AUTO COMPONENTS

INDIA BRAND EQUITY FOUNDATION
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## EXECUTIVE SUMMARY

### Robust growth
- Over the last decade, the automotive components industry has registered a CAGR of 14 per cent and has scaled three times to US$ 43.5 billion in 2016-17 while exports have grown at a CAGR of 14 per cent to US$ 10.9 billion.

### Rising indigenisation
- The growth of global OEM sourcing from India & the increased indigenisation of global OEMs is turning the country into a preferable designing and manufacturing base.

### Increasing turnover
- The Indian auto-components industry is expected to register a turnover of US$ 100 billion by 2020 backed by strong exports ranging between US$ 80-100 billion by 2026.

### Contribution to GDP and employment
- The auto-components industry accounts for almost seven per cent of India’s Gross Domestic Product (GDP) and employs as many as 19 million people.

### Growing automobile industry
- India is expected to become the 4th largest automobiles producer globally by 2020 after China, US & Japan. The auto components industry is also expected to become the 3rd 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 EV batteries in India by 2030.*

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

India is set to break into the league of top 5 vehicle producing nations

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

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 & Europe

A cost-effective manufacturing base keeps costs lower by 10-25 per cent relative to operations in Europe & Latin America

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

3rd largest steel producer globally hence a cost advantage

In September 2015, Automotive Mission Plan 2016-26 was unveiled which targets a fourfold growth for the sector

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

100 per cent FDI allowed under automatic route for auto component sector

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
- Clutches

Drive transmission & steering parts
- Gears
- Wheels
- Steering systems
- Axles

Body and chassis
- Brake & brake assemblies
- Brake linings
- Shock absorbers
- Leaf springs
- Dashboard instruments
- Other panel instruments
- Other equipment

Suspension & braking parts
- Headlights
- Halogen bulbs
- Wiper motors

Equipment
- Starter motors
- Spark plugs
- Electric Ignition Systems
- Fan belts

Electrical parts
- Sheet metal parts
- Hydraulic pneumatic instruments
- Pressure die castings

Source: ACMA
ORGANISED AND UNORGANISED SECTOR

- The number of manufacturing units in the unorganised sector are far higher than those in the organised one.
- Although lesser in number, the organised sector accounts for 85 per cent of total industry turnover (FY17).
- India auto component aftermarket is expected to grow at 10.5 per cent to touch US$ 13 billion by 2019-20, as compared to US$ 8.4 billion in 2016-17.

**Number of Players: Organised vs. Unorganised (FY17)**

<table>
<thead>
<tr>
<th></th>
<th>Organized</th>
<th>Unorganized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>700</td>
<td>10000</td>
</tr>
</tbody>
</table>

**Turnover Breakup: Organised vs. Unorganised (FY17)**

- Organised: 85%
- Unorganised: 15%

*Note: *As per latest figures available

*Source: ACMA*
‘Engine parts’ accounts for 31 per cent of the entire product range of the auto components sector followed by ‘drive transmission & steering parts’ (19 per cent)

‘2 wheelers’ is the largest domestic customer segment for the auto components industry

Original Equipment Manufacturers (OEMs) dominate production volumes by market range; encouragingly, exports account for around 28 per cent.

Source: ACMA
ROBUST GROWTH

- Revenues have risen from US$ 26.5 billion in FY08 to US$ 43.5 billion in FY17 at a CAGR of 5.66 per cent during FY08-17.
- The market size for auto component sector increased by 11.5 per cent reaching to US$ 43.5 billion in FY17 from US$ 39 billion in FY16.
- As per Automobile Component Manufacturers Association (ACMA) forecasts, automobile component exports from India are expected to reach US$ 70-billion by 2026 from US$ 10.9 billion in FY17. The Indian auto component industry aims to achieve US$ 200 billion in revenues by 2026.
- The industry is expected to post a 13-15 per cent growth rate in FY18, on the back of robust growth in domestic passenger vehicle, commercial vehicle, tractor and two-wheeler segments.\(^\)

\[\text{Aggregate turnover}\,*\, (US\$\text{ billion})\]

\[\text{FY08 } 26.5\,\text{ FY09 } 24.1\,\text{ FY10 } 30.8\,\text{ FY11 } 41.3\,\text{ FY12 } 42.2\,\text{ FY13 } 39.7\,\text{ FY14 } 35.1\,\text{ FY15 } 38.5\,\text{ FY16 } 39\,\text{ FY17 } 43.5\]

\[\text{CAGR: } 5.66\%\]

\[\text{Note: CAGR – Compound Annual Growth Rate, } *\text{Turnover data covers supplies to OEMs, aftermarket sales and exports, } ^\text{As per ratings agency ICRA}\]

\[\text{Source: ACMA}\]
India’s exports of auto components increased at a CAGR of 9.96 per cent, during FY09-FY17, with the value of auto component exports increasing from US$ 5.1 billion in FY09 to US$ 10.9 billion in FY17.

Europe accounted for a volume share of 35 per cent during FY17 in Indian auto component exports followed by Asia and North America with 27 and 26 per cent respectively in the same year.

Source: ACMA
## Porter’s Five Force Framework Analysis

### Threat of Substitutes
- **Low** – As public transportation is underdeveloped even in most cities
- Rapid growth in Indian economy has changed travel patterns

### Bargaining Power of Suppliers
- **Moderate** – As there are a large number of steel and aluminium manufacturers (key raw material)
- Some of them have their own units which give them linkage power

### Competitive Rivalry
- **High** – As government has already deregulated the sector
- Increasing number of foreign firms (Ford, Volkswagen, etc.) are increasing their presence
- Cheaper imports of components from China is increasing

### Threat of New Entrants
- **Moderate** – Given the concentration of industry clusters in specific strategic centres
- Foreign firms are increasing their footprints in India

### Bargaining Power of Buyers
- **Low** – High demand from car manufacturers give them lesser bargaining power
- Product differentiation is low

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*Source: Aranca Research, Media Sources*
RECENT TRENDS AND STRATEGIES
## NOTABLE TRENDS

### 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 & General Motors, 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.

### Improving product-development capabilities

- Increased investments in R&D operations & laboratories, which are being set up to conduct activities such as analysis, simulation & engineering animations.
- The growth of global OEM sourcing from India & the increased indigenisation of global OEMs is turning the country into a preferred designing & manufacturing base.
- ACT established to offer technical services to ACMA members for enhancing process & quality abilities through various cluster programmes.
- Faurecia, a global automotive equipment leader, has partnered with Indian Institute of Science (IISc) to develop new technologies and solutions in three areas viz. online air quality monitoring, data analysis and algorithms for driver behaviour and artificial intelligence for industrial design.

### Inorganic route to expansion

- In September 2017, Auto component maker Spark Minda acquired EI Labs India at a cost of US$ 1.01 million to help integrate technology into its existing range of products.
- In April 2018, Motherson Sumi Systems signed a deal to acquire Reydel Automotive for US$ 201 million. The acquisition will help the company to enter new geographies and get new customer portfolios.
- In May 2017, Pricol announced its plans to acquire PMP Auto Components as the brand is focusing on expanding in North American & European markets. Pricol has inked an exclusive agreement to acquire the entire ownership in wiping systems business, including PMP’s manufacturing facilities.
- In October 2017, Precision Camshafts acquired precision component maker MEMCO Engineering to scale up its business and diversify into a new product range.
- In January 2018, Samvardhana Motherson (SAMIL) acquired MS Global India, from MS Group of Korea. The acquisition will help SAMIL enter a new vertical and will create other synergies.

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**Note:** OEM means Original Equipment Manufacturer

**Source:** Aranca Research

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<table>
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<th>New strategies</th>
<th>Diversification</th>
<th>Capacity</th>
<th>R&amp;D facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto component suppliers are focused on entering new vehicle segments &amp; manufacturing new products with higher margin</td>
<td>Many Indian firms specialising in only one product market or segment &amp; are looking forward to diversify horizontally in other segments like 2-wheelers, passenger cars or commercial vehicles.</td>
<td>India's projected production is around 8.7mn passenger vehicles per year by 2020 (with most of them being compact cars)</td>
<td>Looking at the opportunity many global suppliers for example Bosch Chassis Systems, Tenneco &amp; Faurecia have established R&amp;D facilities in India to adapt global designs &amp; develop new products</td>
</tr>
<tr>
<td>Both Indian &amp; global manufacturers are investing in new capacities &amp; newer programmes, in order to get long term advantage</td>
<td>Many MNC's like Ford, Hyundai, Toyota &amp; GM are launching new vehicle models due to their earlier success in the Indian market.</td>
<td></td>
<td>Increasing investments in R&amp;D also assists companies in setting up laboratories, new facilities to conduct analysis, simulation &amp; engineering animations.</td>
</tr>
<tr>
<td>As markets in North, West &amp; South are getting saturated, components makers are now focusing on untapped market like 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>Many MNC’s like Ford, Hyundai, Toyota &amp; GM are launching new vehicle models due to their earlier success in the Indian market.</td>
<td>Global automotive seating leader Adient is planning to open India's largest-ever auto seating prototyping and testing facility in Pune by 2018.</td>
</tr>
<tr>
<td>Mergers and acquisition activity and private equity investments in the automotive sector in the first quarter of FY18 stood at US$ 91.65 million.</td>
<td></td>
<td></td>
<td>Automotive component manufacturer Schaeffler AG has announced setting up of a manufacturing plant along with an R&amp;D unit in Talegaon at an investment of US$ 31.1 million.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>In January 2018, auto components manufacturer Spark Minda inaugurated a technical centre which will nurture innovation and help the company move towards electrified mobility solutions.</td>
</tr>
</tbody>
</table>

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

**Supply-side drivers**
- Competitive advantages facilitating emergence of outsourcing hub
- Technological shift; focus on R&D

**Demand-side drivers**
- Robust growth in domestic automotive industry
- Increasing investment in road infrastructure
- Growth in the working population & middle class income to drive the market

**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), NMEM 2020, likely to infuse growth in the auto component sector of the country.
- The government is going to come out with a National Automotive Policy for boosting the growth of India’s automotive sector.

*Note: NMEM – National Mission For Electric Mobility
Source: Aranca Research*
GROWTH IN THE AUTOMOBILES SECTOR

Vehicle production in India (thousand units)

<table>
<thead>
<tr>
<th>Category</th>
<th>FY17</th>
<th>FY21E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Vehicles</td>
<td>3,791</td>
<td>10,000</td>
</tr>
<tr>
<td>Commercial Vehicles</td>
<td>810</td>
<td>2,350</td>
</tr>
<tr>
<td>2 &amp; 3 Wheelers</td>
<td>20,712</td>
<td>30,231</td>
</tr>
</tbody>
</table>

Car Sales 2017 (in number of units)

<table>
<thead>
<tr>
<th>Brand</th>
<th>2016</th>
<th>2017E</th>
<th>2018^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maruti Suzuki</td>
<td>13,77,137</td>
<td>16,02,612</td>
<td></td>
</tr>
<tr>
<td>Hyundai</td>
<td>4,87,848</td>
<td>5,27,320</td>
<td></td>
</tr>
<tr>
<td>M &amp; M~</td>
<td>1,380,022</td>
<td>1,58,890</td>
<td>1,69,035</td>
</tr>
<tr>
<td>Honda</td>
<td>2,25,193</td>
<td>7,06,872</td>
<td>2,22,168</td>
</tr>
<tr>
<td>Tata</td>
<td>2,22,168</td>
<td>5,80,929</td>
<td>3,67,545</td>
</tr>
<tr>
<td>Toyota</td>
<td>-</td>
<td>1,39,546</td>
<td>1,34,150</td>
</tr>
<tr>
<td>Ford</td>
<td>-</td>
<td>-</td>
<td>93,932</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>67,298</td>
</tr>
</tbody>
</table>

India vehicle loan outstanding* (US$ billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18*</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>12.9</td>
<td>13.3</td>
<td>19.9</td>
<td>20.2</td>
<td>20.5</td>
<td>21.6</td>
<td>24.6</td>
<td>23.4</td>
<td>25.3</td>
<td>29.5</td>
</tr>
</tbody>
</table>

Note: (E) – Estimate; *Loan outstanding at the end of financial year, FY18* - up to September 2017, M & M ~ - Mahindra and Mahindra, ^ up to February 2018

Source: ACMA, Reserve Bank of India, Team BHP, Aranca Research

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OPPORTUNITIES
DOMESTIC AND EXPORTS MARKETS HOLD HUGE POTENTIAL

- The domestic market is expected to account for 71 per cent of total sales by 2021 with a total market size of US$115 billion.

- Exports will account for as much as 26 per cent of the market by 2021.

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

Both domestic & export markets are almost similar in terms of potential share by different product types. For example, Engine & Exhaust components, along with Body & Structural parts, are expected to make up 50 per cent potential domestic sales as well as exports in 2020.

Transmission, Steering components, Electronics & Electrical parts are likely to be the other key products.

Note: 2020E – Estimated value for 2020 by ACMA
Source: ACMA
## OPPORTUNITIES IN ENGINEERING PRODUCTS

### Engine & engine parts
- New technological changes in this segment include introduction of turbochargers & common rail systems
- The trend of outsourcing may gain traction in this segment in the short to medium term

### Transmission & steering parts
- Share of the 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

### Equipment
- Companies operating in the replacement market are likely to focus on establishing a distribution network, brand image, product portfolio & pricing policy

### Electrical
- Manufacturers are expected to benefit from the growing demand for electric start mechanisms in the 2 wheeler segment

### Others (Metal Parts)
- Metal part manufacturers are likely to benefit from rising demand for body & chassis, pressure die castings, sheet metal parts, fan belts, hydraulic pneumatic instruments, mainly in 2 wheelers industry
- The prominent companies in this business are constantly working towards expanding their customer base

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**Note:** OEM means Original Equipment Manufacturer

**Source:** Make in India
INVESTMENTS AND DEVELOPMENTS
INVESTMENTS HAVE BEEN RISING AT A FAST PACE

- FDI Investments in the auto components sector reached US$ 372.44 million in 2016-17.
- With the launch of “Make in India” initiative, the government is expected to vitalise a substantial investment in the auto component sector.
- Auto component sector is expected to invest around US$ 4.5 billion for upgradation of products & keeping up with the new industry regulations.
- Schaeffler India, the Indian arm of Germany’s automotive and industrial parts maker, is planning to invest Rs 300 crore (US$ 46.66 million) per annum over FY18-19.
- Major auto component firms such as Krishna Group, Minda Industries, Lumax Industries, Subros Ltd, etc are planning to invest over US$ 233.31 million over the next 2-3 years.
- Exhaust system and ride control major, Tenneco Automotive India is going to set up a greenfield facility in Gujarat by investing US$ 6-8 million in different phases.*
- American company Cummins is planning to manufacture automotive battery packs in India. The company has already made investments of over US$ 1 billion in India in the past five years.
- Sixteen companies are going to set up auto component units in Andhra Pradesh with an investment of US$ 737 million which are expected to create over 6,500 jobs.

*As of December 2017, ^only FDI Inflows

Source: ACMA
### KEY INVESTMENTS AND DEVELOPMENTS

<table>
<thead>
<tr>
<th>Company</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEAT Ltd</td>
<td>CEAT Ltd. is planning to invest around US$ 413.50 million to expand its tire production during 2017-22. The company plans to reach at a production level of 17 million 2 wheeler tires, annually, 1 million Truck &amp; Bus Radial (TBR) tires &amp; 6 million passenger car radial tires, annually.</td>
</tr>
<tr>
<td>Bosch</td>
<td>As of March 2017, Bosch plans to invest around US$ 119 million annually in the next few years, to develop its headquarters in Bengaluru into a modern technology park &amp; move the manufacturing facility to a new location.</td>
</tr>
<tr>
<td>Setco Automotive</td>
<td>Setco Automotive is going to invest Rs 250 crore (US$ 38.62 million) over the next two to three years for capacity expansion and modernisation.</td>
</tr>
<tr>
<td>ASK Automotive</td>
<td>Friction materials maker ASK Automotive has signed an agreement with Fras-le of Brazil to set up a joint venture of a brake pads and linings facility for commercial vehicles in Haryana at an investment of over US$ 15.6 million.</td>
</tr>
<tr>
<td>Tata Motors</td>
<td>In March 2017, Tata Motors &amp; Volkswagen Group signed a MoU to develop vehicle concepts &amp; product components, jointly. Skoda Auto AS will be joining the project as a part of the German based auto group.</td>
</tr>
<tr>
<td>Mercedes Benz</td>
<td>Mercedes Benz India Private Limited has set up India’s largest spare parts warehouse in Pune, with an area of 16,500 square meters which can stock up to 44,000 parts. It will also include a vehicle preparation centre that can stock up to 5,700 cars to customise them before delivery.</td>
</tr>
<tr>
<td>Amara Raja Batteries</td>
<td>In December 2017, Amara Raja Batteries commissioned its two wheeler battery plant in Andhra Pradesh. The plant will have a capacity of 5 million units in the first phase, which will eventually be scaled up to 17 million units.</td>
</tr>
<tr>
<td>Sundaram Clayton</td>
<td>Sundaram Clayton, part of the TVS group, plans to invest US$ 50 million in US and Rs 400 crore (US$ 59.76 million) in India over the next three years.</td>
</tr>
<tr>
<td>UNO Minda</td>
<td>UNO Minda Group is expanding its manufacturing capacity in Gujarat with a total investment of US$ 91.87 million.</td>
</tr>
</tbody>
</table>

Source: News articles, Government Websites, Aranca Research, Ministry of External Affairs, Govt. of India (ITP) Division
INDIA IS POISED TO EMERGE AS AN OUTSOURCING HUB

- Hyundai plans to source gasoline and diesel engines from its Indian manufacturing operations for its domestic & global operations.
- The company is also planning to invest US$ 300 million for a new engine plant & metal pressing shop in India & is also in plans to open its 2nd manufacturing plant in Rajasthan.
- With the encouragement of Indian government, Hyundai, is planning to set up its 3rd new plant in the country & expand its production capacity to 7.2 lakh units annually.

- Ford expanded its retail distribution network of genuine parts in Gujarat, Daman & Diu & Silvassa.
- Ford is currently working on a small – capacity petrol engine called Dragon which is estimated to be ready by 2016 – 17. The Detroit – based company is planning to produce 1.5 million units a year globally, 4 lakh of which will be produced in India.
- In 2015, the company opened a new production facility in Sanand, Gujarat which is likely to increase its capacity by adding 240,000 cars & 270,000 engines to its existing production level. US$ 1 billion has been invested for this manufacturing plant.

- Honda is likely to setup a 3rd manufacturing plant in Gujarat for which US$ 384.9 million (approx.) has been initially invested which is expected to reach US$ 655.1 million by the end of the project
- The company has an export base for certain key engine components in India.
- The company planned to invest US$ 59.23 million (approx.) in Tapukara plant to expand production capacity from 120,000 units per annum to 180,000 units per annum.

- Toyota Kirloskar Motor disclosed its fully integrated cloud based telematics service for Indian market, by the name Toyota Connect.
- Toyota India under a new joint venture initiated production of diesel engines at Jigani Industrial Area.

**Note:** (* Figure converted from EUR to US$ at EUR/USD = 1.4)

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

| Auto Policy 2002 | ▪ Automatic approval for 100 per cent foreign equity investment in auto component manufacturing facilities.  
▪ Manufacturing & imports are exempt from licensing & approvals. |
|-----------------|---------------------------------------------------------------------------------------------------------------|
| 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 an interest subsidy on loans & investment in new plants & equipment.  
▪ Provided export benefits to intermediate suppliers of auto components against the Duty Free Replenishment Certificate (DFRC). |
| Automotive Mission Plan 2016-26 (AMP 2026) | ▪ AMP 2026 targets a 4-fold growth in the automobiles sector in India which includes the manufacturers of automobiles, auto components & tractor industry over the next 10 years.  
▪ It is expected to generate an additional employment of 65 million. |
| FAME Scheme     | ▪ The scheme is aimed at incentivising all vehicle segments i.e. 2 Wheeler, 3 Wheeler Auto, Passenger 4 Wheeler Vehicle, Light Commercial Vehicles and Buses. It covers hybrid & electric technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles. The scheme has been extended to March 2018 from March 2017. |
| Union Budget 2018–19 | ▪ Budget 2018-19 imposed a surcharge of 10 per cent on aggregate duties of customs on imports, replacing education and secondary and higher Education Cess, which is expected to boost domestic manufacturing.  
▪ Reduction of tax to 25 per cent for companies with turnover up to Rs 250 crore (US$ 38.62 million) was also announced in Union Budget. |

*Note: NATRiP - National Automotive Testing and R&D Infrastructure Project  
Source: SIAM, Make in India*
KEY PLAYERS
### Major Players by Segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>Players</th>
</tr>
</thead>
</table>
| **Engine & engine parts**     | - Pistons – Goetze, Shriram Pistons & Rings, India Pistons, Anand I-Power Ltd.  
                              | - Engine Valves – Rane Engine Valves, Shriram Pistons & Rings, SSV Valves  
                              | - Carburetors – Ucal Fuel Systems & Spaco Carburetors & Escorts Auto Components  
                              | - Diesel-based fuel-injection systems – Mico, Delphi-TVS Diesel System & Tata Cummins |
| **Transmission & steering parts** | - Steering Systems – Sona Koyo Steering Systems, Rane NSK Steering Systems & Rane TRW Systems  
                              | - Gears – Bharat Gears, Gajra Bevel Gears, ZF Steering Gear (India) Ltd, Eicher, Graziano Trasmissioni & SIAP Gears India  
                              | - Clutch – Clutch Auto, Ceekay Daikin, Amalgamations Repco, Luk Clutches  
                              | - Driveshafts – GKN Driveshafts, Spicer India Private Ltd., Delphi & 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 & Allied Nippon  
                              | - Leaf Springs – Jamna Auto & Jai Parabolic  
                              | - Shock Absorbers – Gabriel India, Delphi, Mando India Ltd. & Munjal Showa |
| **Electrical**                | - Lucas TVS, Denso, Delco Remy Electricals & Nippon Electricals are key players in this segment |
| **Equipment**                | - Headlights – Lumax, Autolite & 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, Aranca research
CAPACITY ADDITION PLANS OF KEY PLAYERS

- **Bosch** inaugurated its 15th plant in November 2015, specialising in manufacturing power tools.

  - On August 2015, the company had completed the construction of new manufacturing facility (Phase-1) in Karnataka for which it had acquired 97 acres of land in Bidadi & invested an amount of US$ 55.68 million. Completion of 2nd phase of Bidadi plant is slated for 2018.

- The company, which had planned to invest US$ 245.66 million for the expansion of its radial tyre capacity at its Chennai plant, would invest an additional amount of US$ 196.53 million for this plant as on August 2015.

  - In September 2016, company announced that it will invest US$ 401.60 million, to double its Chennai plant capacity by the end of 2020

  - The brand has opened its 6th plant globally in Hungary in April 2017, the investment is worth US$ 53.40 million.

- **Apollo Tyres Ltd.**

- **Tata Auto Component Systems** is setting up 5 auto component manufacturing plants in Sanand, Gujarat, at an investment of US$ 62 million. It is also investing US$ 114 million for capacity addition in its Chakan plant in Maharashtra.

- **HELLA** is building its second manufacturing plant in Gujarat with an estimated investment of US$ 5.36 million in the first phase.

- **NGK Technologies India Pvt. Ltd.**, subsidiary of NGK Insulators, Ltd. was established to market automotive related & metal components across India.

- **India's TVS Group** has acquired a 90 per cent 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. Looking for new overseas markets.

  - In May 2015, the company made investments of US$ 24.56 million towards the capacity expansion of 2-wheelers across 2 plants in Tamil Nadu & Uttarakhand.

*Source: Respective Company websites, News articles, TechSci Research*
CASE STUDIES
Bharat Forge is the world's largest forging company with global manufacturing footprint spread across India, Germany, Sweden and France.

It is India’s largest manufacturer and exporter of automotive components and leading chassis component manufacturer in the world.

With 50 years of experience, Bharat Forge has transformed itself from just being a supplier of components to a preferred development partner through a concentrated focus on innovation, technology and value addition.

The company was awarded “TIME Indian Global Manufacturer for the year 2017” award in 2017.

Note: ¹From April to September 2017
Source: Aranca Research, Annual Report, Company website
BHARAT FORGE: MILESTONES

Bharat Forge Ltd incorporation, started commercial production, Forge Shop Hammer Technology, exports in Europe.

Established footprint across Europe, North America, China, tie-up with BITs Pilani to enhance internal technology talent, Centre for Advanced Manufacturing takes shape in Baramati.

Opens its first industrial gearbox service and assembly centre in Hosur, India, supply of crankshaft for Indian rails, becoming the 1st indegenous supplier of crankshaft

1961-1985
Technology upgradation, commissioned two 16,000 MT pressline, breakthrough in Japan, USA, UK for supply of power-train and chassis components.

1990-2001
Commissioned India’s largest commercial open forging press, Inauguration of forging and high horse power, industrial crankshaft machining facility at Baramati, Inauguration of the Ring Rolling facility at Baramati. Establishment of the Kalyani Center for Technology and Innovation

2002 - 2007
Safran and Bharat Forge form partnership to for opportunities in Indian civil and military aerospace, Inauguration of ‘High Tech Rail Component Manufacturing Facility at Baramati, Production starts at Alstom-Bharat Forge’s new turbine and generator manufacturing facility in India, Acquisition of Oil & Gas Machining Company, Mécanique Générale Langroise (MGL) in France

2008 - 2010

2012 - 2013

2014 - 2015

Source: Aranca Research, Annual Report, Company website
MOTHERSON SUMI SYSTEMS LIMITED (MSSL)

- Motherson Sumi Systems Limited (MSSL), the flagship company of the Samvardhana Motherson Group, was established in 1986 in a joint venture between Samvardhana Motherson Group and Sumitomo Wiring Systems (Japan).

- The company has evolved into a full system solutions provider and caters to a diverse range of customers in the automotive and other industries across Asia, Europe, the Americas, Australia and Africa.

- Their product portfolio majorly involves wiring harnesses, rear view mirrors, polymers and modules, elastomers, metal working, IT engineering and design, and manufacturing support.

Note: ¹From April to September 2017
Source: Aranca Research, Annual Report, Company website
MOTHERSON SUMI SYSTEMS LIMITED (MSSL)


1975

Started as Motherson and started its first cable factory in 1977.

1986

Listed on stock exchanges in India.

1993

International and domestic expansion with more than 30 JVs and acquisitions.

1999 onwards

Consolidated revenue for FY17 is US$ 6.4 billion

2017

Source: Aranca Research, Annual Report, Company website
ACMA AWARD
WINNERS
### Excellence in Export
- **Delux Bearings** (Medium Category)
- **Orbit Bearings India** (Large Category)
- **TVS Sundaram Fasteners** (Very Large Category)


### Excellence in Technology
- **Natesan Synchrocones** (Large Category)
- **Subros** (Very Large Category) (Product Innovation)
- **Subros** (Very Large Category) (Process Innovation)


### Excellence in Quality & Productivity
- **Sellowrap Industries** (Medium Category)
- **Anand CY Myutec Automotive** (Large Category)
- **Shriniwas Engineering Auto Components** (Very Large Category)


### Trophies
- **Gold Trophy**
- **Silver Trophy**
- **Bronze Trophy**

_Source: ACMA_
## ACMA AWARD WINNERS (2016-17) … (2/2)

### Excellence in Manufacturing

<table>
<thead>
<tr>
<th>Category</th>
<th>Winner</th>
<th>Trophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Category</td>
<td>Helvoet Rubber &amp; Plastic Technologies</td>
<td>Gold</td>
</tr>
<tr>
<td>Large Category</td>
<td>Shiroki Technico India</td>
<td>Gold</td>
</tr>
<tr>
<td>Very Large Category</td>
<td>Mindarika</td>
<td>Gold</td>
</tr>
<tr>
<td>Large Category</td>
<td>Global Autotech</td>
<td>Silver</td>
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<tr>
<td>Very Large Category</td>
<td>Lumax Industries</td>
<td>Silver</td>
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<tr>
<td>Large Category</td>
<td>Sterling Tools</td>
<td>Bronze</td>
</tr>
<tr>
<td>Very Large Category</td>
<td>Endurance Technologies</td>
<td>Bronze</td>
</tr>
</tbody>
</table>

*Source: ACMA*
USEFUL INFORMATION
### Automotive Component Manufacturers Association of India (ACMA)

6th Floor, The Capital Court, Olof Palme Marg, Munirka, New Delhi – 110 067, India  
Phone: 91 11 2616 0315, 2617 5873, 2618 4479  
Fax: 91 11 2616 0317  
E-mail: acma@acma.in; acma@vsnl.com
GLOSSARY

- ACMA: Automotive Component Manufacturers 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
- INR: Indian Rupee
- OEM: Original Equipment Manufacturers
- NATRiP: National Automotive Testing and R&D Infrastructure Project
- 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)

<table>
<thead>
<tr>
<th>Year INR</th>
<th>INR Equivalent of one US$</th>
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<tbody>
<tr>
<td>2004–05</td>
<td>44.81</td>
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<tr>
<td>2005–06</td>
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<tr>
<td>2006–07</td>
<td>45.14</td>
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<td>Q3 2017–18</td>
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### Exchange Rates (Calendar Year)

<table>
<thead>
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<th>INR Equivalent of one US$</th>
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<tr>
<td>2005</td>
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<td>2017</td>
<td>65.12</td>
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*Source: Reserve bank of India, Average for the year*
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