	28%
FY20	831	-533.46	-29%



03-05-2021

PRODUCTION AND SALES PERFORMANCE OVER THE LAST 5 YEARS:



SALES DATA (SNAPSHOT) :

THIRD QUARTER:

Third Quarter (Oct 2020 to Dec 2020)				
Item Description	Unit	Q3 (2020-21)	Q3 (2019-20)	Change %
Copper Cathode	MT		299	
Copper CC Rods	MT		887	
Copper Sulphate	MT		41	
Metal-in-Concentrate (MIC)	MT		850	
Nickel	Kg			
Sulphuric Acid	MT		1432	

FOURTH QUARTER:

Fourth Quarter (Jan 2021 to Mar 2021)				
Item Description	Unit	Q4 (2020-21)	Q4 (2019-20)	Change %
Copper Cathode	MT		66	
Copper CC Rods	MT		290	
Copper Sulphate	MT		15	
Metal-in-Concentrate (MIC)	MT		3038	
Nickel	Kg			
Sulphuric Acid	MT		0	

SALES FIGURES (IN TONNES):

YEAR	PHYSICAL PRODUCTION + SALES DATA
2015-16	24,112
2016-17	28,888
2017-18	36,435
2018-19	38,273
2019-20	18,408



03-05-2021

PLANNED CAPACITY EXPANSION OVER THE NEXT DECADE:

Hindustan copper initially during FY 2010-11 had decided to increase the mine production capacity from 3.4 million tonne per annum (MTPA) to 12.2 MTPA. However, this target was subsequently revised to 20.2 MTPA in order to boost domestic production of copper metal to reduce dependence on imports. The expansion plan will be implemented in a phased manner i.e., in first phase capacity up to 12.2 MTPA would be targeted and in second phase it will be scaled up to 20.2 MTPA. The first target will be completed by 2028-29 followed by the second target.

STATUS OF DIFFERENT CONTINUING MINE EXPANSION PROJECTS:



1) MALANJKHAND COPPER PROJECT (MP):

The proposed expansion of MCP will significantly increase the ore production capacity from present 2.0 to 5.0 MTPA by developing an underground mine below existing open pit whose life is at its fag end. This will be done after obtaining the required Environment Clearance(EC) and clearance from National Board for Wildlife (NBWL).The company from which the mine was acquired is currently under Insolvency and Bankruptcy Code, 2016 and their liquidation is under process hence this has resulted in slow progress on construction of underground mine at MCP. Meanwhile, a contract for ore production from developing underground mine through decline has been awarded in July,2019 and it is expected that production will commence in 2020-21.

2) KHETRI, KOLIHAN AND BANWAS MINE (RAJASTHAN):

The proposed expansion of mines at western sector will increase ore production capacity from existing 1.0 to 3.0 MTPA.

3) SURDA MINE EXPANSION (JHARKHAND):

The plan is to start sinking of the shaft and deepening of various winzes to increase production capacity from 0.4 to 0.9 MTPA in The Surda mine. The Expert Appraisal Committee (EAC) of the Ministry of Environment, Forest and Climate Change (MoEFCC) in its 34th meeting held on 4.6.2020 deferred the proposal of Environment Clearance (EC) of Surda Mine asking additional information like Letter of Intent (LoI) from the Government of Jharkhand for extension of the lease and few other clarifications. HCL has requested the Government of Jharkhand for issue of LoI and the matter is being pursued. Mining lease of Surda which was valid up to 31.3.2020 would be renewed after obtaining EC from the MoEFCC.



03-05-2021

FUTURE INDUSTRY OUTLOOK:



Copper demand is expected to grow at 7% -8% in India. Growing demand from power sector in view of Government laying thrust on renewable energy and increasing demand from the households for consumer durables will increase demand for copper in India. Manufacturing of electric vehicles (EV) will also augment consumption of copper as EV use four times more copper than traditional internal combustion engines. Copper is essential to EV technology and its supporting infrastructure and the evolving market will have a substantial impact on copper demand. The per capita copper consumption in India is expected to increase from the current level of 0.5 Kg to 1 kg by 2025. The average per capita copper consumption in the world is 3.2 kg. On the supply side, there could be further disruptions in copper production due to the smelter upgrades in Chile following the introduction of new environmental regulations. The extended closures at Chilean smelters (including Chuquibambilla and Potrerillos) reduced smelter production in the first half of 2019.

WHY DOES COPPER PLAY A MAJOR ROLE IN THE ELECTRIC VEHICLE GROWTH STORY?

EVs need large amounts of copper, EVs can use up to three and a half times as much copper when compared to an internal combustion engine (ICE) passenger car. The amount goes up as the size of the vehicle increases: a fully electric bus uses between 11 and 16 times more copper than an ICE passenger vehicle, depending on the size of the battery and the actual bus. Copper is used in every major EV component, from the motor to the inverter and the electrical wiring. And a fully electric vehicle can use up to a mile of copper wiring.

IS THERE ANY ALTERNATIVE TO COPPER, CAN IT BE REPLACED?

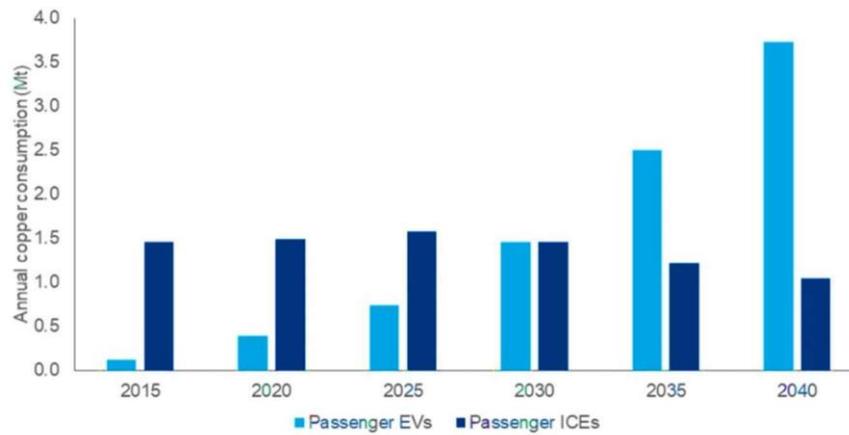
Copper's physical properties make it the best metal to conduct electricity, and it can comfortably accommodate the higher temperatures that are common in EV's. Aluminium is the closest alternative, but despite it being lighter and almost three times cheaper, copper comes up trumps on size and efficiency: an aluminium cable needs to have a cross-sectional area that is double the size of any copper equivalent to conduct the same amount of electricity. Copper is king in the world of the supercharger. With a supercharger, an EV can reach 80% of its full charge in as little as 20 minutes. Superchargers rely on copper to be as electrically efficient as possible. By 2030, we anticipate over 20 million EV charging points will be deployed globally, consuming over 250% more copper than 2019. But to get there, we need to see much more private and public investment.



03-05-2021

ANNUAL COPPER CONSUMPTION IN EVs:

Annual copper consumption in EVs and ICE vehicles



HOW COPPER DRIVES ELECTRIC VEHICLES:

HOW COPPER DRIVES ELECTRIC VEHICLES

Copper Development Association Inc.
Copper Alliance

Electric vehicles (EV) are contributing to a cleaner, safer and more energy-efficient environment. Powering this sustainable technology is copper, used for its durability, superior electrical conductivity and reliability.

Copper is a major component in EVs used in electric motors, batteries, inverters, wiring and in charging stations.

A pure electric vehicle can contain more than a mile of copper wiring in its stator windings.

In 2016, the number of electric vehicles increased to **2 million globally**

Annual sales of PEVs will exceed **1 million vehicles in 2023**, reaching more than 7 percent of annual sales by 2025.

The total number of EVs is projected to reach **7 million by 2025**.

About **5 million charge ports** will be required to support them.

In 2016, the estimated amount of copper used in all electric vehicles was nearly **26 million pounds**.

Copper Use By Vehicle Type

<ul style="list-style-type: none"> ■ Conventional cars: 18-49 lbs of copper ■ Hybrid electric vehicles (HEV): 85 lbs ■ Plug-in hybrid electric vehicles (PHEV): 132 lbs 	<ul style="list-style-type: none"> ■ Battery electric vehicles (BEVs): 183 lbs ■ Hybrid electric bus: 196 lbs ■ Battery electric bus: 814 lbs
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Demand Surge

The increasing demand will significantly impact the copper market. The demand for copper due to electric vehicles is expected to increase by 1,700 kilotons by 2027.

Sources: International Energy Agency (IEA); IDTechEx 2017; EEU/IEI; Bloomberg New Energy Finance

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S.W.O.T ANALYSIS:

STRENGTHS

- One of the three Companies mining copper ore in India.
- Fully developed infrastructure facilities.
- Holding mining lease of more than 80% of country's copper reserves.
- Vertically integrated operations greater business certainty.
- Skilled and well-trained workforce.
- Established brand value.
- Wide distribution network and established customer base.

WEAKNESSES:

- Smaller size mine deposits except Malanjkhand.
- Aged equipment & old technology for value addition.
- Low process efficiency.
- High cost of logistics due to multi location units
- Low utilization of two plants, TCP & GCP resulting in cross subsidization.
- Aged workforce.

OPPORTUNITY

- Growing copper demand within country.
- Ready market for copper concentrate in India due to large smelting/refining capacity.
- Buoyancy in world copper prices.
- Scope for expansion of mine capacity.
- Opportunity to explore new deposits.

THREAT

- Volatility in LME Copper price affecting turnover/profitability.
- Increasing cost of inputs.
- Attrition of skilled manpower.
- Regulatory risks in mining increasing.
- Risk in existing non-profitable business.
- Non-availability of competent underground Metal mining contractor / Outsourcing agency in India.



04-05-2021

TATA POWER LIMITED

CMP	101
POTENTIAL UPSIDE	100%
TARGET	200/220/240
BSE CODE	500400
NSE CODE	TATAPOWER
TIME FRAME	1 YEAR

Tata Power is India's largest integrated power company with a significant international presence. The Company has an installed generation capacity of 12742 MW in India and a presence in all the segments of power sectors such as Fuel & Logistics, Generation (thermal, hydro, solar and wind), Transmission, Distribution and Trading.

It has successful public-private partnerships in Generation, Transmission and Distribution in India namely "Tata Power Delhi Distribution Limited" with Delhi Government for distribution in North Delhi, 'Powerlink's Transmission Ltd.' with Power Grid Corporation of India Ltd. for evacuation of Power from Tala hydro plant in Bhutan to Delhi and Maithon Power Ltd with Damodar Valley Corporation for a 1050 MW Mega Power Project at Jharkhand.

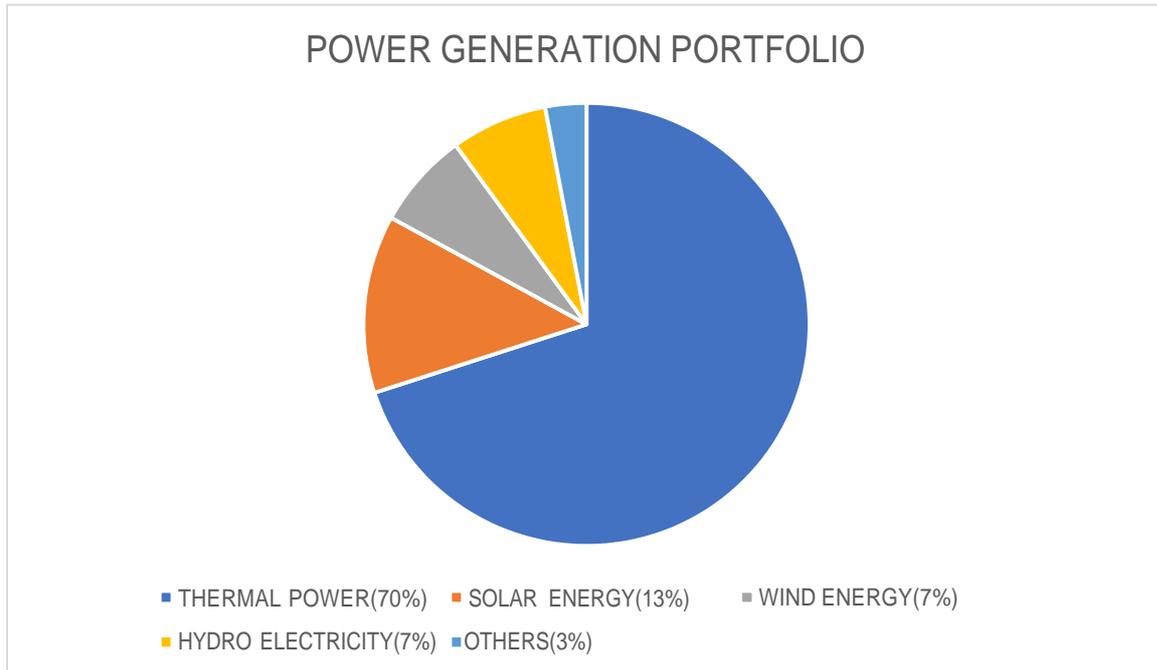
It is one of the largest renewable energy players in India and has developed the country's first 4000 MW Ultra Mega Power Project at Mundra (Gujarat) based on super-critical technology. Tata Power has signed a Distribution Franchisee Agreement (DFA) with Ajmer Vidyut Vitran Nigam Limited (AVVNL) and formed a Special Purpose Vehicle (SPV) "TP Ajmer Distribution Limited" (TPADL), to cater to the power requirements of customers in Ajmer for a period of 20 years.





04-05-2021

BUSINESS VERTICALS:



TATA POWER HAS 5 MAJOR THERMAL POWER GENERATION COMPANIES (SUBSIDIARIES):

SUBSIDIARY NAME	REVENUE CONTRIBUTION (%)
CGPL(MUNDRA)	21%
TPDDL(DELHI DISCOM)	22.52%
MAITHON POWER PLANT	7.63%
TP CENTRAL ODISHA	8.39%
TPTCL(POWER TRADING)	0.91%





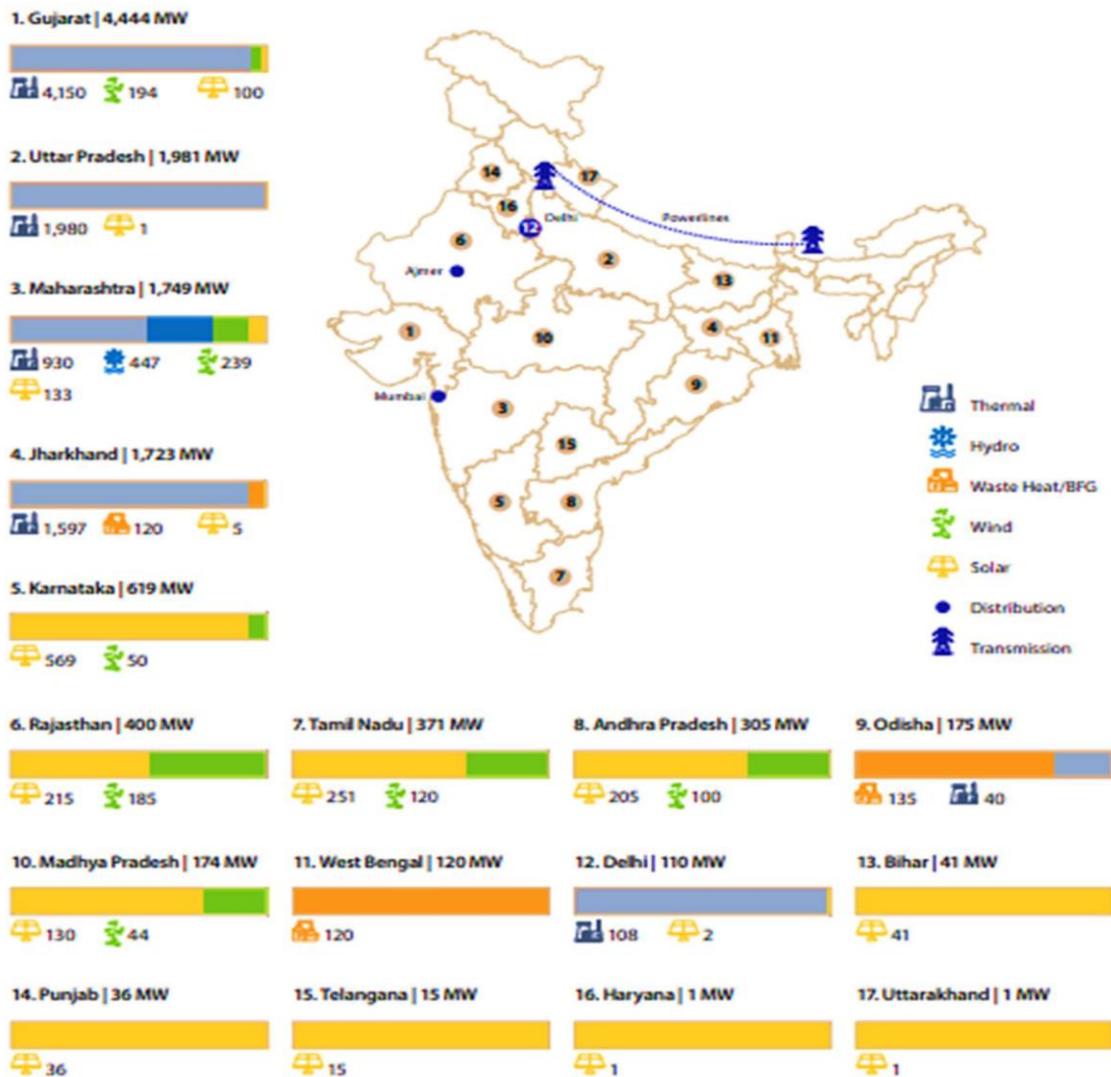
04-05-2021

REVENUE CONTRIBUTION:

On a Standalone basis Tata power’s revenue Contribution is 18.77%. Let us have a look at the revenue contribution from its Renewable energy Portfolio:

COMPANY NAME	REVENUE CONTRIBUTION
TATA POWER SOLAR	9.20%
TATA POWER RENEWABLE ENERGY(STANDALONE)	2.80%
WREL	3.44%

Domestic footprint and Generation Capacity (MW)





04-05-2021

WHAT DOES TATA POWER HAVE TO OFFER IN THE ELECTRONIC VEHICLE GROWTH STORY?



Electronic Vehicle charging stations are needed for Electronic vehicles as they act as fuel stations for electronic vehicles, EV charging, and battery swapping are two means for providing energy to a vehicle. EVs will proliferate as charging/swapping infrastructure is set up. Charging infrastructure can be rolled out on a city-by-city basis with select cities and regions leading the transition. As per global standards nearly 33 percent of all EV sales take place in only 14 cities where charging infrastructure is widespread and convenient to use.

- Based on the last six years of sales data, the vehicles on Indian roads are estimated to consist of:
- Two-wheelers: 79% of the total number of vehicles.
- Three-wheelers (passenger and goods), including tempos: 4% of the total number of vehicles.
- Buses and large goods vehicles like trucks: 3% of the total number of vehicles.
- Economy four-wheelers (cars costing less than ₹10,00,000): 12% of the total number of vehicles.
- Premium four-wheelers (cars costing higher than ₹10,00,000): 2% of the total number of vehicles.

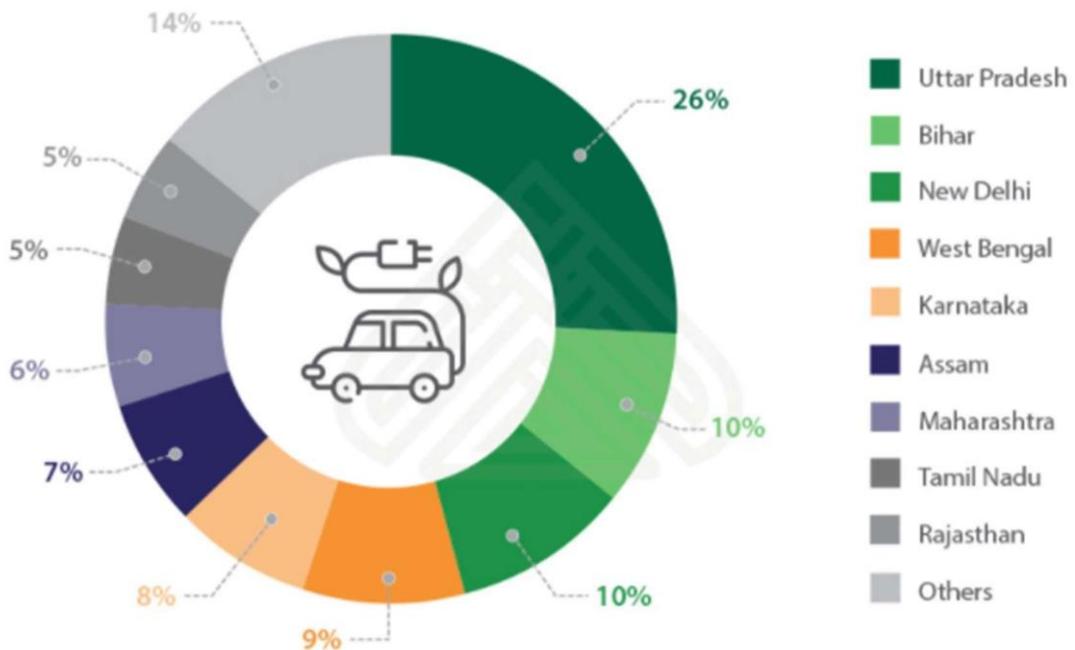
There is huge room for expansion as there are only 930 EV charging stations (installed by the government), in 2018 top research firm McKinsey had estimated that India will need about five million public charging points, which will entail an investment of almost \$6 billion by 2030. On the flip side China which is India's top competitor in terms of size and population has nearly 0.3 million charging stations involved.

India's electric vehicle market could be worth nearly \$206 billion (Rs 14,42,000 Crore) in the coming decade, by 2030 according to an independent study by the CEEW Centre for Energy Finance. The study also estimates that an investment of about \$180 billion (Rs 12,50,000 crore) in vehicle production and charging infrastructure until 2030 to meet India's EV ambition. According to the CEEW-CEF study, the cumulative EV sales in all vehicle segments could cross over 100 million units by FY30 which is 200 times its current market size. Electric car registrations jumped from 46 to 672, 1360%, in the past few years. Much more is expected in the years to come, especially with better charging infrastructure.

ELECTRIC VEHICLES GROWTH 2015 – 2019 :



Regional Registered EV Sales Jan-Dec 2020





04-05-2021

WHAT HAS TATA POWER DONE UP TILL NOW TO SUPPORT EV INFRASTRUCTURE?



- Tata Power currently has a presence in 65 cities in India has over 400 charging points the states where Tata power is present include Delhi, Mumbai, Calcutta, Bangalore.
- Tata power has partnered with MG motors, Jaguar, Land rover and Tata motors for Constructing EV charging solutions.
- Tata power has Memorandum of understanding's (MOU's) with IOCL, HPCL, MGL, IGL and government of Maharashtra for developing EV infrastructure.
- Tata power was the first company to pioneer EV infrastructure in Maharashtra.

RECENT DEVELOPMENTS

Tata Power, India's largest integrated power company, is aggressively expanding its electric vehicle charging network. The company, which is present across all segments of the EV eco-system – public charging, captive charging, home charging and workplace charging – has deployed all types of chargers including DC 001, AC, Type2, Fast DC chargers up to 50kWh and also up to 240kWh chargers for e-buses. The company is targeting to set up an EV charging infrastructure of over 700 charging stations across the country by December 2021.

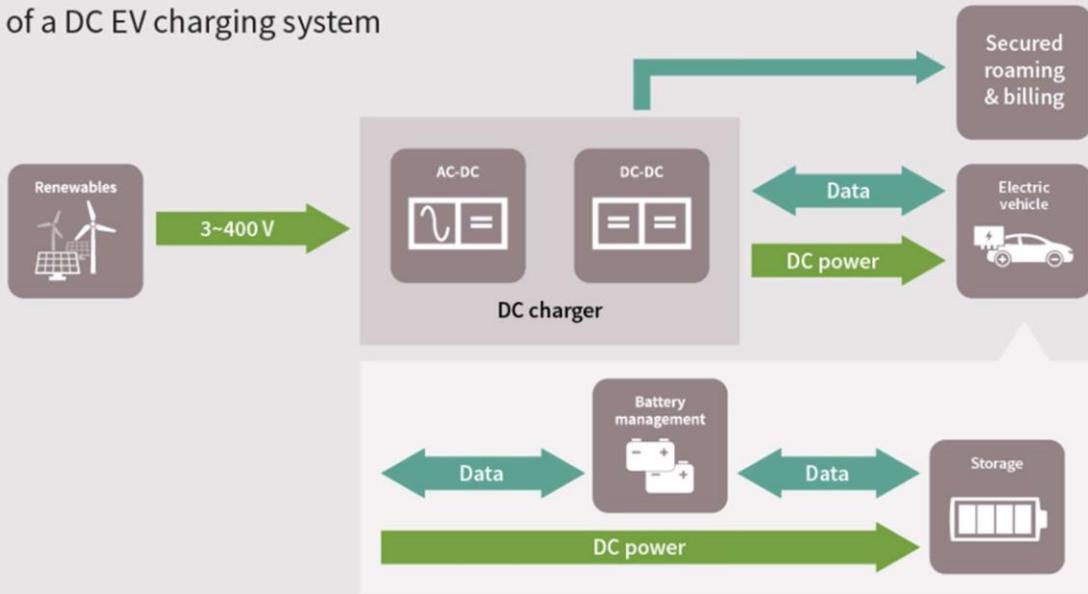
Tata Power Solar Systems recently put on stream additional module and cell manufacturing capacity, taking the total capacity to 1,100 megawatts (MW), from 700 MW that existed earlier. The expansion was a result of increased demand that the company saw for its solar modules, as well as an expected rise in demand due to the government's Atma Nirbhar Bharat initiative. The expansion was done at the company's Bangalore plant.

Tata Power and venture development platform Social Alpha have announced an investment in industrial IoT start-up URJA. With the deal, Tata Power aims to become a fully integrated energy-as-a-service (EaaS) provider with smart energy management offerings.

Mumbai railway stations will be getting EV charging stations as part of a new initiative to promote e-mobility in the Mumbai region. The program is collaboration between UN Environment Programme (UNEP), Tata Power, and Central Railway.

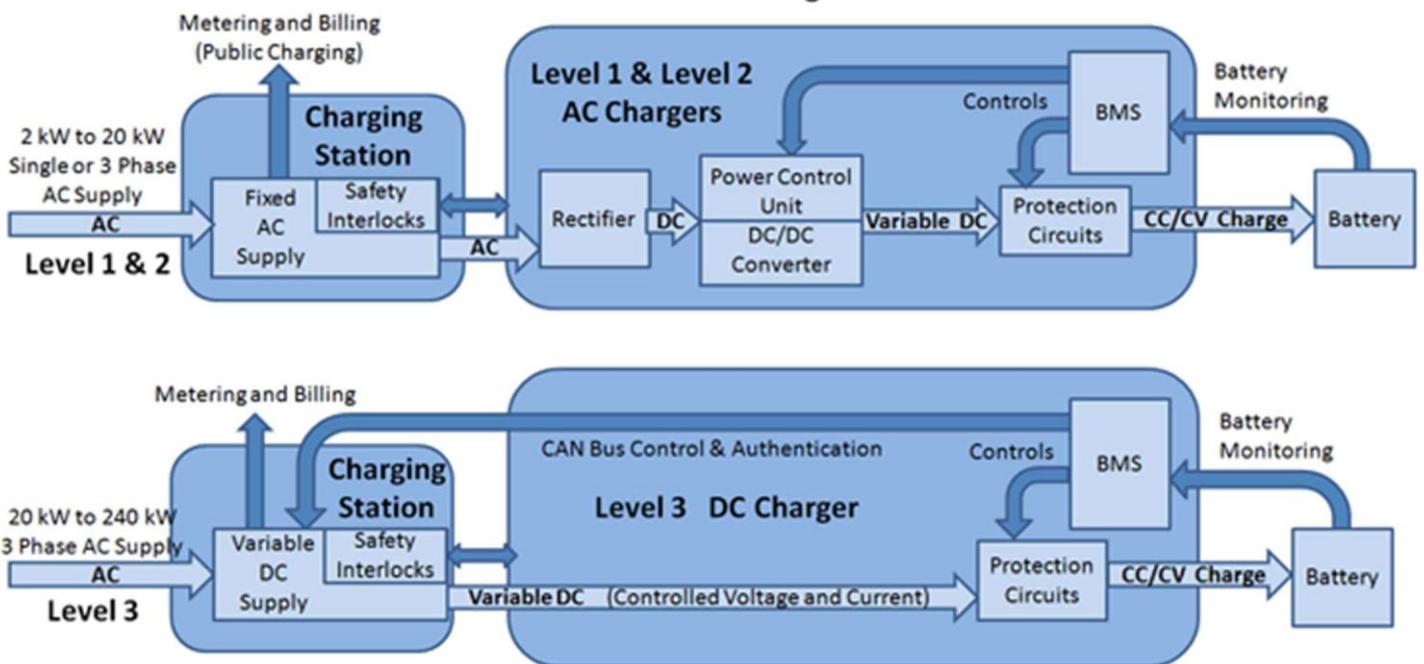
EV CHARGING PROCEDURE:

Structure of a DC EV charging system



EV CHARGERS :

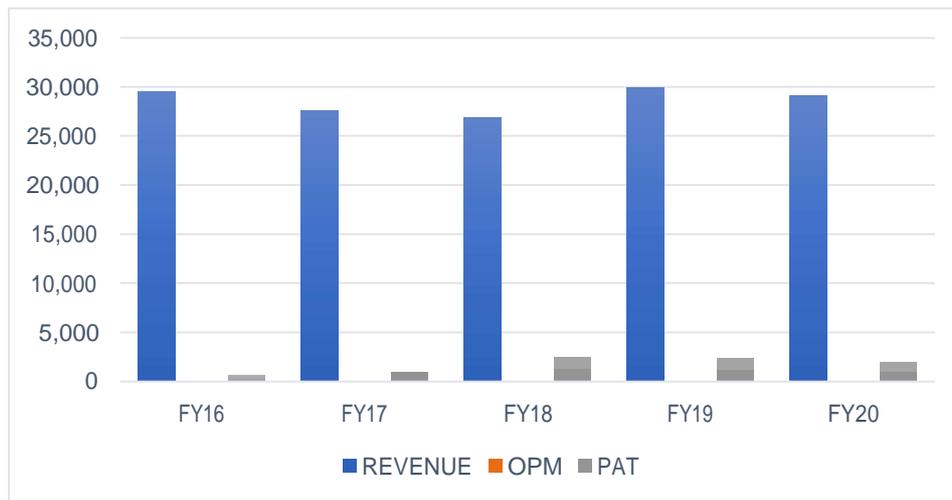
EV Chargers





04-05-2021

FINANCIALS :



IMPORTANT FINANCIALS:

YEAR	REVENUE	OPM	PAT
FY16	29,494	12%	662
FY17	27,588	20%	897
FY18	26,840	19%	2,408
FY19	29,881	21%	2,356
FY20	29,136	23%	1,958

TATA POWER'S PROJECT PORTFOLIO:

Tata Power's project portfolio					
Fuel source	Location	Capacity (MW)	PPA	Generation in 2018-19 (MUs)	Generation in 2019-20 (MUs)
Thermal	Mundra	4,150	Long term	26,839.30	26,495.39
	Prayagraj	1,980	Long term	7,759.32	9,120.88
	Trombay	1,430	Medium term	6,092.00	5,969.38
	Maithon	1,050	Long term	7,267.81	6,488.20
	Jojobera	548	Long term	2,604.00	4,226.45
	PT Citra Kusuma Perdana (Indonesia)	54	Long term	-	-
	Rithala (gas)	108	PPA is being pursued	0.00	0.00
Thermal -	Jamshedpur	120	Long term	-	-
Waste heat recovery	Kalinganagar	135	Long term	-	926.00
	Haldira	120	Short term	704.00	712.37
Hydro	Bhira	300	Medium term	909.79	841.35
	Khopoli	72	Medium term	342.49	310.38
	Bhivpuri	75	Medium term	315.90	336.54
	Dagachhu	126	Short term	495.00	-
	Sukhadevi	178	-	-	-
	Itzhi Tezhi	120	Long term	722.00	-
Renewables	Wind farms	1,161	Long term	-	-
	Solar photovoltaic	1,705	Long term	-	-

Sources: Tata Power; CEA

FUTURE OUTLOOK (TATA POWER 2.0)

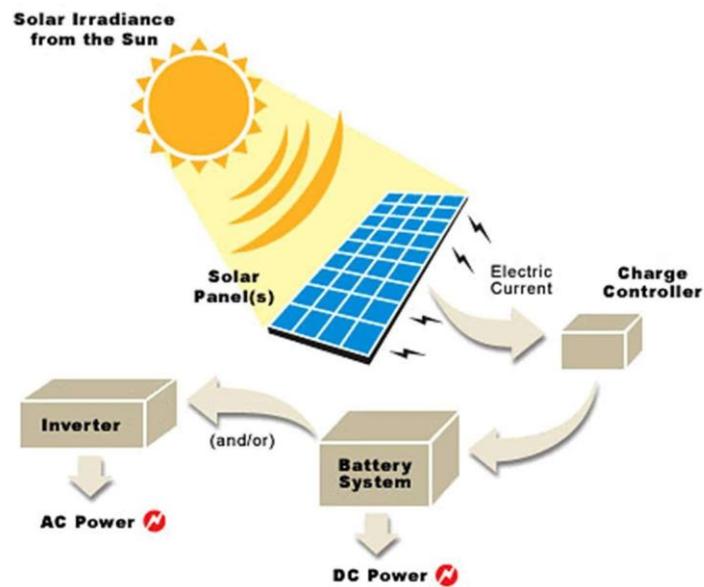
The company has set following goals to completely transform the company over the coming years:



- No new coal-based capacity to be developed by Tata Power.
- Achieve Carbon Neutrality by 2050 with Phase out of coal-based generation completely.
- Selective waste heat based thermal generation through Group companies to be pursued.
- Benchmark in water management in Indian utility sector and move towards water positivity.
- Scale Participatory Ground Water Management Program to Increase recharge of ground water level to ensure water availability for communities.
- Benchmark in Waste Management and fly ash utilization in Indian Utility Sector and aim towards achieving Zero Waste to Landfill. Capacity growth driven by Renewable Energy – Solar as well as Hybrid assets to be the focus growth area.
- Clean & Green Capacity to grow to ~ 60% by FY 2025 and 80% by FY 2030
- CSR Vision 2025- Impact 5.33 Million lives positively across 353 villages, 10000 Microgrid locations and 220 clusters across 16 states
- Customer focused New & Service led business models, focused on EV charging, Solar Rooftops, Solar pumps, Microgrids & Home Automation.
- The company aims to install 1 lakh EV charging stations by FY25.
- The company aims to achieve a topline of INR 5000 crores by Solar rooftops business. Currently Tata power is the No 1 Solar rooftop player in India and recently bagged a huge order of INR 860(239 MWP) crores.
- The company aims to install 10,000 Micro grids by FY27, currently it has installed 71 Micro grids in UP and Bihar, and about 60 Micro grids are in the pipeline to be installed.

SOLAR POWER BUSINESS OF THE COMPANY:

Here are the projects that Tata power has completed so far:



SOLAR GENERATION PROJECTS:

1. Mithapur-25 MW.
2. Pavagade-150 MW.

SOLAR EPC GROUND MOUNT PROJECTS:

1. Anantpur-100 MW.
2. Andhra Sugars- 3 MW.

SOLAR ROOFTOP PROJECTS:

1. RSSB-EES-12MW.
2. OCI-820KWP.
3. Cochin Carport 2.5MW.

SOLAR MICRO GRID PROJECTS:

1. Solar micro grids – Ladakh India-1MW.
2. Solar micro grids- West Bengal-110KW.
3. Solar micro grids-U. P and Bihar (71 Micro grids installed).



04-05-2021

ORDER PIPELINE FOR SOLAR EPC BUSINESS:

The order book from the Solar E.P.C business nears INR 10,000 crores.

Customer	Capacity (MW)
TPREL	1,229
NTPC	780
GIPCL	100
SJVNL	100
GSECL	65
THDC	50
NHPC	40
Total Capacity as on 31st Dec 20	2,364
Order Book as on 31st Dec 20 (₹ Cr)	8,694

- DCR orders worth ₹ 2,900 crore – to be supplied from own manufacturing lines.
- Order book expected to be realized over next 12-18 months.
- Recent order wins in the Solar EPC business.
- Won 110 MW Solar Project from Kerala State Electricity Board Limited for development.
- ₹ 450 crores rooftop solar orders received YTD FY21 – 71% Commercial & Industrial; 21% Govt; balance residential.
- The company had installed over 2,750 solar pumps.





04-05-2021

S.W.O.T ANALYSIS:

STRENGTHS:

- Can leverage on the “Tata” brand which signifies Trust.
- Capable of expansion since it has large reserves and low Debt-Equity Ratio
- Tata Power uses various ways of generating power i.e., thermal, hydro, wind, solar energies etc.
- Malaysia, Saudi Arabia, Kuwait, Singapore, Cyprus etc. are some places where Tata Power has made its presence felt.
- Diversified business risk profile with presence across generation, transmission, and distribution businesses and across energy types
- Tata Power is India's largest integrated power company with its presence in entire "Value chain" of power sector.
- Tata Power's core strength lies in its over 100 years of experience in Operation and Maintenance of power plants.

WEAKNESSES:

- Huge competition this impacting the market share.
- Dependency on external sources for coal.
- Losses incurred by CGPL on account of unviable project economics adversely impact Tata Power's credit risk profile.

OPPORTUNITY:

- As India progresses, the demand for power is increasing.
- Non-conventional sources of power.
- Expansion into third world countries and global expansion.
- Creating a strong network of power stations for the future of EV vehicles.

THREATS:

- Fluctuating prices of coal internationally.
- Change in international policies sun importing coal & Government policies.

OLECTRA GREENTECH LIMITED

CMP	185
POTENTIAL UPSIDE	190%
TARGET	500/520/540
BSE CODE	532439
NSE CODE	OLECTRA
TIME FRAME	1 YEAR

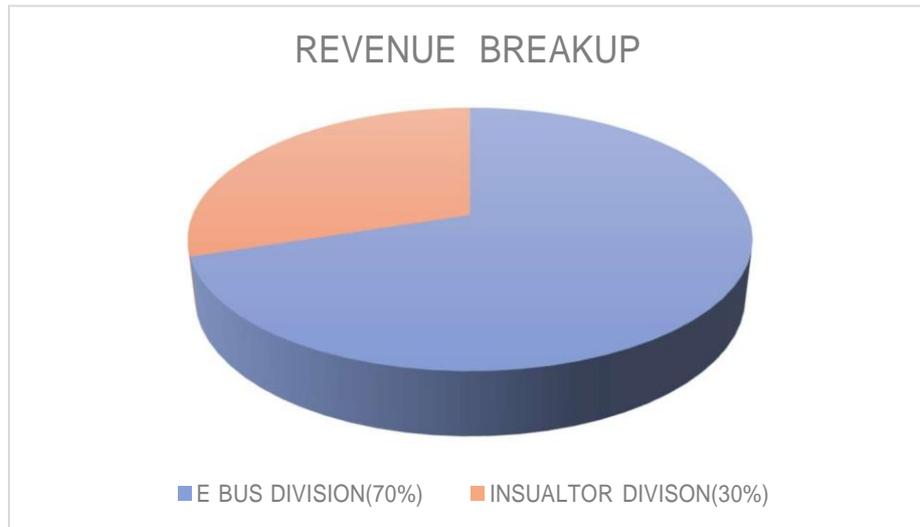
Earlier known as Goldstone Teleservices (GTSL) is a part of the highly diversified Goldstone Group, with major interests in Cables, Cable Closures & Accessories, Composite Insulators, BPO and Software Solutions. The company in 2007 decided to change its name to “Goldstone Infratech Limited” (GIL). The name was in line with the company’s new thrust areas in infrastructure and technology products related to infrastructure. GTSL is the largest manufacturer and suppliers of Heat Shrinkable Telecom Cable Closures and other Telecom accessories in India.

Goldstone Teleservices (GTSL) is a public listed company. GTSL is currently traded on the Bombay Stock Exchange (BSE), the National Stock Exchange (NSE) as well as the Ahmedabad, New Delhi, Chennai and Hyderabad Stock Exchanges in India. Its BPO services offers fully blended multimedia-based contact centre providing in-bound and out-bound call centre and back office supporting processes.

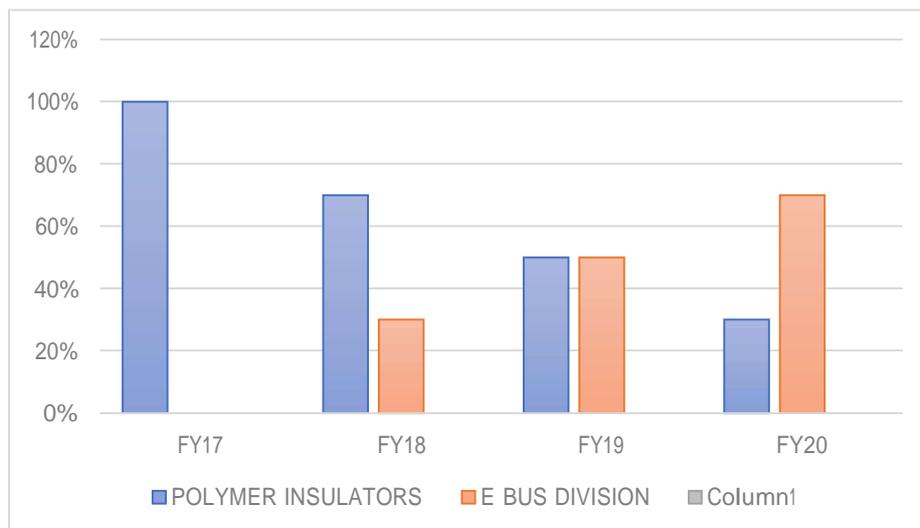
Goldstone Infratech Ltd. is an ISO 9001-2000 certified company engaged in the manufacture of Composite Insulators & Telecom Cable Jointing Kits. It was the first company in the country to start manufacture of Composite Insulators and is the only company in India to have facilities for manufacturing Polymer Compounds for complete range of Insulators from 11kv to 400kv. The company pioneered a revolution in Composite Insulators technology in India through extensive in-house R & D. Goldstone’s R & D, besides continuing to improve and innovate, is engaged in establishing higher standards in Polymer compounds and product design and understanding the challenge in crucial products market and is recognized by Department of Scientific & Industrial Research, Govt. of India.

Now, Olectra Greentech Ltd (A Group Company of MEIL) is pioneer in electric bus manufacturing and insulators in India, With this Endeavour OGL has been a part of building the Power Transmission and distribution in India. Olectra vision to support environment has led to a new phase by developing Innovative solutions for the society. As a part of its mission Olectra embraced its growth path into new age green technology.



REVENUE BREAKUP:


The company's Revenue Break up has transformed since the Inception of its E bus Division in 2018.



YEAR	POLYMER INSULATORS	E BUS DIVISION
FY17	100%	0%
FY18	70%	30%
FY19	50%	50%
FY20	30%	70%

As we can see slowly and gradually Olectra Green tech is transforming into a pure play Electric Bus company, since its Partnership with BYD international in FY18, the company has transformed its overall sales mix in a huge manner and has started preparing for a green future.

OLECTRA GREEN TECH AND BYD INTERNATIONAL:

The company announced its Partnership with BYD international (the world's largest Electronic bus Manufacturer) in FY18, with the Company became a pioneer in India for Electronic Bus manufacturing, Olectra Green tech was the first Indian Company to manufacture Electronic buses for commercial deployment. In FY19 Olectra Green tech and BYD international formed a Special purpose Vehicle (SPV) named EVEC Transport Ltd to cater to the rising demands of Electronic buses from State government departments and to get tax benefits and incentives under the Fame II policy.

BYD INTERNATIONAL

BYD is a high-tech company devoted to technological innovations for a better life. BYD was founded in February 1995, and after more than 20 years of fast growth, the company has established over 30 industrial parks worldwide and has played a significant role in industries related to electronics, automobiles, new energy, and rail transit. From energy generation and storage to its applications, BYD provides zero-emission energy solutions. BYD is listed on the Hong Kong and Shenzhen Stock Exchanges, with revenue and market capitalization each exceeding RMB 100 billion. YD International is majorly held by Berkshire Hathaway (24% stake), the holding company of Mr. Warren Buffet.



MANUFACTURING LOCATIONS OF BYD INTERNATIONAL ACROSS THE WORLD:


Global Presence

BYD: A company which has fast-expanding global marketing network worldwide to guarantee the most efficient and comprehensive services;



ORDER INFLOWS BY VARIOUS STATE GOVERNMENTS OVER THE LAST 3 YEARS:**FY18**

1. The company successfully completed 31 Bus orders for B.E.S.T and H.R.T.C
2. The company successfully completed 160 Bus orders nationally.
3. The company also bagged an international order for 5 Buses from Nepal.

FY19

1. The company successfully completed 270 Bus orders.
2. The company supplied its buses to Hyderabad and Telangana Road corporation, Pune Mahanagar Parivahan mahamandal, Kerala state bus corporation and Haryana State bus corporation.

FY20

1. The company bagged orders for 775 Electrical buses from various state STU's.

FY21

1. In January 2021, the company received an order of 350 electric buses from Mahanagar Parivahan Mahamandal Ltd.

Trinity Infraventures Limited (TIL) and SSISPLBYD-OGL Consortium

These two subsidiaries were formed by the company for procurement of Raw Materials of electronic vehicles.



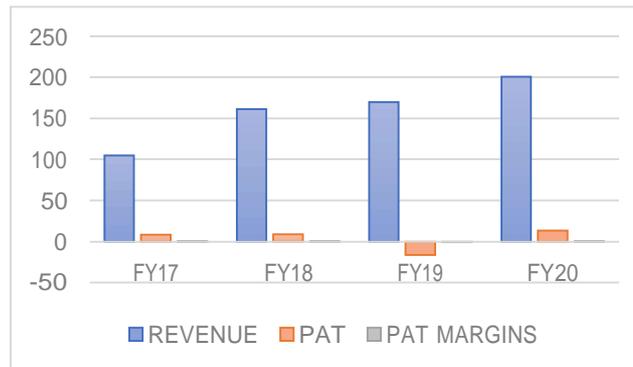
INDUSTRY OVERVIEW:

There were two events that disrupted the Automobile Industry at large, first one is the transition from BSIV vehicles to BSVI vehicles, the second one was the entry of Electronic vehicles, the electronic vehicle is expected to grow at Breakneck speeds over the coming years. The government has been playing a very active role in deployment of electronic vehicles as it had first announced the FAME policy, under which incentives of up to INR 4.3 billion were given to Electronic Vehicle manufacturers, next the FAME II policy was announced which provides incentives of INR 10,000 crore to electronic vehicle manufacturers this will help in boosting the demand and penetration of Electronic Vehicles. The Niti Aayog expects that Electronic vehicles will replace all Internal combustion engine cars by 2030, also the Government intends to Support the manufacturing and delivery of 7000 electronic vehicles through an outlay of INR 3500 crores, these all things will provide a major push for EV's in India.

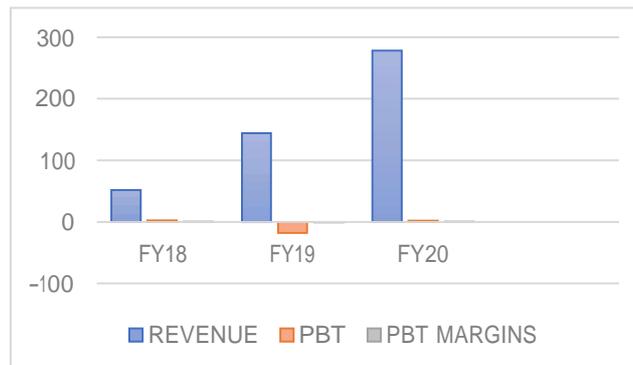
The focus of FAME II scheme is the electrification of public & shared transportation. After this scheme, the thrust showed by the Government is to allow the electric vehicles to become the first choice for the purchasers so that these vehicles can replace the conventional vehicles and thus reduce conventional fuel consumption and thereby pollution in the country from the automobile sector. Buses are an extremely important means of public transportation, however the penetration of buses in India is negligible, also the Number of Buses per 1000 persons is extremely low as compared to other countries. The government has also exempted basic customs duty on EV spare parts which will further give a boost to the Industry.

The electrical bus market across India is also expecting a robust growth in future in the private market as well. Introduction of electrical buses in Private segment will not only help in providing a pollution & environment free experience to the customer but also helps increasing the visibility in market. Electrical buses will also help in providing a comfortable and a safe journey to the passengers by the means of use of advance technology, noise free components with safety and hassle-free transportation. The penetration of different kinds of vehicles in India:

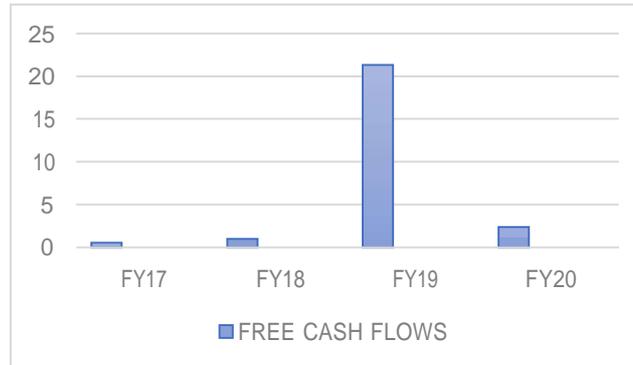
- Two-wheelers: 79% of the total number of vehicles.
- Three-wheelers (passenger and goods), including tempos: 4% of the total number of vehicles.
- Buses and large goods vehicles like trucks: 3% of the total number of vehicles.
- Economy four-wheelers (cars costing less than ₹1 million): 12% of the total number of vehicles.
- Premium four-wheelers (cars costing higher than ₹1 million): 2% of the total number of vehicles.

FINANCIALS: ALL FIGURES IN CRORES
CONSOLIDATED FINANCIAL OVERVIEW (INSULATOR'S BUSINESS & ELECTRONIC BUSES)

KEY FINANCIALS:

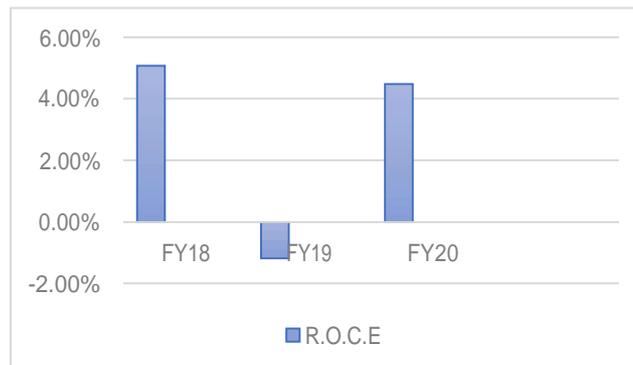
YEAR	REVENUE	PAT	PAT MARGINS
FY17	104.88	8.42	7.38%
FY18	161.49	8.89	5.42%
FY19	170.11	-15.81	-4.68%
FY20	200.52	13.53	2.71%

FINANCIALS OF THE ELECTRONIC BUS DIVISION

KEY FINANCIALS:

YEAR	REVENUE	PBT	PBT MARGINS
FY18	52	2.38	4.54%
FY19	144	-18	-12.70%
FY20	278	1.8	1.41%

CONSOLIDATED FREE CASHFLOWS:

CASH FLOWS (ANNUAL):

YEAR	FREE CASH FLOWS
FY17	0.53
FY18	0.99
FY19	21.33
FY20	2.4

RETURN ON CAPITAL EMPLOYED:

COMMENTARY ON FINANCIALS:

1. The company's electronic bus business has performed exceptionally well, and sales from the electric bus business division has more than tripled since FY18.
2. The company made a loss in FY19 on account of higher input costs from the insulator and E bus business, marketing expenses and commercial trials.
3. The company witnessed huge free cash flows in FY19 because of Equity infusion by MEIL holdings ltd (the holding company of BYD International).
4. The company's return on capital employed is currently ranging between 2 to 4%, is expected to rise in the future as the capacity expands and the demand expands.

5. The company has made huge investments in Plant and machinery, Plant and machinery has doubled since FY18 and the gross block has also expanded its nicely.
6. The company has huge cash and cash equivalents as well with majority of the investments being in Mutual funds.

S.W.O.T ANALYSIS:**STRENGTHS**

1. The company has a partnership with the world's Largest Electronic bus manufacturer which gives the company a huge competitive advantage over its competitors.
2. The company has a strong leadership and team.
3. Promoters have rich Industry experience and background.
4. The company has huge cash and cash equivalents which help the company in times of turmoil like the Covid crisis and help the company in gaining competitive advantage due to strong financial backing.
5. The company has a strong research and development team which has helped the company to reduce costs significantly and improve profitability and deliver better and efficient products to the customers.
6. The company has a strong customer base with state bus corporations being their clients, also the company has a strong brand recall value as the company has been getting repeat orders from the companies.
7. The company has a first mover advantage as it was the Indian company to venture into manufacturing of Electronic buses.
8. The company has a strong competitive edge against all competitors as it is backed by BYD international (the largest manufacturer of Electric buses).
9. The company has an Indirect investment of Marquee investor and one of the greatest investors of all times MR WARREN BUFFET as Berkshire Hathaway is of the largest Shareholder (24%) in BYD international.

WEAKNESSES

1. Though the company has been reporting huge revenues, the company has not been able to able to produce good profits.
2. The company has given out too many incorporate loans and advances to its subsidiaries and associate companies.
3. The company has been spending a lot on marketing and commercial trials, in FY19 it was the reason for the loss occurred.
4. The company's revenues are hurt in a large way by currency fluctuations as more than 90% of E bus parts must be imported.

5. Due to rising demand of Electrical vehicles the battery prices have being going up in the short term, also all the materials required to build a battery have to be imported which has been a reason for rising input costs.

OPPORTUNITIES

1. The global electric bus market size is projected to reach 704 thousand units by 2027 from 81 thousand units in 2021, at a CAGR of 43.1%. Increasing focus of countries on promoting electrification of mass transit solutions and government support are propelling the growth of the electric bus market.
2. The market in Asia Pacific is projected to experience the fastest growth owing to the high demand of electric buses from countries such as China, Japan, South Korea, and India.
3. Favorable policies such as the FAME I and FAME II as well as consistent new orders for electric buses would drive the Indian electric bus market in the upcoming years.
4. Various governments across the globe have introduced initiatives to make their urban public transport system more sustainable and fuel efficient with the use of electric buses. For instance, the Swiss government plans to increase the penetration of electric vehicles to 15% by 2022. The country has the Electric Transport Green Deal 2016–2020. The key objective of the green deal is to eliminate vehicle emissions by 2025, which would boost the electric bus market. Also, the US Department of Transport's Federal Transit Administration (FTA) has announced funding of USD 130 million for Low or No Emission in June 2020. Similarly the Indian Government under the FAME II policy has announced an outlay of INR 10,000 crores in the form of subsidies and incentives to support E bus manufacturers, the government also intends to support the manufacturing of over 7000 E buses via providing INR 3500 Cr for the same.

THREATS

1. Since the Industry is expected to grow at huge growth rates, the competition will intensify to a large extent, Biggies such as Ashok Leyland have already announced their foray into the E bus Industry.
2. India is highly dependent on Imports for all the raw materials required for building batteries, hence any disruption in supply can lead to a delay in the delivery of vehicles and affect demand in a negative way.
3. Though the Government has announced many supportive policies for the E bus industry, though a delay in the actual implementation can pan out to be a huge negative for the E bus manufacturers, e.g., delays in paying out incentives, or giving tax benefits.
4. The high cost involved in the development of electric buses and coaches and related components such as batteries and monitoring systems (battery management systems, CAN bus modules) is a major restraint for electric bus manufacturers.
5. The development cost of infrastructure for EVs is also very high. Almost USD 2.8 trillion is needed for building the infrastructure globally.

SCHAEFFLER INDIA LIMITED

CMP	5074
POTENTIAL UPSIDE	130%
TARGET	10000/11000/12000
BSE CODE	505790
NSE CODE	SCHAEFFLER
TIME FRAME	1 YEAR

A world constantly evolving needs an evolutionary technology. Schaeffler is actively engaged in innovating and shaping the global pace of change. With innovative technologies, products, and services for CO₂-efficient drives, electric mobility, Industry 4.0, digitalization, and renewable energies, the company is a reliable partner for making motion and mobility more efficient, intelligent, and sustainable. Schaeffler with four plants and 11 sales offices has significant presence in India with three major widely known product brands - FAG, INA and LuK. The manufacturing plant in Vadodara, Gujarat was set up in 1964 and produces a vast range of ball bearings, cylindrical roller bearings, and spherical roller bearing and wheel bearings and sold under the brand name of FAG. The second plant in Vadodara at Savli produces next generation deep groove ball bearings and large size roller bearings also sold under the name of FAG.

Schaeffler's third state-of-the-art plant is located at Talegaon near Pune and manufactures engine and transmission components for front accessory drive system, chain drive systems, valve train, shift systems and a range of needle roller bearings and elements, under the brand INA.

The fourth manufacturing location is based out of Hosur, producing clutch systems and dual mass flywheels for passenger cars, light commercial vehicles, heavy commercial vehicles and tractors which are sold under the brand of LuK. In addition to this, Schaeffler also has dedicated engineering, research and development support based in India to augment the product teams. Schaeffler also has among the largest after-market networks serving the industrial and automotive markets.



BUSINESS OVERVIEW:

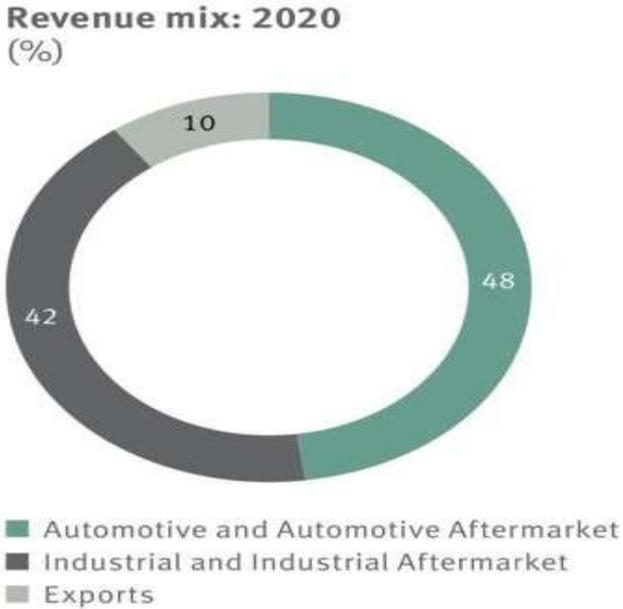
Schaeffler products facilitate and shape mobility - as they have been doing for decades. We have also continued the development of our expertise from "basic" components to complete system solutions. Our high-precision products can be found in automobile drive trains, high-speed trains, wind turbines, and innovative solutions for aviation and aerospace applications. Their business is divided into three segments :

AUTOMOTIVE - The Automotive Technologies division develops and manufactures ground-breaking products for engine, transmission, and chassis applications based on internal combustion engines as well as for hybrid and electric vehicles.

AUTOMOTIVE AFTERMARKET -The Automotive Aftermarket division delivers components and complete repair solutions to the automotive spare parts market worldwide. Schaeffler supports garages with overarching system understanding and comprehensive services for complex repairs.

INDUSTRIAL-The Industrial division supplies products such as rolling and plain bearings, linear and direct drive technology as well as services such as maintenance products and monitoring systems to customers from different industrial sectors, through direct sales and a global network of certified distribution partners.

REVENUE BREAKUP :



INDUSTRY OVERVIEW:



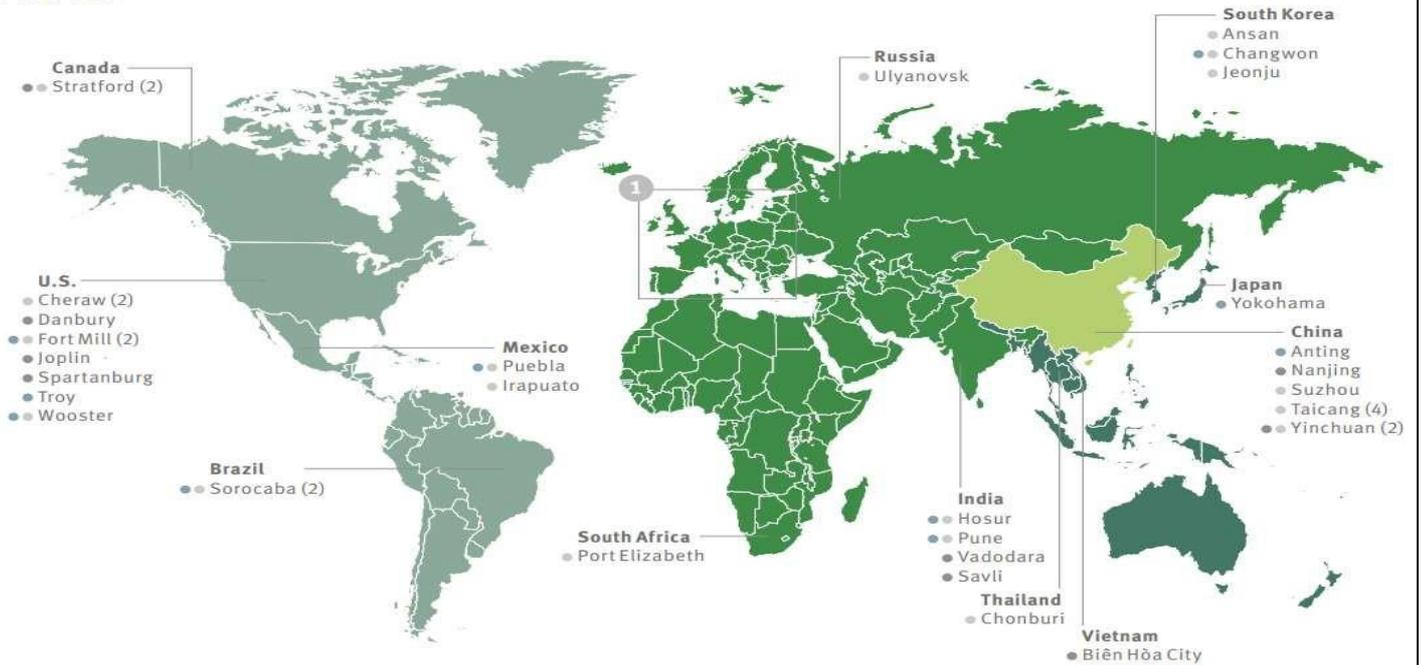
AUTOMOTIVE-The slowdown in automotive sales witnessed through the year 2019 was aggravated sharply by the spread of the pandemic during the year 2020. While the impact was felt by all segments (see table), Commercial Vehicles (CVs) were particularly hit due to the slowing economic activity. In December 2020, sales of Passenger Vehicles (PVs) and two-wheelers witnessed a resurgence of growth. Release of pent-up demand, the festive season and rising focus on maintaining social distancing (by travelling in personal vehicles) were the key drivers of this improvement. Over the medium to long term, structural factors such as growing congestion in bigger cities, growth of ride-hailing apps such as Ola and Uber, moderating economic growth and subdued consumption will influence automobile sales. Amid strengthening infrastructure and favourable policies for Electric Vehicles (EVs), more users are likely to adopt EVs (starting with public transport vehicles). This is another key growth avenue for the automotive sector. On the other hand, favourable interest rates, growth in rural areas and under- penetration of PVs could propel growth of vehicles.

INDUSTRIAL- Despite significant unplanned expenditure since the outbreak of COVID-19, the government plans to continue investing in the areas of health, manufacturing, and infrastructure to help boost recovery. It plans to increase allocation to key schemes, promote foreign participation and continue with a reforms-oriented approach. Large projects such as development of industrial corridors, smart cities, and initiatives such as Atmanirbhar Bharat and 'Make in India', among others, are likely to aid the performance of the industrial sector over the next few years. Additionally, a host of measures are underway to strengthen India's railway infrastructure. This includes upgradation of railway stations, building and expanding Metro stations and replacing older coaches. All these measures are expected to impact favourably on the growth prospects of the industrial business.

MANUFACTURING LOCATIONS & R&D CENTERS:

Schaeffler Group plants and R&D centers

World



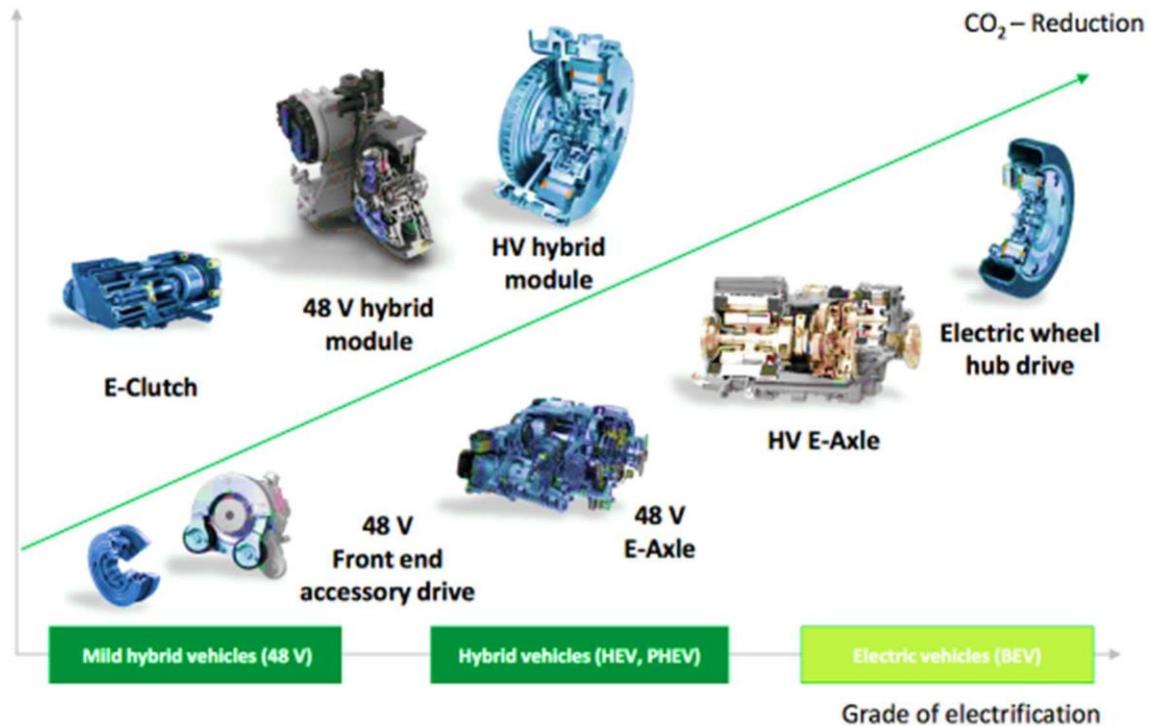
1 Europe

(enlarged section)



Regions ¹⁾	Europe	Americas	Greater China	Asia/Pacific
R&D centers ●	12	5	1	2
Plants	46	14	8	5
Automotive ●	33	10	6	4
Industrial ●	13	4	2	1

SCHAEFFLER IN EV SPACE:



The increasing focus of the world towards electric mobility has raised a question mark over the revenue visibility of auto-ancillary companies that manufacture parts used mainly in vehicles powered by conventional fuels. **Schaeffler India** is already moving ahead to address this challenge. Thanks to continuous investment by its German parent in research & development, **Schaeffler India** could see automakers using more of its components. Adoption of new emission rules (BS-VI) from 2020, safety standards that are getting stricter and the rising share of automatic and premium cars in the market could support the company's revenue growth in the medium term. Meanwhile, it is offering a complete system solution, comprising the axle, electric motor and transmission parts to deal with the expanding requirements from the electric-vehicle segment.

This could help the company increase its supply of content per EV compared with the conventional car. Typically, in the developed world, Schaeffler is supplying €100 worth of content per vehicle powered by conventional fuels, while in India it is around €30-40. It expects content per vehicle in the EV segment to expand fourfold by 2030.

Vehicle makers are reducing the size of engines to lower emission. The lower engine size means the vehicle will require extra bearing to bring down vibration. Also, the rising share of automatic transmission augers well for the company's revenue growth. In India, the share of automatic vehicles is just around 5%, but is expected to reach 15% by 2022.

OUTLOOK:



The Schaeffler Group is a well-established player in the Automotive components and Industrial bearings segments. What differentiates Schaeffler from the other manufacturers of bearings and car parts is its approach towards R&D and its involvement in the development process of components.

Schaeffler works closely with its customers to design and develop new technologies which are critical in making their customers' industries more productive and reliable. The focus on product advancement and contribution to the growth of various industries makes Schaeffler a true global technology company. This is also why the company enjoys better margins and valuation as compared to other auto ancillaries.

While there are plenty of Industry headwinds for the Automobile sector such as slowing demand, liquidity crunch, higher acquisition costs, changing regulations and the threat from electric vehicles, Schaeffler is uniquely positioned as its sales mix is well balanced between Auto and Industrial businesses. So, while the Auto business is down, the Industrial business has grown, and this diversity provides Schaeffler with a good hedge.

FINANCIALS:

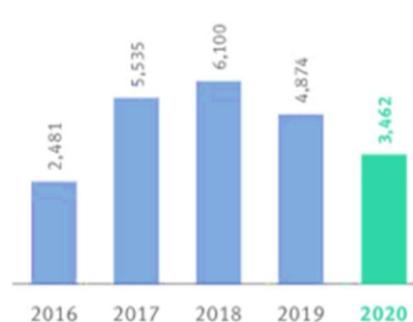
Revenues
(₹ in mn)



Growth y-o-y

4.2% 119.0% 16.0% -4.4% -13.7%

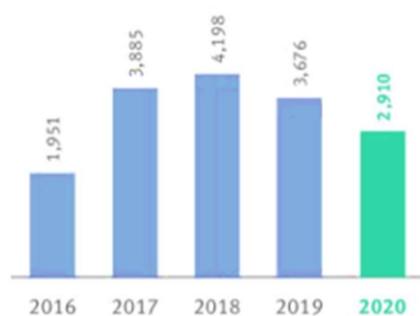
EBIT
(₹ in mn)



EBIT Margin

13.8% 14.1% 13.4% 11.2% 9.2%

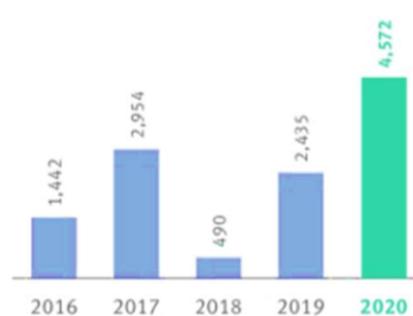
Earnings after tax
(₹ in mn)



EAT Margin

10.9% 9.9% 9.2% 8.4% 7.7%

Free cash flows
(₹ in mn)



FCF-Conversion Ratio*

58.0% 53.0% 8.0% 50.0% 132.0%

*FCF/EBIT

KEY FINANCIALS:

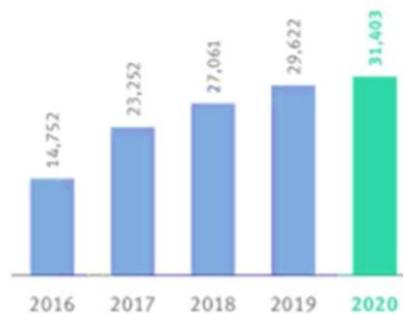
Capital employed*
(₹ in mn)



ROCE
17.6% 28.2% 23.6% 16.9% 11.1%

*Average capital employed

Net worth
(₹ in mn)



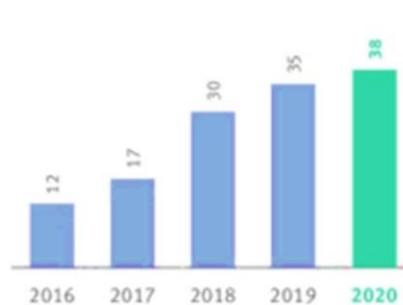
Growth y-o-y
14.6% 57.6% 16.4% 9.5% 6.0%

Earnings per share
(₹)



Growth y-o-y
-1.2% 5.9% 8.0% -12.4% -21.0%

Dividend per share
(₹)



Growth y-o-y
20.0% 41.7% 76.5% 16.7% 9.0%

SWOT ANALYSIS

STRENGTHS

- Strong R & D facilities and a culture of innovation in the company carrying out its activities.
- In the automotive as well as industrial sector thus acting as a hedge and a diverse portfolio
- Strong parent company that helps to carry out its business.
- Huge number of patented products
- New 'Trupower' range of lubricants in the Automotive Aftermarket continues to gain traction, demonstrating the strength of the brand.

OPPORTUNITY

- Immense potential to tap through the EV market and other advanced technology product segments.
- To penetrate through the local market more and realise full potential of all three segments.
- Embrace digitisation across all functions.
- Potential to move up the value chain — from providing products to providing systems and end-to-end solutions

WEAKNESS

- It has a very low return on equity.
- Sharp gain in steel prices and intermittent supply issues remain a cause of concern.

THREAT

- Unforeseen and sudden currency volatility and raw material prices.
- Increasing trend in non-core income .
- Government regulations play a huge role in the demand of automobiles.



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HERO MOTOCORP LIMITED

CMP	2860.80
POTENTIAL UPSIDE	180%
TARGET	7000/7500/8000+
BSE CODE	500182
NSE CODE	HEROMOTOCO
TIME FRAME	1 YEAR

Hero MotoCorp has been at the forefront of designing and developing technologically advanced motorcycles and scooters for customers around the world. It became the world's largest two-wheeler manufacturer in 2001, in terms of unit volume sales in a calendar year and has maintained the coveted title for the past 20 consecutive years with over 100 million satisfied customers across the globe, it continues to champion socio-economic progress and empowerment through its range of products and services.

The company has its presence in 40 countries across Asia, Africa, and South & Central America. Hero MotoCorp is a truly global enterprise with a workforce that comprises of people from different nationalities including India, Bangladesh, Colombia, Germany, Austria, Japan and France. Hero MotoCorp is the dominant market leader in India – the world's largest two-wheeler market – with over 50% share in the domestic motorcycle market.



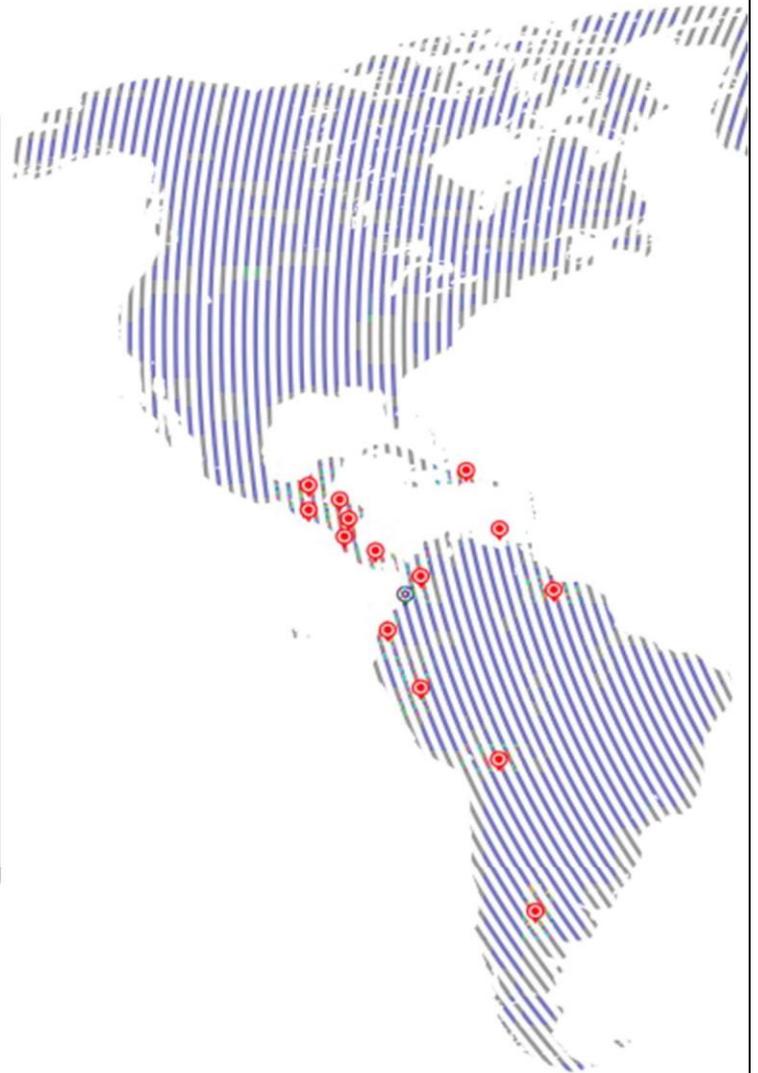
GEOGRAPHIC PRESENCE:

Transcending borders



Operational footprint

ASIA	AFRICA & MIDDLE EAST
<ul style="list-style-type: none"> ▪ India ▪ Sri Lanka ▪ Bangladesh ▪ Nepal ▪ Myanmar 	<ul style="list-style-type: none"> ▪ Kenya ▪ Tanzania ▪ Uganda ▪ Ethiopia ▪ Burkina Faso ▪ Ivory Coast ▪ Angola ▪ Democratic Rep of Congo ▪ Mozambique ▪ Madagascar ▪ Egypt ▪ Liberia ▪ Guinea ▪ Nigeria ▪ Ghana ▪ Turkey ▪ Dubai ▪ Iran ▪ Djibouti ▪ Zambia ▪ Mauritius ▪ Kuwait
LATIN AMERICA	
<ul style="list-style-type: none"> ▪ Colombia ▪ Peru ▪ Ecuador ▪ Guatemala ▪ El Salvador ▪ Honduras ▪ Nicaragua ▪ Costa Rica ▪ Panama ▪ Bolivia ▪ Dominican Republic ▪ Argentina ▪ Guyana ▪ Trinidad & Tobago 	



Manufacturing capability*

Annual Capacity (million units)

Dharuhera	Gurgaon	Haridwar	Neemrana	Halol	Chittoor
2.1	2.1	2.7	0.8	0.8	0.4
Colombia	Bangladesh				
0.15	0.08				

9.1 mn units

Total manufacturing capacity

SHORT TERM COVID IMPACT:



The Covid-19 pandemic in Q4 FY2020 exacerbated the already weak two-wheeler demand environment, and additionally disrupted OEM supply chains. In adherence to the nationwide lockdown, HMCL completely shut down its production between March 22, 2020 and May 4, 2020. This impacted clearance of BS-IV stocks and delayed the ramp-up of BS-VI production, resulting in slowdown in dispatches. In line with the domestic two-wheeler industry, HMCL also witnessed a ~18% YoY decline in sales volumes in FY2020. HMCL was the first to resume operations in May 2020, followed by other OEMs.

However, ICRA takes cognizance of the near-term challenges (demand and supply) due to the pandemic and expects a 16-18% contraction in the two-wheeler industry volumes in FY2021. The industry will be facing multiple headwinds of higher ownership cost for BS-VI compliant vehicles and reduced discretionary and overall spending owing to uncertainties related to personal incomes amid a weak economic environment. Nonetheless, preference for personal mobility solutions (to adhere to social distancing norms) and early recovery witnessed for rural demand (led by a healthy Rabi harvest, Kharif sowing, and overall lower disruption caused by the pandemic) are expected to augur well for HMCL, which has a significant rural clientele.

In line with the industry, HMCL is also expected to witness a contraction in FY2021 in terms of demand and earnings. Despite the same, the rating continues to factor in the strong financial profile of the company, evidenced by its healthy profitability (average OPBDITA and core ROCE of ~15.5% and ~95%, respectively, over the past five years) and cash accruals, negative net debt position and robust liquidity profile.



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LONG TERM INDUSTRY OUTLOOK:



The two-wheeler market in India is forecasted to expand at a CAGR of 7.33% and reach a sales volume of 24.89 million units by 2024, from 21.19 million in 2019. The Indian automobile sector is experiencing a slowdown since September 2018, which is likely to ease by the second half of FY 2020. The Indian government: unforeseen announcements regarding the norms of BS-VI transition and the electrification of two-wheelers by 2025 have made the market volatile.

However, the automobile sector is expected to recover by mid-FY 2021 as per speculations of industrial experts. Due to the rising pollution and the increasing provision of financial incentives by the government, the sales of electric scooters and motorcycles are booming in India. In 2019, nearly 152.0 thousand units of electric motorcycles and scooters were sold in the country, registering a 20.6% growth annually from 2014. In terms of retail sales value, the market is predicted to advance at a CAGR of 63.9% from 2020 to 2025 and attain a revenue of more than \$1.0 billion in 2025. A key factor fuelling the growth of the market is the provision of lucrative financial incentives and subsidies on electric vehicles by the government.

Moreover, the government is also providing tax exemptions and purchase rebates for promoting the utilization of electric vehicles and two-wheelers in the country. The ballooning sales of these scooters would be driven by the availability of a wide array of electric scooter models in the country, their affordable prices, and their ability to serve as excellent alternatives to the traditional fossil fuel-powered mopeds. According to the publisher, a market research company based in India, the Indian electric scooter and motorcycle market is currently demonstrating the highest growth in Uttar Pradesh out of all the states in the country. Hence, it can be safely said that the market will exhibit rapid growth in the coming years, mainly because of the rising implementation of favourable government policies regarding the sales of electric vehicles and the increasing consumer preference for electric scooters and motorcycles over their fuel-based variants in the country.



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RECENT DEVELOPMENTS:



Ather Energy was founded in 2013 by Swapnil Jain and Tarun Mehta. The start-up designs and sells electric two-wheeler vehicles for the Indian market. The company had launched its flagship e-bike Ather 340 and 450 e-scooters in Bengaluru in June 2018. However, it decided to discontinue the entry-level Ather 340 e-scooter in September 2019 due to low demand. The company had announced that it was to focus on scaling up the production of another flagship two-wheeler Ather 450. The company competes with another Bengaluru-based company Ampere Vehicles, which is a wholly owned subsidiary of Greaves Cotton.

Hero MotoCorp has been a part of Ather's growth story since 2016, when they first invested as a part of Series B. In July 2020 Ather Energy raised ₹84 crore from the country's largest two-wheeler maker Hero MotoCorp as an extension of series C round. Ather Energy further raised 86 crore in its Series D round held in November 2020.

Ather Energy recently started a new scooter plant in Hosur, Tamil Nadu and has started production with an investment of more than Rs 630 crore. The plant spreads over 400,000 sq. ft and it will manufacture electric scooters along with lithium-ion batteries. The company has signed an agreement with the Tamil Nadu government to invest Rs 635.4 crore over the next 5 years. The company has achieved 90 per cent localisation of parts, including battery pack which is made in-house. The plant has an annual capacity of 1.1 lakh scooters and 1.2 lakh battery packs.

Ather energy opened its first showroom in Pune and Ahmedabad in February, and in Mumbai in January 2021. Ather Energy recently inaugurated its newest retail outlet – Ather Space at Hitech City in Hyderabad – in association with Pride Motors.

Ather Energy begun its operations in Rajasthan on 22nd March 2021 and deliveries for the Ather 450X and Ather 450 Plus electric scooters are expected to begin soon. Test rides of the electric scooter are already being offered in Jaipur.



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FUTURE OUTLOOK:



The company will be launching in Delhi soon and plans to reach 40 cities across the country by the end of 2021. A 10x increase in electric scooters is expected in the next three years. 1 million mark will be crossed by 2024. During 2020, this segment saw sales of 27,260 electric two-wheelers with Hero Electric accounting for one-third of this market followed by the Okinawa brand with around 20% market share. Ather energy commands a 12.12% market share.

Ather Energy said that to meet the projected demand in the coming years, it is opening a new manufacturing facility in Hosur, which is designed to produce 1 lakh units annually, and is scalable to 5 lakh units. It will also set up "Ather Grid fast charging points" across the country over the next 5 years, making public charging easy and accessible to all electric vehicle owners.

MARKET SHARE:

Market Share (In Motorcycle Segment)





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FINANCIALS:

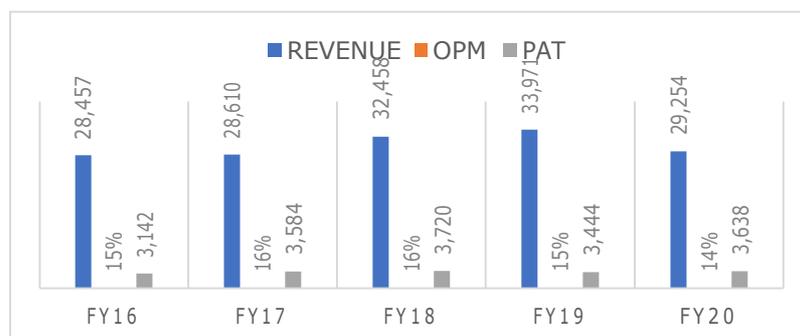
Ather Energy record a 4x growth in its revenue to INR 48.8 Cr but with over 2X rise in expenses, its losses also widened in FY20. In FY21, the company is looking to set up another manufacturing unit in Hosur, Tamil Nadu and expand its Ather Grid EV charging network beyond Bengaluru and Chennai. In terms of sales, Bengaluru remains the most popular market for Ather, accounting for over 70% of the 3007 units sold in FY20.

The company recorded over 8x growth in its operating revenue from INR 4.2 Cr in 2019 to INR 35.3 Cr in the year ended March 30, 2020. Out of this, a majority (INR 35 Cr) came from the sale of products — electric two-wheelers — while the rest INR 0.3 Cr was from the sale of services.

The primary reason for the rise in expenses is the increase in production as Ather Energy launched a new electric scooter in January this year and is also expanding its EV charging network.

Overall, the expenses have more than doubled from INR 119.2 Cr to INR 268.6 Cr. Much of this spending has gone towards the cost of material used in EV production. Ather spent nearly INR 81 Cr on materials, which has gone up over 2X from INR 38.2 Cr in FY19. It also spent INR 7 Lakh on inventory of finished goods, work-in-progress components and stock-in-trade.

Employee benefits was another area where Ather has seen costs more than double — from INR 25.3 Cr to INR 52.3 Cr in FY20. It spent INR 85.6 Cr in salary and wages, INR 2.7 Cr in provident and other funds and INR 3.1 Cr in staff welfare expense. It is important to note that the company had paid INR 53.3 Cr in salaries and wages in FY19. The company also granted 23,431 shares under the employee stock ownership plan (ESOP). Key financials are as follows:



YEAR	REVENUE	OPM	PAT
FY16	28,457	15%	3,142
FY17	28,610	16%	3,584
FY18	32,458	16%	3,720
FY19	33,971	15%	3,444
FY20	29,254	14%	3,638



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S.W.O.T ANALYSIS

STRENGTHS

- **Brand Recognition:** Brand and brand trust plays a huge part when purchase decisions are made by consumers. Hero MotoCorp is a strong brand which is synonymous with reliability and fuel efficient two wheelers.
- **Strong Global Presence:** As of late 2018, its two wheelers are being sold in over 37 countries and has 8 manufacturing plants in 3 countries.
- **Extensive Domestic Network:** Hero MotoCorp has over 6,500 dealerships and service points across India. The large number of service points has allowed it to roll out its Express Service scheme, where it strives to service a customer's vehicle within 60 minutes.
- **Large Product Portfolio:** Not only does Hero MotoCorp provide a large variety of two wheelers, but it is also moving rapidly alongside current market trends as well.
- **Robust financial risk profile :**The company is near debt-free on a standalone level with robust cash accrual and substantial liquid surplus of over Rs 6,400 crore as on March 31, 2020. The strong financial position enables it to withstand competitive challenges in terms of pricing as well as making fresh investments.

WEAKNESS

- **Declining Service Quality:** In a study conducted by the International Journal of Innovative Research in Science, Engineering and Technology in 2015, the overall service quality for Hero MotoCorp fell below expectations of end consumers.
- **Lack of Innovation:** Maximum products of Hero MotoCorp comes with almost similar features, whether is design and functions.
- **Exposure to intense competition :**The Indian two-wheeler market remains highly competitive, with 12 players, including Honda Motorcycles & Scooters India Pvt Ltd (HMSI), Bajaj Auto Ltd , and TVS Motors Ltd. Furthermore, players continue to launch new models.

Opportunity

- **Electric Two Wheelers:** The electric bike and scooter market is booming globally, and it would be an opportunity for Hero MotoCorp to leverage on. The e-bike market is expected to reach about 24.3 billion U.S. dollars by 2025. According to Prescient and Strategic Intelligence, the electric scooter and motorcycles market in India alone will surge past \$617.7 million by 2025.
- **Joint Ventures and Acquisitions:** Despite the terminated joint venture with Honda Japan, it is crucial to note that for many years, technology in its two wheelers came from Honda. By acquiring start-ups or going into joint ventures will allow the conglomerate to obtain more valuable technology and tap into other market segments.
- **Increase utilization capacity:** The current utilization capacity is 72.5 percent on average which can be increased.



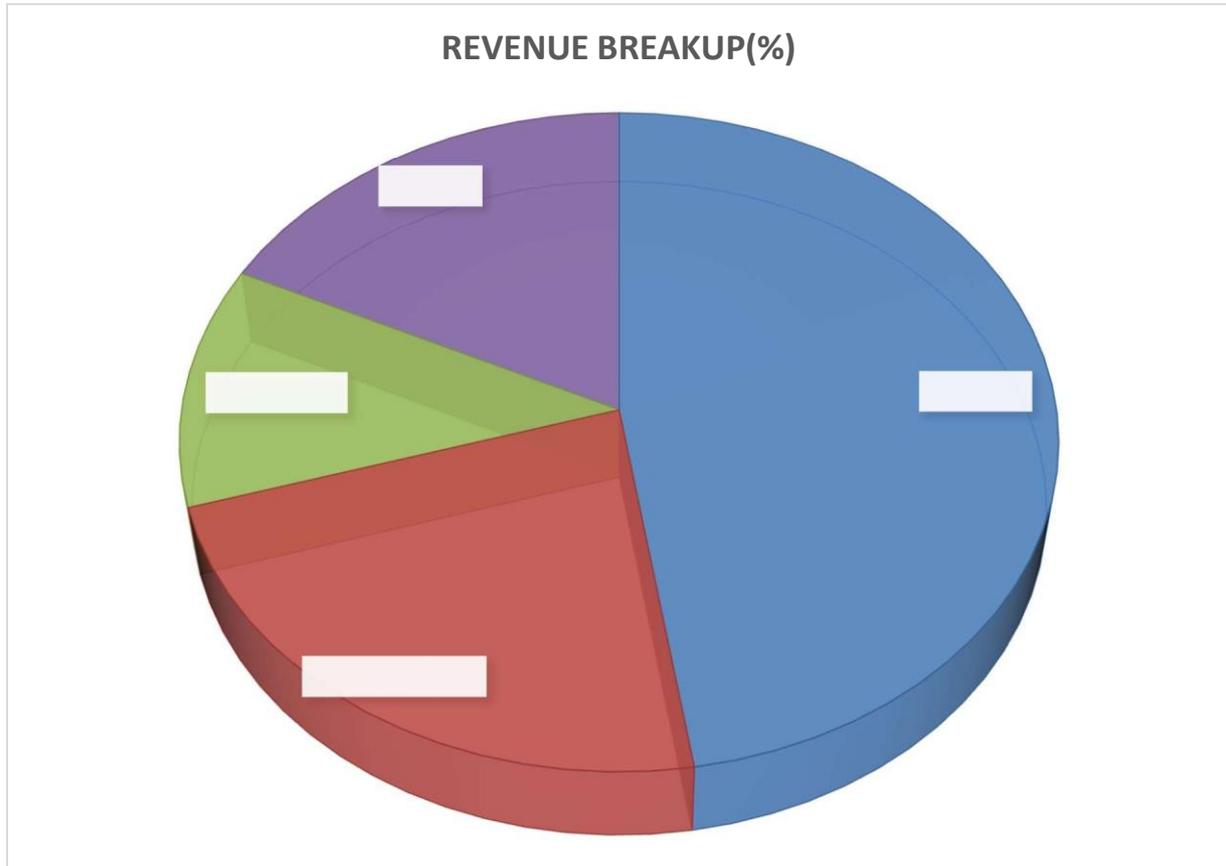
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- **Modest presence in premium motorcycles segment and in the overseas market** :While the company had a 53% market share in the economy segment and a 7% market share in the scooter segment, its share in the executive segment remained 2% as of March 2020.

THREAT

- **Strong Competition:** Hero MotoCorp faces strong competition domestically despite its strong foothold in India. The two-wheeler market in India is very competitive and is dominated by three other major players, TVS Motors, Honda, and Bajaj Auto.
- **Public Transport Infrastructure:** The government of India is striving to improve on its public transport infrastructure. Government initiatives will reduce the demand for automobiles if public transport becomes more reliable.

REVENUE BREAKUP:



REVENUE BREAKUP (%) :

SEGMENTS	REVENUE BREAKUP(%)
ENGINES	48%
AFTER MARKET	23%
E MOBILITY	12%
OTHERS	18%



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PRODUCTS SOLD BY GREAVES COTTON:

AUTOMOTIVE BUSINESS:

The Company's automotive engines are available in an all-fuel range, including diesel, petrol, hybrid, electric, or Compressed Natural Gas (CNG). The Company has recently launched the BS-VI diesel engine, Greaves cotton is the first company to launch it. It was built for affordable 3-wheeler application and provides better performance and also ensures significant pollutant reduction. The Best feature of this engine is its lower total cost of ownership (TCO) and fuel efficiency. The company is a market leader in this segment and holds a 60 to 65% market share in this segment, and counts some of the major OEM's such as M&M, Atul auto, Piaggio ltd etc.

AFTER MARKET

The company provides a wide range of genuine, affordable, and reliable spares. It currently has 6,300 aftermarket retail outlets, supported by 10,000 auto mechanics on ground. The Company's aftermarket business emerged from the need to support its primary businesses of engines and farm equipment, and the increasing demand for genuine spare parts, along with its entry into new territories. By expanding its network, the Company has largely overcome the challenge posed by the unorganised trade in spare parts and maintenance service.

NON-AUTOMOTIVE BUSINESS:

NON-AUTOMOTIVE ENGINES

Greaves cotton has unique advantage of widest range of diesel engines (1.5 HP to 700 HP) in market, supported by CNG and gasoline fuel options. Greaves Industrial engine business has significantly grown year-on-year with all segments and products registering growth, Engines for fire pumps and tractors have been the major growth drivers for Greaves cotton over the years. Greaves Cotton has a huge range of non-automotive engines that are fuel-efficient, compact, and versatile products and have various non-auto applications such as agriculture and construction, marine industries, gardening, and micro irrigation applications, railway and defence. The Company has partnered with small and micro-entrepreneurs and equipment manufacturers in India and abroad, helping them increase their output.

AUXILIARY BUSINESS:

The company offers CPCB-II compliant gensets that meet the demand of multiple sectors. The company has a good focus on low TCO gensets and offers a huge variety of comprehensive diesel gensets that are compact, reliable, and efficient. The demand of auxiliary power market is driven by various sectors such as real estate, infrastructure, railways, telecommunication, airports, and the



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industrial sectors. Banking sector and data centres also have a huge demand for DG sets. The segment has been receiving a lot of Government support especially for the rural sector.

FARM EQUIPMENT BUSINESS

Greaves Cotton provides Farm Mechanisation solutions to small and marginal farmers, which constitute over 80% of the Agri segment in the country. The Company has evolved as a farmer-friendly equipment brand with a wide range of the efficient agricultural equipment, such as pump sets, power tillers, irrigation machines, and light Agri-equipment. The reliable and affordable solutions for small and marginal farmers help them increase productivity and cut down on manual labour in a significant way. The Company is working with small equipment manufacturers to promote the sale of engine and the end products. Greaves is planning to introduce products in electrical pumps, OHV pumps, power weeder, and multipurpose mini power tiller and brush cutter to tap the opportunities.

GREAVES RETAIL

Greaves Retail is mobility enabler one-stop shop for all customers' needs in a mobility ecosystem. It offers a comprehensive 3S (Sales, Service and Spares) proposition to customers. The company has more than 380 retail outlets across the country, this business and is an end-to-end solutions provider. Greaves Care, a part of Greaves Retail, is an organised service setup for 3-wheeler and small 4-wheeler commercial vehicles, well supported by genuine parts and Company-trained mechanics, making it a one-of-a-kind retail platform in India. The company has a huge Network of 10,000+ skilled mechanics. The company has recently signed an Agreement with TVS 3W for OEM service through Greaves Care franchisee. It has also started providing BS-VI Training to channel partners.

E MOBILITY

Electric mobility is gaining momentum in India, especially for intra-city commute, as national and local governments work to bring down pollution levels and consumers desire better cost efficiency. The Government of India recently implemented Phase II of the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme to give this sector a big push. Greaves Cotton has taken the lead in providing reliable and energy-efficient electric mobility solutions for 2-wheelers through its e-mobility subsidiary Ampere Vehicles. The Company also sells e-rickshaws through its Greaves Retail outlets. According to a survey short journeys account for two-thirds of all transport emissions in urban areas. An electric-powered mode of commute over short distances within cities and towns can significantly lower pollution levels.

BUSINESS OVERVIEW:

BUSINESSES

Precision-made products that help you
do more with your day.



GREAVES ENGINES



GREAVES POWER



GREAVES AGRI



GREAVES SPARES



GREAVES CARE



GREAVES GLOBAL



AMPERE





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BUSINESSES :



A) ELECTRIC 2-WHEELERS (AMPERE)

The company has 328+ dealerships across 200+ cities and towns, Ampere is expanding its footprint across India with new product launches. With decent distance ranges under a single charge, these electric 2-wheelers are good for both short commutes and longer rides around a city or a town. Ampere has sold more than 50,000 units of its e-scooters to individuals from several segments of society. Ampere electric scooters are supporting all eco-conscious B2C and B2B customer groups with unique value proposition. High speed e-variants are good alternatives to traditional petrol scooters because of its build quality, speed, comfort and overall performance along with the environmental advantage.

Ampere has also partnered with major brands in India that require low-cost, clean mobility across various segments such as E commerce, Food delivery platforms and Ride sharing. In January 2020, it signed an agreement to provide Big Basket, India's largest online supermarket, with custom-fit electric scooters for its delivery fleet in key Indian metros. More such partnerships are in the pipeline to promote e-mobility, currently the company has signed partnerships with 50 such companies.

B) E-RICKSHAWS:

India's commercial fleet of battery-operated 3-wheelers has grown to 1.5 million in less than a decade which represents huge, unprecedented growth. The company has launched a huge range of electric rickshaw models to cater to the rising demand. These affordable commercial mobility solutions have revolutionised the commercial 3-wheeler segment in India. With its wide range of environment friendly e-rickshaws, the Company is creating opportunity for financial independence and self-employment for thousands of customers.

INDUSTRY OUTLOOK:



E SCOOTERS

The Indian electric scooter and motorcycle market would reach a sales volume of 1,080.5 thousand by the end of 2025, exhibiting a CAGR of 57.9% between 2020 and 2025. Due to the rising pollution and the increasing provision of financial incentives by the government and policies such as the FAME II, the sales of electric scooters and motorcycles are booming in India. In 2019, nearly 152.0 thousand units of electric motorcycles and scooters were sold in the country, registering a 20.6% growth annually from 2014. In terms of retail sales value, the market is predicted to advance at a CAGR of 63.9% from 2020 to 2025 and attain a revenue of more than \$1.0 billion in 2025. A key factor fuelling the growth of the market is the provision of lucrative financial incentives and subsidies on electric vehicles by the government.

Moreover, the government is also providing tax exemptions and purchase rebates for promoting the utilization of electric vehicles and two-wheelers in the country. The ballooning sales of these scooters would be driven by the availability of a wide array of electric scooter models in the country, their affordable prices, and their ability to serve as excellent alternatives to the traditional fossil fuel-powered mopeds. The Indian electric scooter and motorcycle market is currently demonstrating the highest growth in Uttar Pradesh out of all the states in the country. The surge of the market in Uttar Pradesh is caused by the increasing penetration of electric motorcycles and scooters in the state. Moreover, these two-wheelers are registering soaring sales in the tier 2 and tier 3 cities of the state. Because of the rising demand for these vehicles in the state, many original equipment manufacturers (OEMs) are rapidly increasing their dealer network.

This is, in turn, pushing up the sales of electric motorcycles and scooters in the state. Hence, it can be safely said that the market will exhibit rapid growth in the coming years, mainly because of the rising implementation of favourable government policies regarding the sales of electric vehicles and the increasing consumer preference for electric scooters and motorcycles over their fuel-based variants in the country.



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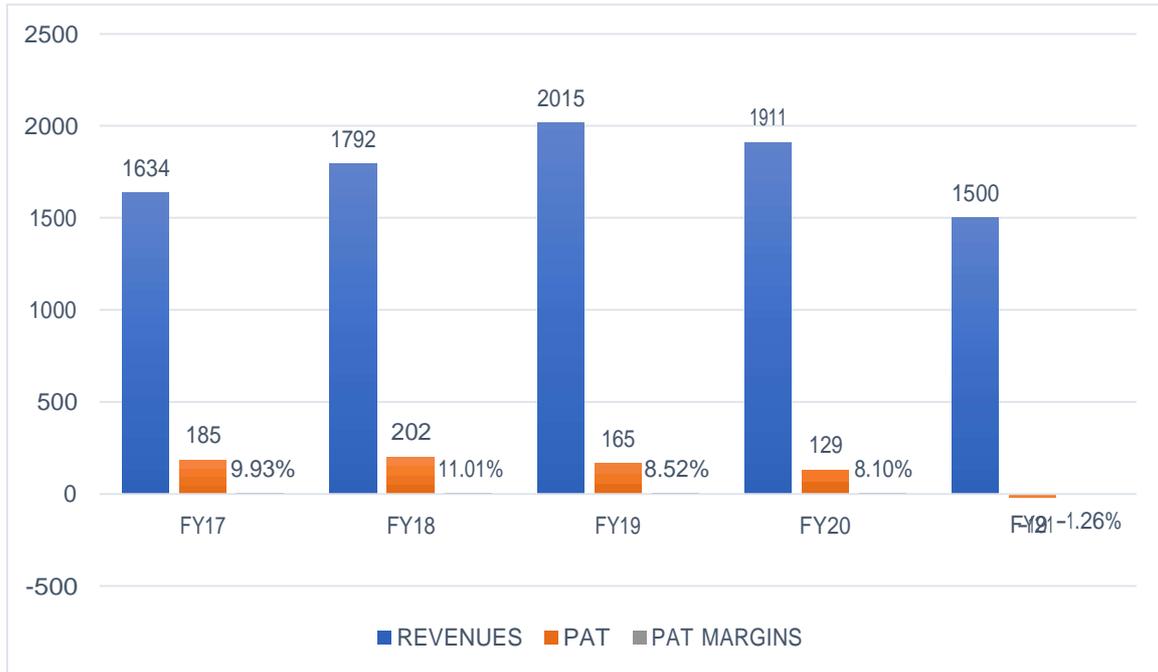
E RICKSHAWS

Most of the people living in Indian cities are still not wealthy, which is why the need for cost-effective public transportation, especially for short distances, has always been high. This factor is expected to propel the Indian electric rickshaw market at a 33.3% CAGR between 2020 and 2025. At this rate, the market size will likely rise to \$1,394.2 million by 2025 from \$786.2 million in 2019. Rides on electric rickshaws in the country, which are typically 1 km long, cost around INR 10 per head, which is way cheaper than sharing a two-wheeler or car or taking an autorickshaw. Moreover, if four people share an e-rickshaw for 5 km, the per person cost comes out to be INR 15, and the driver earns INR 120 (figures are approximates) Hence, another reason for the growth of the Indian electric rickshaw market is the favourable operational cost dynamics these vehicles offer to their owners.

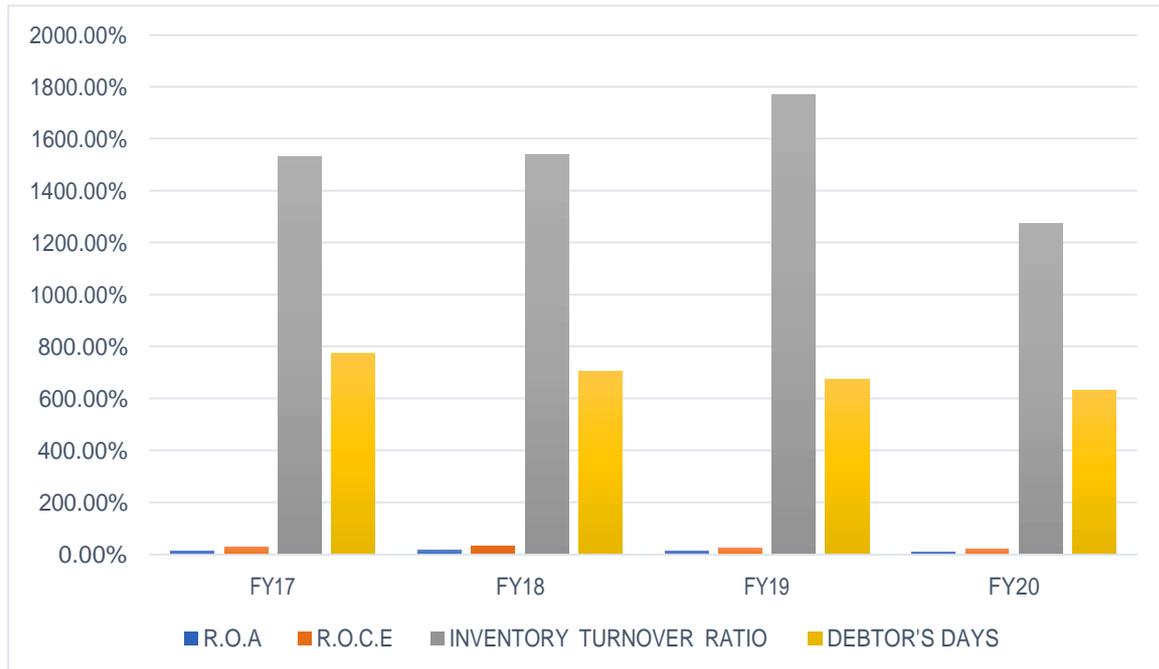
Due to the COVID-19 pandemic, the Indian electric rickshaw market has been badly affected, as the lockdowns and curfew-like situations in infection hotspots have reduced the demand for public transportation substantially. Moreover, even after the pandemic ends, many people are not expected to opt for shared mobility, to reduce the chances of catching the virus as much as possible. This would, in turn, discourage mobility service providers from purchasing new e-rickshaws. The passenger carrier bifurcation is expected to hold the larger share in the Indian electric rickshaw market in the years to come on the basis of vehicle. Due to the increasing urban population driving the demand for cost-effective first- and last-mile transportation, the number of passenger carrier e-rickshaws is burgeoning on the country's roads. The Indian electric rickshaw market was dominated in the past by the <101 Ampere-hour (Ah) bifurcation, based on battery capacity. Currently, most of the operators prefer low-cost e-rickshaws, which are easily available with unorganized automakers, who account for the majority of the sales. In the years to come, the organized bifurcation, under segmentation by sales channel, is expected to become the higher Indian electric rickshaw market revenue generator.

With state governments passing laws to allow the operation of such vehicles and the rollout of the Goods and Services Tax (GST) coming as a severe blow for unorganized players, organized electric rickshaw manufacturers are witnessing a rapid rise in their sales. Delhi was the largest state in the Indian electric rickshaw market historically, on account of the alarming air pollution levels and air quality index (AQI) in the city. As a result, the government is offering strong support for electric vehicles, including a \$413 (INR 30,000) subsidy on e-rickshaws. In the years to come, the increasing demand for these eco-friendly automobiles in Varanasi, Lucknow, Noida, and Kanpur will likely make Uttar Pradesh the state making the largest revenue contribution to the industry.

FINANCIALS (FIGURES IN CRORES):



IMPORTANT RATIOS OF THE COMPANY:





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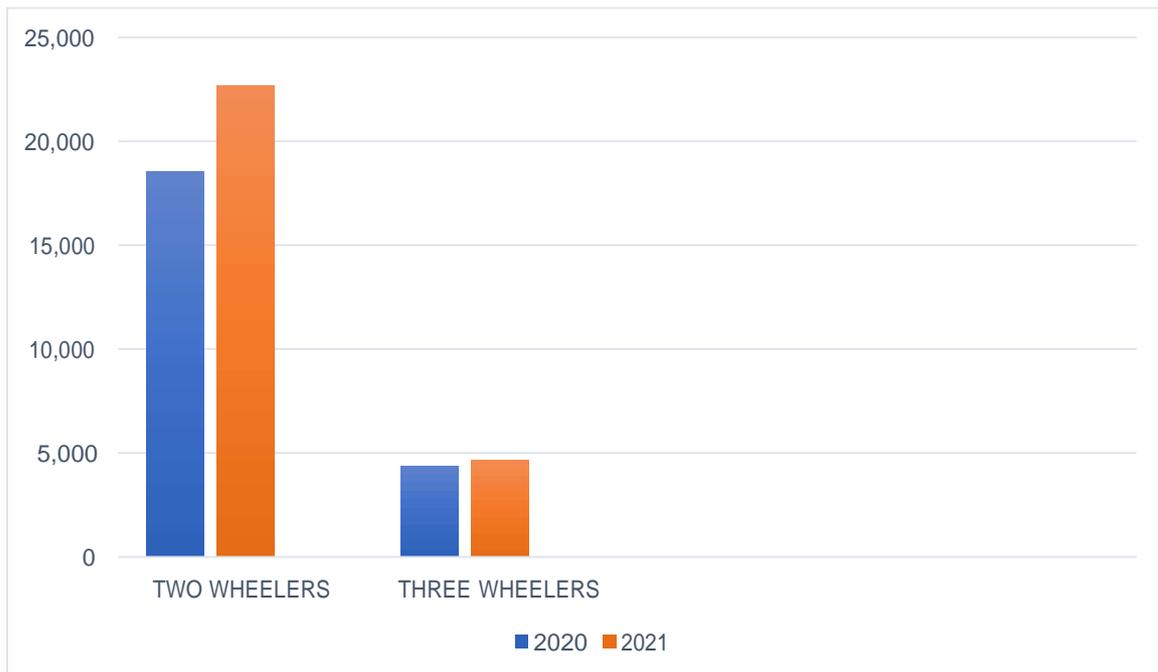
KEY FINANCIALS:

YEAR	REVENUES	PAT	PAT MARGINS
FY17	1634	185	9.93%
FY18	1792	202	11.01%
FY19	2015	165	8.52%
FY20	1911	129	8.10%
FY21	1500	-19	-1.26%

YEAR	R.O.A	R.O.C.E	INVENTORY TURNOVER RATIO	DEBTOR'S DAYS
FY17	14.94%	27.60%	15.32	7.73
FY18	15.66%	31.51%	15.41	7.04
FY19	12.31%	25.88%	17.7	6.75
FY20	10.96%	21.88%	12.72	6.33

ELECTRONIC VEHICLES	2020	2021
TWO WHEELERS	18,536	22,661
THREE WHEELERS	4,382	4,649

SALES VOLUMES OF AMPERE AND ELECTRONIC RICKSHAWS





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COMMENTARY ON FINANCIALS:

1. The Company's revenues and the PAT has remained subdued over the last 5 years, given the low growth of the Industry.
2. The company has an extremely good R.O.C.E which means that the company is efficiently utilizing its manufacturing capacity, however it has been in a declining trend since the last 2 years.
3. The debtors days of the company are increasing which is not a good sign.
4. R.O.A as well as the PAT margins have also declined over the last 3 years.
5. The company expects demand to recover and sales to pick up growth after the Pandemic.

S.W.O.T ANALYSIS:

STRENGTHS

- Ampere has shown tremendous growth in terms of revenues since it was acquired by Greaves cotton, its revenues have risen to more than 100% since it was acquired.
- The company has one of the fastest growing E mobility networks with a huge presence in 260+ cities and a huge dealer network of over 328 dealers.
- The company has a huge variety of products, high speed variants which are aimed at the GenY's and young generations, low speed variants for housewives, office goers etc.
- The company has a strong footprint in the B2B business as well and has tie ups with 50+ start-ups such as Ola, E bike go, Big basket, flipkart, etc, these start-ups are spread across various sectors such as E commerce, Food delivery and ride sharing.
- The company has a huge range of E rickshaws available, which are particularly designed and aimed at Rural Areas and Semi Urban areas.
- There has been a huge volume growth in E rickshaws as well as E scooters with Volumes growing by 103% and 63% over the last year.
- The company has over 6300 touchpoints spread over the country and a huge network of 10,000+ skilled mechanics for Aftermarket as well as servicing of various products.
- The company is a market leader in Diesel 3-wheeler engines and has a market share of 60-65% and counts many major Automobile companies such as M&M, Piaggio Ltd, Atul auto etc as their major clients.
- The company has the biggest range of Diesel onset generators ranging from 1.5 HP to 700 HP which gives the company a huge competitive edge against its competitors.
- The company has developed and got approvals for the world's first BSVI diesel engine, which will help the company gain a first mover advantage in the Industry.
- The company has also set up a vehicle finance company for increasing the sales of Ampere and E rickshaws.
- The Company has a very strong promoter pedigree.
- The company has a very strong cash and bank balance.



08-05-2021

- The company's diesel gensets are used in Government and tender businesses in India, Registered in maximum Government bodies including Indian Railways, Used in most of the Airports run by Airports Authority of India
- The company is the major Supplier to one of the leading Petroleum companies in the world.
- Greaves cotton is the largest supplier to Reliance Retail.

WEAKNESSES

- The company derives a very small part of its revenues from Electric mobility business and is heavily dependent on diesel engines for majority of its revenues.
- A major reason for subdued growth of revenues as well as PAT of greaves cotton has been the muted growth of the 3-wheeler Industry, a sector which was affected the most due to the de growth in Automobile Industry.
- The company's PAT margins as well as PAT has been declining over the last 5 years owing to the de growth in Automobile sector, Construction sector, Industrial manufacturing which are some of the major sectors responsible for the company's revenue.
- Cheap imported engines pose a challenge to diesel gensets business which caters to Agriculture and construction business.
- The company's growth is heavily dependent on spending by Construction companies, Industries on new projects.

OPPORTUNITIES

- The company has huge opportunities ahead as Industries such as Construction Industry, Automobile Industry, Agriculture and manufacturing are projected to show huge growth in the coming years which will ultimately affect the company's revenues as well as profits.
- The company has partnerships with major food delivery aggregators; hence the company can be considered as a proxy play to the growth of food delivery aggregators, this will be ultimately reflected on the Company's balance sheet.
- The electronic scooter Industry in India is expected to grow at a growth CAGR of 63.8% and become a billion-dollar Industry by 2025 which represents huge growth opportunities for the company (Ampere).
- Ampere currently has a market share of 18-20%, as the penetration of E scooters increases, the market shares as well as volumes sold are expected to grow exponentially for Ampere.
- The electric rickshaws Industry is expected to grow at a pace of 33.3% CAGR till 2025 which represents huge opportunities for the company. The penetration of E rickshaws has been extremely fast over the last decade, the number has gone up from 0 in 2010 to 1.5 million in 2020.
- The company has recently started manufacturing Industrial products for the marine Industry as well as the Defence Industry which will further aid the growth of the company.



08-05-2021

- The company has recently announced a huge Electronic scooter manufacturing plant in Panipat, Tamil Nadu in collaboration with the Tamil Nadu government.

THREATS

- The company has been operating in the EV industry (E rickshaws and scooters) which is showing huge, unprecedented growth and is expected to grow at breakneck speeds hence the competition will intensify, also the EV Infrastructure in India is not appropriate to support the huge growth, this can hamper the growth of the industry.
- The demand for diesel vehicles especially 3 wheelers has been Tapering.
- The Growing demand for green fuel and clean energy solutions poses a huge threat to Diesel and gasoline engines.
- The ever-Changing emission norms such as the jump from BSIV to BSVI engines
- The Large prevalence of duplicate parts and the growing market share of unorganized players
- Many Industries and Companies are now moving from lower kVA to higher kVA. The companies are now moving to Higher horsepower solution's(HHP's).The company has a weak Presence in HHP.
- Gas and hybrid fuel based gensets solutions are gaining popularity.
- Growing agricultural inflation and Climate-related crisis for farmers can be a threat for the agricultural products of the company.

ENDURANCE TECHNO. LIMITED

CMP	1342
POTENTIAL UPSIDE TARGET	120%
BSE CODE	3000/3200/3400
NSE CODE	540153
TIME FRAME	ENDURANCE
	1 YEAR

Endurance Technologies was originally incorporated as a private limited company at Mumbai under the name of “Endurance Suspension Systems (India) Private Limited” under the Companies Act, 1956 and received a certificate of incorporation dated December 27, 1999. The company is a complete solutions provider, providing end-to-end services by engaging its customers from conception to end-user delivery. Its development process includes design, development, validation, testing, manufacturing, delivery and aftermarket sale service for a wide range of technology-intensive auto component products leading to better customer satisfaction and diversification of its customer base. The company is an innovation-driven company with strong focus on research and development (R&D), which allows it to develop new products suited to customer requirements. The company has 25 plants across India, Italy and Germany. It has 18 manufacturing plants in India, all of which are strategically located in the major automotive manufacturing belts of the country, comprising eight in Aurangabad (Maharashtra), five in Pune (Maharashtra), two in Pantnagar (Uttarakhand) and one each in Manesar (Haryana), Chennai (Tamil Nadu) and Sanand (Gujarat), with two in-house tool rooms.

Endurance Technologies Limited (ETL) is a leading automotive component manufacturer and the largest aluminum die casting manufacturer in India in terms of total output and capacity (as per the data from the Aluminum Casters’ Association of India). Having started its operations as an aluminum die casting manufacturer in 1985, the Company is today a Tier-I supplier to India’s 2, 3 and 4-wheeler OEMs. It is an established supplier of aluminum die castings and alloy wheels, suspensions, transmissions, and braking systems providing end to-end solutions right from design to aftermarket services. Apart from creating a niche in India through its quality-driven critical automotive components, the Company has expanded its operations in Europe through its overseas subsidiaries in Italy and Germany.



INDUSTRY OVERVIEW:

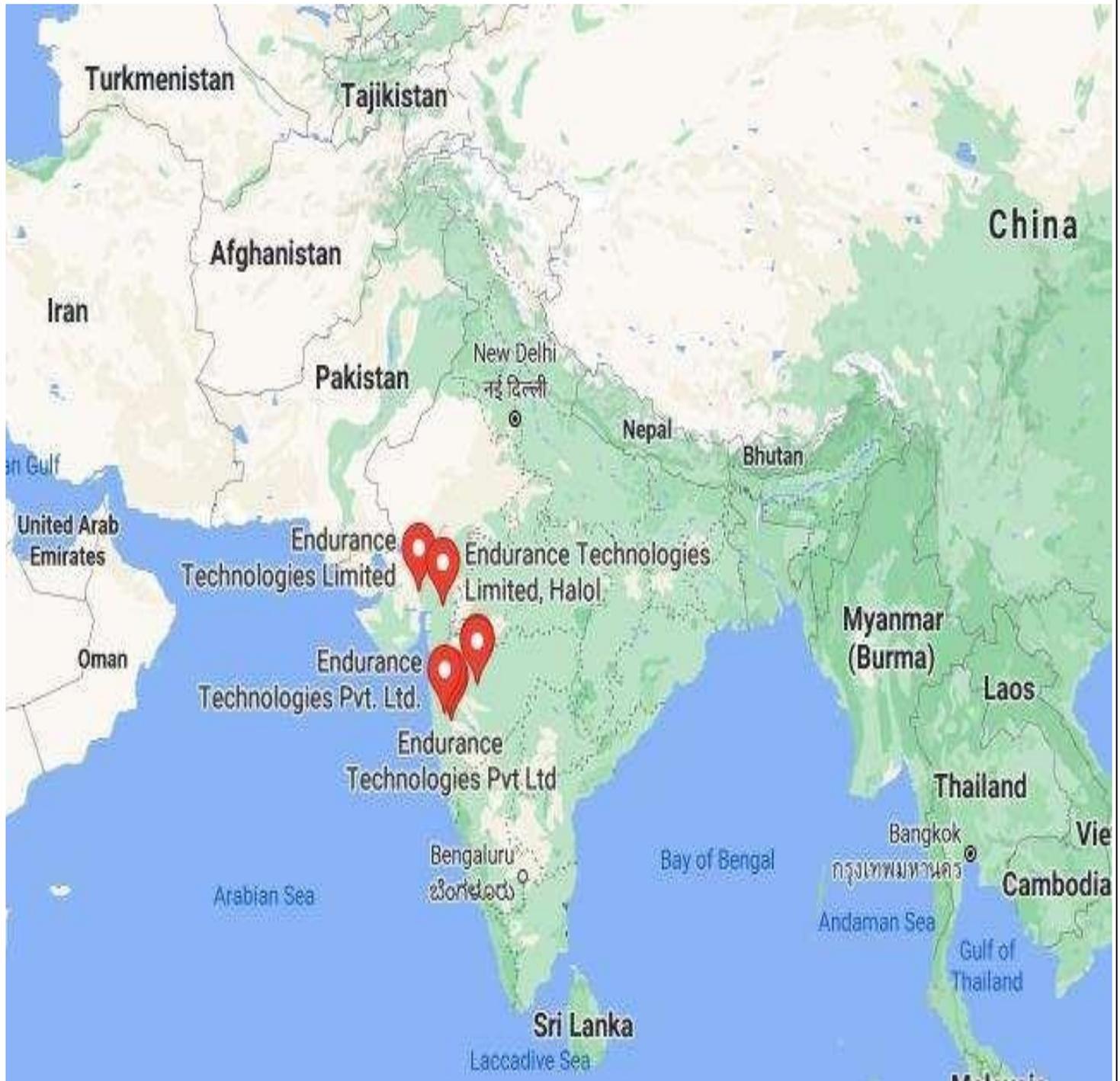
India's automobile industry is the world's fourth largest automobile market in terms of sales and production and is a top employment generator in the country. In the past few years, growth in the industry has been supported by robust economic activity and large-scale infrastructure development, a growing middle-class population with increasing income and availability of financing options.

The sector has benefitted from factors such as the availability of low-cost skilled labor, research & development support, and a strong manufacturing supply chain. Being an attractive sector for investment, the industry has been a recipient of USD 23.89 billion FDI (between April 2000 and December 2019), amounting to 5% of India's total FDI flows till date.

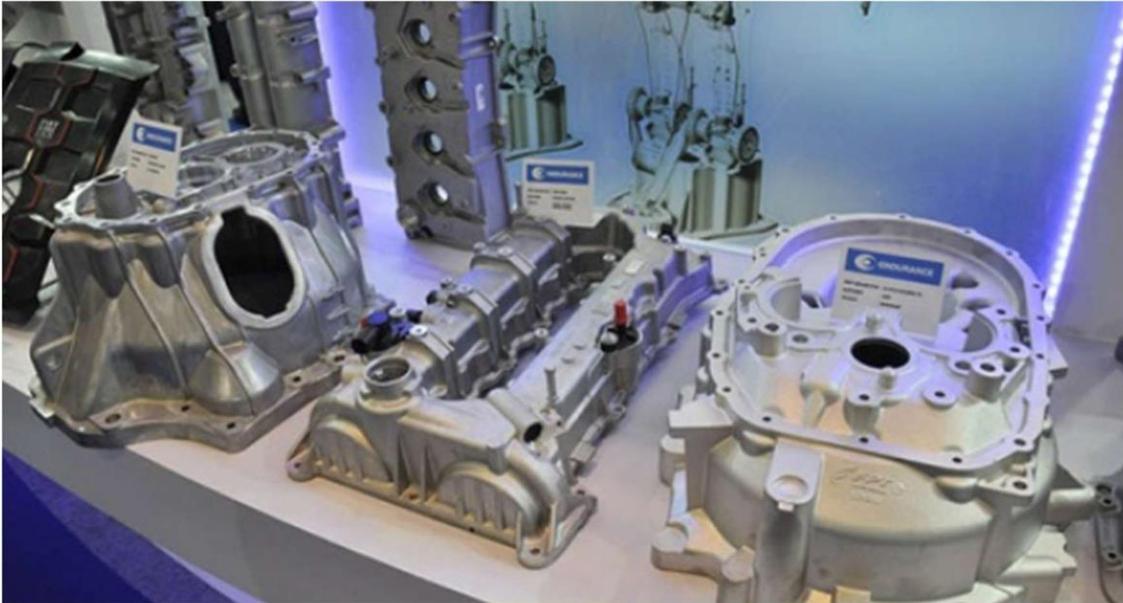
The automotive industry, including automobile and component manufacturing, is projected to reach a market size of ` 16-18 trillion (USD 251-282 billion) by 2026. The Government introduced the National Electric Mobility Mission Plan (NEMMP) 2020 and the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme to encourage transition to electric and hybrid vehicles in two phases. FAME I was launched on 1st April 2015; while FAME II, which is an expanded version of the earlier scheme, was launched on 1st April 2019, with a total projected outlay of ` 10,000 crore.

The Electric Vehicle (EV) market in India is projected to grow by an annual rate of 36% between FY 2018-19 and FY 2025-26 owing to the momentum gained after the implementation of FAME II. Electric Vehicles is going to create significant potential for auto component manufacturers, including the battery and charging infrastructure. The list of 20 EV parts to be indigenized under the PMP will be a major boost for the industry. According to a recent study, indigenization of electric powertrain components and battery pack assembly can produce a 5.7% higher output value addition worth USD 2.70 billion for the industry.

MANUFACTURING LOCATIONS:

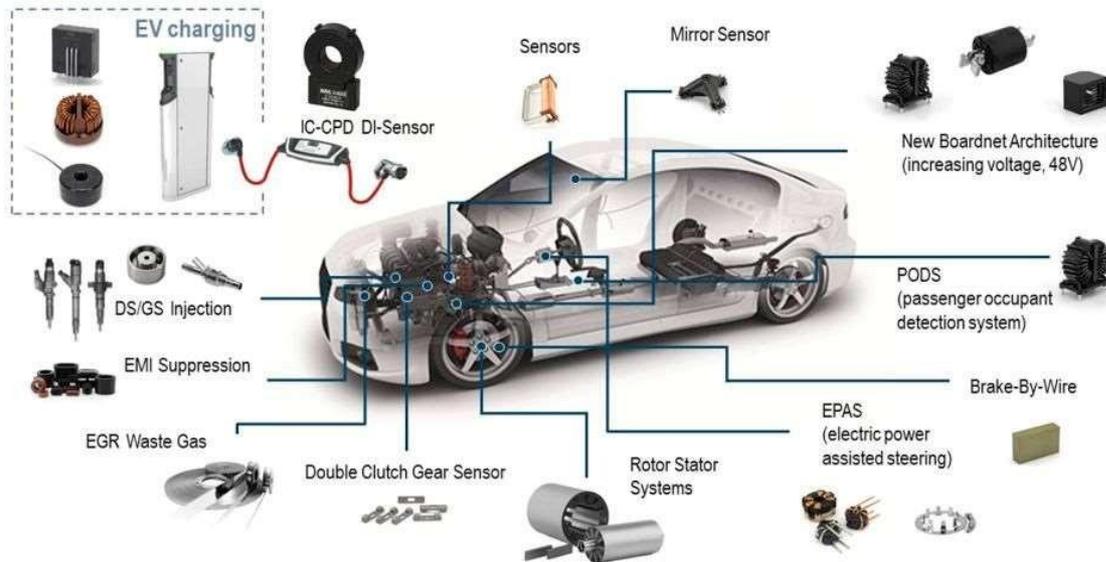


RECENT DEVELOPMENTS:



- To serve the 2-wheeler market with technologically advanced components, the Company has recently acquired controlling stake in companies having advanced technology in transmission and braking products. Its Italian subsidiary Endurance Overseas Srl acquired a controlling stake of 99% in Adler SpA and subsequently changed the name to Endurance Adler SpA.
- The Italian company is a leader in systems solutions for clutches, gears, and friction plates with a niche in R&D, engineering services and product development for OEM customers in Europe. Subsequently, Endurance Adler SpA acquired Grimeca Srl, a company in Italy specializing in designing of braking systems for motorcycle applications.
- The transaction involved the acquisition of “G Grimeca” brand, the Company, intellectual property rights, patents, and know-how for braking systems for 2-wheelers and 3-wheelers. With these two acquisitions, the Endurance Group has given a new impetus to its technological leadership with the prospect of creating a “Centre of Excellence” in Italy for designing and manufacturing of motorcycle components.

ENDURANCE IN EV SPACE:



- The Company is gaining a foothold in the electric vehicles and hybrid vehicles space, which is potentially the future of mobility. In Europe, a significant part of the new orders is for parts that will go into the production of EVs and Hybrid vehicles. In the last two years, €110 million of European business has been received for electric and hybrid cars.
- This business is expected to reach peak volumes by FY 2022-23. In India, the Company supplies components to an OEM which has launched its iconic scooter brand as an EV. Further, ETL's aluminum forging project will also cater to the demand for aluminum forging from 2-wheelers, 4-wheelers and EVs. As their OEM customers gravitate towards tech-advanced vehicles, including higher CC and electric and hybrid vehicles, their expertise makes them their preferred supplier. They have an internationally acclaimed tech partner for suspension and in-house technical expertise for transmission and brakes.
- They are entering a new product area, that of aluminum forging, which will enable them to integrate backwards. Today, they are importing Axle clamps from Western Europe for our inverted front forks. With their new venture, we will begin manufacturing of such clamps in-house, the production of which is aimed to start in April 2021.
- This will give them an opportunity to grow the aluminum forging proprietary business for other usage in 2-wheelers, 3-wheelers, 4-wheelers, and electric vehicles. Their recent investments in companies with strengths in braking and clutch technologies will help them offer further value addition to their customers. They have won significant orders for automotive components of electric and hybrid cars, which they have begun manufacturing this year.

KEY PRODUCTS:

A Diversified Portfolio of Products

India Operations

Products	Application segments
1. Aluminium die cast and machined components (including aluminium alloy wheels for motorcycles)	2, 3 and 4-wheelers
2. Suspension components and assemblies	
3. Transmission components and assemblies	
4. Braking systems	

Overseas Operations

Products	Application segments
1. Aluminium die cast and machining of: <ul style="list-style-type: none"> • Suspension and body parts • Engine parts • Transmission parts 	4-wheelers
2. Assembly of other metallic components like cast iron and steel	
3. Transmission components	2-wheelers
4. Engineered plastic components	Automobile and other industries

BUSINESS MODEL:

PRODUCTS



1. CASTING AND MACHINING: The Company's casting and machining division is its oldest business line. This division manufactures a wide range of aluminium die-casting components for two-wheelers, three-wheelers, passenger vehicles, LCVs and HCVs.

The five major product lines of the aluminium alloy casting and machining division are:

- A. High-pressure die-casting products.
- B. Low-pressure die-casting product.
- C. Gravity die-casting products.
- D. Alloy wheels.
- E. Machined products.

2. BRAKES: The Company's brakes division was established in 2003 and began commercial production of hydraulic disc brake systems and their components in 2004 through a now-expired technical collaboration with an Italian manufacturer. It division manufactures a wide range of brake products for two-wheelers and three-wheelers.

The major products of the company's brakes division include:

- A. Two-wheeler hydraulic disc brake assemblies.
- B. Two-wheeler rotary brake discs.
- C. Three-wheeler hydraulic drum brake assemblies.
- D. Three-wheeler tandem master cylinders assemblies.

3. SUSPENSIONS: The Company's suspension division was established in 1996 and began commercial production of shock absorbers in the same year. In 1998, the company expanded its product range to include front forks. It also commenced TPM initiative in the suspension division in 2004. In June 2008, the company entered into a joint venture with Magneti Marelli, forming Endurance Magneti Marelli Shock Absorbers (India) Private Limited to manufacture struts, shock absorbers and gas springs for passenger vehicles. This joint venture arrangement enabled the company to access new technologies developed by Magneti Marelli and also to obtain greater access to potential customers. As a result of this joint venture, the company believes that it has the ability to offer a complete portfolio of suspension solutions for passenger vehicles, LCVs and HCVs.

The major products of the company's suspension's division include:

- A. Two-wheeler and three-wheeler shock absorbers. B. Two-wheeler front forks; and
- C. Passenger vehicle, LCV and HCV struts and gas springs(manufactured by EMM JV)

4. TRANSMISSIONS: The Company's transmissions division was established in 1998 and began commercial production of clutches in the same year. On January 30, 2002, the company established its subsidiary, HTTS India, through a joint venture with Adler SpA of Italy, for the manufacture of two-wheeler transmission components. The company currently owns 85.0% of the shareholding in HTTS India and Adler owns the balance. Since its establishment, its transmission products are primarily manufactured by HTTS India.

The major products of its transmissions division include:

- A. Clutch assemblies B. Continuous variable transmissions ("CVTs") C. Friction plates

The Company's Major Clientele includes Global OEMs such as various subsidiaries of Fiat Group Automobiles Spa, Lancia and Alfa Romeo, Daimler AG, Audi AG, Porsche AG, Magyar Suzuki ZRT as well as two leading French automobile manufacturers.

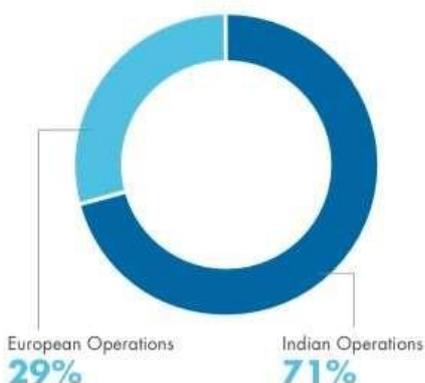
Leading Indian OEMs such as Bajaj Auto Limited, India Yamaha Motor Private Limited, Royal Enfield Motors Limited, Maruti Suzuki India Limited and Honda Motorcycle & Scooter India Private Limited.

Further, the Company has a long-standing relationship with Bajaj Auto Limited, which is Company's largest customer. The company has been supplying components to Bajaj Auto Limited since inception.

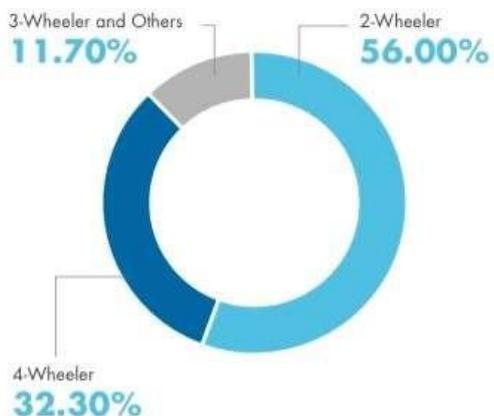
OUR OUTLOOK:

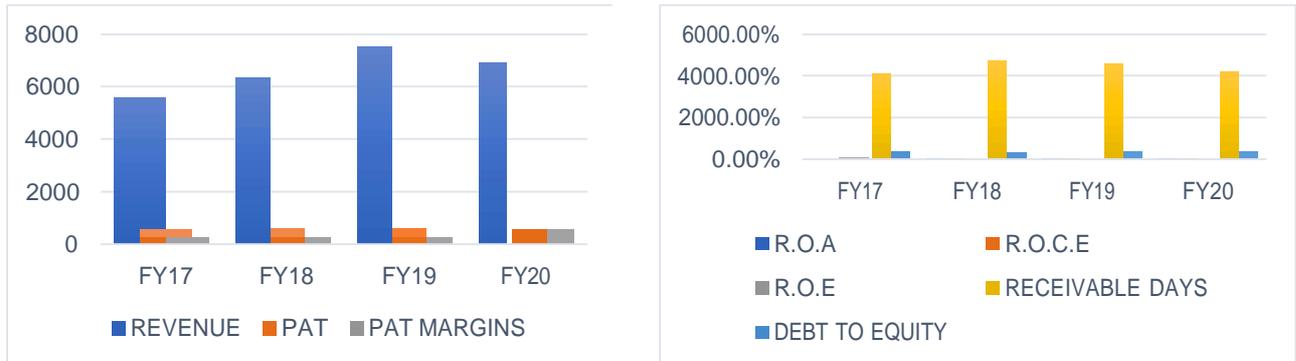
- As a manufacturer of auto components, ETL is built on a foundation of technical capabilities, product quality, and process know-how, cost economy and a strong connect with customers, suppliers, and distributors. The Company's measures towards productivity improvement, product cost control, quality enhancement and higher product performance continue to support its growth outlook.
- The impact of Covid-19 on the automotive industry has been severe in the first quarter of the current fiscal, in most parts of the world. The demand revival in the second quarter is expected to be robust, partly because of the pent-up demand, and partly on account of the preference for individual mobility.
- The pace of demand revival for the full year will depend upon several factors. ETL has a growth outlook for the second half of the fiscal. The Company has consistently won large new orders in both geographies over the last few quarters. These orders are yet to achieve full ramp-up. Further, it has a robust pipeline of requests for quotations, which is expected to further strengthen its order book. With such orders, its inherent strengths and its track record, the Company aims at growing higher than the industry average.
- ETL will continue to focus on raising the bar in terms of its technological offerings. Its acquisition of controlling interest in companies having advanced technologies in transmission and braking will enable it to expedite supply of high-end clutches, CVTs and braking solutions in the Indian 2-wheeler market, where OEMs will continue to launch superior products for an increasingly discerning market.

Business Share by Geography (In %)



Business Share by End-User Market (In %) (Consolidated)



FINANCIALS :

KEY FINANCIALS:

YEAR	REVENUE	PAT	PAT MARGINS
FY17	5588	330	5.51%
FY18	6349	391	5.88%
FY19	7509	495	6.56%
FY20	6915	566	8.14%

YEAR	R.O.A	R.O.C.E	R.O.E	RECEIVABLE DAYS	DEBT TO EQUITY
FY17	9.78%	21.12%	20.78%	41.23	0.4
FY18	9.99%	22.29%	20.03%	47.53	0.37
FY19	10.90%	24.16%	20.90%	45.82	0.28
FY20	11.55%	21.67%	20.30%	41.96	0.25

COMMENTARY:

During the year under review, the Company posted a total income of ` 49,747.57 million on a standalone basis as against ` 54,336.82 million in the previous year. The total income on a consolidated basis was ` 69,653.04 million compared to ` 75,375.45 million in the previous year. The Company's total income on standalone and consolidated basis de-grew by 8.4% and 7.6%, respectively. This primarily was on account of negative growth by automotive industry followed by the nationwide lockdown in March 2020 due to Covid-19 pandemic. Despite a challenging market environment, the Company recorded a 'better than industry' performance.

The profit after tax, however, increased significantly by 19.5% in the financial year 2019-20 at ` 4,276.92 million as against ` 3,578.61 million in the previous year, on standalone basis, while consolidated profit after tax grew by 14.2% at ` 5,655.34 million as against ` 4,950.06 million in the previous year. Despite de-growth in the automobile industry, the Company earned better profit margins due to sharper focus on costs, including raw material costs and lower effective income tax rate. Further, greater control was exercised on our capital expenditure and working capital.

STRENGTHS

- Strategically located facilities- it has got 26 manufacturing plants across the globe with 17 plants in India and 9 plants in Europe. It ensures timely delivery.
- Diversified product range.
- Innovation with R&D – company focuses a lot on R&D to develop innovative, lean, and cost competitive designs to maintain a technological edge across product range.
- End to end solution provider- it does not only provide auto components but also end to end services from conception to end user delivery. It also provides aftermarket sale for wide range of technology intensive auto components.
- High technology futuristic products
- Strong financials with increasing revenue and profits
- Leading market position for aluminium die-casting components, healthy relationships with major customers and well-diversified revenue streams

OPPORTUNITY

- Opportunity to increase exports across product segments.
- Tap into the 4-wheeler market segment in India.
- Increasing diversification of customer base and segments

THREAT

- Auto industry downturn- a general economic slowdown can lead to a drop in auto industry.
- Volatility in commodity prices- the volatility in commodity prices like aluminum and Steel may affect the company's profitability.
- Intensifying competition- a positive business environment in India has invited new players and competition.

WEAKNESS

- Exposure to cyclicalities in automotive industry, both in domestic as well as overseas market.
- While ETL's revenue profile benefits from good geographical and product diversity, the company remains exposed to risks related to customer concentration at each of the geographies it operates in.

TATA MOTORS

KEY FUNDAMENTALS

- Established in 1945 and is a \$35 billion organisation. It is a leading global automobile manufacturing company holding a 37% Market share.
- Tata motors has the largest EV distribution network in the country and currently present in 51 cities, has 93 sales centres. It's first Electric Vehicle, Nexon EV is close to crossing 3000 units sales mark.
- Recently, it is working on Electrification of commercial vehicles. Centre had introduced the 'Faster Adoption and Manufacturing Electric Vehicles in India' scheme to promote the manufacturing of electric and hybrid vehicle technology.
- Tata Motors on reported a 67.2 per cent year-on-year jump in its consolidated net profit to Rs. 2,906.45 crore for the quarter ended December 2020 & its revenues rose 5.5 per cent to Rs. 75,653.8 crore.

TECHNICAL OUTLOOK

- Given below is the weekly chart of Tata Motors.
- Tata motors is in an uptrend and has formed a flag pattern on weekly time frame. It is a Bullish continuation pattern.
- Breakout confirmation above 360.

TECHNICAL LEVELS

CMP	294
BUY LEVELS	ABOVE BO-350, NEAR S1-240 , S2-200
TARGETS	600/700/800+
STOP LOSS	149
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 13:59:03 IST
 NSE:TATAMOTORS, 1W 294.00 ▼ -0.55 (-0.19%) O:295.00 H:308.15 L:290.50 C:294.00



HERO MOTOCORP LTD.

KEY FUNDAMENTALS

- Hero MotoCorp was incorporated in the year 1984 & has been at the forefront of designing and developing technologically advanced motorcycles and scooters for customers around the world. It became the world's largest two-wheeler manufacturer in 2001.
- Pawan Munjal-led Hero MotoCorp was the primary investor in Ather Energy's Series B fund raise in 2016, where it led the \$27 million financing into the start-up. Hero continues to be the largest equity investor in Ather Energy.
- Hero MotoCorp continues to remain on the top of the list in December 2020 having sold 5,59,118 units, with a market share of 39.25 percent & its Profit rose 14% to INR 880 CR in Q3.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Hero Motocorp.
- Hero Motocorp has formed a Cup and handle Pattern on monthly time frame.
- It is a bullish reversal pattern.
- Breakout confirmation above 3650.

TECHNICAL LEVELS

CMP	2864
BUY LEVELS	ABOVE BO-3400-3650, NEAR S1-3000 S2-2500
TARGETS	7000/7500/8000+
STOP LOSS	1490
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 14:19:34 IST
 NSE:HEROMOTOCO, 1M 2864.05 ▲ +12.90 (+0.45%) O:2949.00 H:3004.95 L:2741.10 C:2864.05



AMARA RAJA BATTERIES

KEY FUNDAMENTALS

- Amara Raja Batteries Limited is one of the largest manufacturers of lead-acid batteries for both industrial and automotive applications in India having a Market Share of 30%. It was incorporated in February 1985 as a private limited company and has a Market cap of INR 13,679.52 Cr.
- Recently, the Company, among the largest battery manufacturers in India, announced that it has installed electric vehicle battery charging and swapping stations along with a fleet of electric autos in Tirupati, Andhra Pradesh.
- Net profit of Amara Raja rose 18% over the year-earlier to Rs 193.2 crore in the three months ended December.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Amara Raja Batteries.
- Amara Raja Batteries has formed a Cup and Handle pattern on monthly timeframe.
- It is a Bullish Reversal pattern.
- Breakout Confirmation ABOVE 1050.

TECHNICAL LEVELS

CMP	800
BUY LEVELS	ABOVE BO 1050 S1-700 S2-550
TARGETS	2000/2200/2400
STOP LOSS	498
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 14:38:36 IST
 NSE:AMARAJABAT, 1M 800.55 ▲ +4.50 (+0.57%) O:858.95 H:866.85 L:780.10 C:800.55



ENDURANCE TECH

KEY FUNDAMENTALS

- Endurance Tech is one of the best plays in the two-wheeler auto ancillary space in India on the robust clientele, strong product portfolio, a very strong focus on research and development (R&D) to develop technologically advanced products and focus on electric and hybrid vehicles.
- Endurance Technologies Limited was originally incorporated as private limited company under the name Endurance Suspension Systems (India) Pvt Ltd on 27th December 1999.
- Endurance Technologies reported a consolidated net profit rises 53.22% in the December 2020 quarter.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Endurance technology.
- Endurance Tech is forming a Cup and Handle pattern on Monthly Time frame.
- It is a Bullish Reversal Pattern.
- Breakout confirmation above 1600.

TECHNICAL LEVELS

CMP	1275
BUY LEVELS	ABOVE BO-1400-1600, NEAR S1-1100 S2-950
TARGETS	3000/3200/3400
STOP LOSS	698
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 14:47:43 IST
 NSE:ENDURANCE, 1M 1273.85 ▼ -8.65 (-0.67%) O:1452.35 H:1465.10 L:1249.40 C:1273.85



VEDANTA LIMITED

KEY FUNDAMENTALS

- Vedanta is the largest aluminium producer in India with a capacity of 2.3 MTPA and a 40% market share in India's aluminium industry.
- The demand for lightweight battery casings and heat exchangers is expected to exponentially increase in the future. This will indirectly increase the demand for aluminium.
- Aluminium is known for its Anti thermal and lightweight properties hence it is the ideal material for producing batteries as well. Simultaneously, the demand for aluminium will also rise due to the increasing EV infrastructure which are crucial for serving EVs.
- Vedanta Ltd consolidated Q3 net profit at Rs 3,017 crore, up 35% YoY.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Vedanta .
- Vedanta has formed a Double bottom pattern on monthly time frame. It is a bullish reversal pattern.
- Breakout Confirmation above 360.

TECHNICAL LEVELS

CMP	228
BUY LEVELS	ABOVE BO-230-250, NEAR S1-50 S2-120
TARGETS	500/550/600
STOP LOSS	110
TIME FRAME	1 YEAR

CHART:

shahhnti published on TradingView.com, April 25, 2021 14:51:12 IST
 NSE:VEDL, 1M 228.00 ▲ +1.50 (+0.66%) O:229.25 H:244.90 L:209.75 C:228.00



TATA POWER

KEY FUNDAMENTALS

- Tata Power is India's largest integrated power company with a significant international presence. It holds a market share of 32.47% in the Industry in India.
- Since its inception in 1915, Tata Power now has over a century of expertise in technology leadership, project execution excellence, world-class safety processes, customer care and driving green initiatives, Tata Power is committed to 'lighting up lives' for generations to come.
- The company has so far installed 170 fast and smart-charging points across 20 cities including Delhi, Mumbai, Bengaluru, Pune, and Hyderabad and expects to expand the coverage to more cities by the end of the current financial year.
- Tata Power on reported a 22% rise in its net profit in the quarter ended 31 December 2020 at ₹318 crore as compared to ₹260 crore reported in the same quarter last year.

TECHNICAL OUTLOOK

- Given below is the monthly chart.
- Tata Power is currently in an uptrend.
- It is witnessing a breakout above 115 levels.

TECHNICAL LEVELS

CMP	96
BUY LEVELS	ABOVE BO-105-115, NEAR S1-80, S2-60
TARGETS	200/220/240
STOP LOSS	49
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 14:51:29 IST
 NSE:TATAPOWER, 1M 95.65 ▲ +1.40 (+1.49%) O: 103.90 H: 107.35 L: 89.90 C: 95.65



HINDUSTAN COPPER

KEY FUNDAMENTALS

- Hindustan Copper Limited (HCL), a public sector enterprise of the Government of India was incorporated on 9th November 1967.
- Copper is a major component in EVs used in electric motors, batteries, inverters, wiring and in charging stations and the company expects electric vehicles and renewable energy to drive the demand growth for copper in India, taking the per capita consumption from a level of 0.5 kg to 1 kg by 2020.
- Hindustan Copper had posted a net loss Rs 95.61 crore in the year-ago period, Hindustan Copper said in a filing to BSE. State-owned Hindustan Copper on Wednesday reported a consolidated net profit of Rs 108.19 crore for the quarter ended December 2020.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Hindustan copper.
- In this chart we see that the support has turned into resistance.
- Hindustan Copper is witnessing a breakout above 180 levels.

TECHNICAL LEVELS

CMP	138
BUY LEVELS	ABOVE BO-150-170, NEAR S1-110, NEAR S2-85
TARGETS	300/340/380
STOP LOSS	70
TIME FRAME	1 YEAR

CHART:

shahhniti published on TradingView.com, April 25, 2021 14:53:50 IST
 NSE:HINDCOPPER, 1M 138.30 ▲ +1.75 (+1.28%) O:120.50 H:150.95 L:120.15 C:138.30



OLECTRA GREENTECH

KEY FUNDAMENTALS

- Established in 2000, Olectra is the largest domestic manufacturer of silicone rubber and composite insulators for power transmission and distribution networks.
- Olectra Green tech is engaged in the business of manufacturing and sale of Electric Buses and Insulators and has gained leadership position in India owing to strong technology and quality of the products.
- Olectra Greentech said that EVEY Trans has received Letter of Award for 350 Electric Buses from one of the State Government Undertakings for supply of 350 Electric Buses on Gross Cost Contract (GCC) model basis for a period of 12 years.
- In the latest Quarter company has reported Gross Sales of Rs. 3955.3 Cr and Total Income of Rs. 4219.17 Cr.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Olectra Greentech.
- It is in an uptrend.
- It is witnessing a breakout above 240/280 levels.

TECHNICAL LEVELS

CMP	187
BUY LEVELS	ABOVE BO-250-280, NEAR S1-160 NEAR S2-130
TARGETS	500/520/540
STOP LOSS	110
TIME FRAME	1 YEAR

CHART:



GREAVES COTTON LIMITED

KEY FUNDAMENTALS

- Greaves is one of the leading diversified engineering companies with presence in Automotive, Non-Automotive, Aftermarket, Retail , Electric mobility solutions & Finance.
- The company has ventured into last mile personal mobility segment with Ampere Electric for electric 2 wheelers, smaller electric industrial products and electric 3 wheelers.
- The company was incorporated in the year 1922 and currently has a market capitalization of Rs 2,935.17 Crore & a market share of 49.41% in the industry.
- Greaves Cotton reported -4.94% fall in total revenues for the Dec-20 quarter on consolidated basis at Rs494.57 CR but we expect the Company to perform better in the forthcoming quarters as it stands great potential.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Greaves Cotton.
- It is currently trading sideways.
- Greaves cotton is witnessing a multiyear breakout above 180 levels.

TECHNICAL LEVELS

CMP	127
BUY LEVELS	ABOVE BO-165-180, NEAR S1-110, S2-95
TARGETS	300/350/400
STOP LOSS	79
TIME FRAME	1 YEAR

CHART:

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 NSE:GREAVESCOT, 1M 126.95 ▼ -1.05 (-0.82%) O:129.00 H:138.90 L:120.15 C:126.95



SCHAEFFLER INDIA

KEY FUNDAMENTALS

- Schaeffler Technologies AG & Co. KG, also known as Schaeffler Group (Schaeffler-Gruppe in German) was founded in 1946 by brothers Dr. Wilhelm and Dr.-Ing. E. h. Georg Schaeffler. It is a German manufacturer of rolling element bearings for automotive, aerospace and industrial uses.
- The consumption and emissions targets of the future can be met through electrification of the powertrain. Schaeffler therefore offers products across the full range of electrification options - from 48-volt hybrids and plug-in hybrids through to technologies for all-electric vehicles and alternative drives, such as key components for fuel cells.
- Total revenue from operations (net) for the quarter (Q4) was INR 12,738 million, higher by 13.7% than the preceding quarter and 22.9% higher than the corresponding quarter of 2019.

TECHNICAL OUTLOOK

- Given below is the monthly chart of Schaeffler India.
- It is in an uptrend.
- Schaeffler India is witnessing a similar breakout it had witnessed few years ago and Patterns tend to repeat over time.
- Breakout confirmation above 6000 levels.

TECHNICAL LEVELS

CMP	4998
BUY RANGE	ABOVE BO-5500-6600, NEAR S1-4900, S2-4600
TARGETS	10000/11000/12000
STOP LOSS	2450
TIME FRAME	1 YEAR

CHART:

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 NSE:SCHAEFFLER, 1M 4998.45 ▲ +6.30 (+0.13%) O:5430.00 H:5550.05 L:4897.75 C:4998.45



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