21 November 2016

Automobiles

BSE Sensex: 26,150 **S&P CNX: 8,074**

Stricter regulations to drive costs higher in next four years

2W EVs could be the next big thing, but have potential to be disruptive

We attended Autocar Professional's India Two-Wheeler Industry Conclave, where industry leaders (including key auto component suppliers) discussed the future of the 2W industry. Key highlights from the conclave:

- **Stricter regulatory norms are likely to pose challenges to the Indian auto industry, increasing costs by ~10-20% over next four years.**
- **These norms would also raise compliance costs. This means higher costs for customers without any perceptible difference in vehicle performance.**
- **Bharat stage (BS) VI adoption would result in convergence with Euro 5 norms by 2020, making it difficult for OEMs to get ready-made solutions from developed markets.**
- **The shift from carburetor-based engine to electronic fuel infusion (EFI) system opens up huge opportunity for players like Bosch to tap India's two-wheeler (2W) segment, with additional market opportunity of ~INR135b for BS VI, which includes EFI system (~INR120b) and three-way catalyst (~INR15b). However, tier-1 suppliers would have to invest ~INR35B in capex and further ~INR10b in localization.**
- **Scooterization is expected to continue, with this segment expected to account for ~45% share of the 2W industry by 2020.**
- **Electric vehicle (EV) 2Ws could be the next big opportunity (especially in urban markets), considering increasing excitement toward EVs, government's push toward EVs to control pollution, improving battery technology (increasing density) and ~50% decline in Li-ion battery prices over past three years.**
- **EV 2Ws would require different approach right from product development to manufacturing to distribution and service. With largely different critical success factors, 2W OEMs are vulnerable to competition from non-conventional sources like start-ups (Ather Energy, Stork Motorcycle, etc.).**
- **Valuation & view: While we estimate volume recovery for 2Ws (~12% CAGR in FY16-18E), intense competition would restrict pricing power of 2W OEMs. We expect value migration from motorcycle to scooters to continue, and within motorcycle we expect premium segment to outgrow executive segment. We are lowering our target multiples for the 2W stocks to near LPA (v/s at 10-20% premium to LPA earlier) to reflect in for uncertainty arising due to demonetization coupled with coupled with cost inflation due to regulatory norms. We prefer TVSL and EIM in 2W space.**

Exhibit 1: Comparative valuation – Indian Auto OEMs

	CMP	Rating	TP	P/E (x)		EV/EBITDA (x)		RoE (%)		RoCE (%)	
	(INR)*		(INR)	FY17E	FY18E	FY17E	FY18E	FY17E	FY18E	FY17E	FY18E
Bajaj Auto	2,528	Buy	3,158	17.5	14.5	11.8	9.3	32.1	33.1	31.2	32.1
Hero MotoCorp	2,928	Neutral	3,227	15.5	13.2	10.1	8.4	42.6	40.6	41.6	39.8
TVS Motor	345	Buy	445	27.1	19.5	17.1	12.5	29.2	31.8	30.2	34.8
M&M	1,200	Buy	1,602	17.2	13.2	14.2	11.5	15.9	16.9	13.2	14.3
Maruti Suzuki	4,788	Buy	6,865	18.7	15.4	11.7	9.5	23.7	23.5	31.9	31.6
Tata Motors	457	Buy	633	15.2	8.4	4.8	3.3	12.3	19.0	9.4	14.0
Ashok Leyland	76	Buy	105	14.0	10.1	7.6	5.5	26.5	30.1	19.4	23.7
Eicher Motors	20,358	Buy	30,230	34.0	23.6	26.7	20.2	42.1	42.9	27.9	31.3

Nos. are on CY basis

Source: Company, MOSL

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We attended Autocar Professional's India Two-Wheeler Industry Conclave, where industry leaders (including key auto component suppliers) discussed the future of the 2W industry in terms of regulations, technologies and changing marketplace. Following are the key insights from the conclave.

Regulatory actions pose cost challenges to industry…

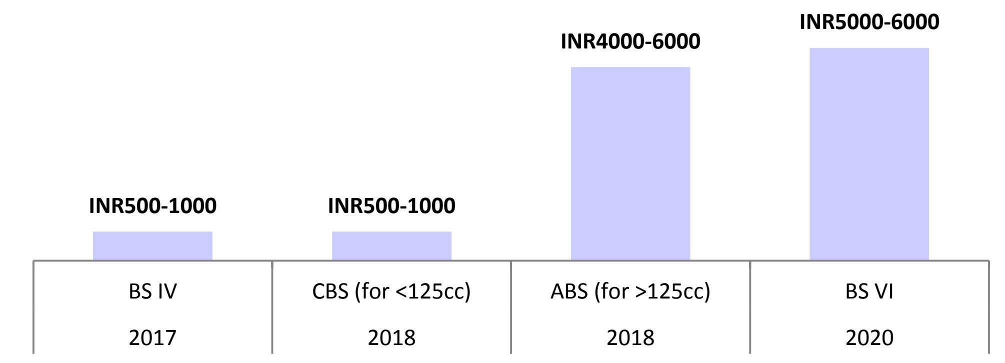
- Indian 2W industry will have to comply with BS IV norms from April-17 and then with more stringent BS VI norms from April-20.
- BS VI mandates reduction in emission by up to 80% and brings in additional norms for particulate matter. It seems compliance to BS VI would be based on EFI system and three-way catalyst (as against carburetor-based systems currently).
- Safety norms also mandate ABS/CBS for >125cc/<125cc 2Ws from April-18.
- The shift to BS VI would entail cost increase of at least 8-10%, while installing ABS/CBS would result in cost increase of up to 8%. Also, evolving regulatory norms should raise compliance costs.
- This means higher costs for customers without any perceptible difference in vehicle performance.
- EFI offers the advantage of software control, which can be leveraged to improve quality (such as drivability and fuel efficiency).
- India's emission norms have lagged global standards in the past. However, BS VI adoption would result in convergence with Euro 5 norms.

Exhibit 2: Emission norms for 2Ws in India

Year	Stage	Type	CO	HC	NOx	HC+NOx	NHMC	PM
1991		All	12-30	8-12	-	-	-	-
1996		All	4.5	-	-	3.6	-	-
2000	BS-I	All	2	-	-	2	-	-
2005	BS-II	All	1.5	-	-	1.5	-	-
2010	BS-III	All	1	-	-	1	-	-
2017	BS-IV	Class 1 & 2-1	1.403	-	0.39	0.59-0.79	-	-
		Class 2-2	1.97	-	0.34	0.47-0.67	-	-
		Class 3-1 & 3-2	1.97	-	0.2	0.2-0.4	-	-
2020	BS-VI	SI	1	0.1	0.06	-	0.068	0.0045
		CI	0.5	0.1	0.09	-	0.068	0.0045

Source: MOSL

Exhibit 3: Upcoming regulatory norms on emission and safety to increase cost to consumers



Source: MOSL

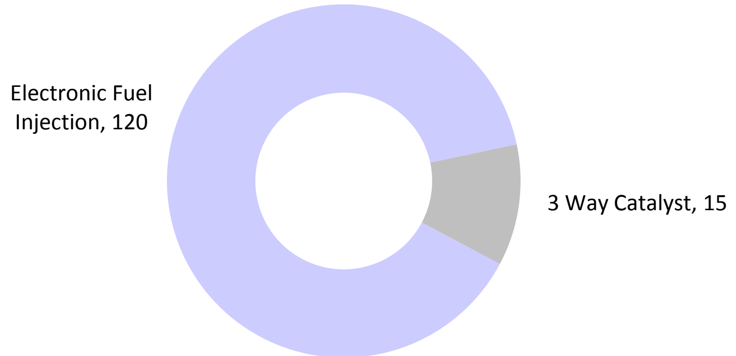
…but also provide opportunity for innovative companies…

- Although BS VI poses challenge for the 2W industry, it can be leveraged by OEMs to offer innovative products that meet emission norms.
- OEMs might use existing solutions like EFI + three-way catalyst, which would result in cost increase without any material improvement in performance.
- This also provides opportunity to innovate on new ICE architecture/EVs, which are more efficient and could meet future CO emissions norms. This would entail higher price, but also offer higher value-add to customers. This approach could lead to creation of a new category, giving first-mover advantage to the innovator.

…and open up 2W segment for players like Bosch

- The shift from carburetor-based engine to EFI framework opens up huge opportunity for players like Bosch to tap the 2W segment.
- Assuming domestic 2W industry volumes of ~25m by FY21 (~9% CAGR), it would imply additional market opportunity of ~INR135b for BS VI – EFIs (~INR120b) and three-way catalyst (~INR15b).
- With converging emission norms, economies of scale in the domestic market could also be leveraged for exporting EFIs to global markets.
- Tier-1 players would have to invest ~INR35B in capex and further ~INR10b in localization.

Exhibit 4: BS VI opens up ~135b additional opportunity for vendors like Bosch

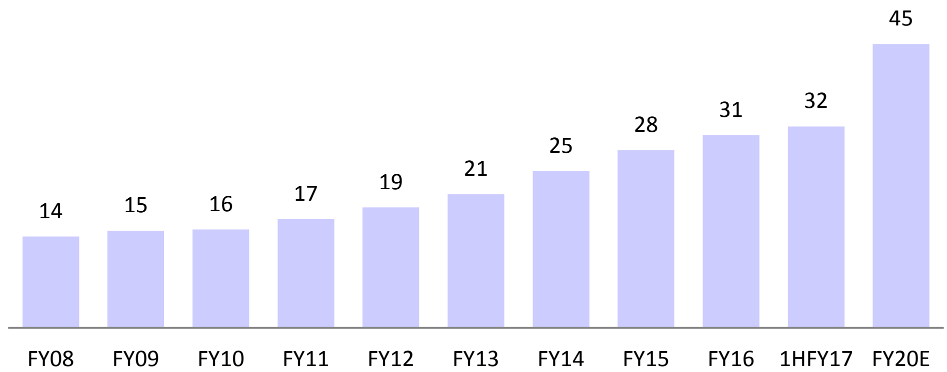


Source: MOSL

Scooterization to continue, with share of ~45% by 2020

- Domestic 2W industry CAGR is expected at 8-10% by 2020, driven by 17-19% CAGR in scooters.
- As a result, the trend of scooterization is expected to continue, albeit a moderating pace. Scooters are expected to command ~45% share of the domestic 2W industry by 2020.
- While the domestic motorcycle industry is expected to grow at 3-5%, the premium segment (>150cc) is expected to outgrow both motorcycle and domestic 2W industry.
- Continued uptrading implies muted volumes for the 110cc segment, which would be largely driven by rural markets.

Exhibit 5: Scooterization expected to continue, with 45% share by 2020



Source: MOSL

EV 2Ws could be the next big opportunity…

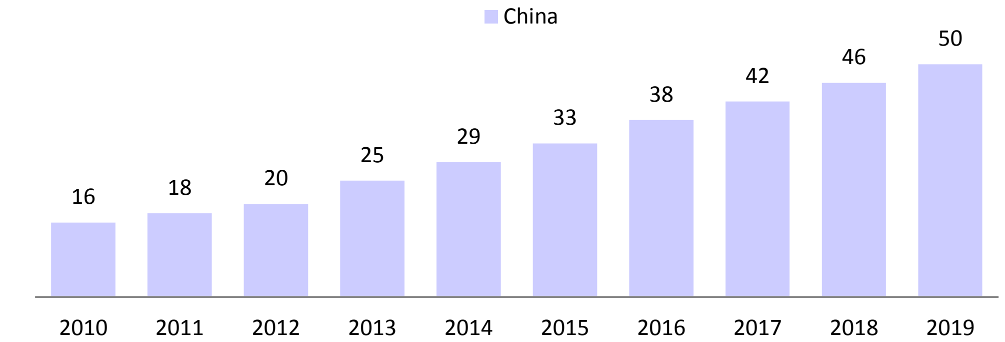
- Electric 2Ws segment has not been able to gain much traction in India by now due to the lack of attractive products, use of conventional lead acid batteries, higher charging time, lower range per charge and speed, and limited push from the government.
- While conventional 2W companies like Hero Electric, Mahindra and Bajaj are working on 2W EVs, a few start-ups like Ather Energy and Tork Motorcycle are also focusing on driving acceptance of 2W EVs.
- Increasing excitement toward EV, the government's gradual push toward EVs to control pollution, improving battery technology (increasing density) and falling Li-ion battery prices (~50% decline in three years) augur well for 2W EVs.
- Also, considering increasing awareness about pollution, improving driving range per charge and declining pricing gap as against mainstream 2Ws (also aided by subsidies), we expect faster adoption of 2W EVs in urban markets.
- However, there are few challenges which need to be addressed (e.g., charging infrastructure and replacement battery prices).
- To put things in perspective, China has largely shifted toward 2W EVs with annual volumes of ~33m units.

Exhibit 6: EVs superior to conventional 2Ws on both economic and environmental parameters

	For total petrol 2W population at present	For petrol 2W that will be purchased this year
No. of 2 Wheelers (m units)	160	20
Petrol consumed (m litres)	30000	3000
Fuel cost (INR b)	2100	21
CO (m tons)	5.4	0.6
HC+Nox ('000 Tons)	3000	0.4
CO2 (m tons)	111	13

Source: MOSL

Exhibit 7: China makes significant progress in EV 2Ws



Source: MOSL

Exhibit 8: Inflection point for EVs not far off

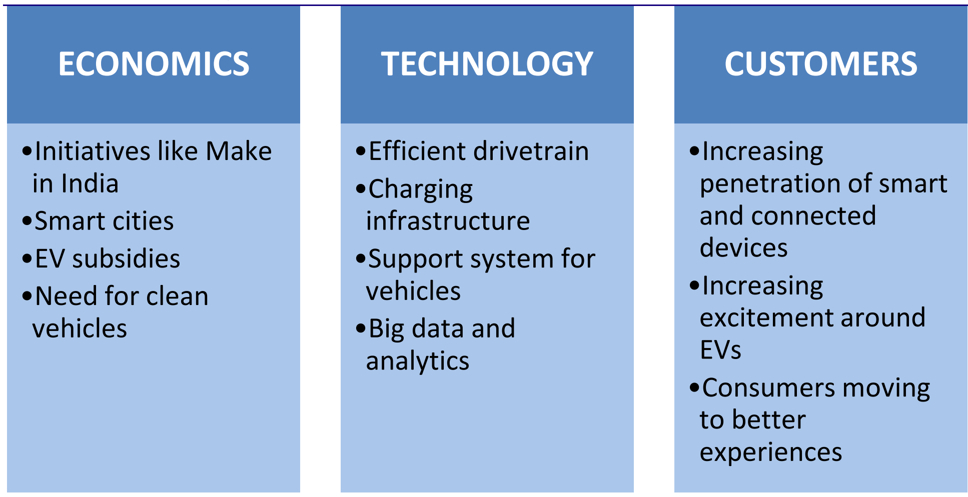
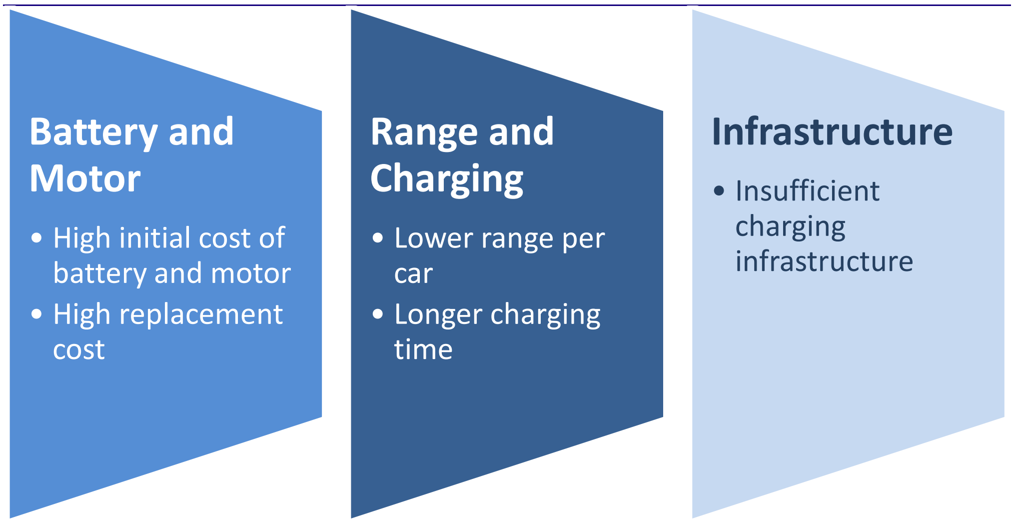
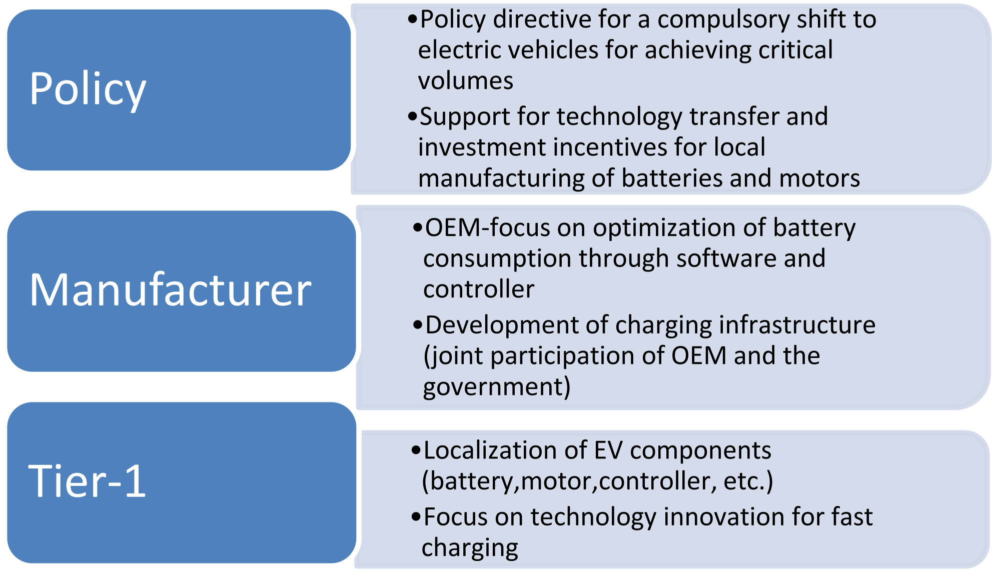


Exhibit 9: Major challenges faced by 2W EVs



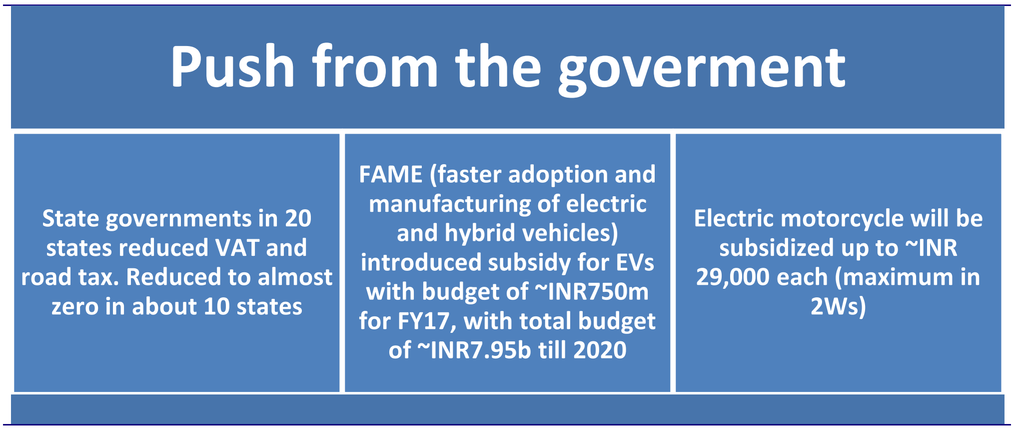
Source: MOSL

Exhibit 10: Road ahead for 2W EVs



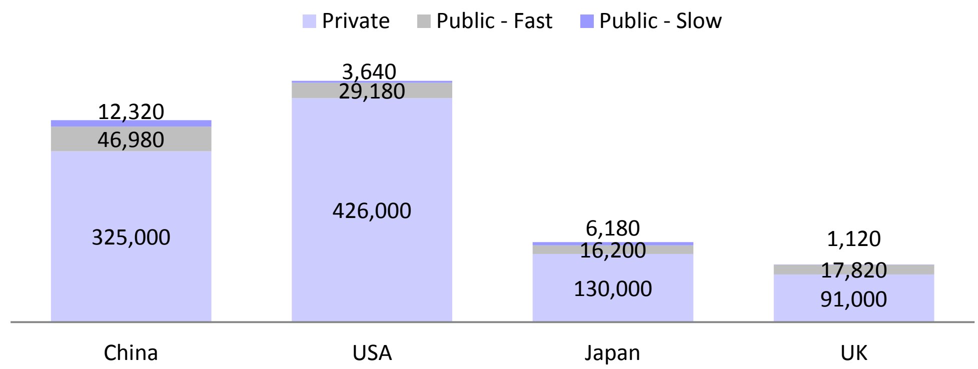
Source: MOSL

Exhibit 11: Government support initially critical for faster EV adoption



Source: MOSL

Exhibit 12: Charging infrastructure critical for shift to EVs



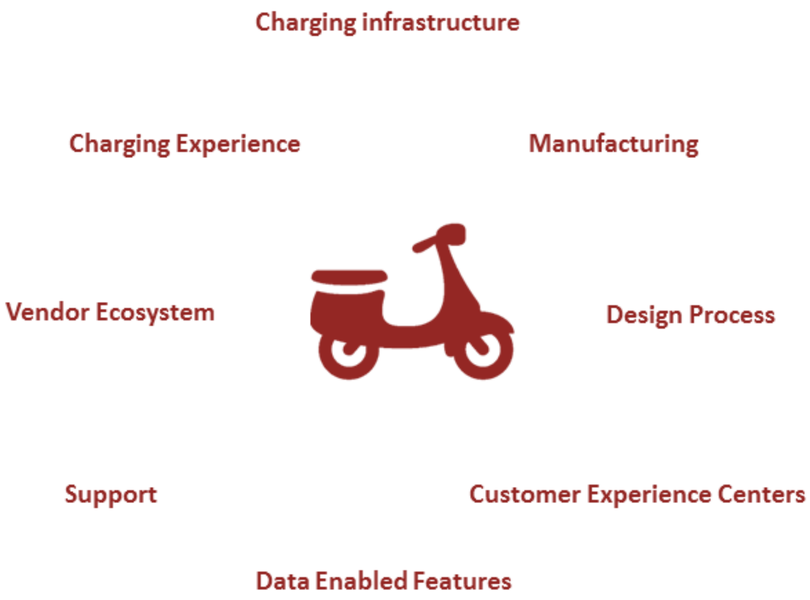
Source: MOSL

...but can be potentially disruptive as well

- While 2W EVs provide scope to differentiate among convention 2W OEMs, there would be competition from non-conventional sources like start-ups as well.
- 2W EVs would require different approach right from product development to manufacturing to distribution and service.

- Unlike currently where OEMs are largely system integrators mainly sourcing standardized parts, EVs would require a more integrated approach as standardized parts would be lower. Also, different components would require different vendors as well.
- Also, the dealer and service network strategy would need rethinking as repair and servicing requirements will be very different. Further, 2W EVs would operate in a connected environment, which would enable remote monitoring by OEMs.
- These factors could be potentially disruptive as companies would require different skillsets to succeed in EVs and also face competition from unconventional sources.

Exhibit 13: 2W EVs would require different approach, right from product development to manufacturing to distribution and service



Source: MOSL

Valuation and view

- After a prolonged period of muted demand for 2Ws due to two consecutive years of below-average monsoon, we are witnessing a strong recovery led by normal monsoon and positive sentiment.
- We expect 2W recovery to lose momentum in the short term (especially in 3QFY17) due to impact of demonetization.
- While we estimate volume recovery for 2Ws (~12% CAGR in FY16-18E), intense competition would restrict pricing power of 2W OEMs. We expect value migration from motorcycle to scooters to continue, and within motorcycle we expect premium segment to outgrow executive segment.
- We are lowering our target multiples for the 2W stocks to reflect in for uncertainty arising due to demonetization coupled with coupled with cost inflation due to regulatory norms. We now value these stocks near LPA. We prefer TVSL and EIM in 2W space.
- **HMCL** has multiple challenges on its hand viz a) value migration towards scooters and its weak franchise in scooters and premium motorcycle, b) bigger

impact of safety regulations and c) headwinds to margins. We maintain **Neutral** on HMCL with TP of ~INR3227 (15x Sep-18 EPS).

- **BJAUT** is relatively better placed in the domestic premium segment with healthy product pipeline. With stability in exports, albeit at lower levels, we are hopeful of both domestic and export business growing simultaneously in FY18. We maintain **Buy** with TP of ~INR3,158 (~16x Sep-18 EPS).
- TVSL's earnings momentum is expected to remain strong over next 2-3 years led by a) ramp-up of Victor volumes and recovery in scooter market share, b) benefit of monsoons and 7th Pay commission to aid sustained volume growth in H2FY17, c) launch of BMW Alliance product in early 2017, d) recovery in export markets as crude oil prices recover and e) resultant margin improvement. We maintain **Buy** with TP of ~INR445 (~16x Sep-18 EPS + ~INR68/share for BWM alliance).
- **EIM** would benefit from continued strong traction in Royal Enfield, supported by new product launches and new capacity coming on-stream from 2QFY18. This would lead to further improvement in margins driven by benefit of vendor consolidation and operating leverage. Maintain **Buy** with target price of INR30,230 (Sep-18 SOTP-based, valuing RE at 30x EPS and VECV at 10x EV/EBITDA).

Exhibit 14: Comparative valuation

	CMP (INR)*	Rating	TP (INR)	P/E (x)		EV/EBITDA (x)		RoE (%)		RoCE (%)	
				FY17E	FY18E	FY17E	FY18E	FY17E	FY18E	FY17E	FY18E
Auto OEM's											
Bajaj Auto	2,528	Buy	3,158	17.5	14.5	11.8	9.3	32.1	33.1	31.2	32.1
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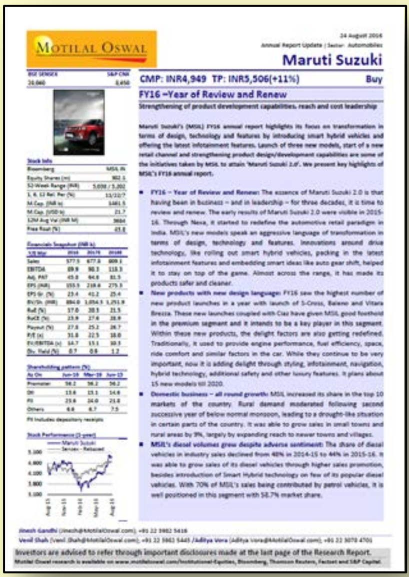
Ashok Leyland	76	Buy	105	14	10.1	7.6	5.5	26.5	30.1	19.4	23.7
Eicher Motors	20,358	Buy	30,230	34	23.6	26.7	20.2	42.1	42.9	27.9	31.3
Auto Ancillaries											
Bharat Forge	858	Buy	1,017	34.6	25.4	16.8	13.7	16.2	19.7	11.1	14.2
Exide Industries	170	Buy	249	20.8	17.3	12.9	11	14.8	15.6	15.3	16.3
Amara Raja Batteries	909	Buy	1,268	28.9	21.6	16.9	13.1	23.8	25.8	22.6	24.6
BOSCH	18,490	Neutral	24,532	35.6	27.4	27.7	19.9	20.9	25.8	29.6	36.5

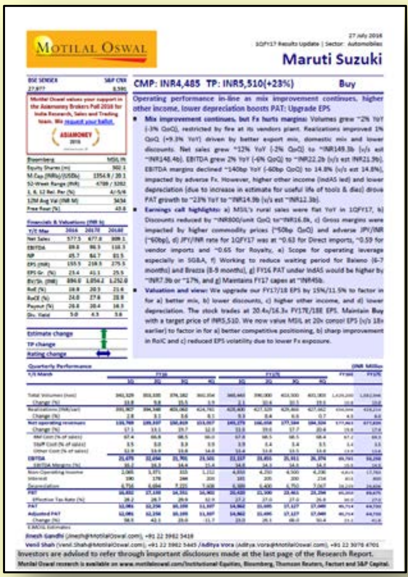
Nos. are on CY basis

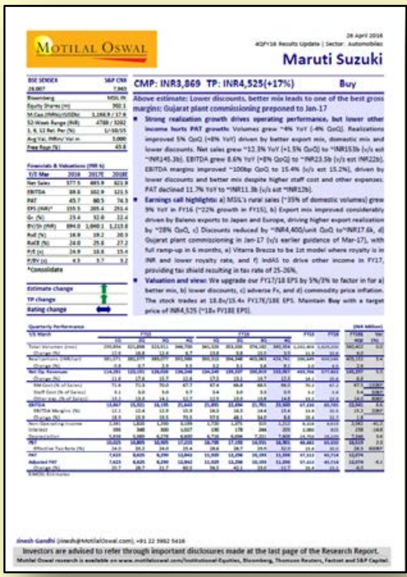
Source: Company, MOSL

PRODUCT GALLERY

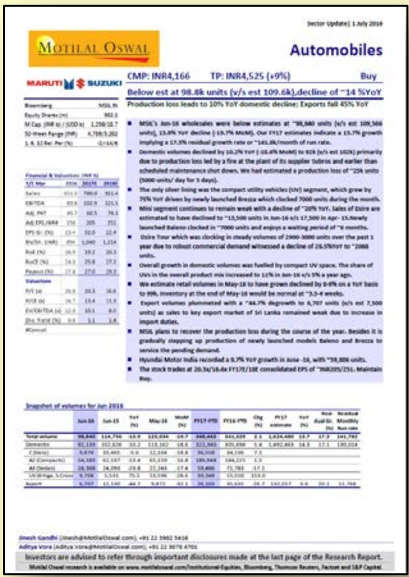
Our recent reports on Maruti Suzuki

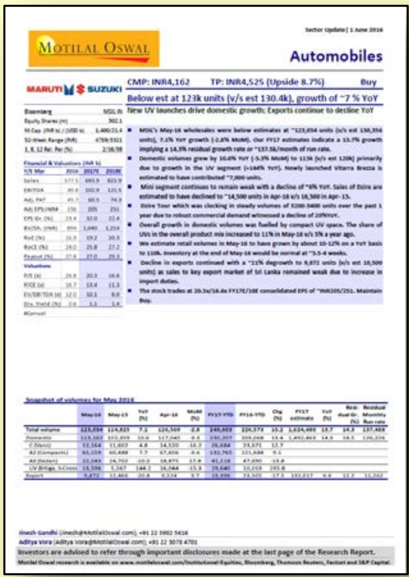

MOTILAL OSWAL
Maruti Suzuki
CMP: INR4,949 TP: INR5,506(+11%) Buy
FY16 –Year of Review and Renew

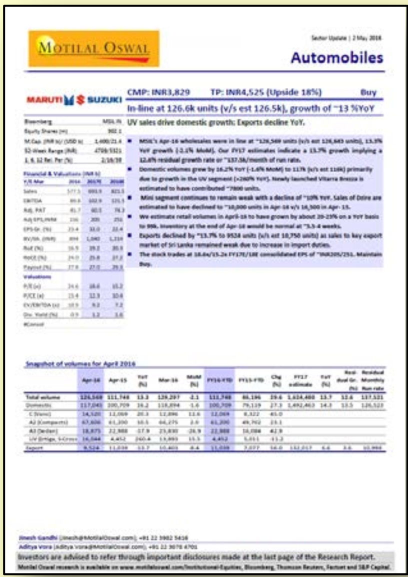

MOTILAL OSWAL
Maruti Suzuki
CMP: INR4,485 TP: INR5,510(+23%) Buy


MOTILAL OSWAL
Maruti Suzuki
CMP: INR3,869 TP: INR4,525(+17%) Buy

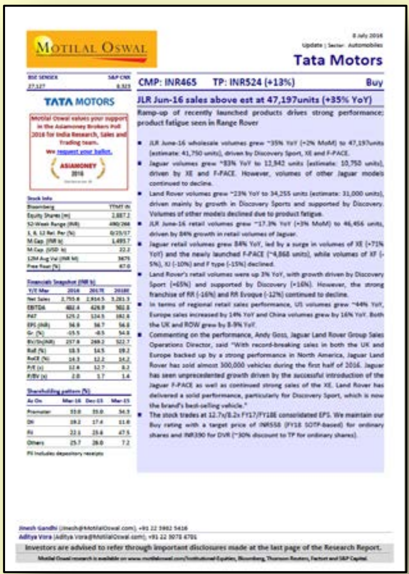
Our recent reports on Auto Sector

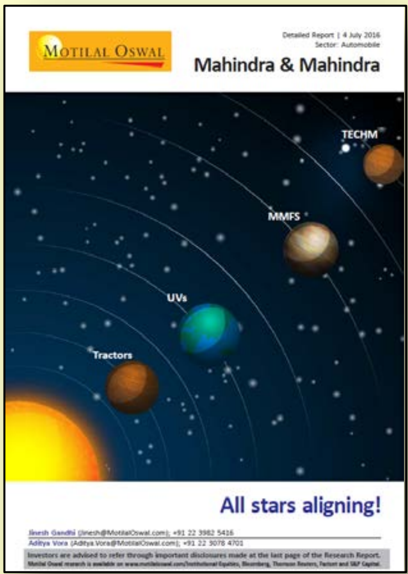

MOTILAL OSWAL
Automobiles
CMP: INR4,166 TP: INR4,525 (+9%) Buy


MOTILAL OSWAL
Automobiles
CMP: INR4,162 TP: INR4,525 (Upside 8.7%) Buy


MOTILAL OSWAL
Automobiles
CMP: INR3,829 TP: INR4,525 (Upside 18%) Buy

Our recent reports on other Auto Companies


MOTILAL OSWAL
Tata Motors
CMP: INR465 TP: INR524 (+13%) Buy
JLR Jun-16 sales above est at 47,197units (+35% YoY)




MOTILAL OSWAL
Hero MotoCorp
CMP: INR3,083 TP: INR3,634 (+18%) Buy
Volume growth coming back, driven by monsoon, 7CPC

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SEBI pursuant to a complaint from client Shri C.R. Mohanraj alleging unauthorized trading, issued a letter dated 29th April 2014 to MOSL notifying appointment of an Adjudicating Officer as per SEBI regulations to hold inquiry and adjudge violation of SEBI Regulations; MOSL replied to the Show Cause Notice whereby SEBI granted us an opportunity of Inspection of Documents. Since all the documents requested by us were not covered we have requested to SEBI vide our letter dated June 23, 2015 to provide pending list of documents for inspection.

List of associate companies of Motilal Oswal Securities Limited -Click here to access detailed report

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