## EXECUTIVE SUMMARY

### Robust growth

- From FY16 to FY20, automotive components industry registered a CAGR of 6%, reaching US$ 49.3 billion in FY20, with exports growing at a CAGR of 7.6% during FY16-FY20 to reach US$ 14.5 billion in FY20.
- The capital expenditure by domestic automotive component manufactures’ is expected to be around Rs. 24,000 crore (US$ 33.26 billion) in FY19 and FY20.

### Rising indigenisation

- The growth of global original equipment manufacturers’ (OEM) sourcing from India & the increased indigenisation of global OEMs is turning the country into a preferable designing and manufacturing base.

### Increasing turnover

- Indian auto components industry is expected to grow to US$ 200 billion by 2026. This growth will be backed by strong export demand which is expected to rise at an annual rate of 23.9% to reach US$ 80 billion by 2026.

### Contribution to GDP and employment

- The auto components industry accounted for 2.3% of India’s Gross Domestic Product (GDP), and contributed 25% to its manufacturing GDP and employment to 50 lakh people in 2018-19.

### Growing automobile industry

- India is expected to become the 4th largest automobiles producer globally by the end of 2020 after China, US & Japan. The auto components industry is also expected to become third largest in the world by 2025.

### Electric vehicles push

- The auto components industry is expected to follow OEMs in adoption of electric vehicle technologies. The global move towards electric vehicles will generate new opportunities for automotive suppliers. The mass conversion to electric vehicles may generate a US$ 300 billion domestic market for electric vehicle (EV) batteries in India by 2030*.
- As per Union Budget 2019-20, the Government moved GST council to lower the GST rate on EV from 12% to 5%. Also, to make EVs affordable to consumers, the Government will provide additional income tax deduction of Rs. 1.5 lakh (US$ 2,115) on the interest paid on loans taken to purchase them.

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**Note:** OEM: Original Equipment Manufacturer, EV – Electric Vehicles, *As per NITI Aayog  
**Source:** ACMA, Make in India, News Articles, ICRA, Crisil
Growing working population and expanding middle class are expected to remain the key demand drivers.

India is the fifth largest automobile market globally.

Reduction in excise duties in motor vehicles sector will spur the demand for auto components.

With plans to reduce auto components’ import dependence domestic players are expected to witness demand surge.

India is emerging as global hub for auto component sourcing.

Relative to competitors, India is geographically closer to key automotive markets like the Middle East and Europe.

A cost-effective manufacturing base keeps costs lower by 10-25% relative to operations in Europe and Latin America.

Presence of a large pool of skilled & semi-skilled workforce amidst a strong educational system.

Second largest steel producer globally, hence a cost advantage.

In September 2015, Automotive Mission Plan 2016-26 was unveiled to target a four-fold growth for the sector.

Strong support for R&D and product development by establishing NATRiP centres.

100% FDI allowed under automatic route for auto components sector.

In January 2019, the Government of India lowered the customs duty on import of parts and components of EVs to 10-15%.

Notes: NATRiP - National Automotive Testing and R&D Infrastructure Project, FY - Indian Financial Year (April to March), R&D – Research and Development
MARKET OVERVIEW
PRODUCT SEGMENTS

Auto Components

- Engine parts
  - Pistons & piston rings
  - Engine valves & parts
  - Fuel-injection systems & carburetors
  - Cooling systems & parts
  - Power train components
- Drive transmission & steering parts
  - Gears
  - Wheels
  - Steering systems
- Body and chassis
  - Brakes & brake assemblies
  - Brake linings
  - Shock absorbers
- Suspension & braking parts
  - Leaf springs
- Equipment
  - Headlights
  - Halogen bulbs
  - Spark plugs
  - Electric ignition systems
  - Fan belts
- Electrical parts
  - Starter motors
  - Spark plugs
  - Electric ignition systems
- Others
  - Sheet metal parts
  - Hydraulic pneumatic instruments
  - Pressure die castings

Source: ACMA
ROBUST GROWTH

- Revenue rose at a CAGR of 6% from US$ 39 billion in FY16 to US$ 47.3 billion in FY20.
- In FY20, the revenue dropped by 12.8% compared to FY19.
- Domestic OEM supplies contributed almost 51% to the industry turnover followed by exports and domestic aftermarket at nearly 29% and 20%, respectively.
- Export of automobile components from India in FY20 stood at US$ 14.5 billion. As per Automobile Component Manufacturers Association (ACMA) forecast, automobile component exports from India is expected to reach US$ 80 billion by 2026.

Source: ACMA
India’s export of auto components increased at a CAGR of 7.6% during FY16-FY20 as the value increased from US$ 10.83 billion in FY16 to US$ 14.5 billion in FY20.

Europe and North America accounted for 30% volume share each of Indian auto component export during FY20, followed by Asia with 27%. Latin America and Africa accounted for 6% each of Indian auto components exports.

In FY20, export of auto components dropped by -4.6% to Rs. 102,623 crore (US$ 14.5 billion) from Rs. 106,048 (US$ 15.2 billion) in FY19.

Source: ACMA
India’s auto components aftermarket contributed 19.88% to the total industry turnover in FY20.

Aftermarket turnover increased at a CAGR of 9.57% from US$ 6.8 billion in FY16 to US$ 9.8 billion in FY20 and is expected to reach US$ 32 billion by 2026.

The ‘Drive Transmission and Steering’ product category accounted for 21% of the aftermarket share followed by ‘Engine Components’, and ‘Electricals and Electronic Components’ with 19% and 18%, respectively.

Note: Exchange Rates as per page 31
Source: ACMA
SHARES IN PRODUCTION AND SUPPLY

- Production of two wheelers, passenger vehicles, commercial vehicles and three wheelers reached 21.03 million, 3.43 million, 0.75 million, and 1.13 million, respectively, in FY20.
- Passenger vehicles had the highest share of total auto component supplies to OEMs in FY20, distantly followed by two wheelers and light commercial vehicles (LCV).

Source: ACMA
## MAJOR PLAYERS BY SEGMENT

### Engine & engine parts
- Pistons - Goetze, Shriram Pistons & Rings, India Pistons, Anand I-Power Ltd.
- Engine Valves - Rane Engine Valves, Shriram Pistons and Rings, SSV Valves
- Carburetors - Ucal Fuel Systems and Spaco Carburetors & Escorts Auto Components
- Diesel-based fuel-injection systems - Mico, Delphi-TVS Diesel System and Tata Cummins

### Transmission & steering parts
- Steering Systems - Sona Koyo Steering Systems, Rane NSK Steering Systems and Rane TRW Systems
- Gears - Bharat Gears, Gajra Bevel Gears, ZF Steering Gear (India) Ltd, Eicher, Graziano Trasmissioni and SIAP Gears India
- Clutch - Clutch Auto, Ceekay Daikin, Amalgamations Repco, Luk Clutches
- Driveshafts - GKN Driveshafts, Spicer India Private Ltd., Delphi and Sona Koyo Steering Systems

### Suspension & braking parts
- Brake Systems - Brakes India, Kalyani Brakes, Mando India Ltd. & Automotive Axles
- Brake Lining - Rane Brake Lining, Sundaram Brake Lining, Hindustan Composites and Allied Nippon
- Leaf Springs - Jamna Auto & Jai Parabolic
- Shock Absorbers - Gabriel India, Delphi, Mando India Ltd. and Munjal Showa

### Electrical
- Lucas TVS, Denso, Delco Remy Electricals and Nippon Electricals are key players in this segment

### Equipment
- Headlights - Lumax, Autolite and Phoenix Lamps
- Dashboard - Premiere Instruments & Controls
- Sheet metal parts - Jay Bharat Maruti, Omax Auto and JBM Tools

**Note:** OEM means Original Equipment Manufacturer

**Source:** Media sources

For updated information, please visit [www.ibef.org](http://www.ibef.org)
RECENT TRENDS AND STRATEGIES
### Global components sourcing hub

- Major global OEMs have made India a component sourcing hub for their global operations.
- Several global Tier-I suppliers have also announced plans to increase procurement from their Indian subsidiaries.
- India is also emerging as a sourcing hub for engine components with OEMs increasingly setting up engine manufacturing units in the country.
- For companies like Ford, Fiat, Suzuki and General Motors (GM), India has established itself as a global hub for small engines.
- Varroc Lighting Systems (VLS) is supplying the complete exterior lighting solutions for Tesla Model S sedan and the Tesla Model X crossover.
- In August 05, 2020, Steel Strips Wheels Ltd (SSWL) bagged orders worth US$ 1 million for over 1.19 lakh wheels for the US caravan trailer market.

### Improving product-development capabilities

- Increased investments in setting-up R&D operations & laboratories to conduct activities such as analysis, simulation & engineering animations.
- The growth of global OEM sourcing from India & increased indigenisation of global OEMs is turning the country into a preferred designing & manufacturing base.
- Faurecia, a global automotive equipment leader, has partnered with Indian Institute of Science (IISc) to develop new technologies and solutions in three areas - online air quality monitoring, data analysis and algorithms for driver behaviour and artificial intelligence for industrial design.
- In July 2020, Bridgestone, a tyre maker, partnered with Microsoft to develop tyre damage detecting system on a real-time basis.

### Route to expansion

- In August 2019, Reliance Industries Ltd and Bharat Petroleum announced a new JV to sell auto fuels and ATF in the country.
- In October 2019, Minda Industries acquired Germany-based automotive lamps firm Delvis Gmbh along with two of its subsidiaries for Rs. 164 crore (US$ 23.47 million).
- In January 2020, Tata AutoComp Systems entered a JV with Beijing-based Prestolite Electric to enter the EVs components market.
- In May 2020, JK Tyre and Industries set up a new entity, Western Tires INC, to expand its business in the Unites States.
- In October 2020, Remsons Industries Ltd. acquired UK-based Magal Cables Ltd., a part of Arlington Group Engineering systems worth Rs. 33 crore (US$ 4.45 million).

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**Note:** OEM means Original Equipment Manufacturer ACT - ACMA Centre for Technology

**Source:** Media sources
## STRATEGIES ADOPTED

<table>
<thead>
<tr>
<th>New strategies</th>
<th>Diversification</th>
<th>Capacity</th>
<th>R&amp;D facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Both Indian &amp; global manufacturers are investing in new capacities &amp; newer programmes to get long term advantage.</td>
<td>▪ Many Indian firms specialising in only one product market or segment are looking to diversify in segments like two wheelers, passenger cars or commercial vehicles.</td>
<td>▪ Many MNC’s like Ford, Hyundai and Toyota are launching new vehicle models due to their earlier success in the Indian market.</td>
<td>▪ According to a study, engineering and R&amp;D market in India is estimated to grow at a CAGR of 14% to reach US$ 40 billion by 2020.</td>
</tr>
<tr>
<td>▪ As markets in North, West &amp; South of India are getting saturated, component manufacturers are eyeing untapped markets in the Northeast region of the country.</td>
<td>▪ They are stepping up their product development capabilities in order to have the best chance of capturing growth opportunity.</td>
<td>▪ In September 2020, Toyota Kirloskar Motors announced investment of Rs. 2,000 crores (US$ 272.6 million) in electric components and technology for local and exports markets.</td>
<td>▪ Looking at the opportunity, many global suppliers like Bosch Chassis Systems, Tenneco and Faurecia have established their R&amp;D facilities in India to adopt global designs &amp; develop new products.</td>
</tr>
<tr>
<td>▪ Varroc Engineering, India’s second largest auto components producer, is aiming to attract business from sales of EV components like electronics, motors and battery management systems.</td>
<td>▪ Samvardhana Motherson International Limited (SAMIL) announced its JV with Hamakyorex Co. to exploit the expected increase in automotive market.</td>
<td>▪ In September 2020, off-highway tyre-maker Alliance Tire Group (ATG), owned by the Japanese major Yokohama Group, announced plans to set up its third plant in the country in Visakhapatnam, with an investment of US$ 165 million (Rs. 1,240 crore). The proposed plant will add over 20,000 tonnes per annum (55 tonnes per day rubber weight) capacity to the 2.3-lakh-tonne annual production from two India plants and will be commissioned by the first quarter of 2023.</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Make in India, Media Sources*
GROWTH DRIVERS
GROWTH DRIVERS

Demand-side drivers
- Robust growth in domestic automotive industry
- Increase in investment in road infrastructure
- Growth in working population & middle class income will drive the market
- With the Self-Reliant India mission, the auto industry is looking to half its Rs. 1 trillion (~US$ 13.6 billion) worth of auto component imports over the next 4-5 years. This will provide significant opportunities for existing and new auto components players to scale up

Supply-side drivers
- Competitive advantage facilitating emergence of outsourcing hub
- Technological shift and focus on R&D

Policy support
- Establishing special auto parks & virtual SEZs for auto components
- Lower excise duty on specific parts of hybrid vehicles
- Policies such as Automotive Mission Plan 2016-26, Faster Adoption & Manufacturing of Electric Hybrid Vehicles (FAME, April 2015) and NMEM 2020 are likely to infuse growth in the auto component sector of the country
- The Government announced National Mission on Transformative Mobility and Battery Storage based on phased manufacturing program (PMP) till 2024
- To install electric vehicle supply equipment (EVSE) infrastructure for EVs, various public sector firms, ministries and railways have come together to create infrastructure and manufacturing components

Note: NMEM - National Mission For Electric Mobility
Source: TechSci Research
GROWTH IN THE AUTOMOBILES SECTOR

Vehicle Production in India (thousand units)

<table>
<thead>
<tr>
<th></th>
<th>FY20</th>
<th>FY22E</th>
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</thead>
<tbody>
<tr>
<td>Passenger Vehicles</td>
<td>3,434</td>
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<tr>
<td>Commercial Vehicles</td>
<td>7,520</td>
<td></td>
</tr>
<tr>
<td>Two &amp; Three Wheelers</td>
<td>22,170</td>
<td>30,231</td>
</tr>
</tbody>
</table>

Vehicle Production (in number of units)

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Parts and Transport Equipment Loan Outstanding# (US$ billion)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY16</td>
<td>FY17</td>
<td>FY18</td>
<td>FY19</td>
<td>FY20</td>
<td></td>
</tr>
</tbody>
</table>

Note: (E) - Estimate; #Loan outstanding at the end of financial year
Source: ACMA, Reserve Bank of India, SIAM
### INDIA IS POISED TO EMERGE AS AN OUTSOURCING HUB

- **Hyundai** plans to source gasoline and diesel engines from its India manufacturing operations for domestic and global operations.
- The company is also planning to invest US$ 300 million for a new engine plant and metal pressing shop in India, and it also has plans to open a second manufacturing plant in Rajasthan.

- **Ford** has expanded its retail distribution network of genuine parts in Gujarat, Daman & Diu and Silvassa.
- Ford is likely to invest US$ 1 billion in Indian operation over the next 5-7 years.
- In March 2019, Ford Motors signed five memorandum of understandings (MoUs) with Mahindra and Mahindra (M&M) to jointly develop new SUVs and small EVs. The partnership will leverage Ford’s global reach and expertise with M&Ms presence in the Indian market.

- The company has an export base for certain key engine components in India.
- As of June 2019, the company planned to invest Rs. 630 crore (US$ 89.37 million) in setting up a new production line in Gujarat. This additional 600,000 capacity would push up company’s total capacity to 7 million units by 2020.

- **Toyota Kirloskar Motor** disclosed its fully integrated cloud-based telematics service for the Indian market by the name, Toyota Connect.
- Toyota India in JV with Kirloskar initiated production of diesel engines at Jigani Industrial Area.
- Toyota Kirloskar Motors announced investments of over Rs. 2,000 crores in India directed towards electric components and technologies.

*Source: Respective Company Websites, News Articles*
## FAVOURABLE POLICY MEASURES AIDING GROWTH

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Details</th>
</tr>
</thead>
</table>
| National Electric Mobility Mission Plan (NEMMP) 2020 | - The vision of this scheme is for faster adoption of EVs and their manufacturing in the country.  
- It aims at achieving sales of 6-7 million units of hybrid and EVs by 2020. |
| NATRIP | - Set up at a total cost of US$ 388.5 million to enable the industry to adopt & implement global performance standards.  
- Focus on providing low-cost manufacturing & product development solutions. |
| Dept. of Heavy Industries & Public Enterprises | - Created a US$ 200 million fund to modernise the auto components industry by providing interest subsidy on loans & investments in new plants & equipment.  
- Provided export benefits to intermediate suppliers of auto components against Duty-Free Replenishment Certificate (DFRC). |
| Automotive Mission Plan 2016-26 (AMP 2026) | - AMP 2026 targets a four-fold growth in the automobile sector in India, which includes manufacturers’ of automobiles, auto components & tractors over the next 10 years. It is expected to generate an additional employment of 65 million. |
| FAME Scheme | - Aimed at incentivising all vehicle segments - two wheelers, three wheelers, four wheelers, LCVs and buses. It covers hybrid & electric technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles.  
- In February 2019, the Government of India approved FAME-II scheme with a fund requirement of Rs. 10,000 crore (US$ 1.39 billion) for FY20-22.  
- Department of Heavy Industries has sanctioned 2,636 charging stations in 62 cities across 24 States/UTs under FAME-II. |
| Union Budget 2020-21 | - The Government has reaffirmed its commitment towards EVs and its mission for 30% electric mobility by 2030. |

**Note:** NATRIP - National Automotive Testing and R&D Infrastructure Project  
**Source:** SIAM, Make in India
INVESTMENTS HAVE BEEN RISING AT A FAST PACE

- FDI inflow in the automotive* sector stood at US$ 24.53 billion from April 2000 to June 2020.
- With the launch of “Make in India” initiative, the Government is expected to vitalise substantial investment in the auto components sector.
- Top private equity (PE) firms such as Temasek, Blackstone, Goldman Sachs, Samara Capital, and Baring Private Equity Asia are actively exploring investment opportunities in India’s auto parts manufacturing sector.
- Higher interest from private equity (PE) and venture capital (VC) investors is expected in India’s EV industry. Investment in EV start-ups stood at US$ 397 million in 2019 (till November 2019).
- In February 2020, National Engineering Industries Ltd (NEIL) announced investment of Rs. 100 crore (US$ 14.31 million) over the next three years for producing needle roller bearing at its Jaipur facility.
- In February 2020, GP Petroleums Ltd announced plans to invest Rs. 100 crore (US$ 14.31 million) in Gujarat.
- In October 2020, the Government of Tamil Nadu signed 14 memorandum of understandings (MoU) worth Rs. 10,055 crore (US$ 1.4 billion) that will generate 69,712 jobs in the state.
- In October 2020, Japan Bank for International Cooperation (JBIC) agreed to provide US$ 1 billion (Rs. 7,400 crore) to SBI (State Bank of India) for funding the manufacturing and sales business of suppliers and dealers of Japanese automobile manufacturers as well as providing auto loans for the purchase of Japanese automobiles in India.

Note: * - Includes automobiles and auto components
Source: ACMA, DPIIT, News Articles
OPPORTUNITIES
DOMESTIC AND EXPORTS MARKETS HOLD HUGE POTENTIAL

- India’s domestic market is expected to have 71% of the total sales by 2021, accounting for a market size of US$ 115 billion.

- Export will account for 26% of the market by 2021.

**Domestic Market Potential (US$ billion)**

<table>
<thead>
<tr>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY21E</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.55</td>
<td>51.20</td>
<td>57.00</td>
<td>115.00</td>
</tr>
</tbody>
</table>

**Export Market Potential (US$ billion)**

<table>
<thead>
<tr>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY21E</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.90</td>
<td>13.50</td>
<td>15.16</td>
<td>30.00</td>
</tr>
</tbody>
</table>

*Note: E - Estimate
Source: ACMA*
MARKET POTENTIAL BALANCED ACROSS PRODUCT TYPES

Both domestic and export markets are almost similar in terms of potential share by different product types. Engine and Exhaust components along with Body & Structural parts are expected to make up nearly 50% of the potential domestic sales as well as export in 2020.

Transmission and Steering Parts and Electronics and Electrical equipment are likely to be the other key products.

Companies like Exide, Exicom, Amaron, Greenfuel Energy Solutions, Trontek, Coslight India, Napino Auto & Electronics, Amara Raja Batteries, Trinity Energy Systems, and Versatile Auto Components have plans to make lithium-ion batteries to ride the wave of green vehicles.

In October 2020, Mark Compressors India launched two new product variations of its piston compressor range — Ironwind series and Bluewind series. This will benefit industry segments such as automobile, tyre retail, fuel stations and woodworks.

Note: 2020E - Estimated value for 2020 by ACMA
Source: ACMA, News Sources
## OPPORTUNITIES IN ENGINEERING PRODUCTS

| Engine & Exhaust parts | ▪ New technological changes in this segment include introduction of turbochargers and common rail systems.  
▪ The trend of outsourcing may gain traction in this segment in the short to medium term. |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transmission & steering parts | ▪ Share of replacement market in sub-segments such as clutches is likely to grow due to rising traffic density.  
▪ The entry of global players is expected to intensify competition in sub-segments such as gears & clutches. |
| Suspension & braking parts | ▪ The segment is estimated to witness high replacement demand with players maintaining a diversified customer base in the replacement & OEM segments besides the export market.  
▪ The entry of global players is likely to intensify competition in sub-segments such as shock absorbers. |
| Electronics and electricals | ▪ In August 2019, Eaton partnered with Pune-headquartered technology firm, KPIT.  
▪ Tritium will soon be delivering fast charging technology for EVs after the company signed a MoU with Tata AutoComp Systems. |
| Others (Metal parts) | ▪ Metal part manufacturers are likely to benefit from rising demand for body & chassis, pressure die castings, sheet metal parts, fan belts, and hydraulic pneumatic instruments, primarily in the two wheelers industry.  
▪ Prominent companies in this business are constantly working towards expanding their customer base. |

**Note:** OEM means Original Equipment Manufacturer  
**Source:** Make in India
Bosch decided to invest Rs. 500 - Rs. 800 crore (US$ 77.58 - 124.13 million) over the next two years (FY19 and FY20) to expand operations in India and increase R&D to develop products for the global market.

It also plans to invest Rs. 20 crore (US$ 2.84 million) between FY20-25 in its Robert Bosch Center for Data Science and Artificial Intelligence (RBC-DSAI) at the Indian Institute of Technology-Madras (IIT-M).

Apollo Tyres inaugurated its seventh factory worldwide and fifth in the Indian market in June 2020. The company will invest around Rs. 3,800 crore (US$ 539.08 million) in phase I of the plant and expect to ramp up the production by 2022.

In June 2020, Tata AutoComp Systems signed a memorandum of understanding (MoU) with USA-based DC charging infrastructure company, Tellus Power Green, to supply AC and DC fast chargers for the entire range of electric vehicles.

HELLA is working on expanding its business through digitalisation of light and will digitally cover the entire range of LED headlamps in future.

NGK Technologies India Pvt Ltd., a subsidiary of NGK Insulators Ltd., has been established to market automotive related and metal components across India.

TVS Group has acquired 90% stake in Universal Components UK Ltd for US$ 19.2 million as part of its expansion plans. Universal Components is a wholesale distributor of commercial vehicle parts. It has also signed a co-operation agreement with BMW Motorrad to develop motorcycles below 500cc segment. The company is looking for new overseas markets.

Lucas TVS, a JV between Lucas UK and TVS, introduced traction motors in 2019, that catered to the growing number of electric rickshaws and electric three-wheeler segments.

**Source:** Respective Company websites, News articles
KEY INDUSTRY ORGANISATIONS
**KEY INDUSTRY ORGANISATIONS**

<table>
<thead>
<tr>
<th>Automotive Component Manufacturers Association of India (ACMA)</th>
<th>Automotive Research Association of India (ARAI)</th>
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<tbody>
<tr>
<td>6th Floor, The Capital Court, Olof Palme Marg, Munirka, New Delhi - 110 067, India</td>
<td>Survey No. 102, Vetal Hill, off Paud Road, Kothrud, Pune - 411 038</td>
</tr>
<tr>
<td>Phone: 91 11 2616 0315, 2617 5873, 2618 4479</td>
<td>P. B. No. 832, Pune - 411 004</td>
</tr>
<tr>
<td>Fax: 91 11 2616 0317</td>
<td>Tel No. : +91-020-30231111</td>
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<tr>
<td>E-mail: <a href="mailto:acma@acma.in">acma@acma.in</a>; <a href="mailto:acma@vsnl.com">acma@vsnl.com</a></td>
<td>Fax No. : +91-020-30231104</td>
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<tr>
<td></td>
<td>Email Id : <a href="mailto:info@araiindia.com">info@araiindia.com</a></td>
</tr>
</tbody>
</table>
GLOSSARY

- ACMA: Automotive Component Manufacturers Association of India
- ARAI: Automotive Research Association of India
- CAGR: Compound Annual Growth Rate
- FDI: Foreign Direct Investment
- FY: Indian Financial Year (April to March); So, FY12 implies April 2011 to March 2012
- GOI: Government of India
- OEM: Original Equipment Manufacturers
- NATRiP: National Automotive Testing and R&D Infrastructure Project
- Rs.: Indian Rupee
- SEZ: Special Economic Zone
- US$: US Dollar
- Wherever applicable, numbers have been rounded off to the nearest whole number
## EXCHANGE RATES

### Exchange Rates (Fiscal Year)

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<th>Year</th>
<th>Rs. Equivalent of one US$</th>
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<tr>
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<td>2018-19</td>
<td>69.89</td>
</tr>
<tr>
<td>2019-20</td>
<td>70.49</td>
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### Exchange Rates (Calendar Year)

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<th>Year</th>
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<td>2009</td>
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<td>53.49</td>
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<td>58.63</td>
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<tr>
<td>2014</td>
<td>61.03</td>
</tr>
<tr>
<td>2015</td>
<td>64.15</td>
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<tr>
<td>2016</td>
<td>67.21</td>
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<td>2017</td>
<td>65.12</td>
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<tr>
<td>2018</td>
<td>68.36</td>
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<tr>
<td>2019</td>
<td>69.89</td>
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*Source: Reserve Bank of India, Average for the year*
“India Brand Equity Foundation (IBEF) engaged Sutherland Global Services private Limited to prepare/update this presentation.

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