

The road ahead for auto-casting

As BS VI emission norms kick in and electric vehicles take off

Sector round-up | April 2019

India's automobile industry is set to change significantly with the implementation of BS VI emission norms and proliferation of electric vehicles (EVs).

While the BS VI emission norms will have a more near-term impact, the effect of EVs will be felt in medium to long term.

The auto-casting industry in India, with revenue of ~Rs 50,000 crore in fiscal 2018, can be categorised into ferrous and non-ferrous segments. The industry comprises major engine components such as cylinder heads, cylinder blocks, gear housing, and braking components such as brake drums and housings, clutch and flywheel housing.

So how will the transition from BS IV to VI emission norms and adoption of electric vehicle impact the auto-casting industry?

On April 1, 2020, India will transition from BS IV straight to BS VI emission norms, skipping the BS V stage. These norms are expected to impact the whole automobile industry barring the tractor segment, which has, therefore, not been included in this analysis.

 <p>Two -wheelers</p>	<ul style="list-style-type: none"> • To improve efficiency, the carburettor is being replaced with a more efficient fuel injection system • Design changes expected in the engine head but no change in value expected due to economies of scale • Impact on the auto casting industry is low
 <p>Cars and utility vehicles</p>	<ul style="list-style-type: none"> • Petrol vehicles are less polluting than diesel vehicles. ~80% of car and utility vehicle sales are accounted for by petrol vehicles • Hence, changes owing to BS VI norms are pegged to be limited for this segment • Impact on auto-casting industry will be low
 <p>Commercial vehicles</p>	<ul style="list-style-type: none"> • Largely comprises diesel vehicles • Due to higher emissions, components like DPF, SCR, sensors and electronics need to be added • However, as these parts are fitted post the engine, the impact on the auto casting industry is low.

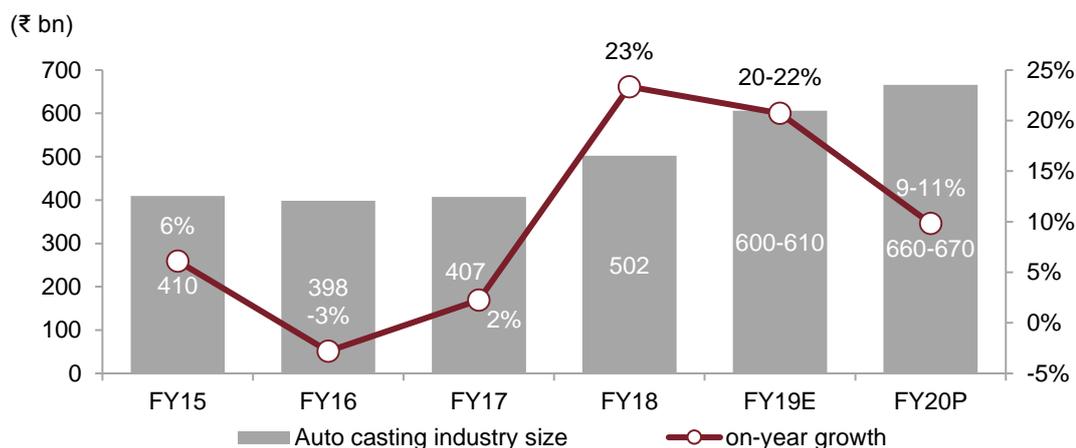
We expect the BS VI emission norms to affect the auto-casting industry only slightly. While two-wheelers will feel the brunt, the net value of auto castings within this segment is expected to remain largely unchanged.

In the case of cars and utility vehicles, we do not envisage a significant change because of low share of diesel vehicles. In commercial vehicles, changes are expected in engine components and the exhaust management system, which have a low impact on auto-casting.

Nevertheless, BS VI norms will lead to addition of both non-casted components and more electricals/sensors and changes in electronic control unit (ECU), which will push up prices across vehicle segments. Therefore, we anticipate advancement in sales, particularly in the commercial vehicle segment.

We estimate auto-castings sales (in value terms) to grow 9-11% in fiscal 2020, largely driven by volume growth owing to expected advancement of sales in fiscal 2020, ahead of the institution of BS VI norms.

Growth in auto casting industry to decelerate in FY20 despite advancement of purchases due to BS-VI norm



Source: CRISIL Research

What risks do EVs pose for the auto-casting industry?

With environmental pollution concerns mounting across the world, the push for vehicles running on alternative fuel sources has gained momentum. With battery costs plunging in last few years, EVs are fast emerging as a desirable option.

Proliferation of EVs poses a threat to traditional internal combustion engines (ICE). Major casted engine components such as cylinder heads, cylinder blocks, and gear housing (comprising around 50% of casted components) run the risk of becoming obsolete. ICE is expected to be replaced by lithium ion and other such batteries.

Keeping in mind the imminent threats, auto-casting players are adopting the following approaches to offset reduction in ICE component demand:

- Working with global and domestic original equipment manufacturers (OEM) to develop motor housing, battery housing, knuckles, and turbochargers, to be used in electric vehicles
- Making strategic investments in foreign companies which have existing electric powertrain solutions with potential to be leveraged in India
- Setting up plants and expanding capacities to develop lightweight components for two-wheelers, and passenger, hybrid, and electric vehicles

Analytical contacts

Hetal Gandhi
Director, CRISIL Limited
hetal.gandhi@crisil.com

Pushan Sharma
Associate Director, CRISIL Limited
pushan.sharma@crisil.com

Deane de Menezes
Analyst, CRISIL Limited
deane.Demenezes@crisil.com

Media contacts

Saman Khan
Media Relations
CRISIL Limited
D: +91 22 3342 3895
M: +91 95940 60612
B: +91 22 3342 3000
saman.khan@crisil.com

Hiral Jani Vasani
Media Relations
CRISIL Limited
D: +91 22 3342 5916
M: +91 982003 9681
B: +91 22 3342 3000
hiral.vasani@crisil.com

About CRISIL Limited

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

It is India's foremost provider of ratings, data, research, analytics and solutions, with a strong track record of growth, culture of innovation and global footprint.

It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers.

It is majority owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

About CRISIL Research

CRISIL Research is India's largest independent integrated research house. We provide insights, opinion and analysis on the Indian economy, industry, capital markets and companies. We also conduct training programs to financial sector professionals on a wide array of technical issues. We are India's most credible provider of economy and industry research. Our industry research covers 86 sectors and is known for its rich insights and perspectives. Our analysis is supported by inputs from our large network sources, including industry experts, industry associations and trade channels. We play a key role in India's fixed income markets. We are the largest provider of valuation of fixed income securities to the mutual fund, insurance and banking industries in the country. We are also the sole provider of debt and hybrid indices to India's mutual fund and life insurance industries. We pioneered independent equity research in India, and are today the country's largest independent equity research house. Our defining trait is the ability to convert information and data into expert judgments and forecasts with complete objectivity. We leverage our deep understanding of the macro-economy and our extensive sector coverage to provide unique insights on micro-macro and cross-sectoral linkages. Our talent pool comprises economists, sector experts, company analysts and information management specialists.

CRISIL Privacy

CRISIL respects your privacy. We may use your contact information, such as your name, address, and email id to fulfil your request and service your account and to provide you with additional information from CRISIL. For further information on CRISIL's privacy policy please visit www.crisil.com.

Disclaimer

CRISIL Research, a division of CRISIL Limited (CRISIL) has taken due care and caution in preparing this Report based on the information obtained by CRISIL from sources which it considers reliable (Data). However, CRISIL does not guarantee the accuracy, adequacy or completeness of the Data / Report and is not responsible for any errors or omissions or for the results obtained from the use of Data / Report. This Report is not a recommendation to invest / disinvest in any company covered in the Report. CRISIL especially states that it has no financial liability whatsoever to the subscribers/ users/ transmitters/ distributors of this Report. CRISIL Research operates independently of, and does not have access to information obtained by CRISIL's Ratings Division / CRISIL Risk and Infrastructure Solutions Limited (CRIS), which may, in their regular operations, obtain information of a confidential nature. The views expressed in this Report are that of CRISIL Research and not of CRISIL's Ratings Division / CRIS. No part of this Report may be published / reproduced in any form without CRISIL's prior written approval.