

Impact of Macro-economic Environment on the Automotive Industry

ACMA

Jan 2020

Content



Macro-economic Analysis



Forecast



Cars and UVs



Two-wheeler



Commercial Vehicles



Tractors



Three-wheelers

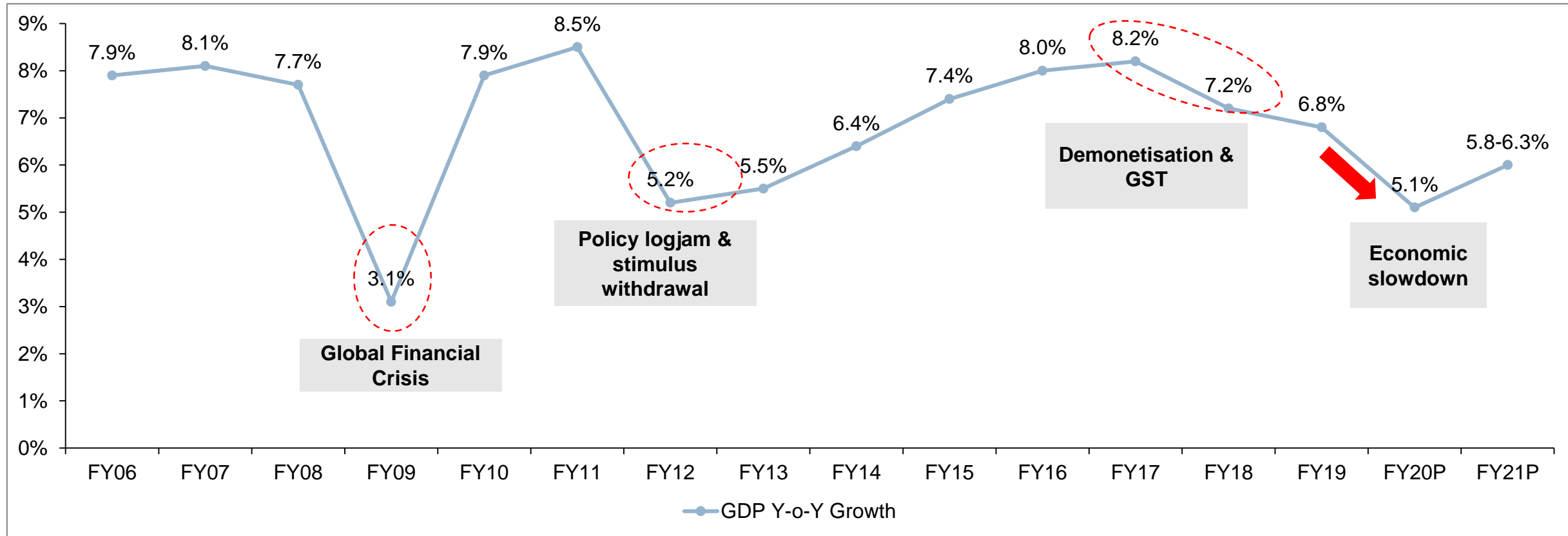


Inventory scenario



Macro-economic Analysis

A fall in GDP growth sets in a vicious cycle of low growth, low tax revenues, and hence, low ability of fiscal policy to support growth

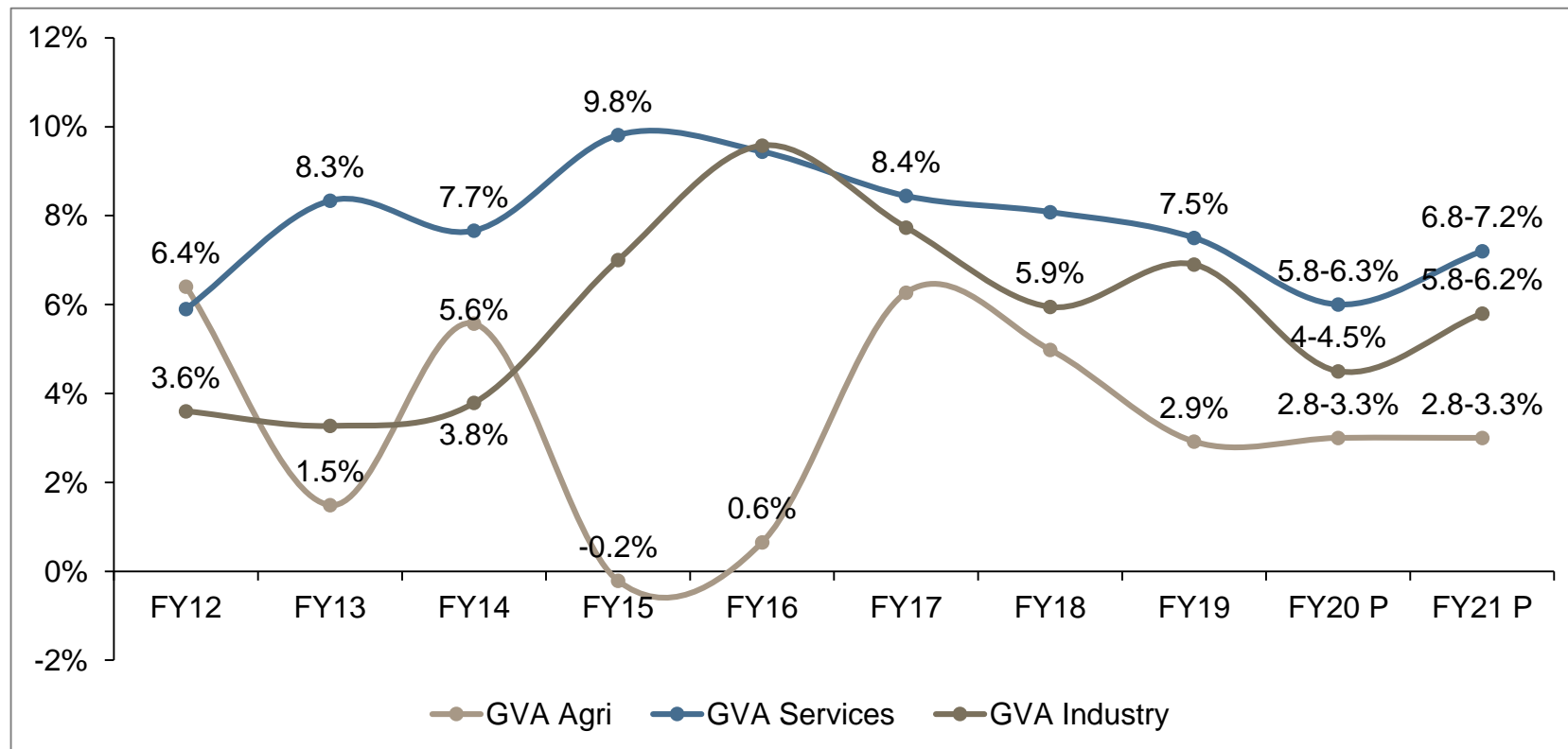


Note: GDP – Gross domestic product; Data on 2011-12 base, P=Projected

Source: Central Statistical Office, MOSPI, CRISIL Research

- Recent data shows worrying growth-inflation dynamics with inflation ballooning and industrial production slipping further
- Recent surveys by the Reserve Bank of India (RBI) show a precipitous drop in business and consumer sentiment and a pick-up in inflation expectations too
- The current slack in the economy and lack of policy space means that economic recovery will be a grind up

GVA Industry expected to see a sharpest decline in FY20

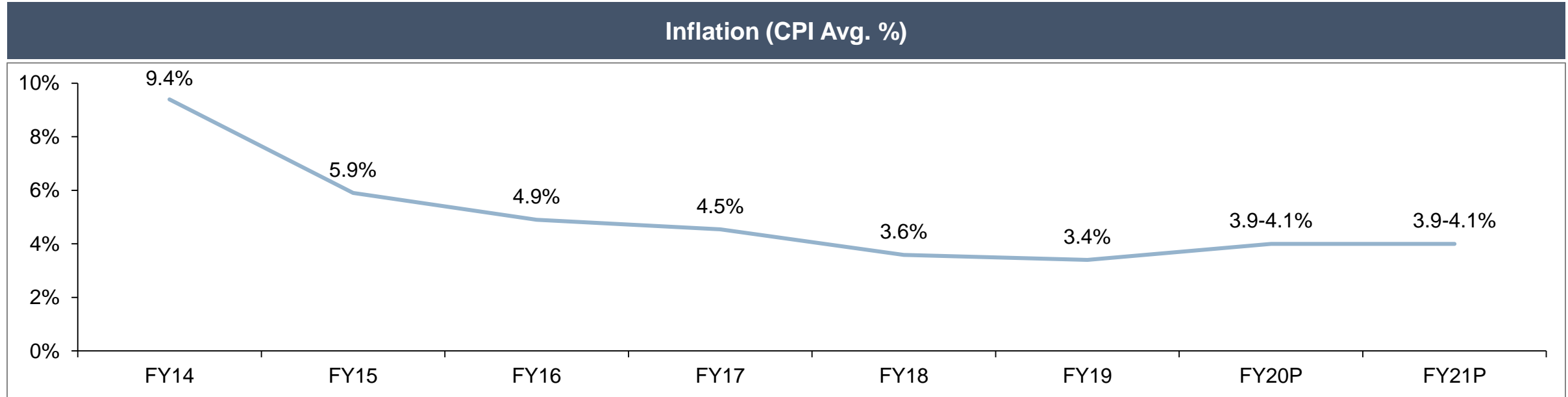


GVA	Year	Q1	Q2	Q3	Q4
GVA Agriculture	FY 19	5.1	4.9	2.8	-0.1
	FY 20	2.0	2.1		
GVA Industry	FY 19	9.8	6.7	7.0	4.2
	FY 20	2.7	0.5		
GVA Services	FY 19	7.1	7.3	7.2	8.4
	FY 20	6.9	6.8		
GVA Total	FY 19	7.7	6.9	6.3	5.7
	FY 20	4.9	4.3		

P=Projected, GVA=Gross Value Added, figures in table represents YoY Growth, data on 2011-12 base
 Source: Central Statistical Office, MOSPI, CRISIL Research

- Much of the slowdown was due to manufacturing, which contracted 1% over an already low 0.6% in Q1
- Construction growth suffered (down to 3.3% in Q2 from 5.7% in Q1) because of extended and heavy monsoon, and slack government capex spending
- Within services, trade, hotels, transport and communications saw a sharp fall in growth
- Agriculture growth at 2% was weak for two reasons: a strong-base effect, and delayed start to monsoon along with heavy and unseasonal rains hurting kharif production

CPI inflation rose to a 40-month high of 5.5% in November on the back of double digit food inflation



YoY (%)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FY 19	4.6	4.9	4.9	4.2	3.7	3.7	3.4	2.3	2.1	2.0	2.6	2.9
FY 20	2.9	3.0	3.2	3.1	3.2	4.0	4.6	5.5				

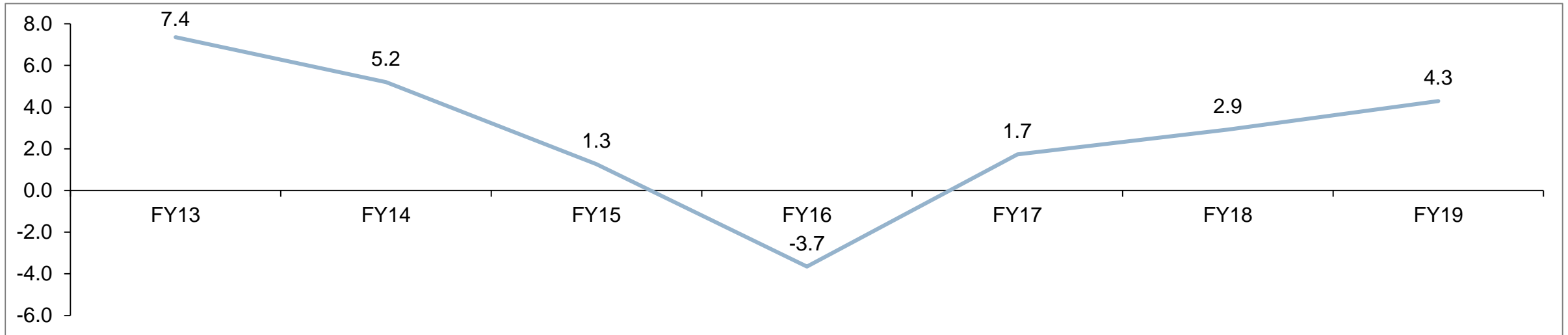
Note: CPI – Consumer price index, P=Projected

Source: Ministry of Statistics and Programme Implementation (MoSPI), CRISIL Research

- Food inflation rose sharply for the third consecutive month, from 7.8% in October to 10% as onion and garlic prices soared over 144%
- Fuel and light inflation came in negative (-1.9%) for the fifth consecutive month. Petrol and diesel inflation measured -3.6%
- The anticipated rise in telecom prices could be another inflationary pressure point that will last at least a year due to the low base effect
- Core inflation (headline minus food and fuel) continued to remain soft, as industrial production and demand continued to slump
- Mean inflation is expected to continue to breach the RBI's medium-term target of 4% over the next few months

WPI remains low with lower core inflation in November and fuel inflation in negative territory

Inflation (WPI Avg. %)



YoY (%)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
FY 19	3.6	4.8	5.7	5.3	4.6	5.2	5.5	4.5	3.5	2.8	2.9	3.1
FY 20	3.2	2.8	2.0	1.2	1.1	0.3	0.2	0.6				

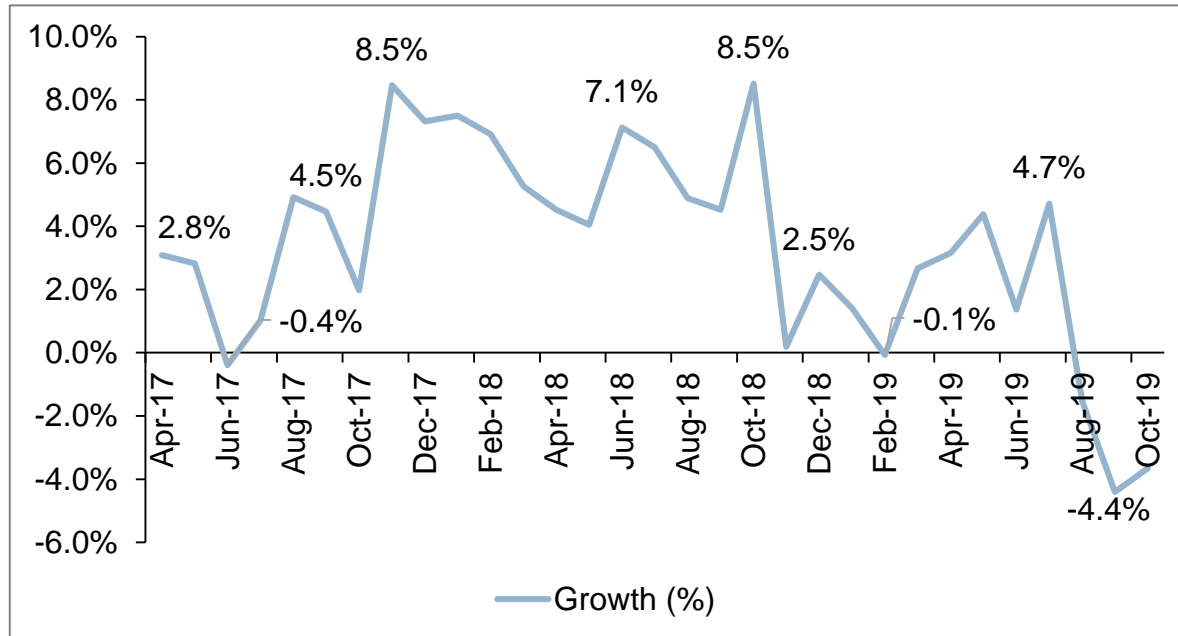
Note: WPI – Wholesale Price Index, P=Projected

Source: Ministry of Statistics and Programme Implementation (MoSPI), CRISIL Research

- The Wholesale Price Index (WPI)-based inflation stood at 0.58% in November, compared with 0.16% in October. The marginal uptick was on account of higher food inflation
- Food (primary and manufactured) inflation, rose for the fourth consecutive month – to 9.0% in November from 7.7% in October
- Core inflation moderated for the thirteenth consecutive month, declining to 0.6% in November, from 0.67% in October
- At -7.3% in November (compared with -8.3% in October), *fuel and power* inflation continued its journey in the negative territory for the sixth consecutive month

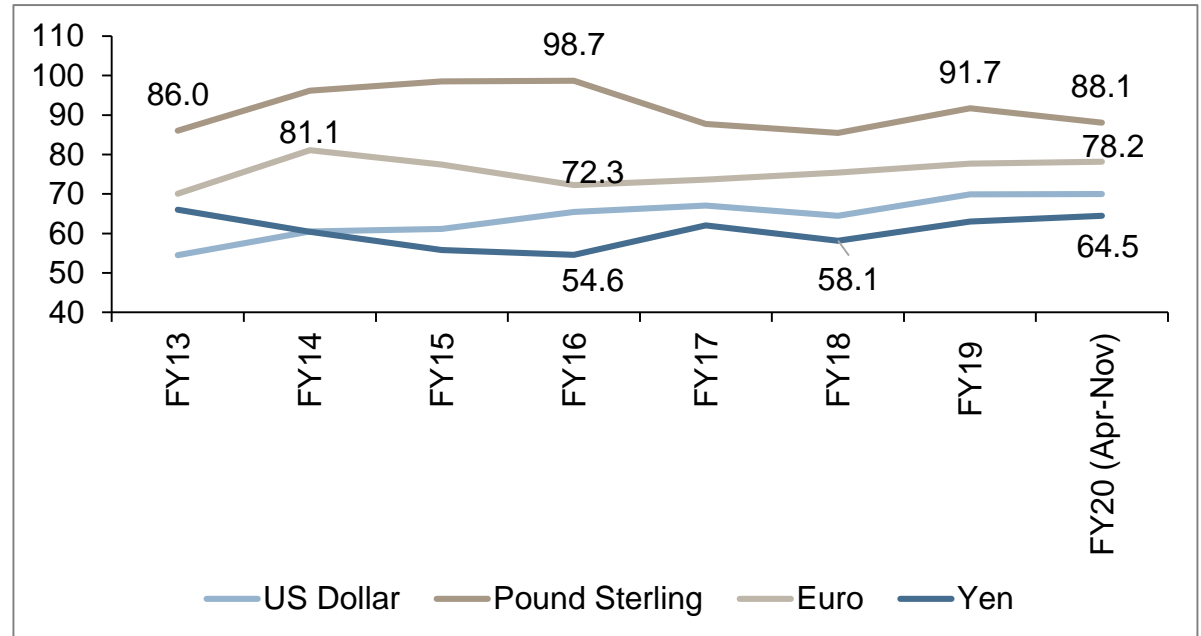
Industrial output contracted for the third consecutive month in October falling by 3.8%

IIP



Source: MoSPI, CRISIL Research

Exchange Rates

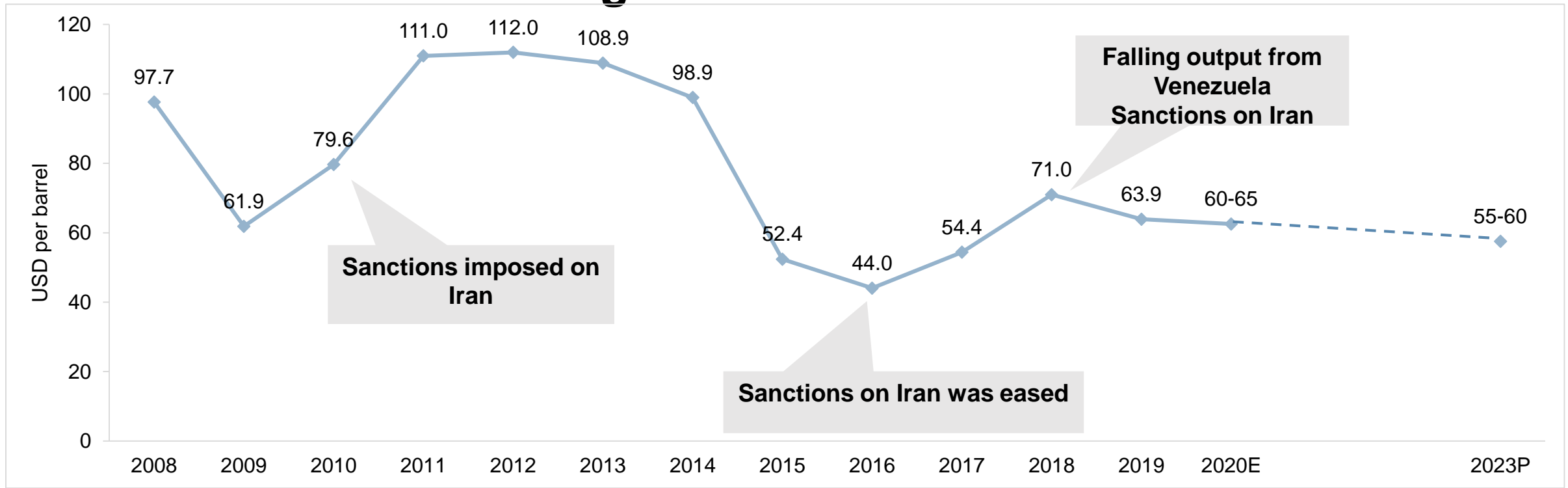


Source: RBI, FBIL, CRISIL Research

Note – For Yen rupees value are per 100 Yen; Nos. mentioned are average exchange rates

- The decline was spread across sectors, with electricity production witnessing the sharpest fall, followed by mining and manufacturing
- As per the use-based classification, capital goods and consumer durables production fell the most, suggesting both business and consumer sentiments remained weak in October
- The core infrastructure segment also suffered, mainly driven by a drop in output in the energy and cement sectors
- The British pound gained 1.9% over the dollar, as traders bet on the Conservative Party securing a majority in the December elections, which would facilitate the Brexit deal in the Parliament
- The Japanese yen, another safe haven currency, depreciated 0.7% against the dollar amid the improved risk appetite for higher-yielding EM currencies

Shift to cleaner fuels, EV penetration, slowing GDP growth to restrict crude oil demand growth



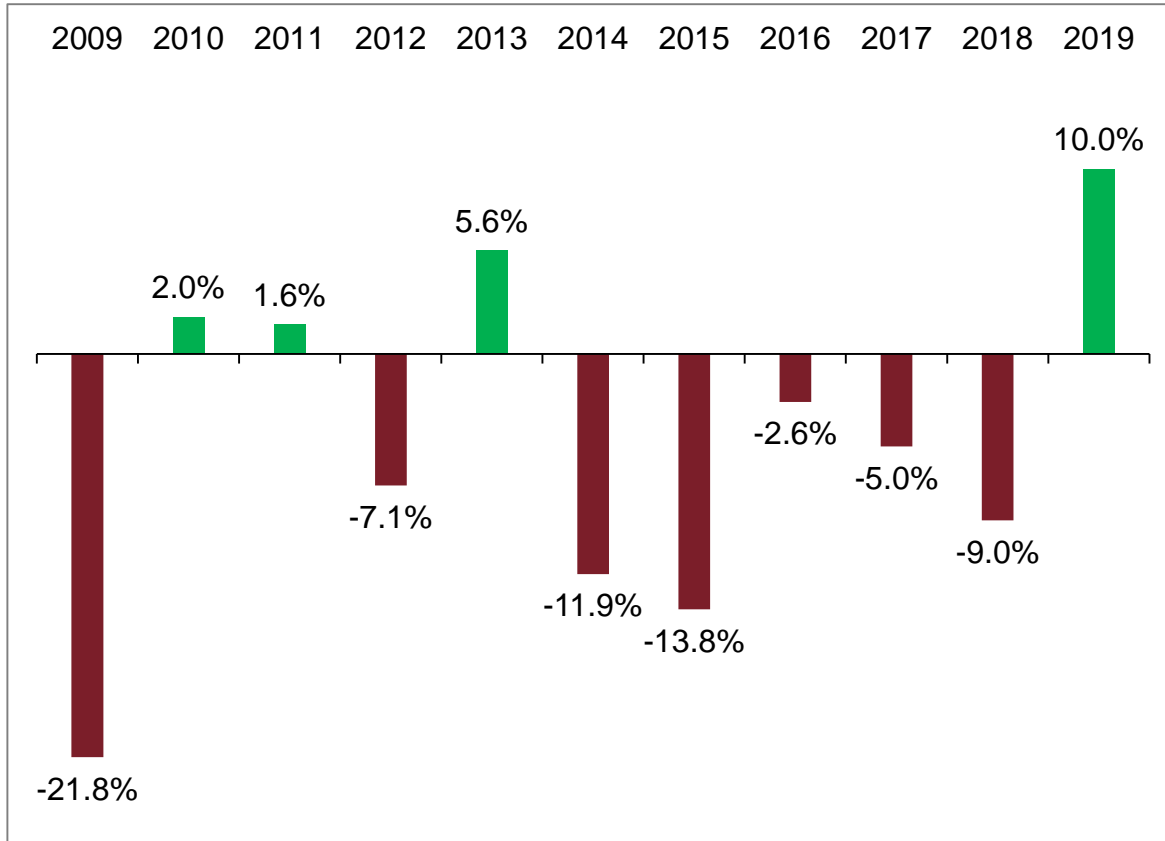
NOTE: Years represents calendar year, E=Estimate, P=Projected

Source: CRISIL Research

- The price of crude oil is expected to trend lower in the next 5 years as incremental production from the non-OPEC countries outpaces global demand
- A rise in shale production in the US, slowdown in demand from China, and lower demand from advanced economies (because of improvement in vehicle fuel efficiency) are expected to be significant factors in keeping crude oil price low
- Higher price expectations of the major crude oil supplying countries would result in artificial balancing of the oil market (as demand growth looks sluggish), restricting crude oil prices to below \$50-60 per barrel
- It is thus expected that prices will settle at \$55-60 per barrel in the long term
- While there was a spike in prices immediately following the US airstrike killing the Iranian general, the uptick may not be substantial or long-term due to uninterrupted supply

Uneven rainfall spread led to negative sentiments in fiscal 2020

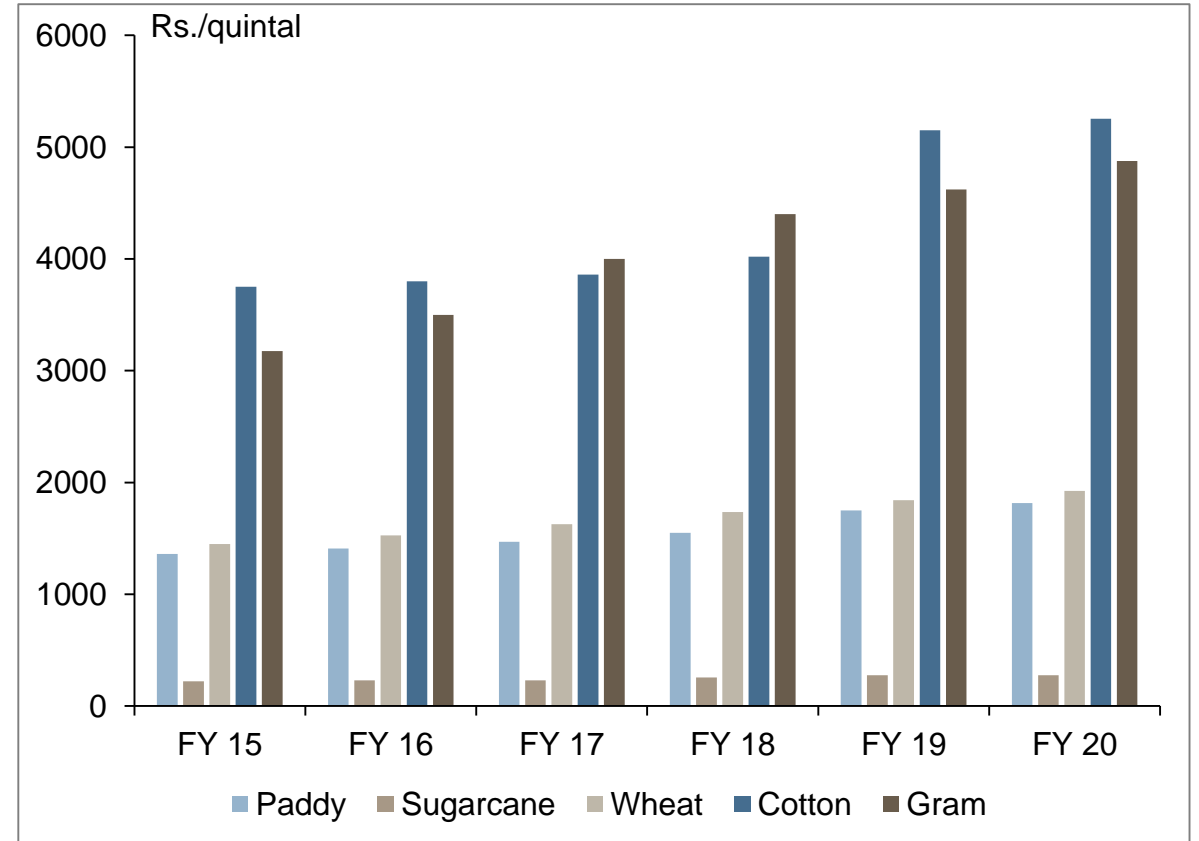
Monsoon deviation from long normal rainfall levels



Note: Years mentioned are calendar years

Source: Indian Meteorological Department, CRISIL Research

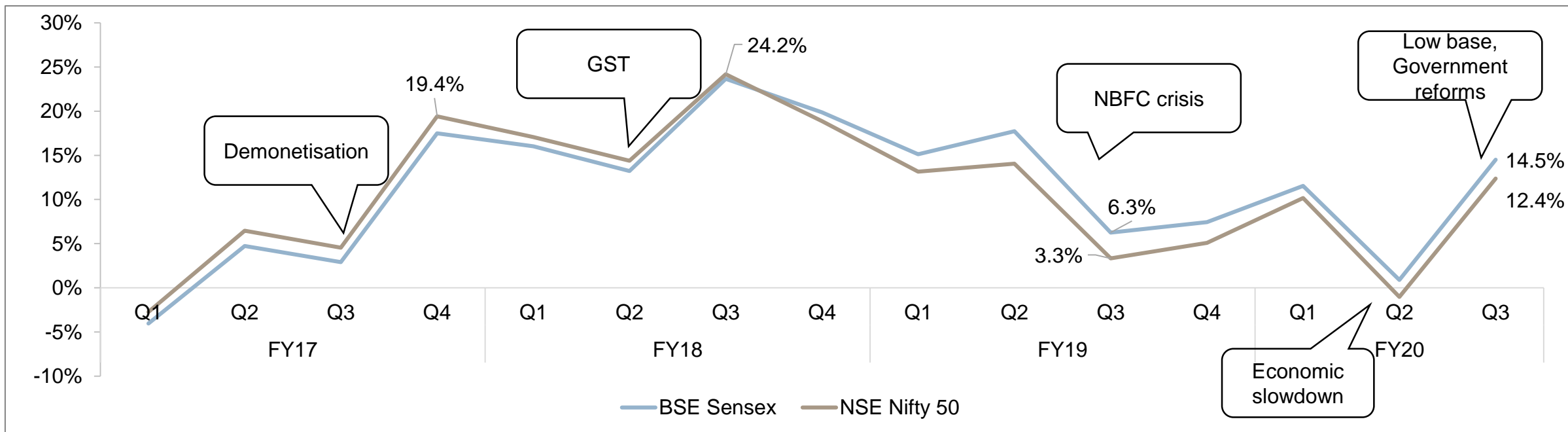
MSP of major crops in the last 5 years



Source: Ministry of Agriculture & Farmers Welfare, CRISIL Research

Sharp upward movement in indices in Q3 FY20

BSE Sensex and NSE Nifty 50



Source: BSE, NSE

Index	Year	Q1	Q2	Q3	Q4
BSE Sensex	FY 19	35,302	37,492	35,568	36,932
NSE Nifty 50	FY 19	10,729.	11,322	10,708	11,082

- Indian equity markets were supported by government reforms for real estate, hopes of rate cut by the central bank, better-than-expected corporate earnings in select sectors and robust foreign portfolio investment
- Banking and metals sector benchmarks soared 7.7% on the corporate earnings of index heavyweights and value-buying



Forecast

Forecasts – Domestic & Exports






















		Domestic						Exports	
		Q4 FY20	Q1 FY21	Q2 FY21	Q3 FY21	FY 20	FY 21	FY 20	FY 21
Passenger vehicles	Cars	(13)-(15)%	(7)-(9)%	15-17%	(1)-(3)%	(20)-(23)%	0-3%	3-7%	3-5%
	UVs and vans	2-4%	7-9%	15-18%	(2)-0%	(2)-1%	4-6%	7-10%	4-6%
Two-wheelers	Motorcycles	(21)-(27)%	(21)-(24)%	(3)-(7)%	6-9%	(16)-(18)%	(2)-2%	8-12%	5-8%
	Scooters	(10)-(15)%	(20)-(23)%	(9)-(13)%	12-15%	(14)-(16)%	1-3%	(7)-(10)%	3-5%
	Mopeds	(26)-(31)%	(15)-(18)%	(5)-(9)%	4-6%	(26)-(29)%	(4)-0%	(20)-(25)%	1-3%
Commercial vehicles	LCV (<3.5T)	(27)-(29)%	(28)-(30)%	(1)-1%	(2)-0%	(15)-(17)%	(1)-(3)%	(25)-(29)%	1-4%
	LCV (3.5-7.5T)	(23)-(25)%	(21)-(23)%	(1)-(3)%	(2)-(4)%	(18)-(20)%	(6)-(8)%	(30)-(35)%	
	MHCV	(54)-(56)%	(37)-(39)%	23-25%	31-33%	(45)-(47)%	10-12%	(62)-(66)%	2-8%
	Buses	(12)-(14)%	(18)-(20)%	13-15%	(9)-(11)%	(1)-(3)%	(2)-0%	(2)-2%	4-7%
Tractors		3-5%	4-6%	(2)-0%	4-6%	(8)-(10)%	4-6%	(14)-(16)%	7-9%
Three-wheelers	Passenger	(13)-(15)%	2-4%	(10)-(12)%	0-2%	(3)-(7)%	1-4%	(9)-(12)%	1-3%
	Goods	(22)-(24)%	(5)-(7)%	4-6%	(2)-0%	(9)-(13)%	0-5%	20-24%	3-6%

Research NOTE: *For tractor exports of fiscal 2019, players such as Action-construction, Captain, IFEL, Kubota and Preet are not included because of unavailability of data
SOURCE: SIAM, CRISIL Research

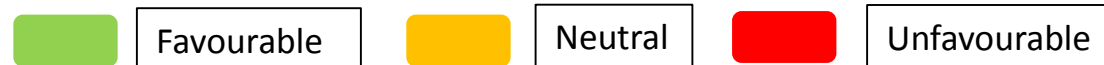


Two-Wheelers

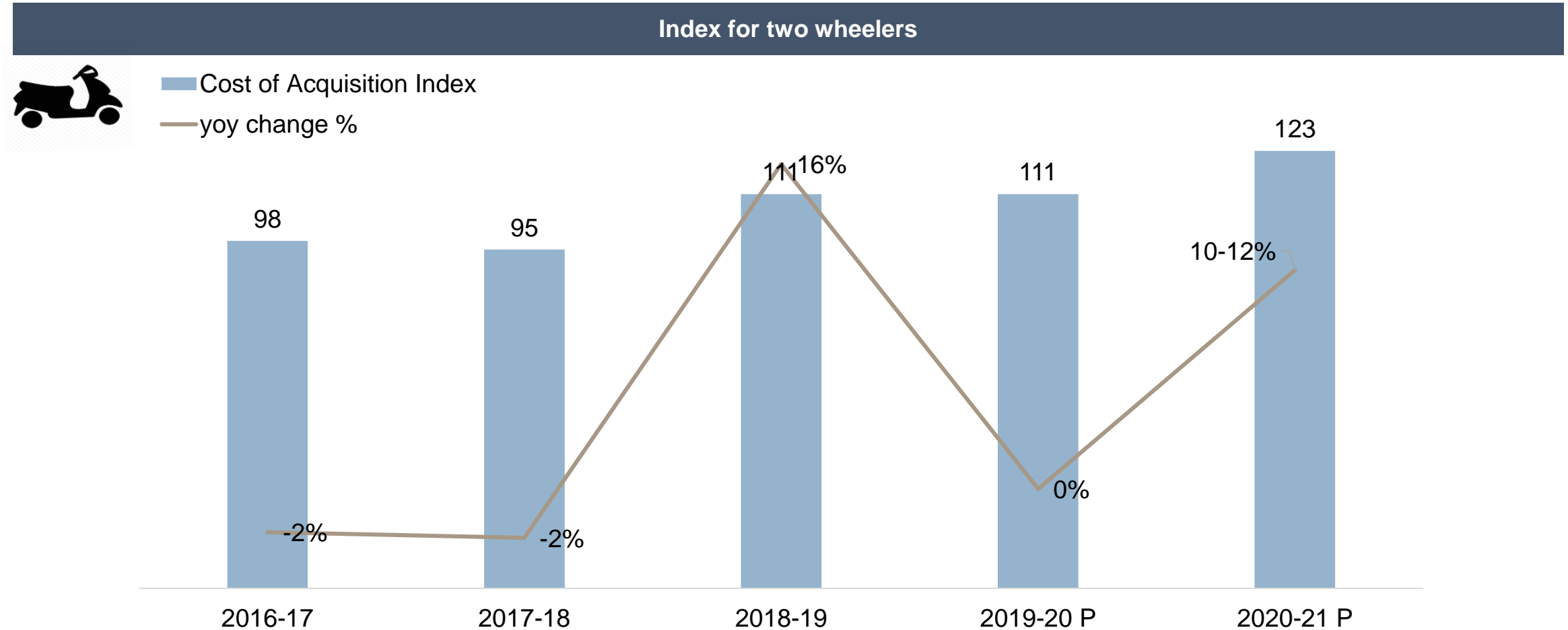
Near term drivers not looking optimistic in FY20

Parameters	Impact		
	FY 19	FY 20P	FY 21P
Demand side variables			
-- Real GDP growth			
-- Rural Roadways Investments (INR bn)			
-- Crop Value index			
Cost of ownership			
-- Petrol Prices			
-- Interest rates			
Supply side variables & financing			
-- Finance Penetration			
-- Regulations/Taxes			

*Fiscal 2021 crop value index assuming normal monsoon
Source: CRISIL Research



Cost of acquisition impacting customer purchase decisions



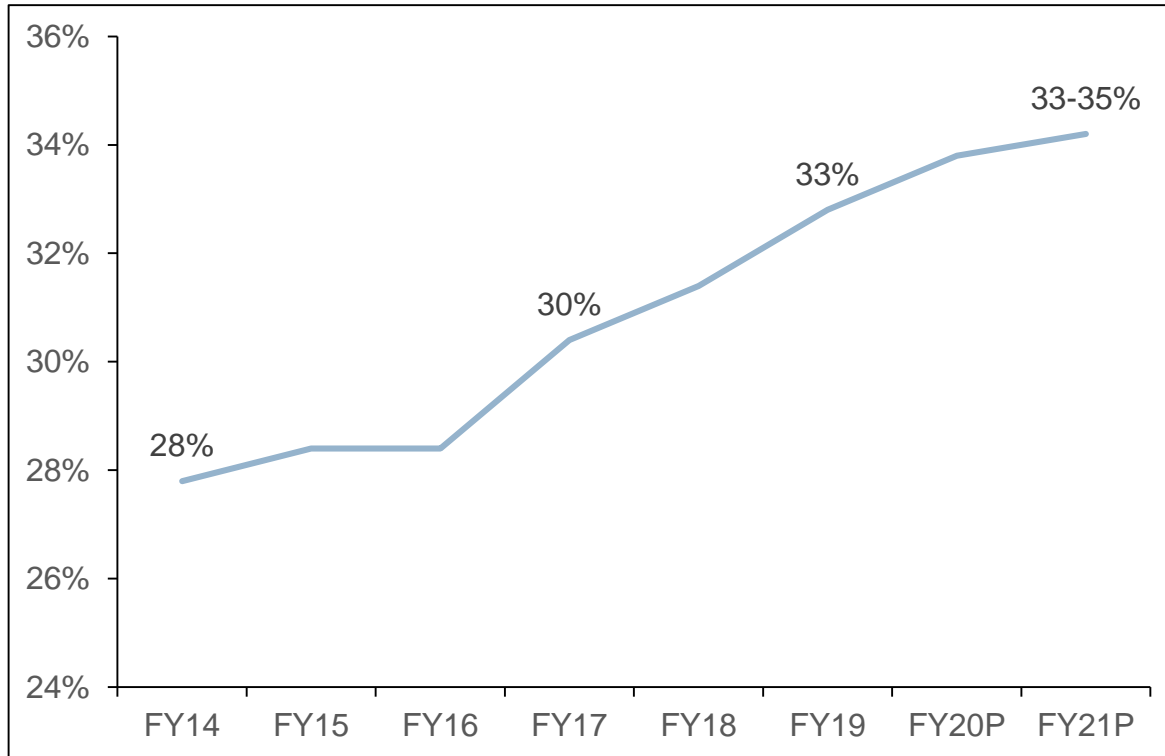
Source: CRISIL Research, , P: Projection

Note: CoA and TCO have been considered for a economy motorcycle

The values have been indexed to 100 as of 2015-16

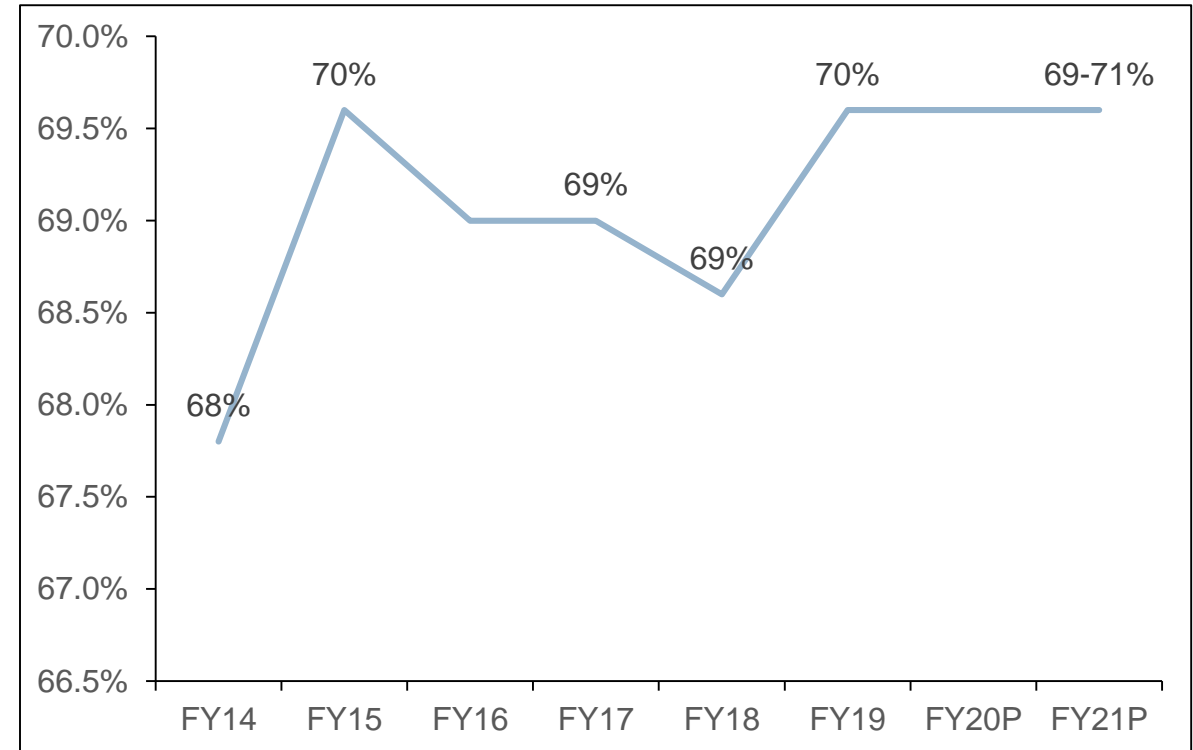
LTV to improve amidst heavy competition for market share; NBFCs to drive financing penetration

Auto Finance Penetration



Source: Experian Credit Bureau, Company Reports, CRISIL Research

Loan-to-Value

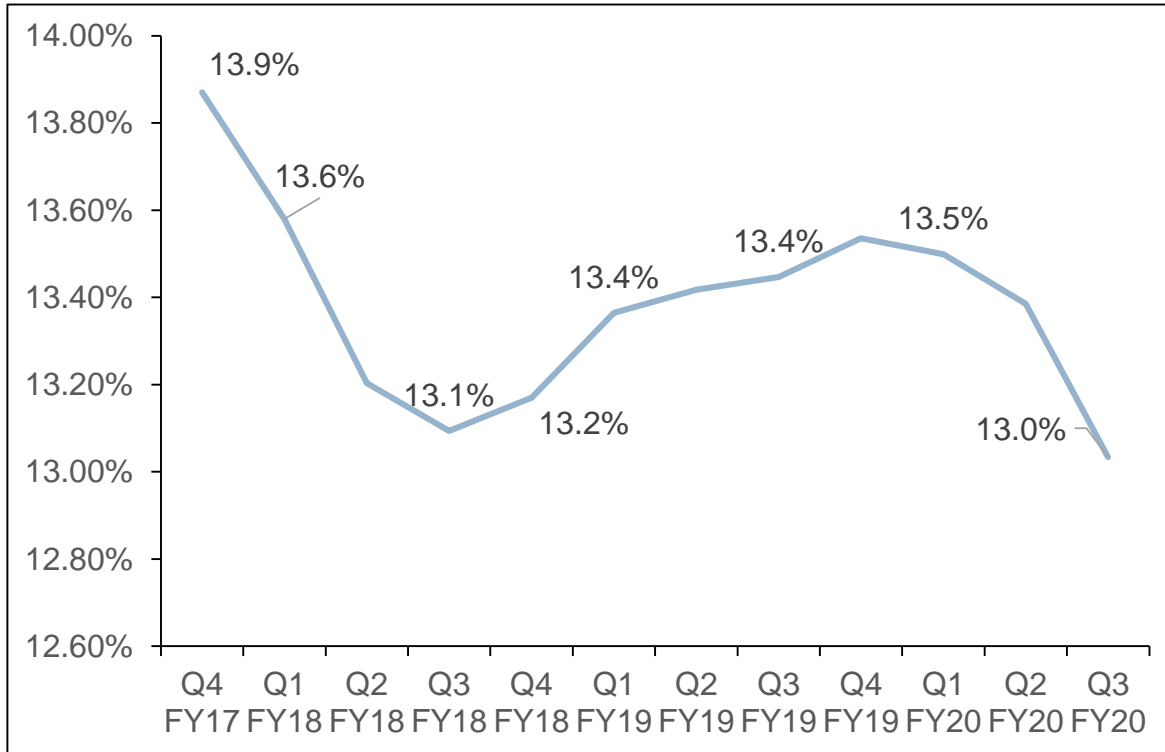


Source: CRISIL Research

- NBFCs are expected to drive penetration by tapping into semi-urban and rural markets while growth in urban markets stagnates
- Strong competition amongst incumbents will push LTVs by 1-2% over long term
- Improving rural demand, better monsoon and more penetration from credit bureaus, this enabling greater transparency, will increase disbursements
- Two-wheeler financing has been becoming the stronghold of NBFCs due to greater ability to tap into regional rural markets

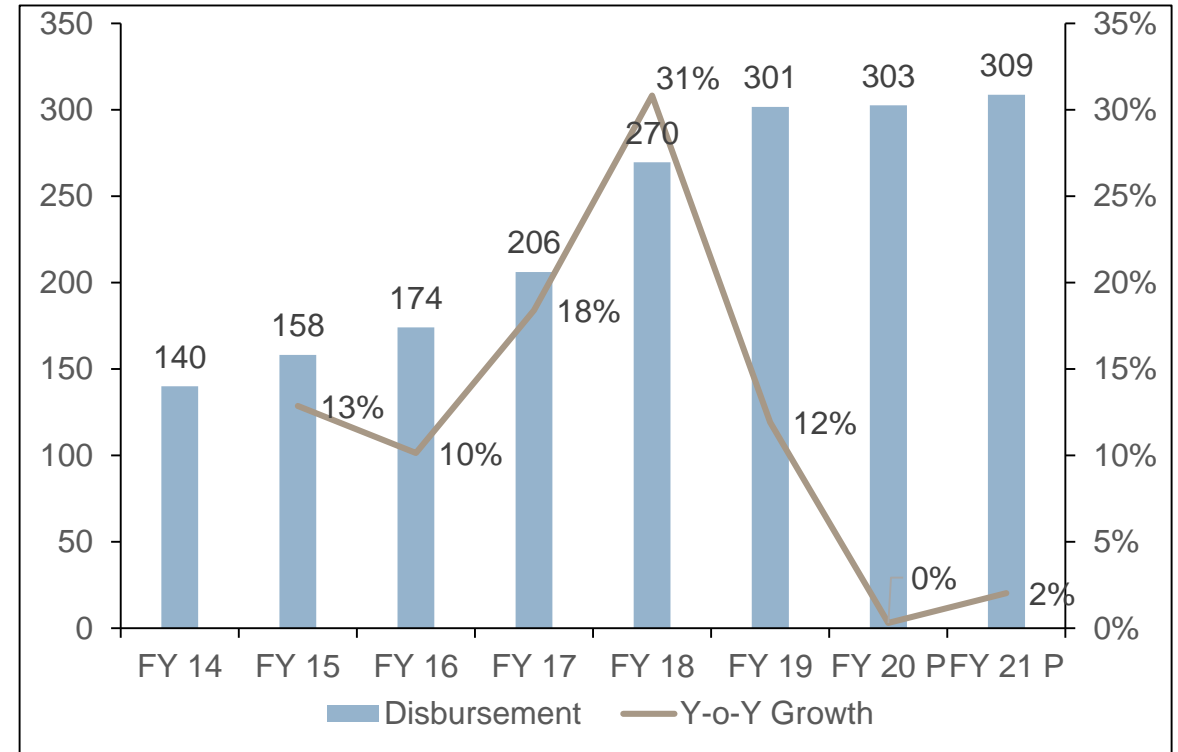
Rising insurance costs, fuel prices, along with liquidity crunch affected financing growth in fiscal 2019

Interest Rates



NOTE - Interest rates are an average of interest rates charged by Banks
Source – CRISIL Research

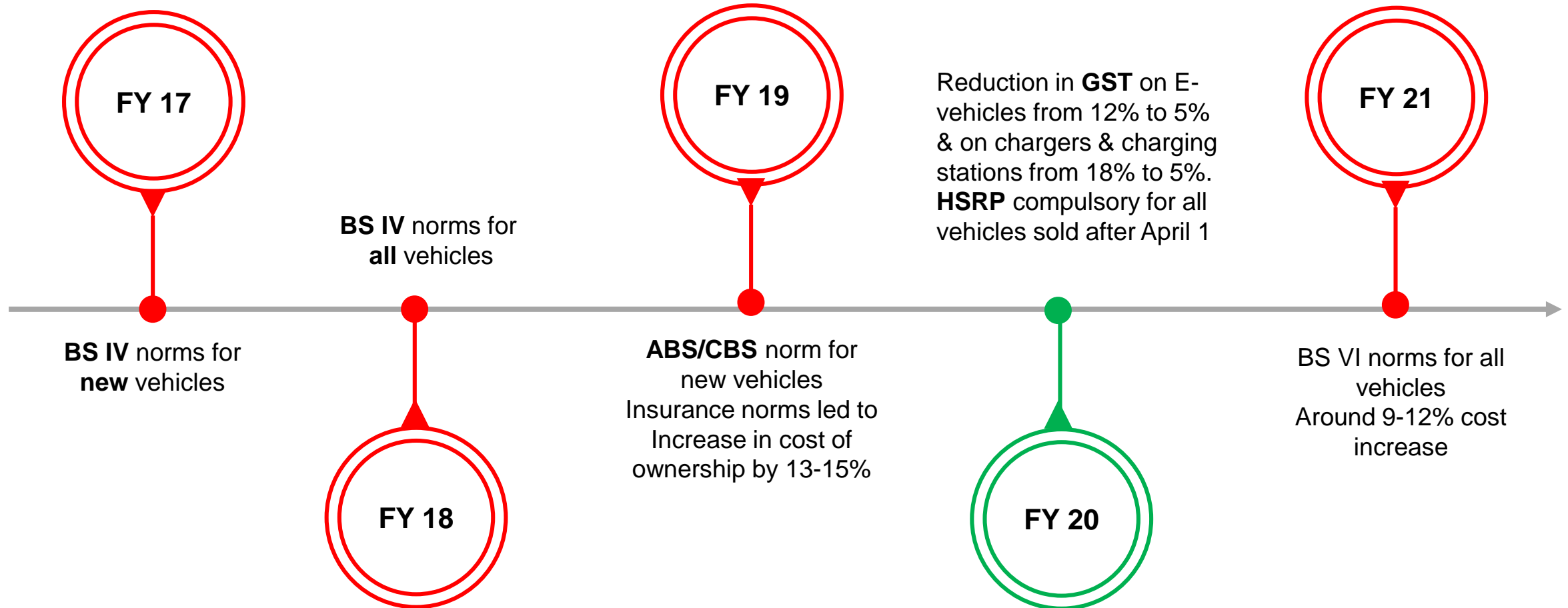
Two-Wheeler Disbursements



Source: Company Reports, CRISIL Research

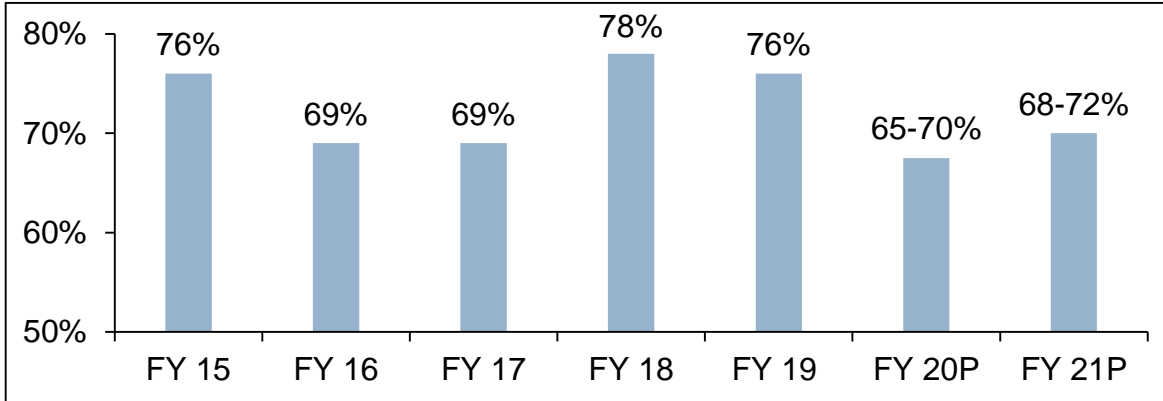
- Disbursement growth is expected to slow down over the next two fiscals, majorly affected by rising prices after BSVI norms and addition of ABS/CBS
- Average interest rate by major banks increased by 35-40 bps in FY19 increasing the cost of vehicle maintenance

Regulations timeline and price impact



Utilisation rates to decline in next two fiscals in comparison to FY19

Utilization rates decreased in fiscal 19



Source: CRISIL Research

Expected capacity additions

Player	Location	Capacity million units	Investment	Commissioning
Hero Motocorp	Chittoor	0.6	Rs. 16 billion	Dec 19
Royal Enfield	Vallam Vadagal, Orgadam, Thiruvottiyur*		Rs. 5 billion	2021
HMSI	Gujarat	0.6	Rs. 6.3 billion	2020-21

*RE signed a pact with Tamil Nadu Govt to invest and expand its production facilities

Source: Industry, CRISIL Research

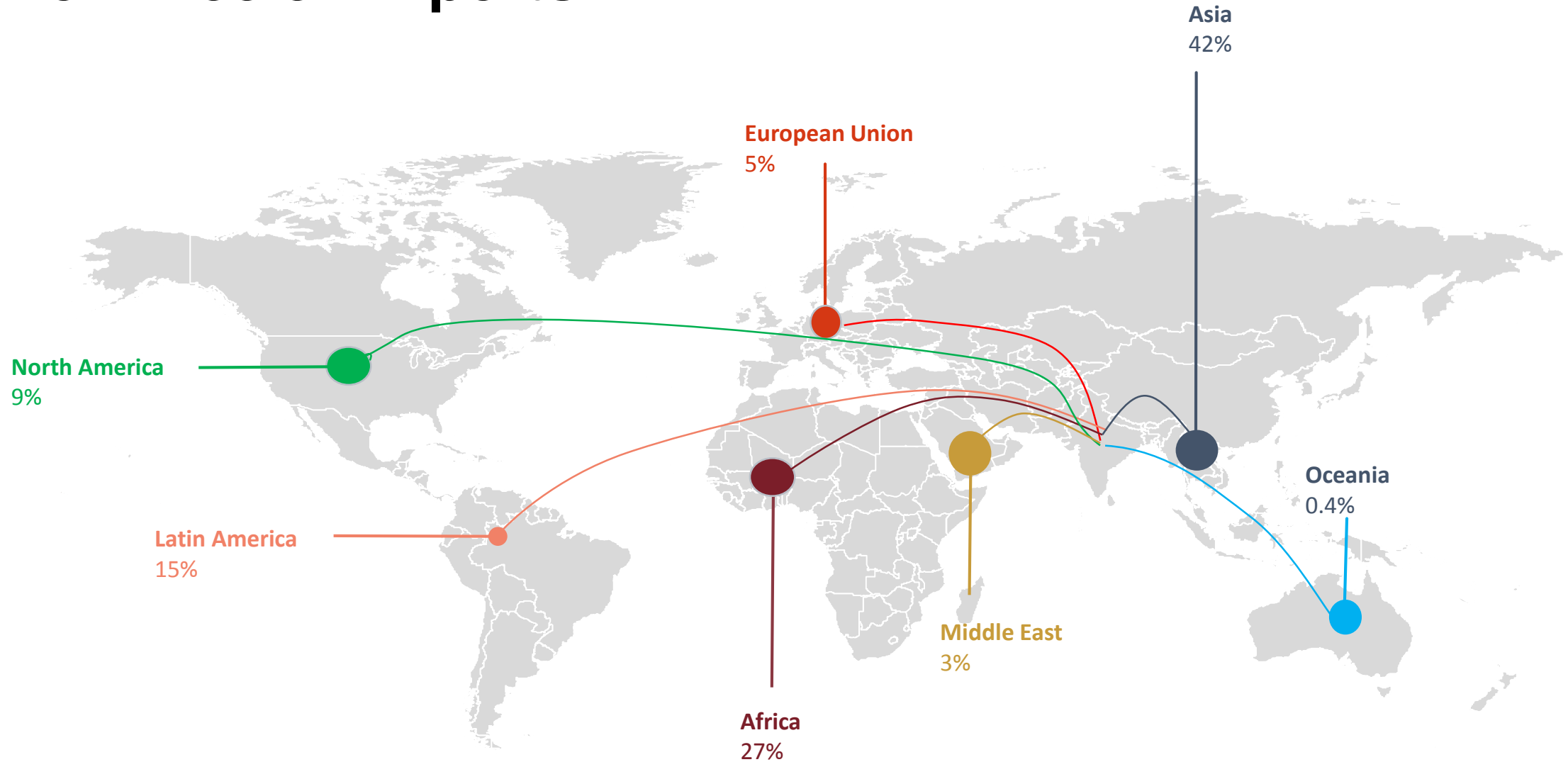
Improved demand to help boost utilization rates

Player	Effective Capacity estimate in mn (as on 31st Mar 2019)	Production (2018-19) (in mn)	Capacity utilization (%)
Hero Motocorp	11.0	7.83	71%
Bajaj Auto	5.4	4.23	78%
HMSI	6.4	5.9	92%
TVS Motor Company	3.9	3.7	95%
India Yamaha Motors	1.6	1.07	67%
Suzuki Motors	1.1	0.7	64%
Royal Enfield	0.95	0.84	88%
Piaggio Vehicles	0.3	0.09	30%
Other Players	1.55	0.01	0.6%
Industry Total	32.2	24.4	76%

Note : Capacity utilization estimates of Bajaj Auto and TVS Motor Co Ltd exclude three-wheelers

Source: CRISIL Research

Two-Wheeler Exports

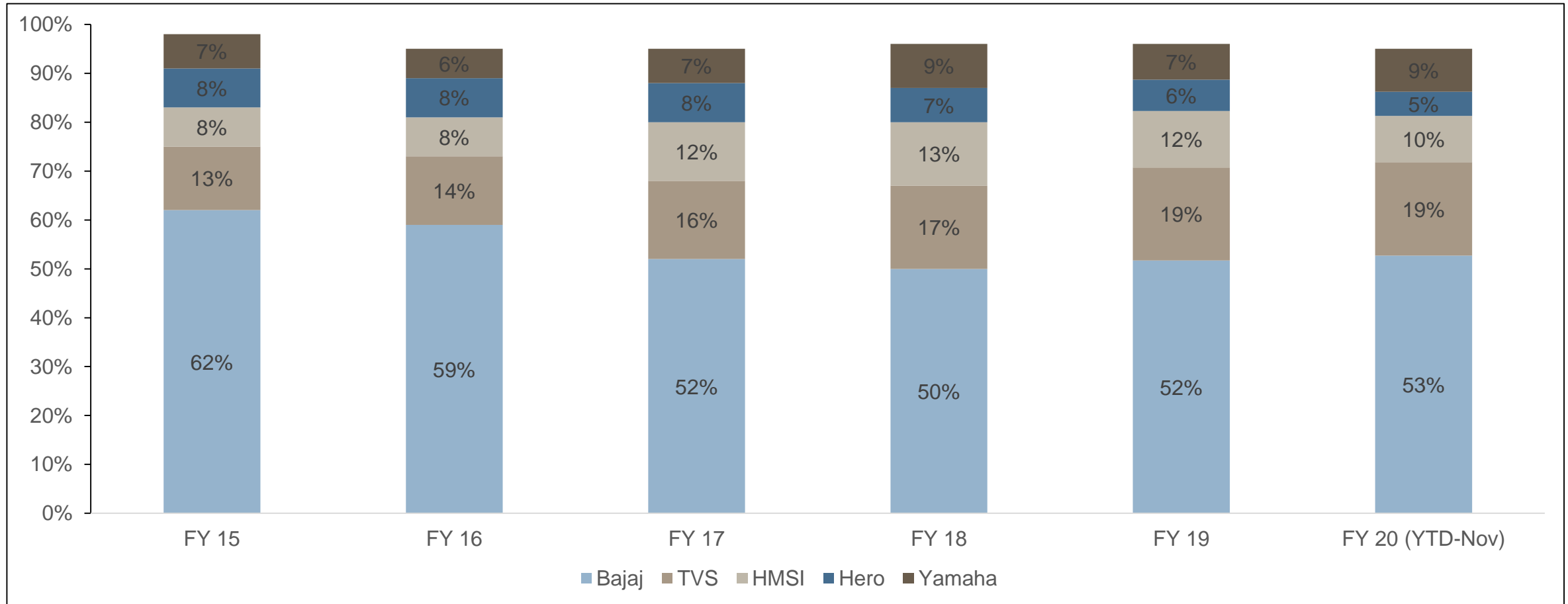


Note: : Represents FY19 exports

Source: DGFT, CRISIL Research

Scooter sales help HMSI / TVS gain market share

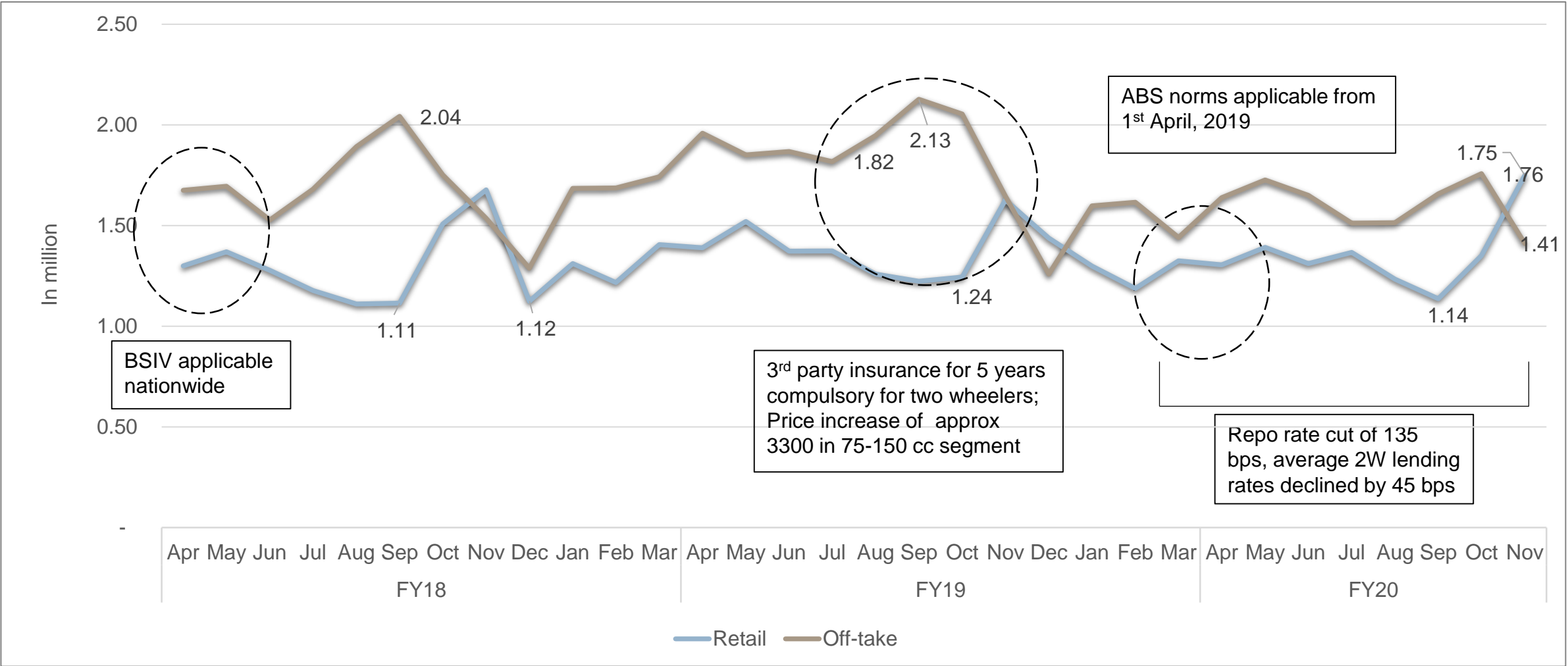
Bajaj dominates the export segment



Note: Others include Suzuki, Royal Enfield, Mahindra, Piaggio, Harley Davidson etc

Source: SIAM, CRISIL Research

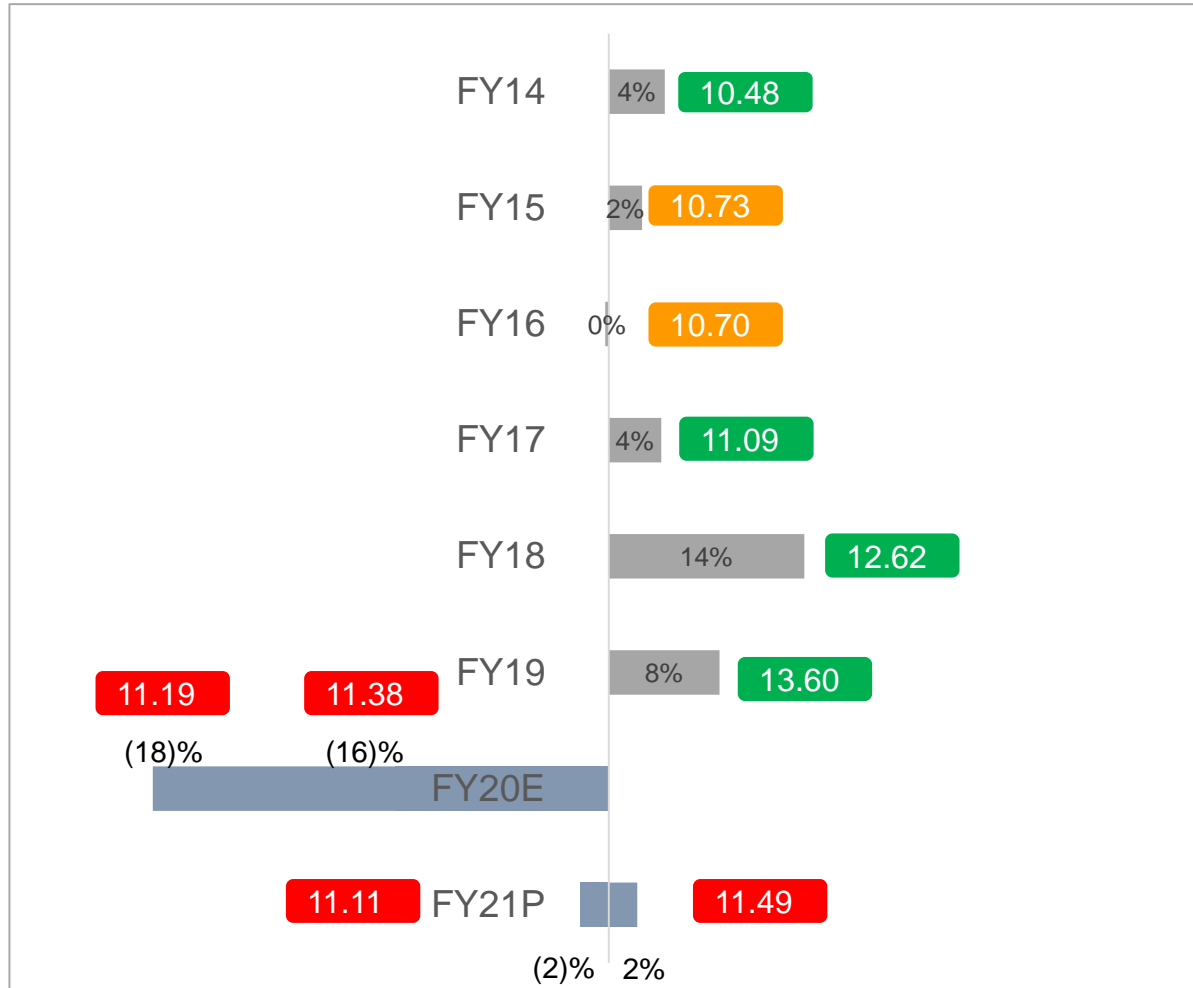
Retail higher than off-take



Source – Vahan, SIAM, CRISIL Research

Domestic sales - Motorcycles

Annual trend



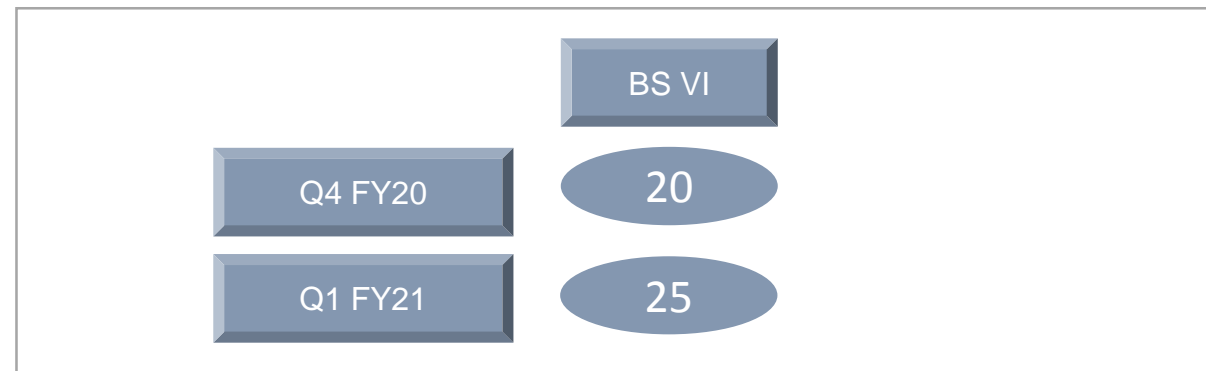
NOTE: While forecasting, impact of budgetary announcement is not considered

NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in million

Quarterly trend

Period		Volume (mn)	YoY Growth	QoQ Growth
FY19	Q4	3.06	(6)%	(4)%
	Q1	3.33	(9)%	9%
FY20E	Q2	2.92	(22)%	(13)%
	Q3	2.71	(15)%	(7)%
	Q4	2.24-2.42	(21)-(27)%	(11)-(17)%
FY21P	Q1	2.54-2.64	(21)-(24)%	9-13%
	Q2	2.72-2.83	(3)-(7)%	7-8%
	Q3	2.88-2.96	6-9%	4-6%

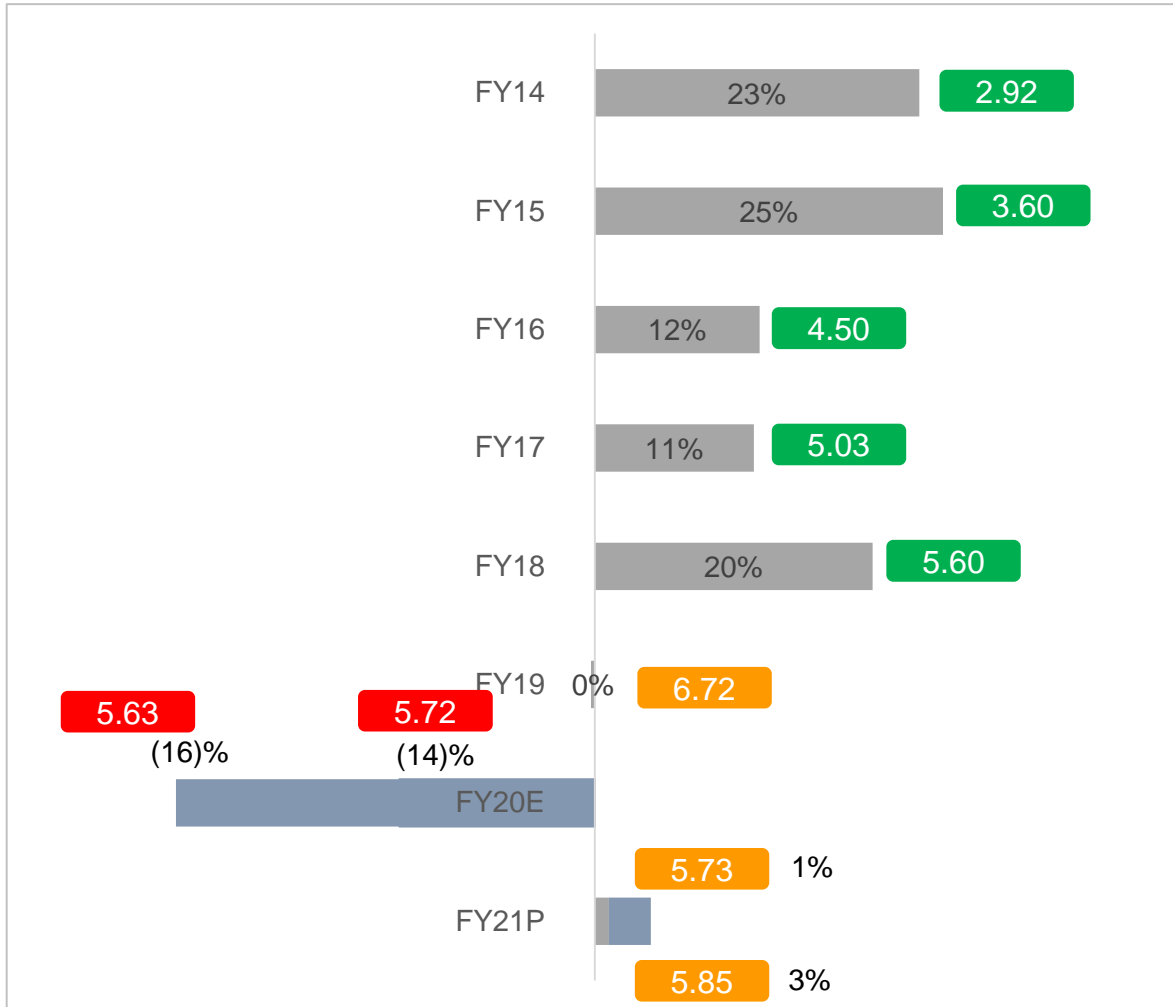
Inventory assumption



NOTE: Inventory calculated using sales of last 12 months. Represents end of quarter inventory

Domestic sales - Scooters

Annual trend



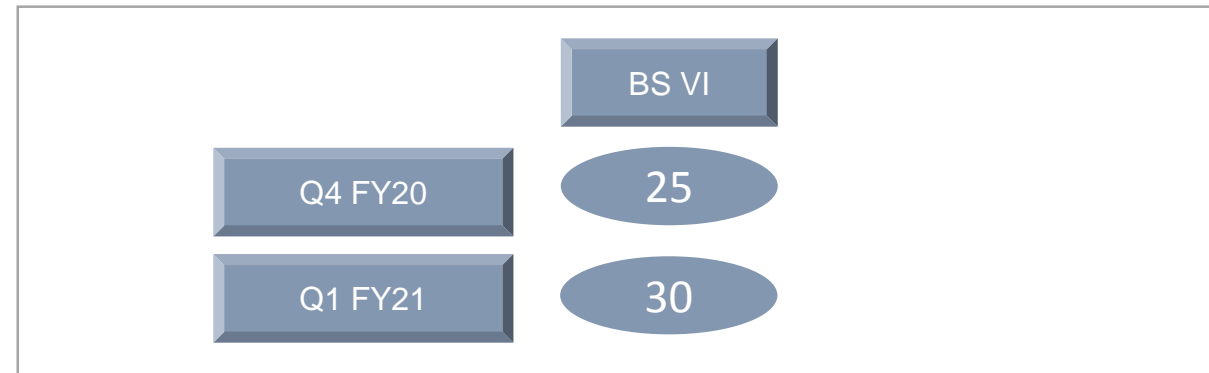
NOTE: While forecasting, impact of budgetary announcement is not considered

NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in million

Quarterly trend

Period	Volume (mn)	YoY Growth	QoQ Growth	
FY19	Q4	1.38	(16)%	(12)%
FY20E	Q1	1.51	(17)%	10%
	Q2	1.60	(17)%	6%
	Q3	1.35	(14)%	(16)%
	Q4	1.17-1.24	(10)-(15)%	(8)-(13)%
FY21P	Q1	1.17-1.21	(20)-(23)%	(2)-0%
	Q2	1.39-1.46	(9)-(13)%	19-21%
	Q3	1.51-1.55	12-15%	7-9%

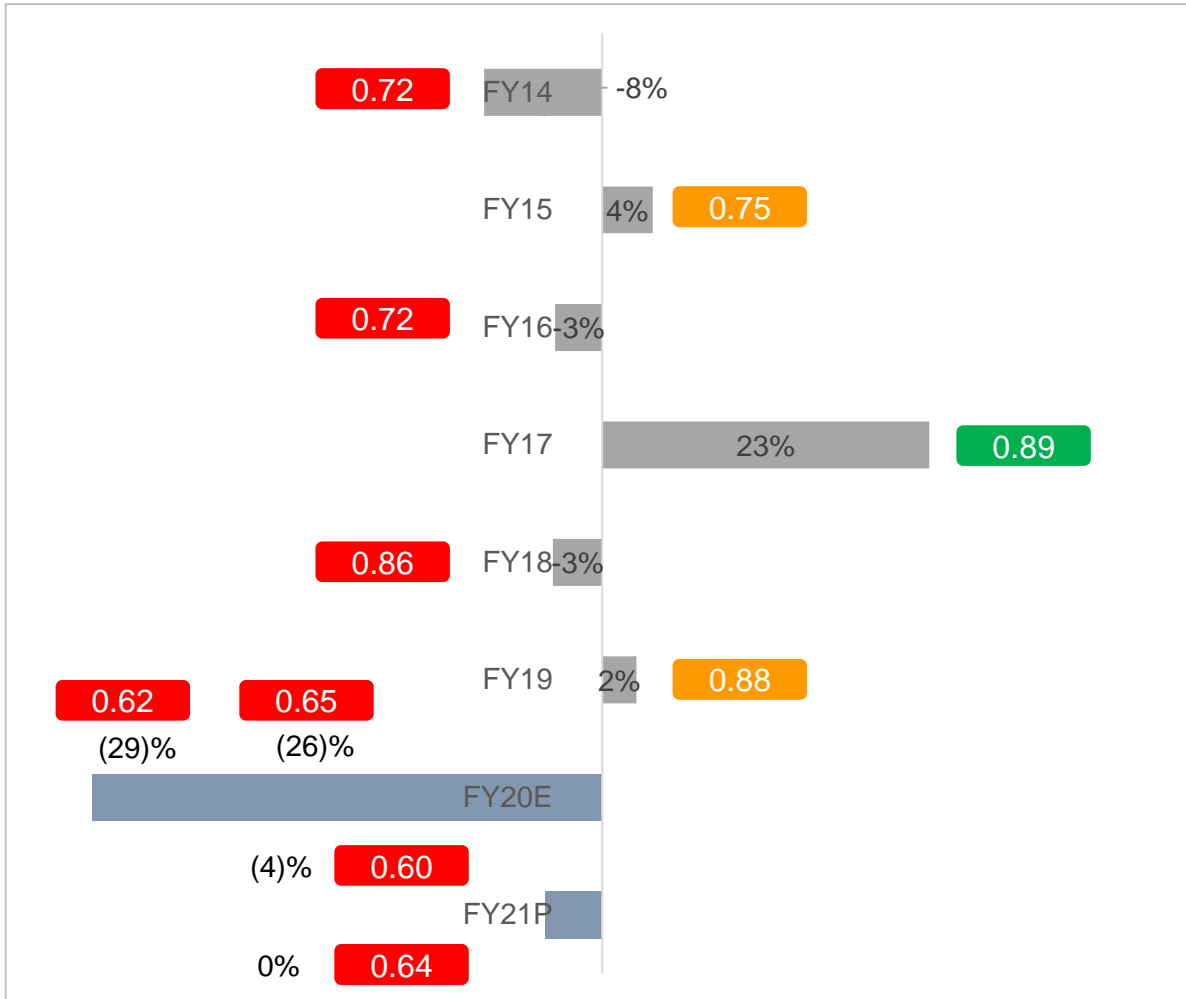
Inventory assumption



NOTE: Inventory calculated using sales of last 12 months. Represents end of quarter inventory

Domestic sales - Mopeds

Annual trend



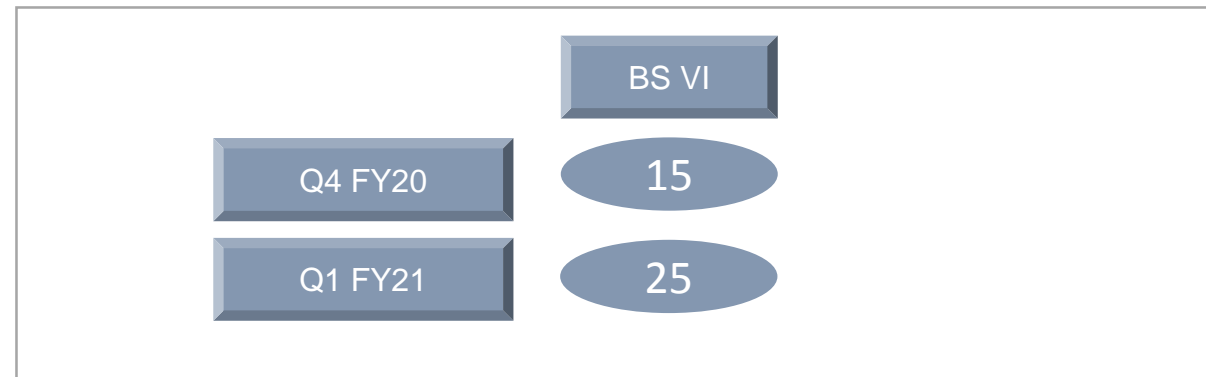
NOTE: While forecasting, impact of budgetary announcement is not considered

NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in million

Quarterly trend

Period	Volume (mn)	YoY Growth	QoQ Growth	
FY19	Q4	0.22	(4)%	1%
FY20E	Q1	0.17	(19)%	(23)%
	Q2	0.16	(31)%	(2)%
	Q3	0.15	(29)%	(7)%
	Q4	0.15-0.16	(26)-(31)%	(1)-6%
FY21P	Q1	0.14-0.15	(15)-(18)%	(9)-(12)%
	Q2	0.15-0.16	(5)-(9)%	7-9%%
	Q3	0.16-0.17	4-6%	4-7%

Inventory assumption


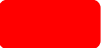



























NOTE: Inventory calculated using sales of last 12 months.
Represents end of quarter inventory

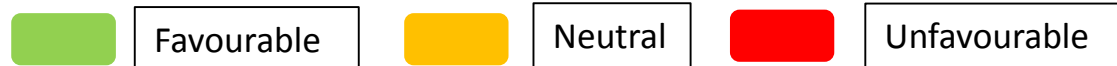


Cars and UV

Near term drivers not looking optimistic in FY20

Parameters	Impact		
	FY 19	FY 20P	FY 21P
Demand side variables			
-- Real GDP growth			
-- CPI Growth			
-- Crop Value index			
Cost of ownership			
-- Petrol Prices			
-- Diesel rates			
-- Car finance rates			
Supply side variables & financing			
-- Finance Penetration			
-- Model launches			
-- Regulations/Taxes			

*Fiscal 2021 crop value index assuming normal monsoon
Source: CRISIL Research



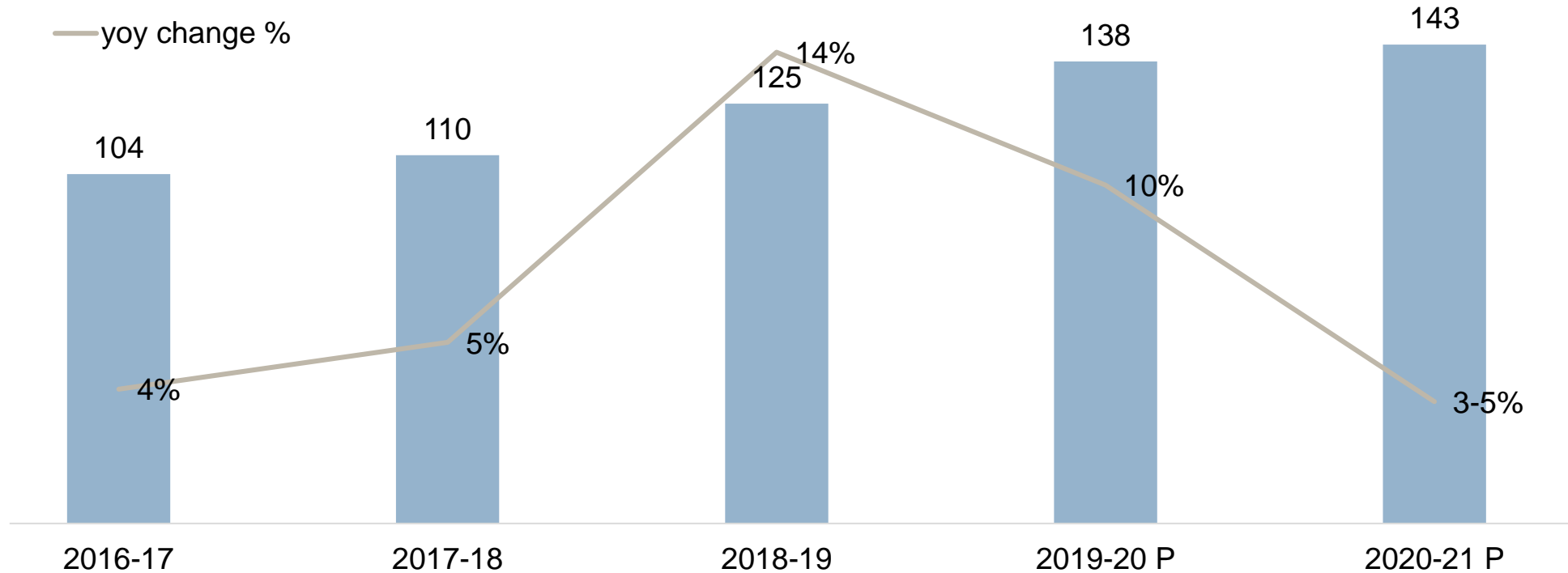
Cost of acquisition impacting customer purchase decisions

Index for Cars and UVs acquisition cost



Cost of Acquisition Index

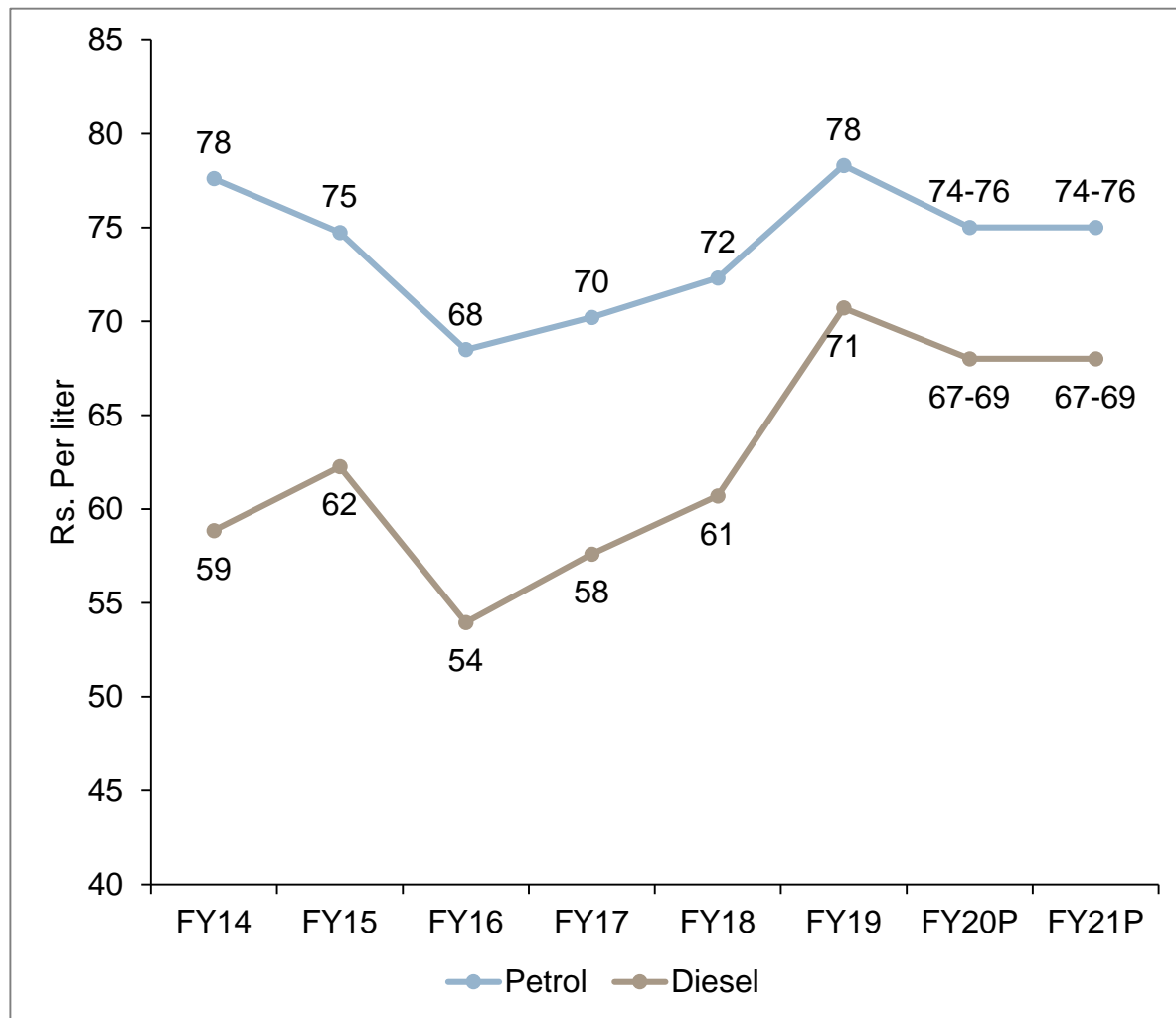
yoy change %



Source: CRISIL Research, , P: Projection
Note: CoA has been considered for a mini vehicle
The values have been indexed to 100 as of 2015-16

Industry to witness more UV launches

Fuel prices significantly higher than past 5 year average



Source: CRISIL Research

Major Upcoming Launches and their contribution

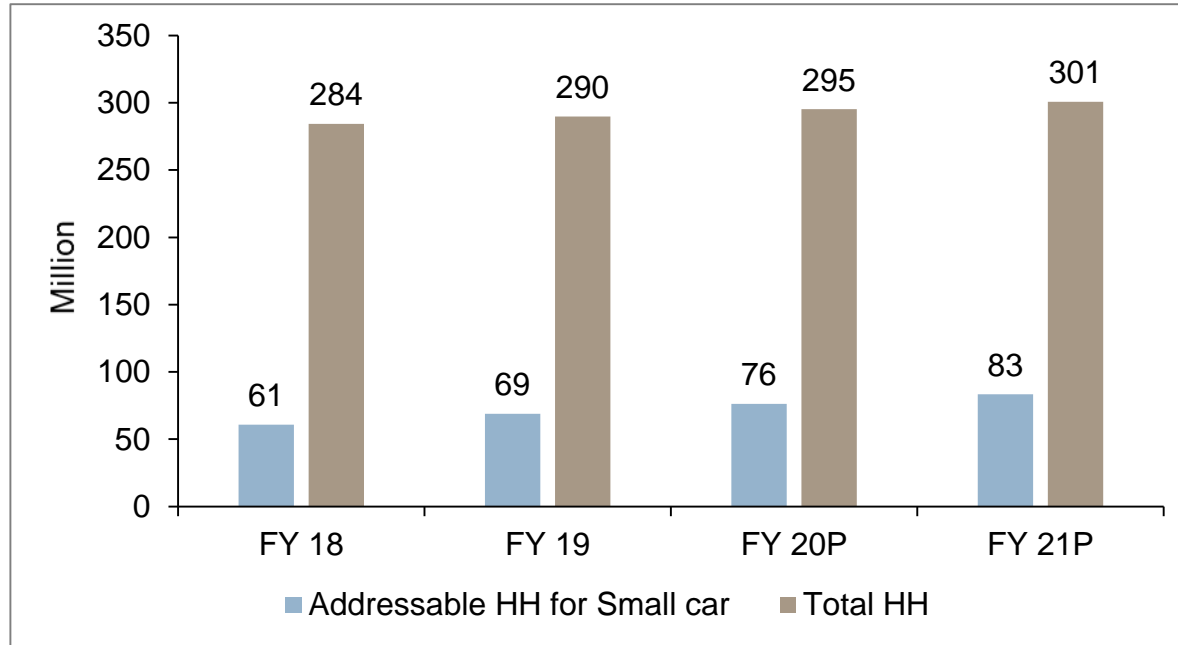
Month	Company	Model	Segment
January	Hyundai	Aura	Small Cars
	Tata	Nexon EV	UV
	Tata	Altroz	UV
	MG	ZS EV	UV
February	Toyota	Vellfire	Small Cars
	Kia	Grand Carnival	UV
	Maruti Suzuki	XL5	UV
March	Nissan	Note e Power	UV
	Hyundai	Santa Fe	UV

- Multiple new launches to aid growth in UV segment
- The rising preference for compact UVs will continue to put pressure on large-car sales, due to continued launch of comparatively higher new launches in these segments

Source: Industry, CRISIL Research

Better income prospects and paced road development expected to help better demand

Expansion in Addressable market at faster pace

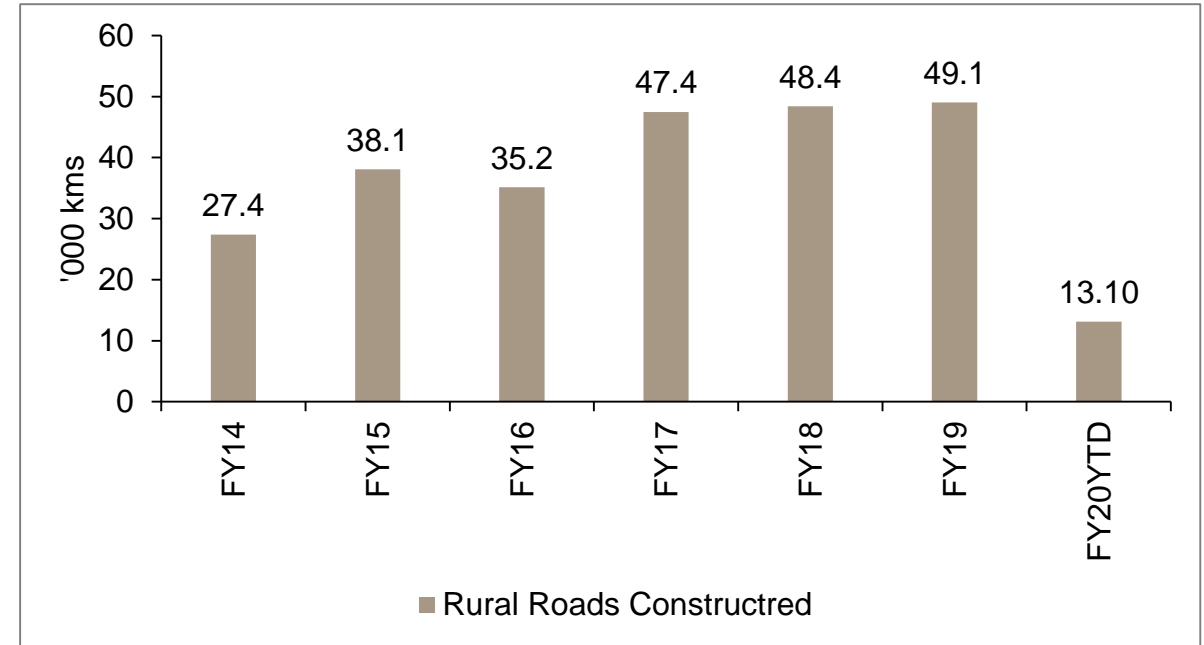


Source: CRISIL Research

Note – (1) In order to calculate addressable households, we have considered ability to purchase entry-level petrol car.

(2) The addressable market is estimated on the basis of cost of owning a vehicle at 30% of household income.

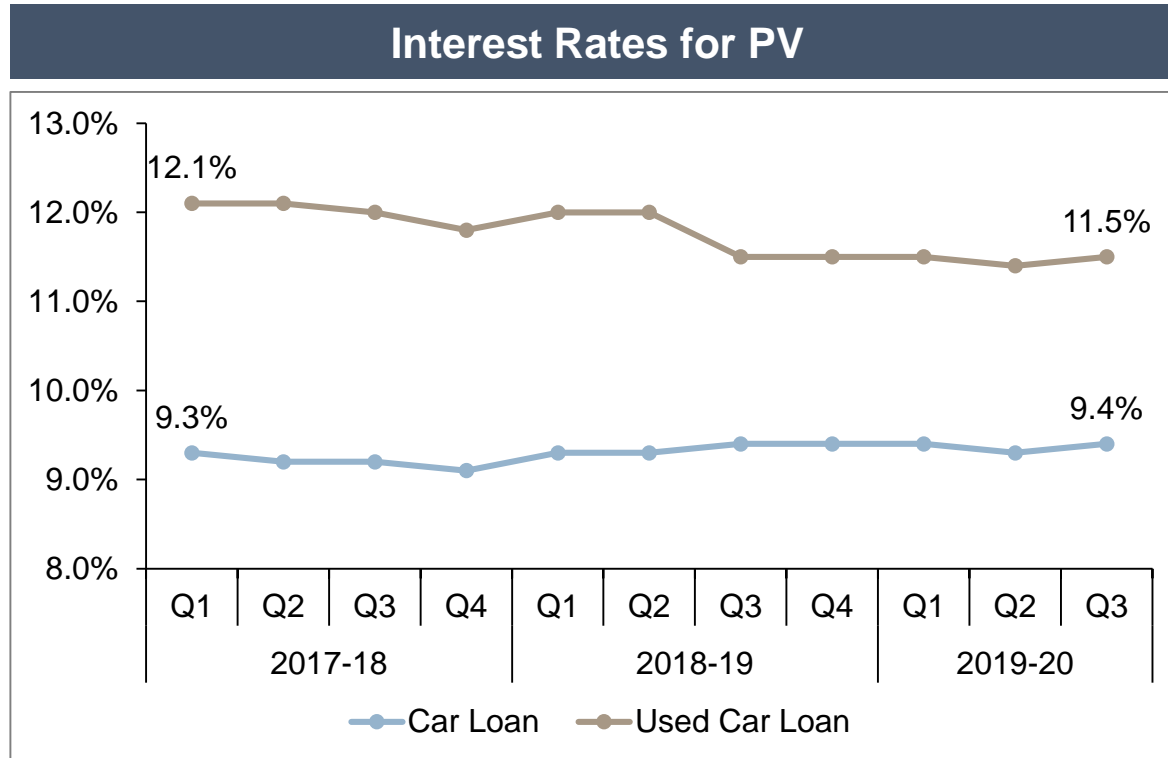
Construction of rural roads to stay strong over short-term



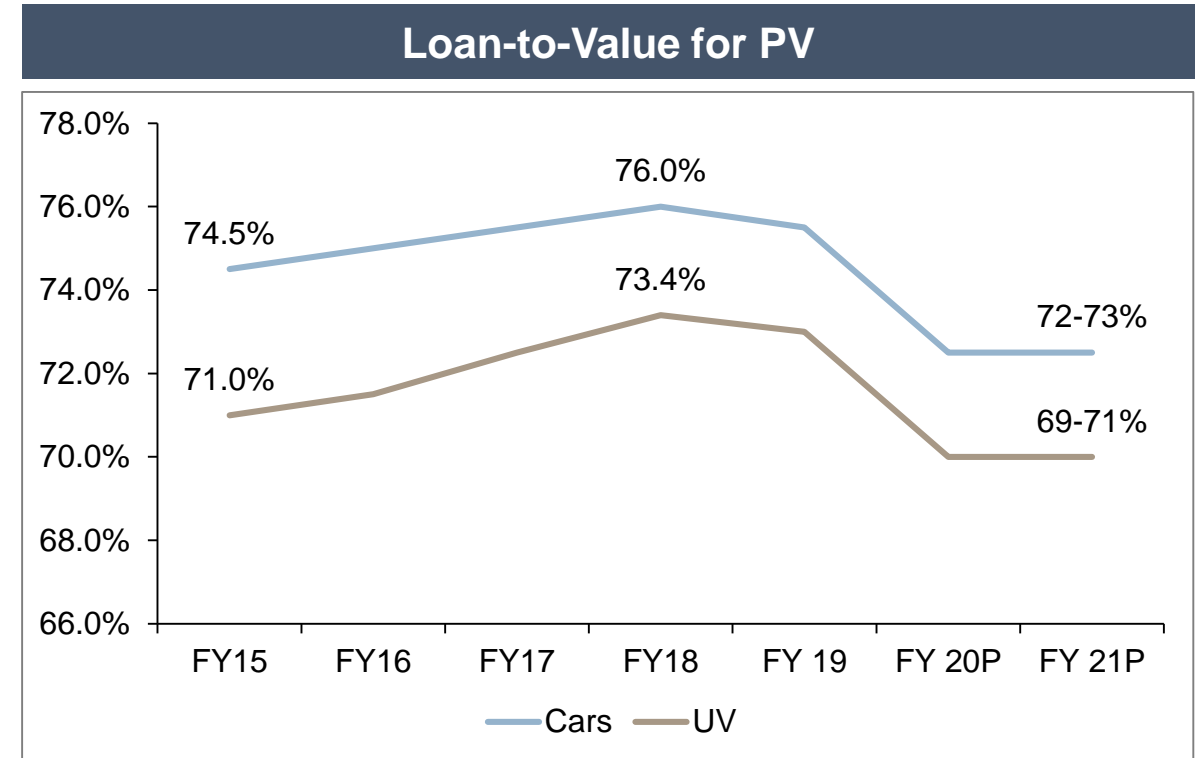
NOTE: Data as on Dec 2019

Source: OMMS (Online Management, Monitoring and Accounting System), CRISIL Research

Interest rates decrease by 10-12 bps in Q2, Loan-to-Value to remain stable in fiscal 2020

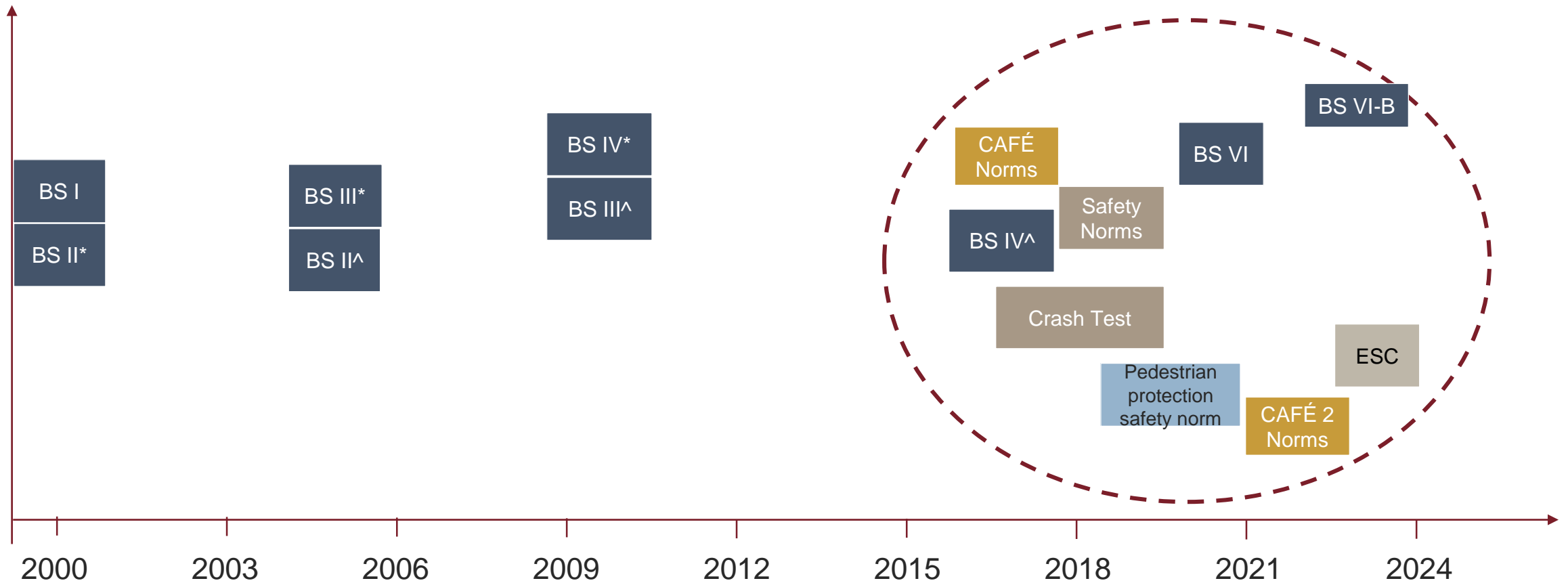


Source: CRISIL Research



Source: CRISIL Research

Regulations on safety & emission norms to bring India at par with developed economies



NOTE: *- Introduction of norm in NCR and 13 cities

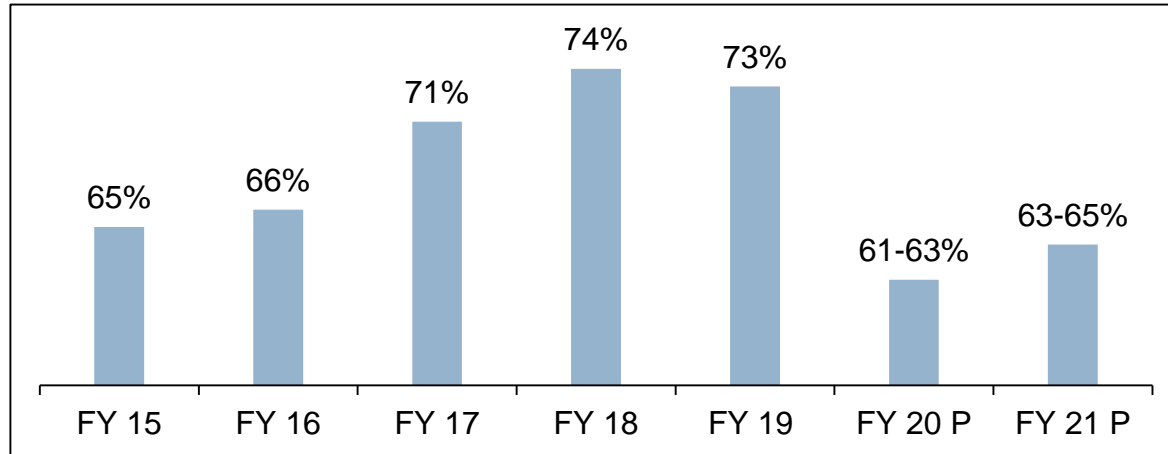
^ Nationwide implementation

BS – Bharat stage (Emission Regulations), CAFÉ- Corporate Average Fuel Efficiency, AEB - Autonomous Emergency Braking, ESC - Electronic Stability Control

Source: CRISIL Research

Industry utilisation rates to decline in fiscals 2020

Utilization level has fallen due to lower domestic sales



Source: CRISIL Research Estimated

Upcoming Projects

Player	Location	Capacity lacs units pa	Investment	Status
Maruti Suzuki	Mehsana, Gujarat	2.5	Rs 85 B	Under implementation
Maruti Suzuki	Mehsana, Gujarat	2.5	Rs 60 B	Planning
PSA	Chennai, TN	1	Rs 7 B	Planning

Source: Industry, CRISIL Research

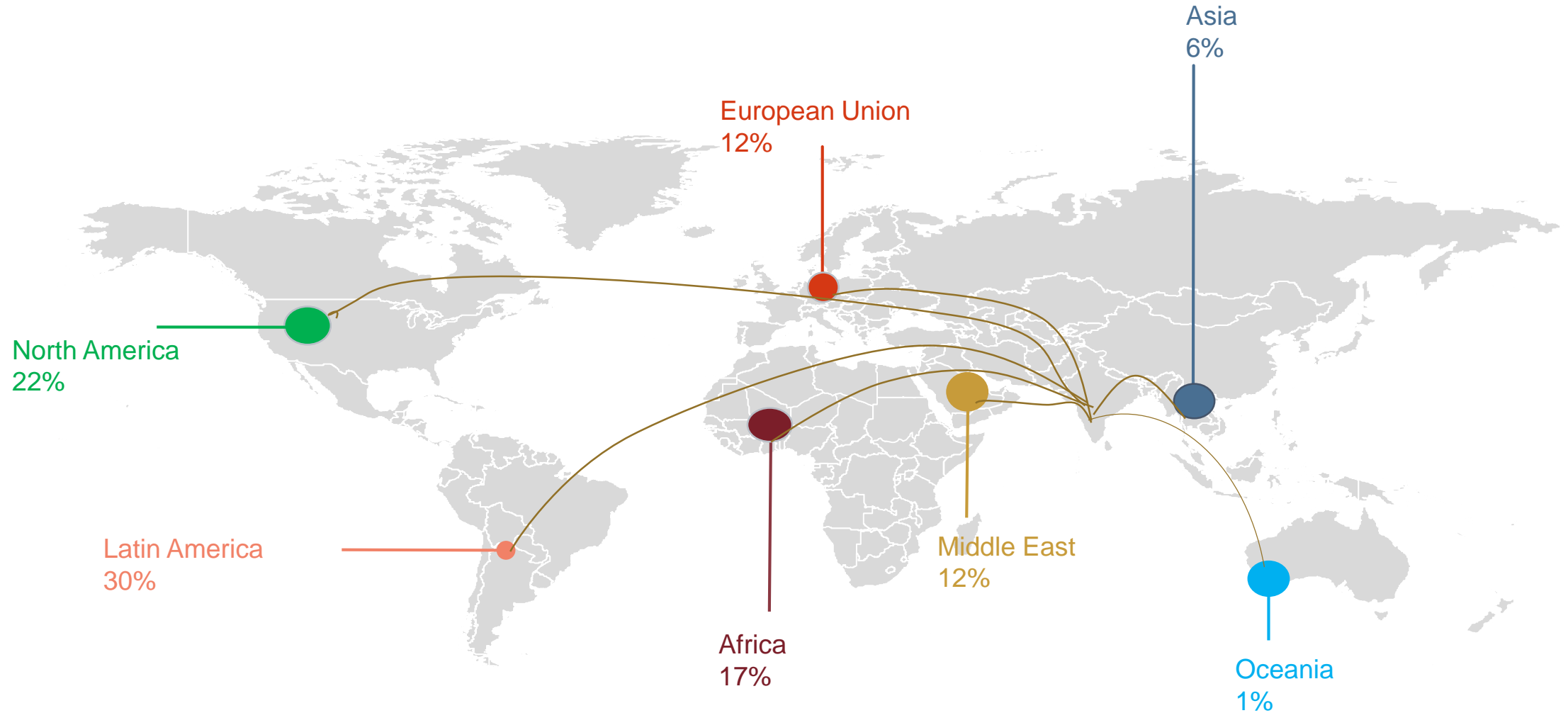
Player-wise capacity utilisation

Player	Effective Capacity estimate (in '000) (as on 31st Mar 2019)	Production (FY19) (in '000)	Capacity utilization in FY19E
Maruti	1800	1870	101%
Hyundai	763	736	93%
Tata Motors	564	227	40%
Ford India	440	260	58%
Renault-Nissan	480	191	20%
General Motors	165	77	46%
Toyota	310	169	52%
Honda	300	178	60%
Volkswagen	179	95	51%
Other Players	551	300	78%
Industry Total	5552	4103	73%

Note : Maruti Suzuki plants are working in double shifts resulting in more than 100% utilization rates;

Source: SIAM, CRISIL Research

Passenger Vehicle Exports

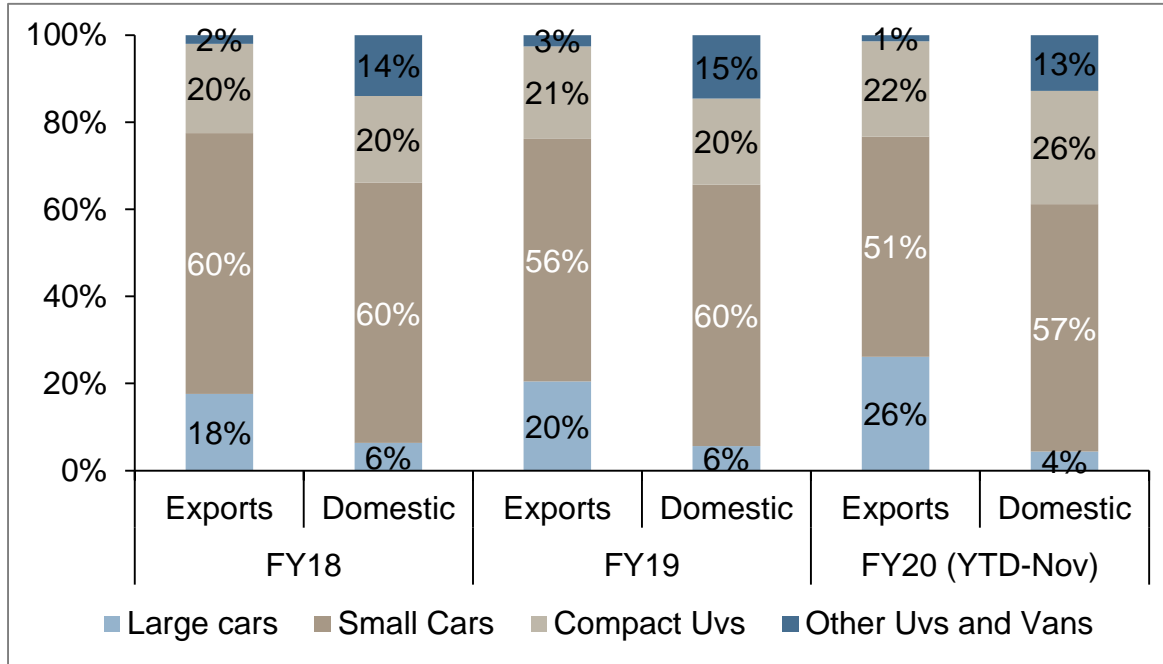


Note: : Represents FY19 exports

Source: DGFT, CRISIL Research

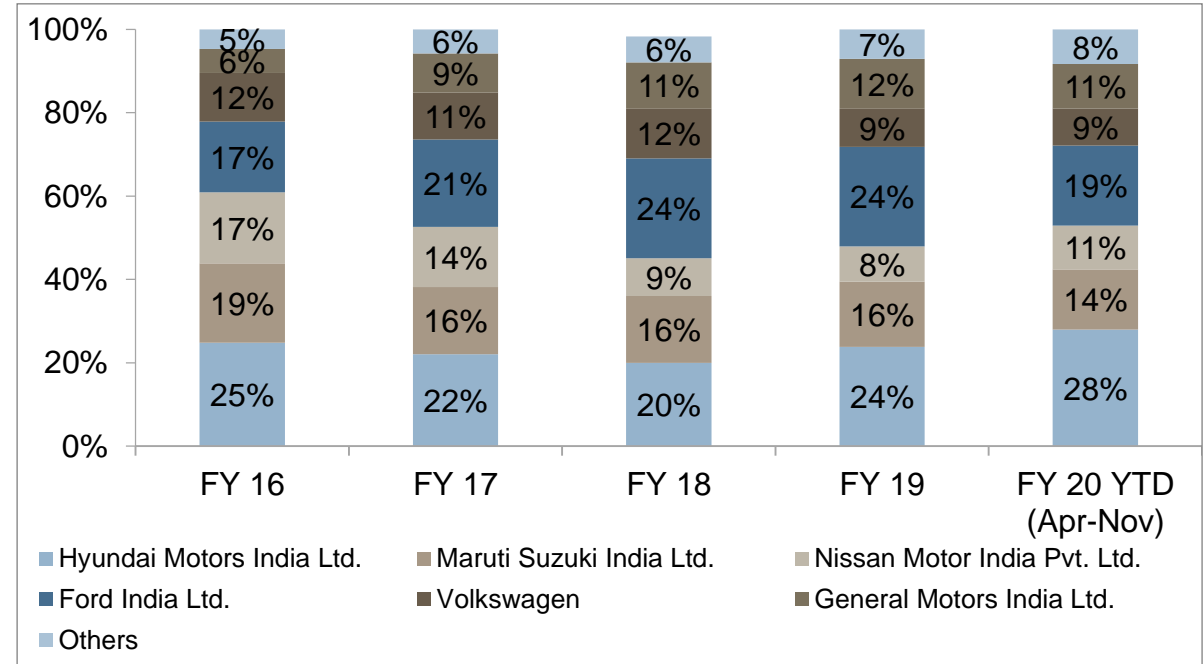
Newer geographies and increasing traction of models to lead to growth of exports in FY20

Share Of Compact UV's in exports on the rise



Source: SIAM, CRISIL Research

Hyundai market leader in fiscal 19, Volkswagen close second

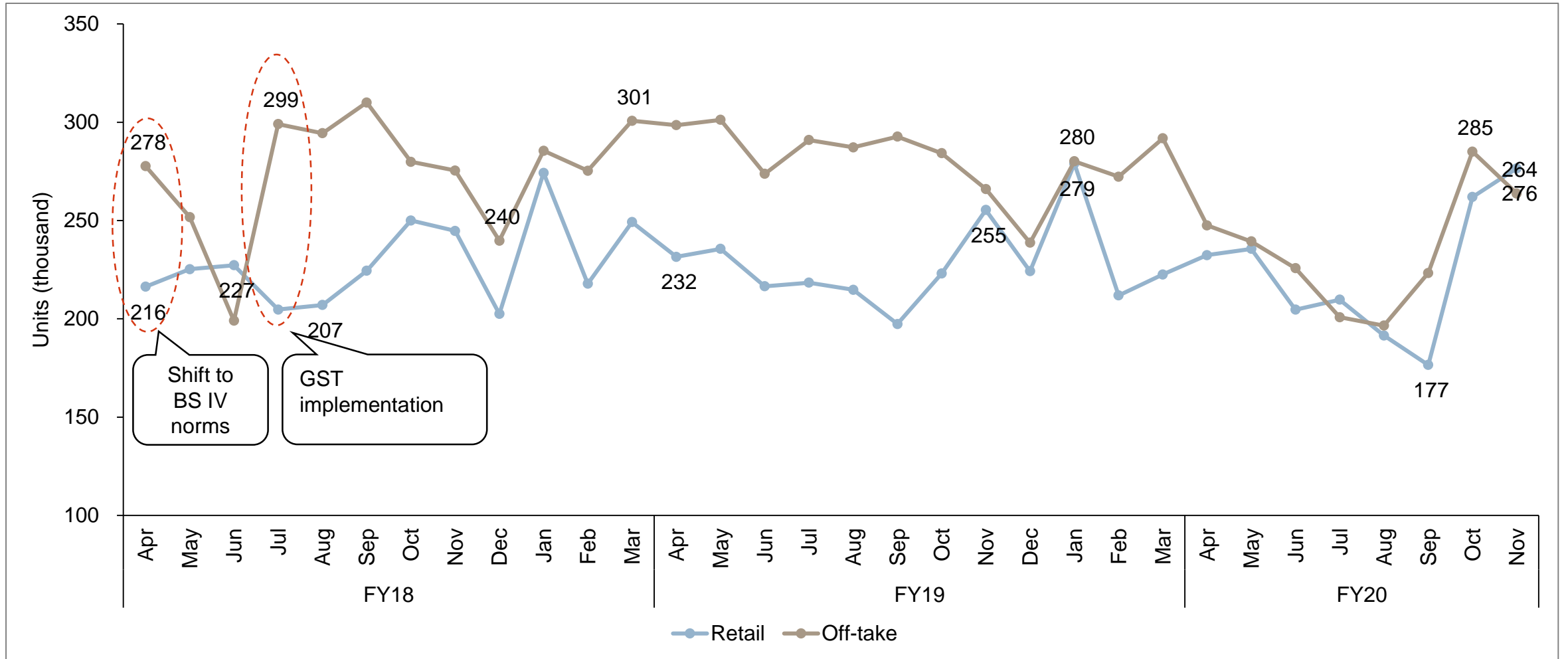


Source: SIAM, CRISIL Research

- Exports have grown by ~4% in YTD FY20 (Apr-Oct) as OEMs shift focus to exports amid slowdown in domestic markets
- Stagnating domestic traction in the past three years has led foreign automobile manufacturers such as Ford, General Motors (GM), and Volkswagen (VW) to increase their focus on exports, thereby improving utilisation by using spare capacity and boosting revenue

Slowdown in retail sales impacting wholesale volumes

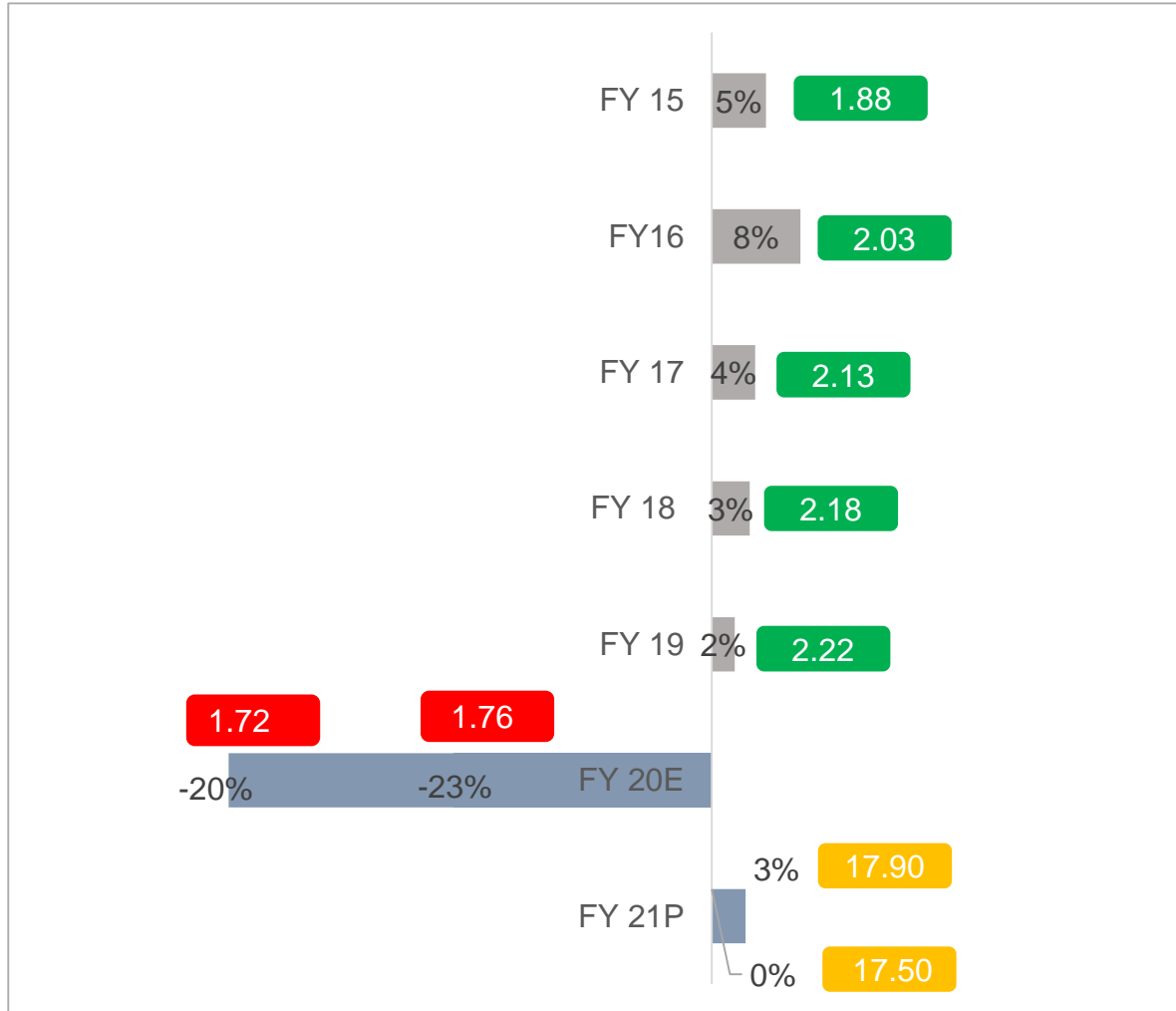
Retail vs off-take



Source: Wahan, SIAM, CRISIL Research

Domestic sales – Passenger cars

Annual trend



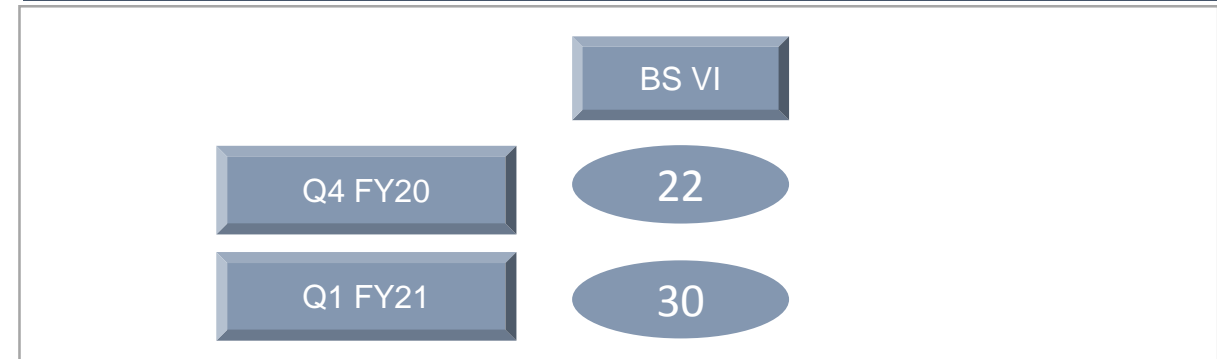
NOTE: While forecasting, impact of budgetary announcement is not considered

NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in million

Quarterly trend

Period	Volume (mn)	YoY Growth	QoQ Growth	
FY19	Q4	0.53	(5)%	2%
FY20E	Q1	0.45	(23)%	(15)%
	Q2	0.37	(37)%	(17)%
	Q3	0.48	(9)%	29%
	Q4E	0.45-0.47	(13)-(15)%	(3)-(5)%
FY21P	Q1	0.40-0.42	(7)-(9)%	(9)-(11)%
	Q2	0.42-0.44	15-17%	4-6%
	Q3	0.45-0.47	(1)-(3)%	7-9%

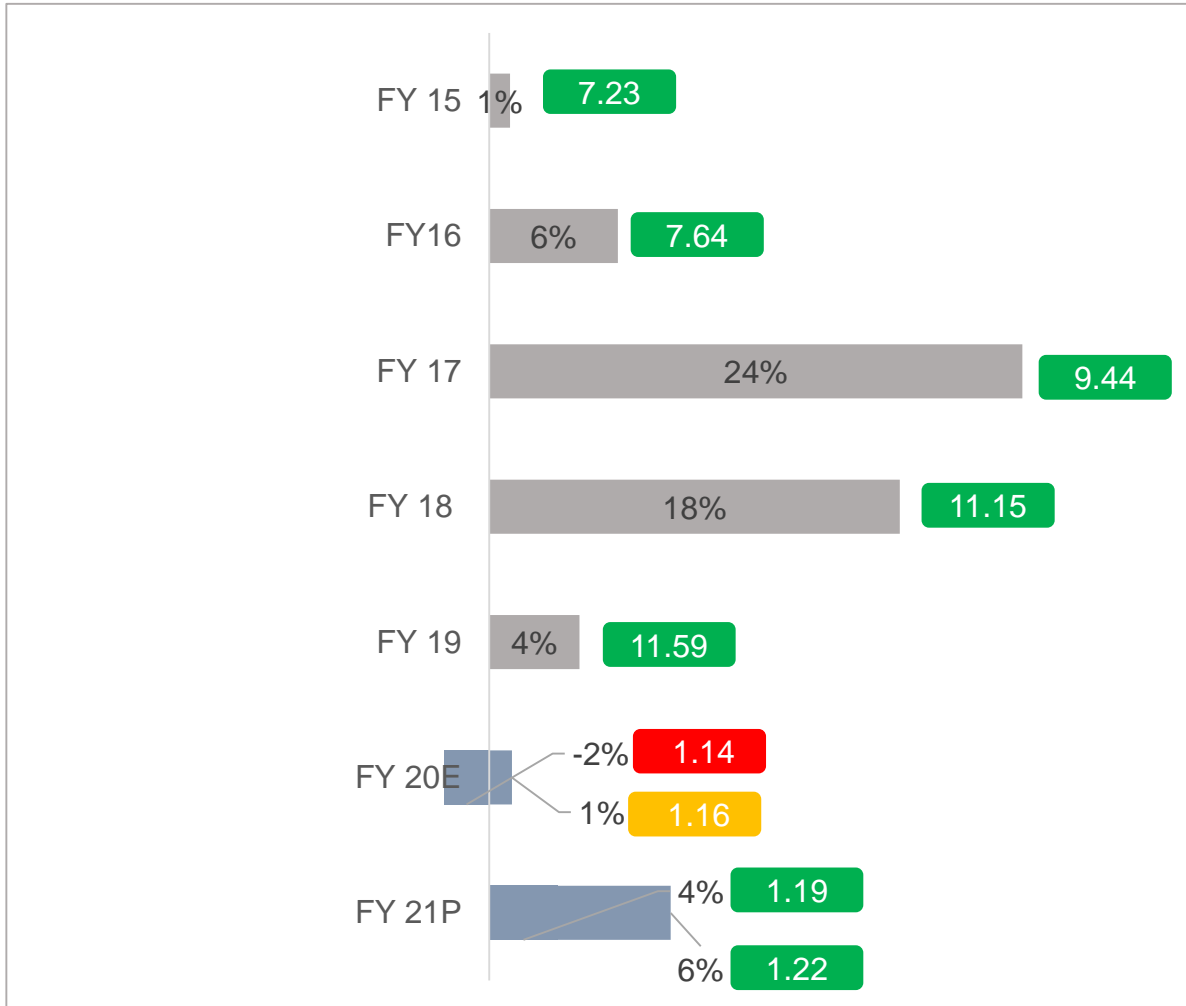
Inventory assumption



NOTE: Inventory calculated using sales of last 12 months. Represents end of quarter inventory

Domestic sales – Uvs and vans

Annual trend



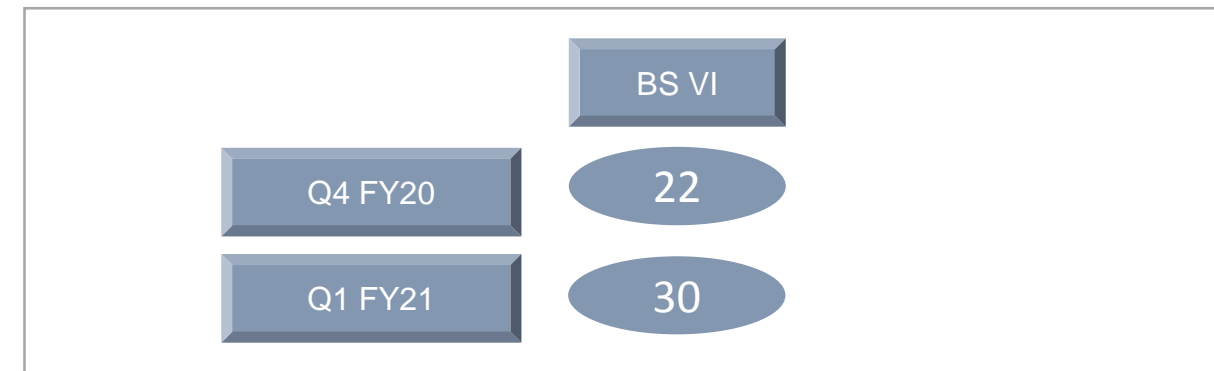
NOTE: While forecasting, impact of budgetary announcement is not considered

NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in million

Quarterly trend

Period	Volume (mn)	YoY Growth	QoQ Growth	
FY19	Q4	0.32	3%	17%
FY20E	Q1	0.27	(9)%	(16)%
	Q2	0.25	(12)%	(6)%
	Q3	0.31	15%	23%
	Q4E	0.32-0.34	2-4%	5-7%
FY21P	Q1	0.27-0.29	7-9%	(11)-(14)%
	Q2	0.28-0.30	15-18%	2-4%
	Q3	0.30-0.32	(2)-0%	3-5%

Inventory assumption



NOTE: Inventory calculated using sales of last 12 months.
Represents end of quarter inventory



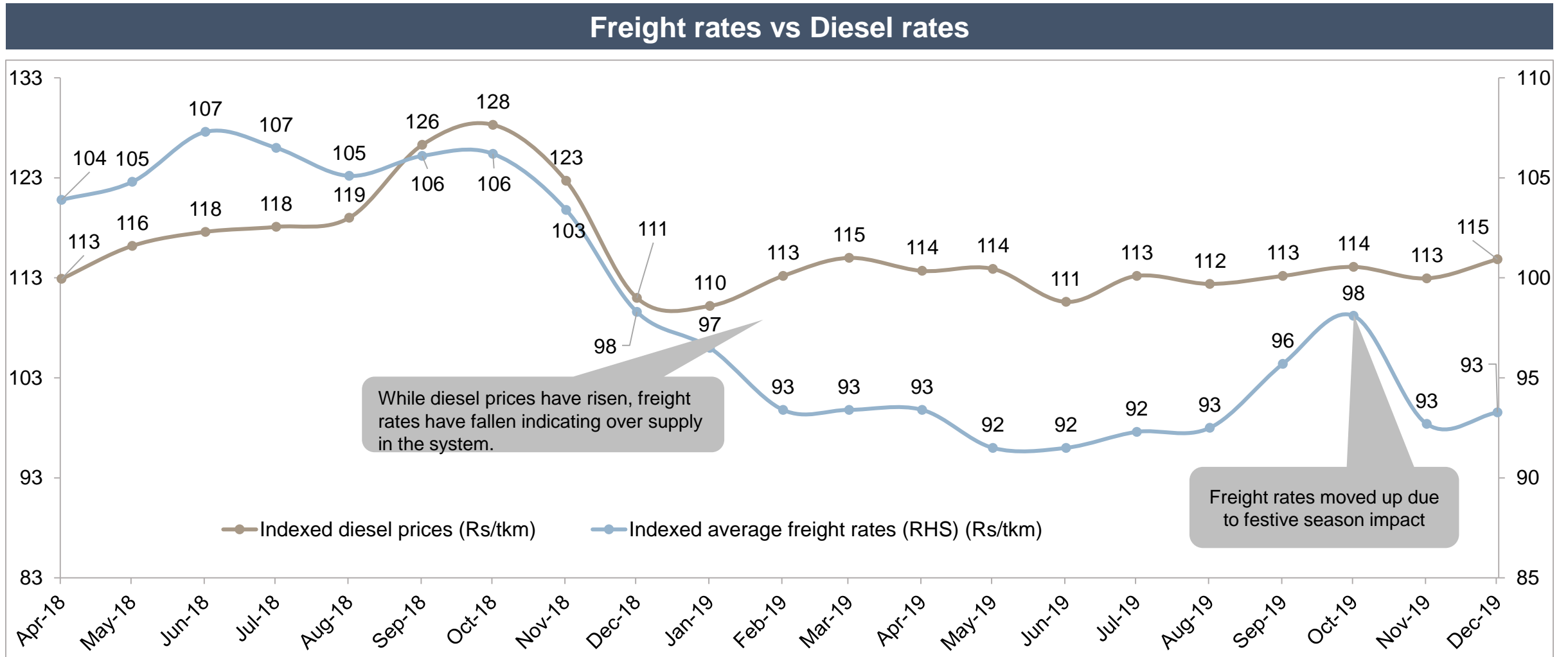
Commercial Vehicles

Demand to remain muted across CV segments in FY20

Variables (common factors across Commercial vehicles)	FY 19	FY 20P	FY 21P
Diesel prices	Not Favourable	Not Favourable	Not Favourable
Regulatory (BSIV to BSVI)	-	Not Favourable	Not Favourable
Availability and cost of finance	Neutral	Not Favourable	Neutral
Variables LCV	FY 19	FY 20P	FY 21P
Freight demand (LCV) – PFCE	Favourable	Not Favourable	Neutral
Replacement demand (LCV)	Favourable	Favourable	Not Favourable
Overall demand (LCVs)	Favourable	Not Favourable	Neutral
Variables MHCV	FY 19	FY 20P	FY 21P
Freight demand	Favourable	Not Favourable	Neutral
Industrial GDP	Not Favourable	Not Favourable	Neutral
Replacement demand	Neutral	Neutral	Favourable
NHAI Road Execution	Favourable	Neutral	Favourable
Impact of Axle load norms	Neutral	Not Favourable	Neutral
Overall demand	Favourable	Not Favourable	Favourable



Freight rates declined post uptick in festival season



Source: Business Standard, PTI, CRISIL Research, IFTRT, AITWA

Note: (i) The estimated freight rate data is a representative of average freight rates from Delhi to 24 locations across India for a 9T payload truck

(iii) Indexed freight rates and diesel prices have been derived taking April 2014 values equaling 100

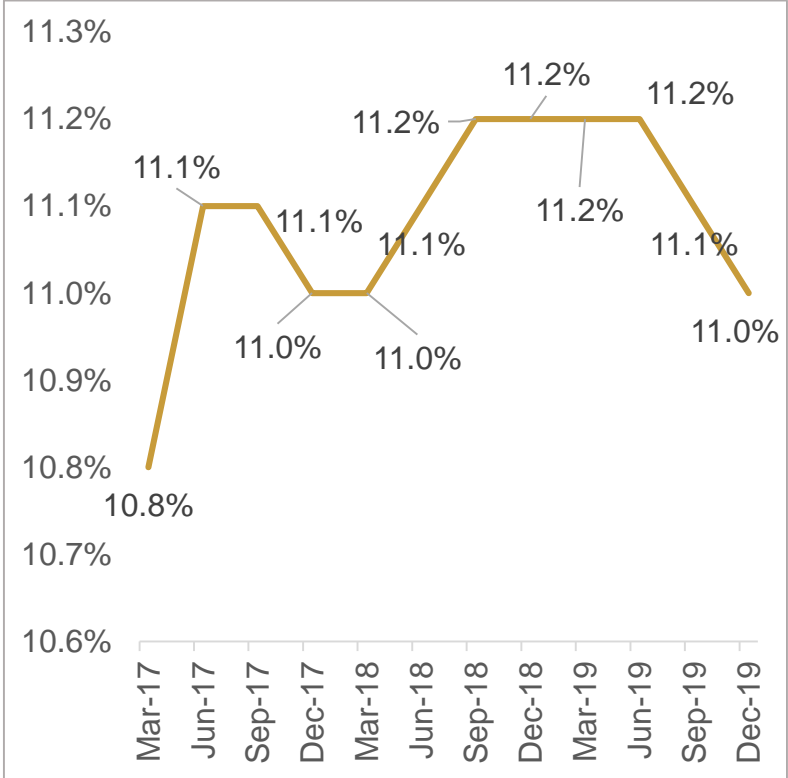
Overview of end-use segments - Cargo

Segments (% Growth Y-o-Y)	FY 16	FY 17	FY 18	FY 19	FY 20 P	FY 21 P
Coal (Production)	5.0	3.0	3.0	7	0-2	5-7
Iron ore (Production)	21	25	3	3	5-7	3-5
Steel (Consumption)	5.8	3.1	8	8	2-4	3-5
Cement (Consumption)	4.7	1.9	9	12	0-2	4-6
Roads (Km Constructed / Day)	6	7	8	9	9.6	10.4
Consumer durables (Consumption)	6.6	6.6	5.8	7	6 - 8	7-9
E-retail	68	22	35	35-37	33-37	31-35

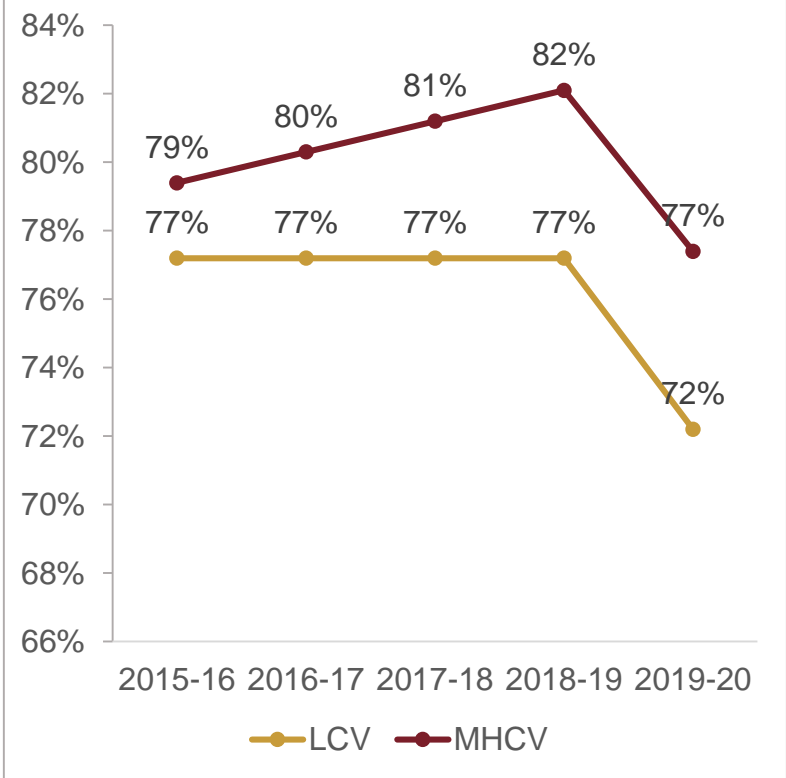
- Note – * Per day road construction by FY 2023
- ^ Long term forecast not available.

Lower LTVs to transporters and higher interest rates reducing finance availability for SFOs

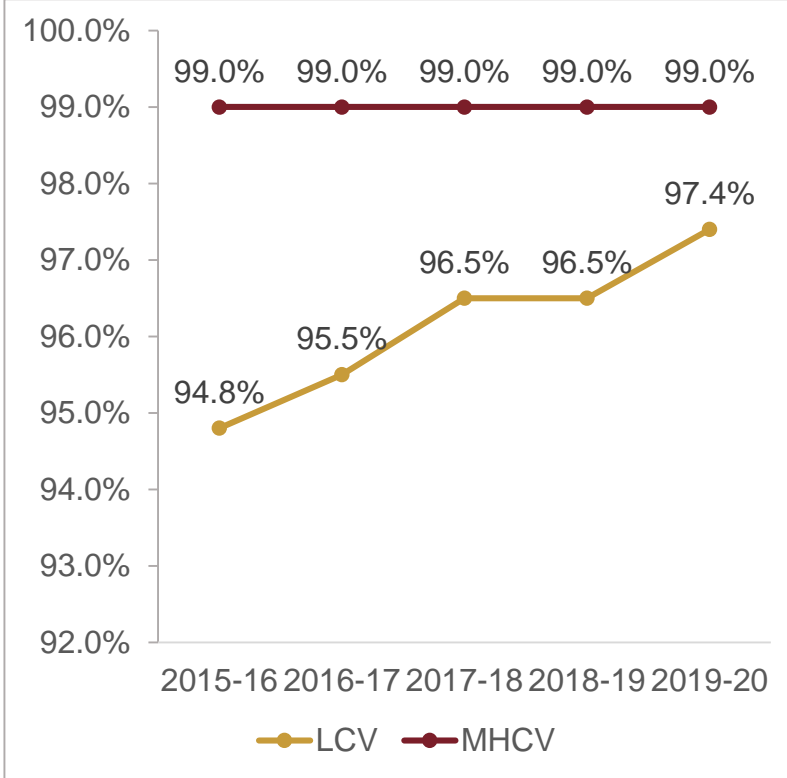
CV Finance Rates



Loan-to-Value for CV



CV Finance Penetration



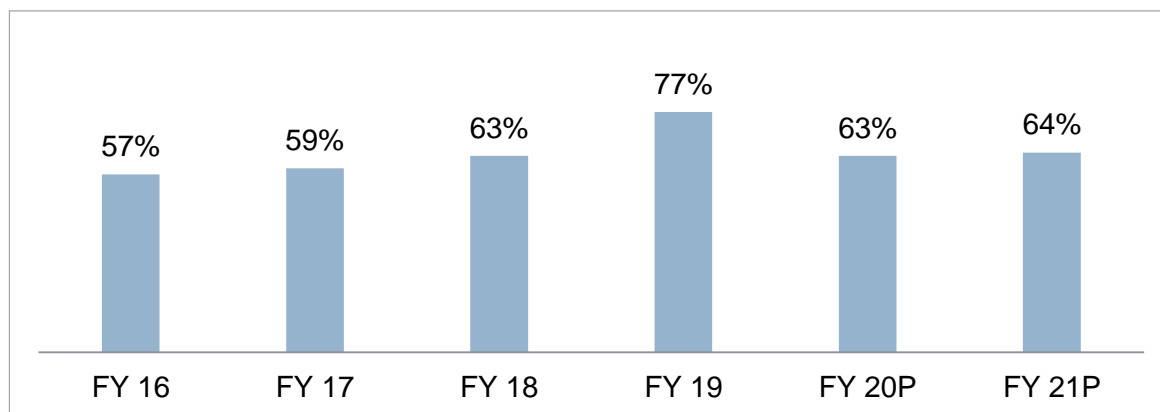
Source: Crisil Research

Source: Crisil Research

- Due to lower risk appetite, financiers have reduced loan-to-values (LTVs) to ensure transporters have equity on the asset purchase. LTVs are lower by ~10% than normal levels
- Transporter are postponing purchases due to higher lending rates and inability to provide for the additional down payment with the lower LTV.

Capacity utilization on a downward trend

Decline in capacity utilization level



Note : Capacity utilization is that of Tata Motors, Ashok Leyland, Eicher Motors and Mahindra & Mahindra representing ~ 90% of domestic sales

Source: CRISIL Research

Capacity additions

Player	Location	Capacity '000 units	Investment	Status
Ashok Leyland Ltd.	Medak, Telangana	20	Rs 5 billion	Planning
Ashok Leyland Ltd.	Krishna, AP	4.8	Rs 1.7 billion	Under implementation
VECV Ltd.	Bhopal, MP	40	Rs 4 billion	Planning
Volvo Buses India Pvt. Ltd.	Bengaluru, Karnataka	1.5	Rs 3 billion	Planning
Sino Truck	Medak, Telangana	1.45	Rs 1 billion	Planning

Source: Industry, CRISIL Research

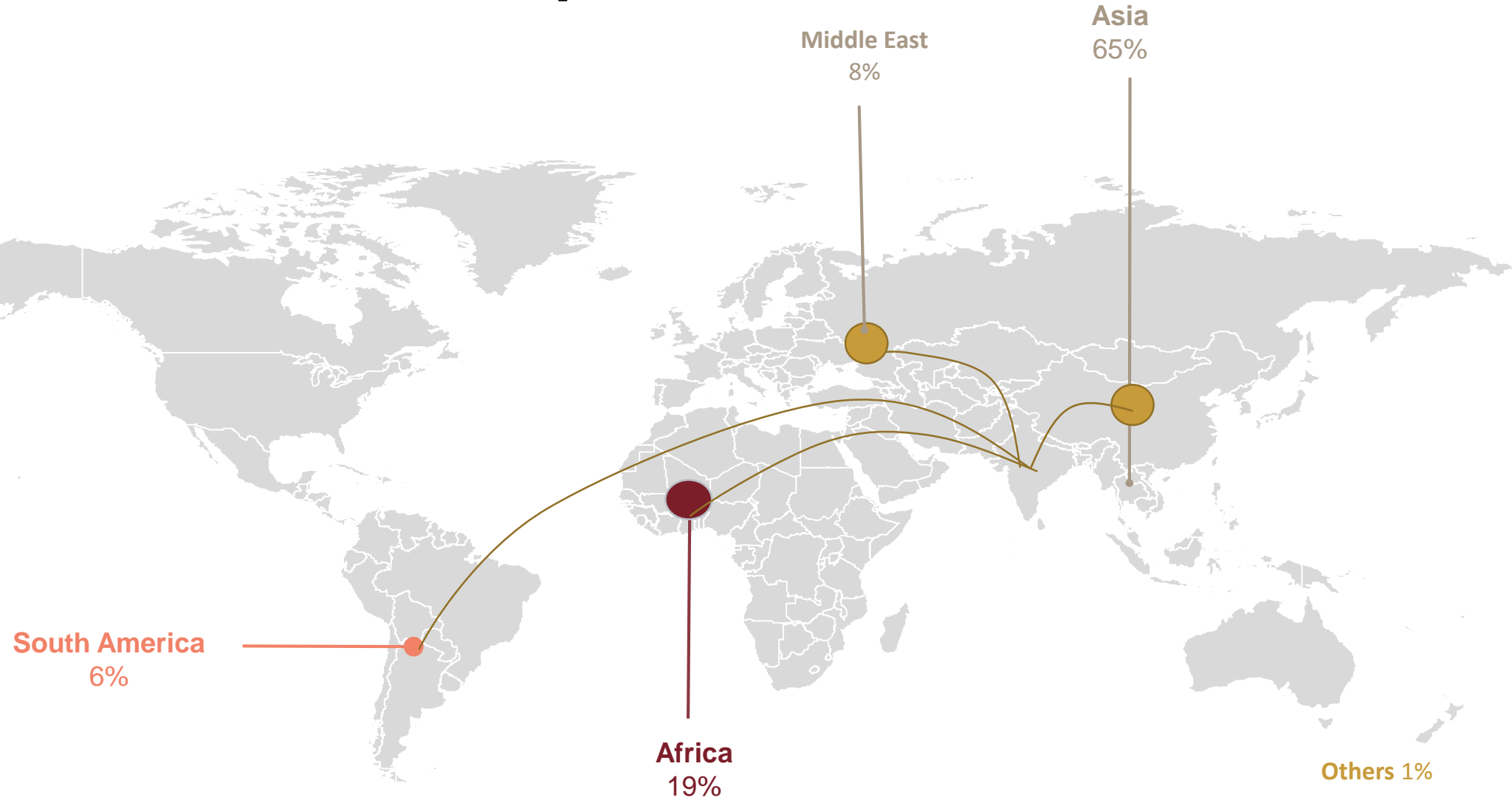
Player-wise capacity utilisation

Player	Effective Capacity estimate (as on 31st Mar 2019)	Capacity utilization
Ashok Leyland	1,86,500	89%
Eicher Motors	93,000	94%
Tata Motors	7,62,000	49%
Mahindra & Mahindra	2,92,000	80%

Source: Crisil Research

- The capacity utilisation of the top four players which was at ~77% in fiscal 2019, is projected to fall to ~64% in fiscal 2020
- Due to industry growing in red in fiscal 2020 and 2021, players have delayed their capacity expansion post incurring capex for BS VI.
- Capital expenditure is expected to continue for electric mobility even in this downturn considering the sanctioned STU orders for FAME-II

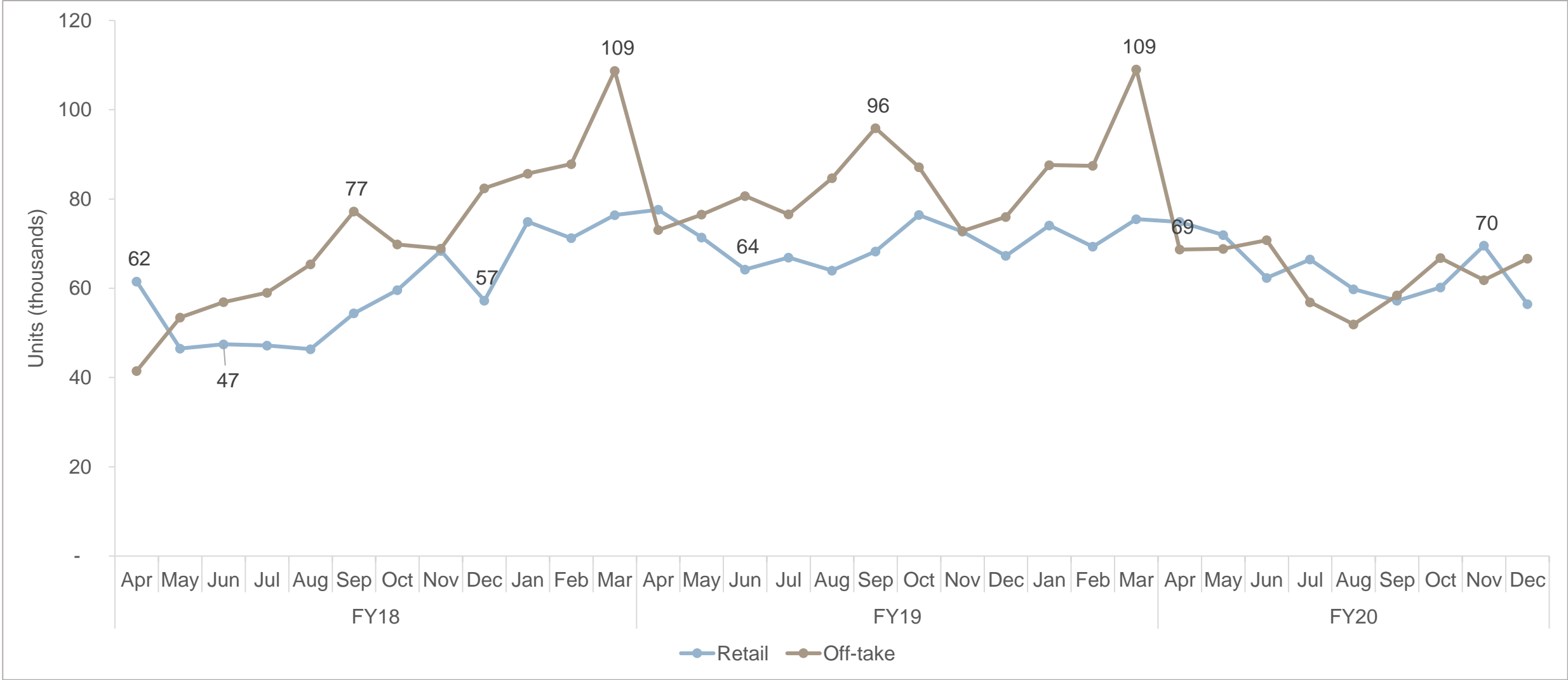
Commercial vehicles exports



NOTE: Represents FY19 exports

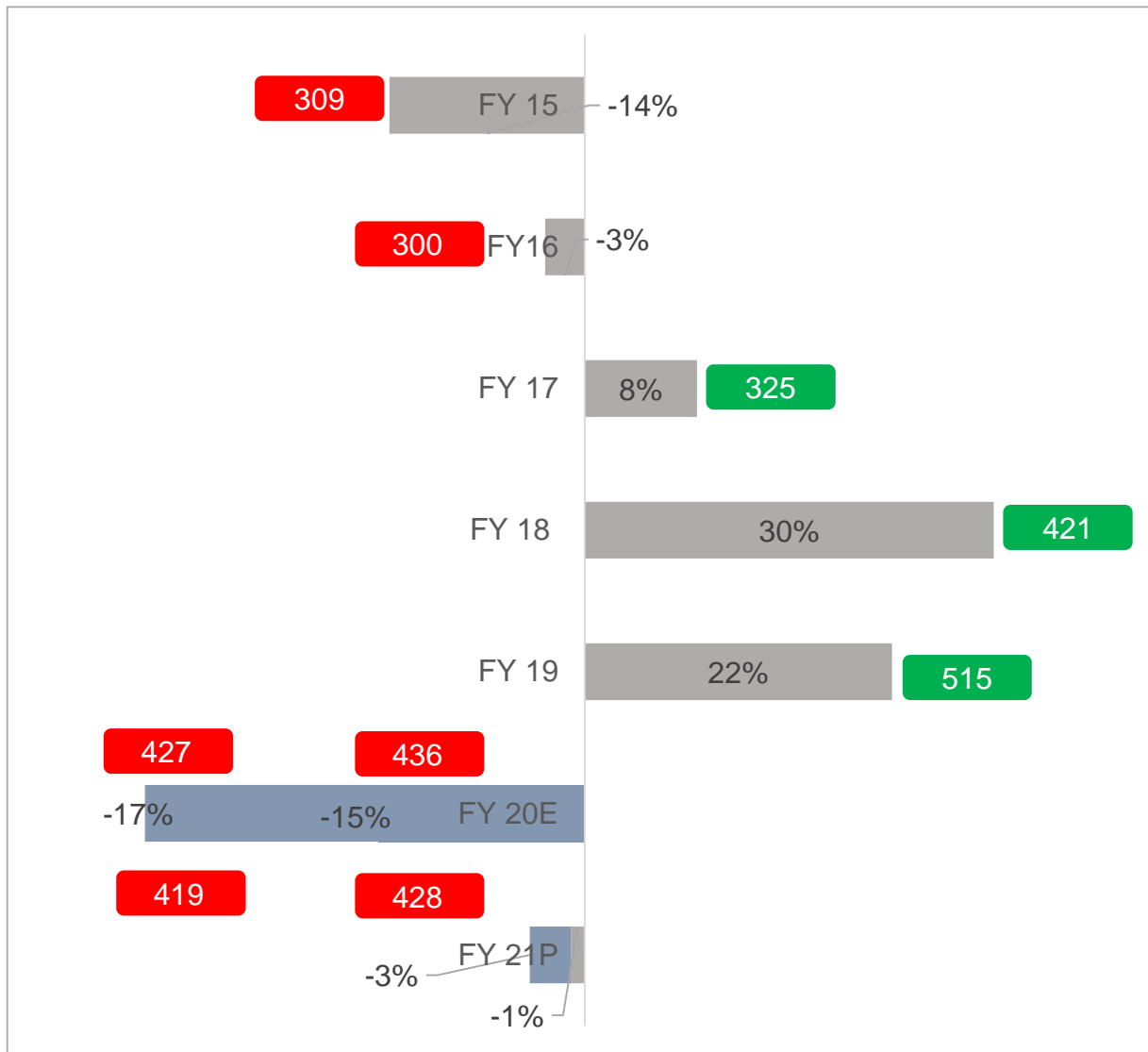
Source: Directorate General of Foreign Trade (DGFT), CRISIL Research

Wholesale in sync with retail sale



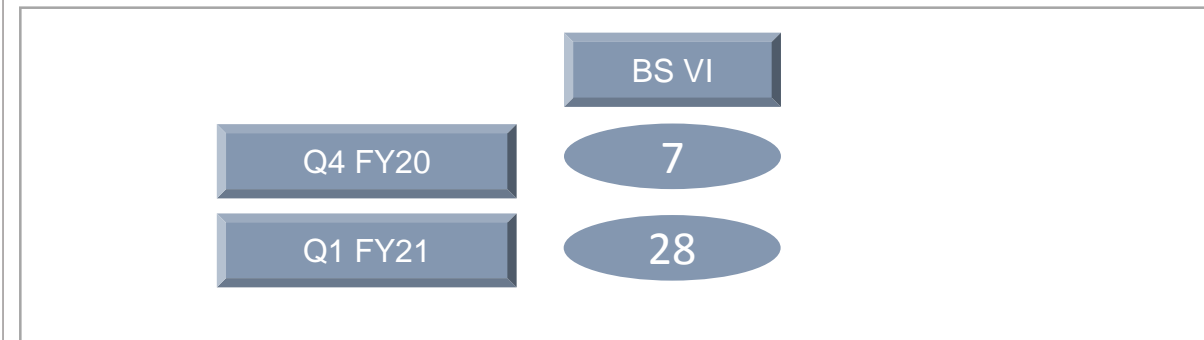
Source: Wahan, SIAM, CRISIL Research

Domestic sales – LCV (<3.5T)



Period		Volume ('000)	YoY Growth	QoQ Growth
FY19	Q4	142	6%	10%
FY20E	Q1	108	(6)%	(24)%
	Q2	100	(24)%	(8)%
	Q3	122	(5)%	22%
	Q4E	101-103	(27)-(29)%	(15)-(17)%
FY21P	Q1	76-78	(28)-(30)%	(24)-(26)%
	Q2	99-101	(1)-1%	29-31%
	Q3	120-122	(2)-0%	21-23%

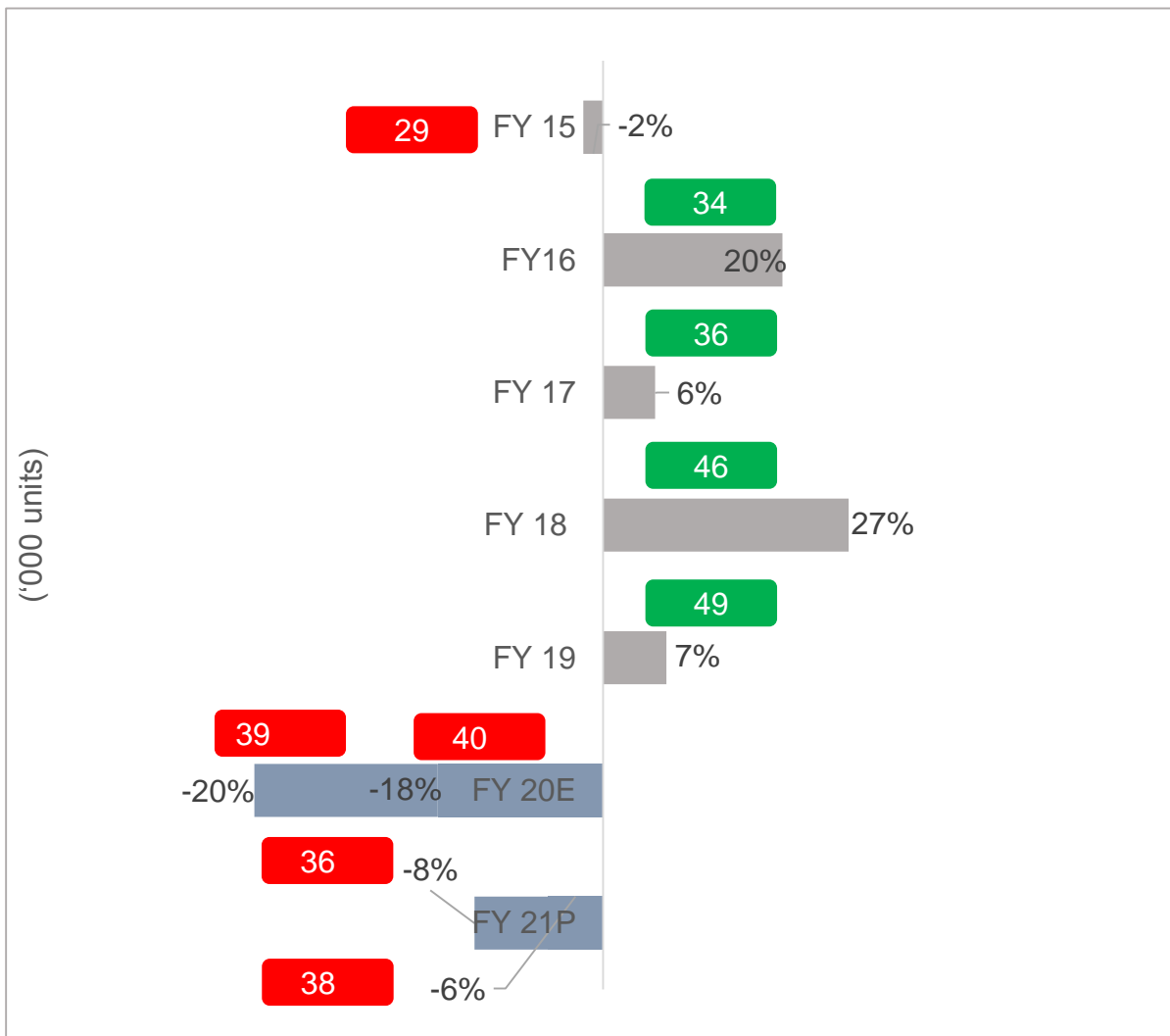
Inventory assumption



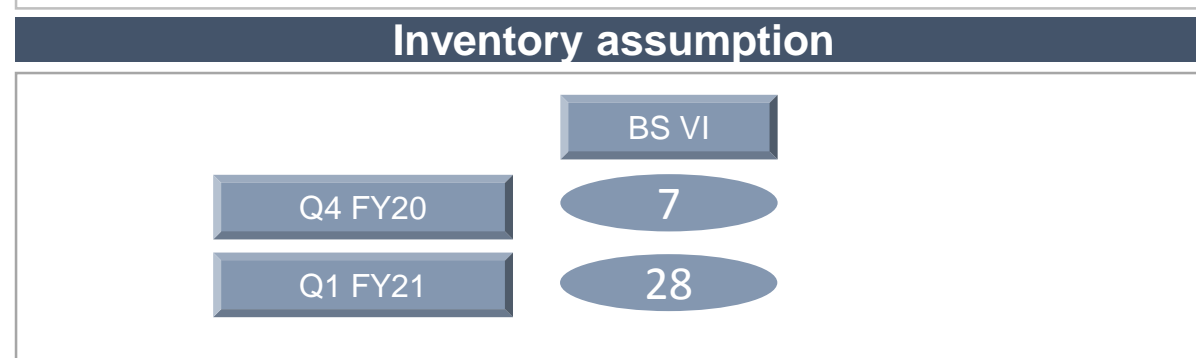
NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

NOTE: Inventory calculated using sales of last 12 months. Represents end of quarter inventory

Domestic sales – LCV (3.5-7.5 T)



Period		Volume ('000)	YoY Growth	QoQ Growth
FY19	Q4	14	(3)%	17%
	Q1	10	(3)%	(29)%
FY20E	Q2	9	(32)%	(10)%
	Q3	10	(13)%	16%
	Q4E	10-12	(23)-(25)%	1-3%
FY21P	Q1	6-7	(21)-(23)%	(26)-(28)%
	Q2	8-10	(1)-(3)%	13-15%
	Q3	9-11	(2)-(4)%	14-16%



NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

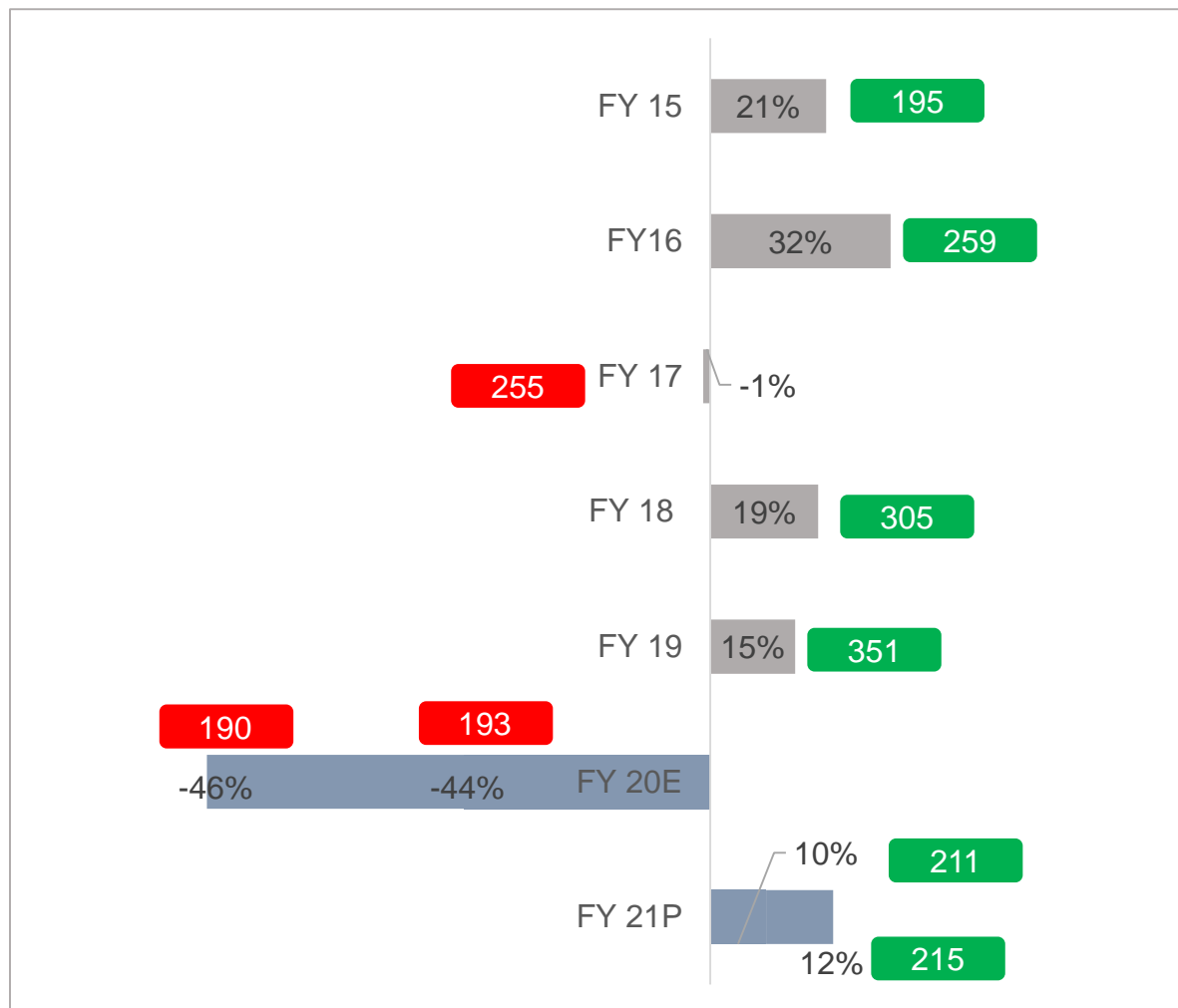
Source: SIAM, CRISIL Research

NOTE: Inventory calculated using sales of last 12 months.

Represents end of quarter inventory

Domestic sales – MHCV (>7.5T)

Annual trend



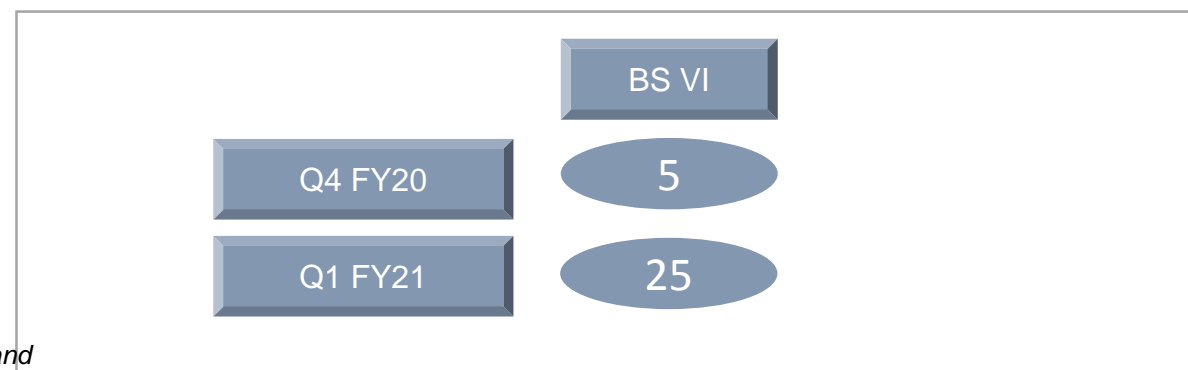
NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

Source: SIAM, CRISIL Research

Quarterly trend

Period		Volume ('000)	YoY Growth	QoQ Growth
FY19	Q4	99	(6)%	25%
FY20E	Q1	64	(19)%	(36)%
	Q2	40	(56)%	(37)%
	Q3	43	(47)%	6%
	Q4E	44-45	(54)-(56)%	4-6%
FY21P	Q1	38-40	(37)-(39)%	(10)-(12)%
	Q2	49-51	23-25%	24-26%
	Q3	54-56	31-33%	11-13%

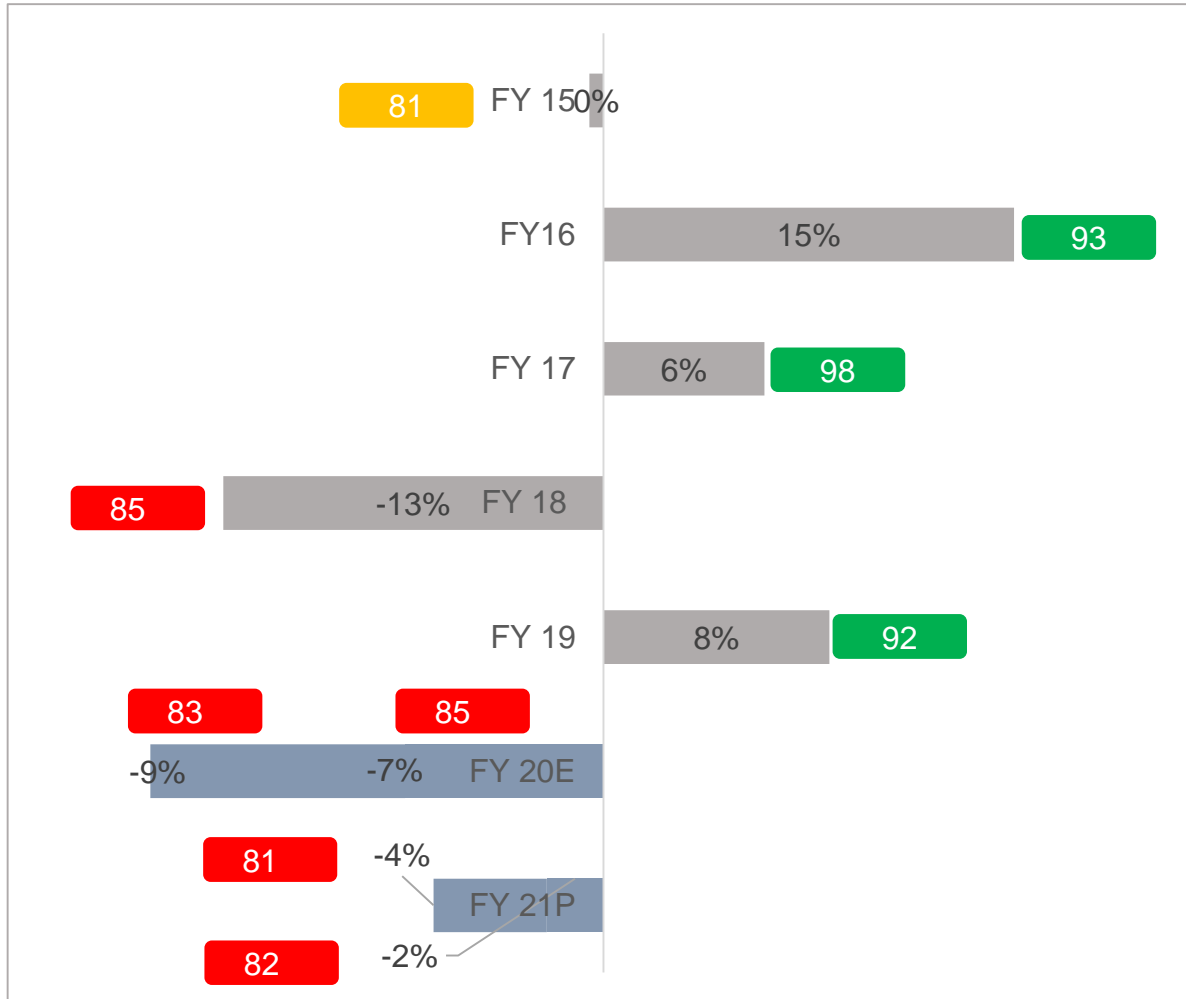
Inventory assumption



NOTE: Inventory calculated using sales of last 12 months.
Represents end of quarter inventory

Domestic sales – Buses

Annual trend



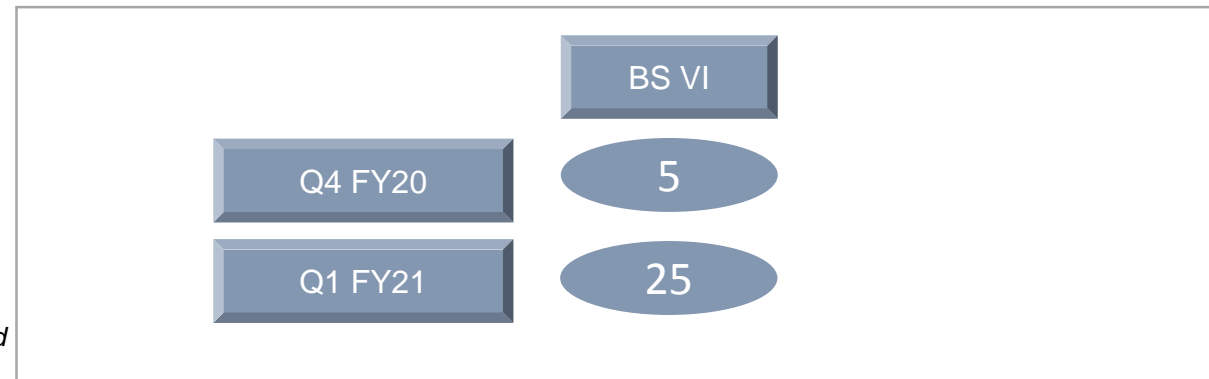
NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

Source: SIAM, CRISIL Research

Quarterly trend

Period	Volume ('000)	YoY Growth	QoQ Growth	
FY19	Q4	28	2%	86%
FY20E	Q1	26	(2)%	(8)%
	Q2	18	(13)%	(30)%
	Q3	20	31%	10%
	Q4E	24-25	(12)-(14)%	22-24%
FY21P	Q1	19-20	(18)-(20)%	(12)-(14)%
	Q2	20-21	13-15%	(4)-(6)%
	Q3	17-18	(9)-(11)%	(11)-(13)%

Inventory assumption







































NOTE: Inventory calculated using sales of last 12 months.
Represents end of quarter inventory



Tractors

Tractor sales to decline in fiscal 2020 after three years of strong growth amid high inventory and low demand

Parameters	Impact		
	FY 19	FY 20P	FY21P
Farm Income**			
-- Crop Prices			
-- Crop Output			
-- Kharif Output			
-- Rabi Output			
Demand Indicators			
-- Infrastructure Development			
-- Sand Mining			
Supply side variables & financing			
-- Finance Availability			
-- Channel Inventory			
-- Player Action			

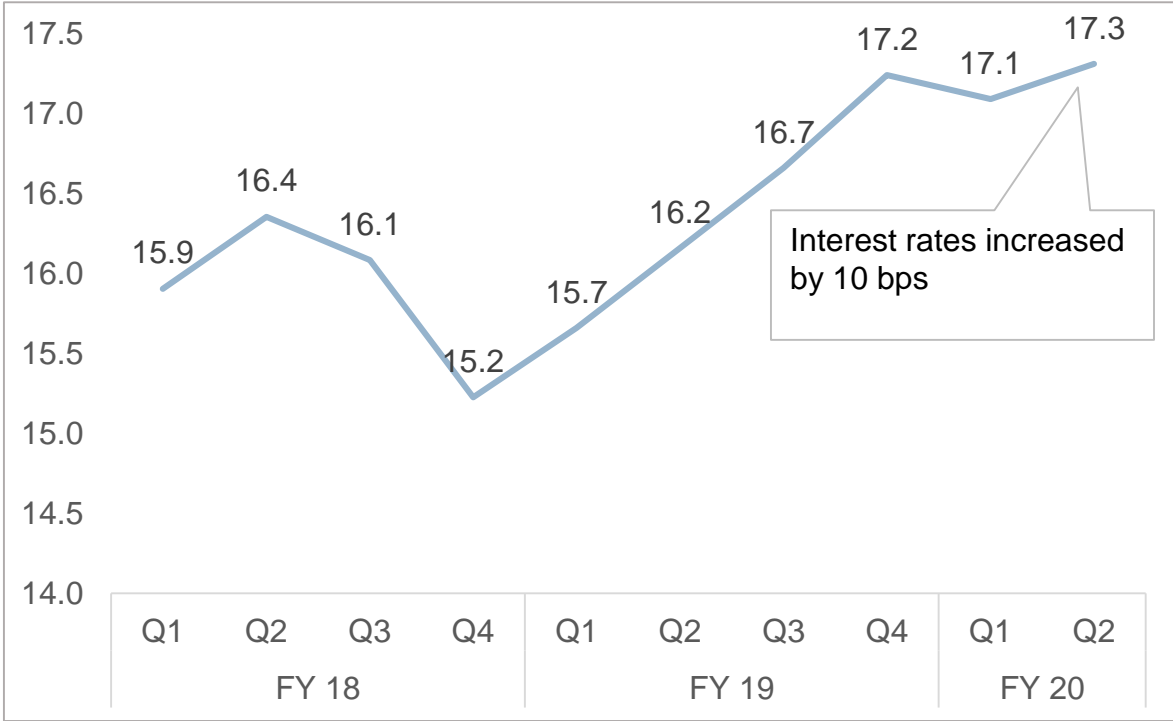


NOTE : ** Fiscal 2021 assumed neutral assuming normal monsoon, P: Projected

Source: CRISIL Research

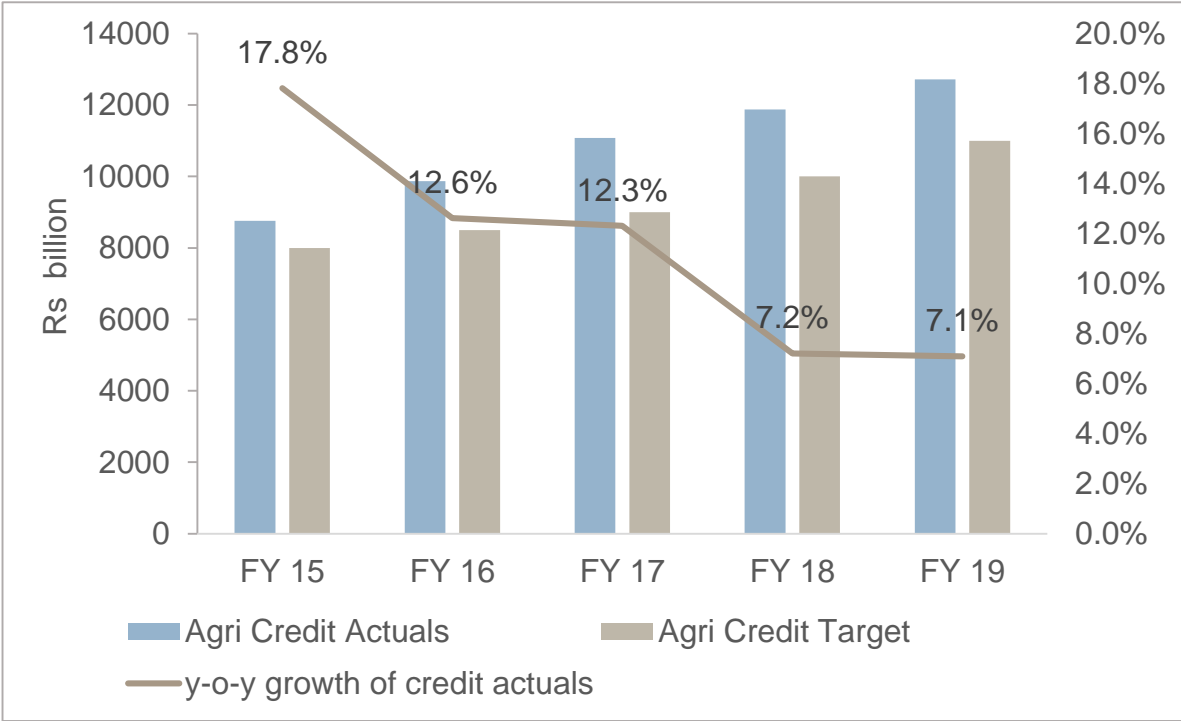
Increasing cost of fund for financing companies to hamper demand for tractors in FY20

Higher interest rates to hamper farm profitability



Source: CRISIL Research

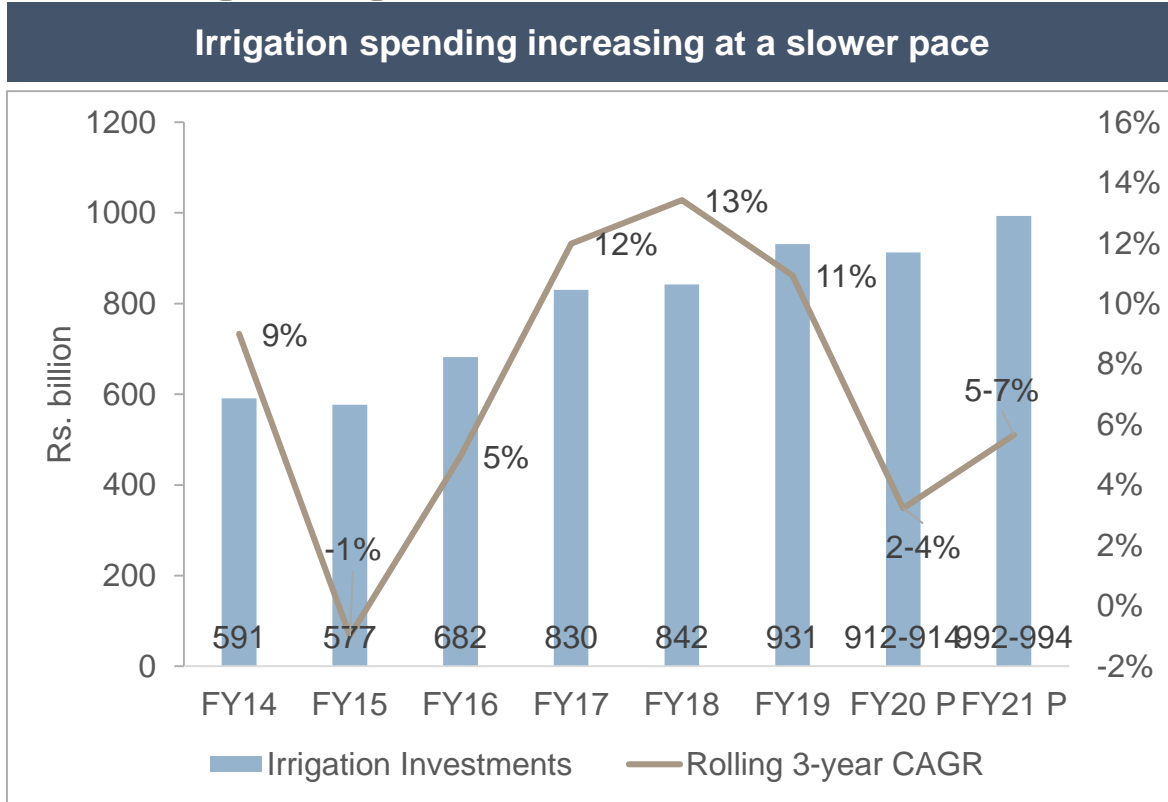
Actual agri credit disbursal higher than target in last five years



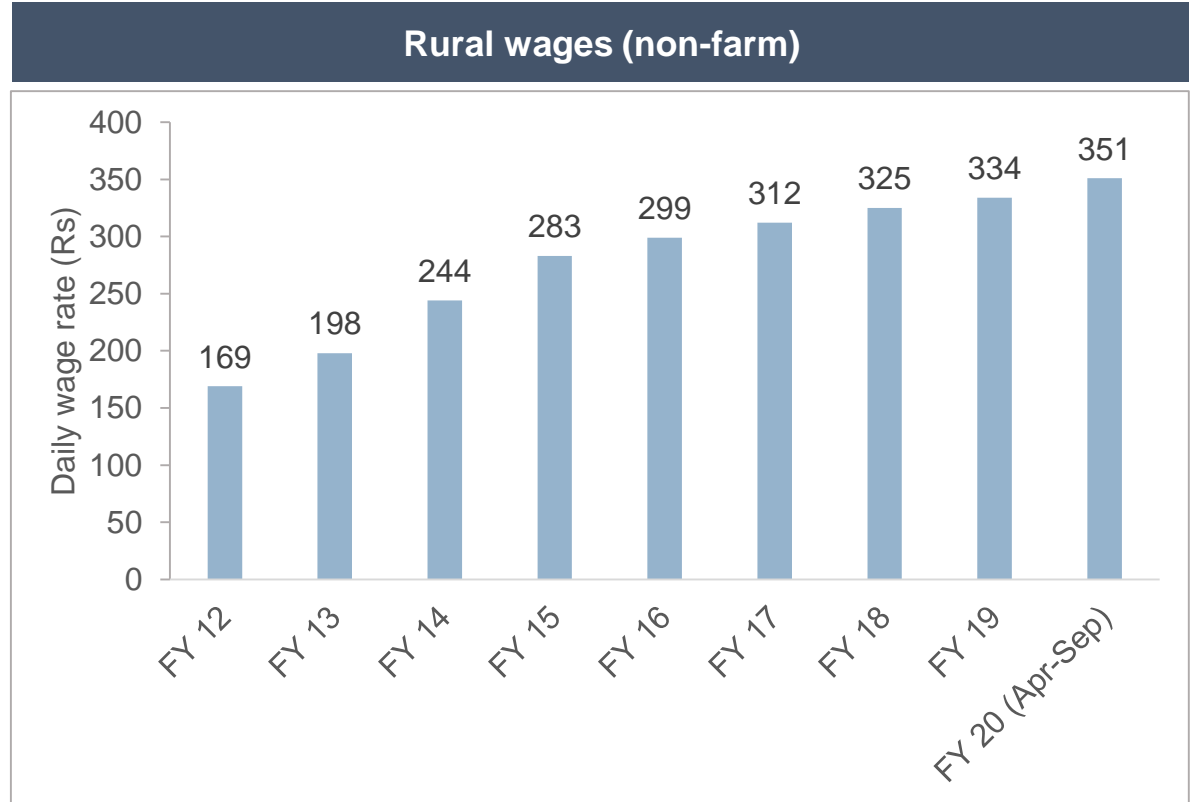
Source: Government of India, CRISIL Research

- The rates expected to remain at the same level in H2 fiscal 2020, thereby impacting the tractor industry.
- Rate cuts from RBI along with increased cash in hand of farmers from rabi crops will positively impact tractor finance gradually in FY21.

Irrigation investments to increase at a rate of 5-7% in FY21 aiding higher HP tractor sales



Source: Department of Agriculture, Cooperation & Farmers Welfare, CRISIL Research
P: Projected

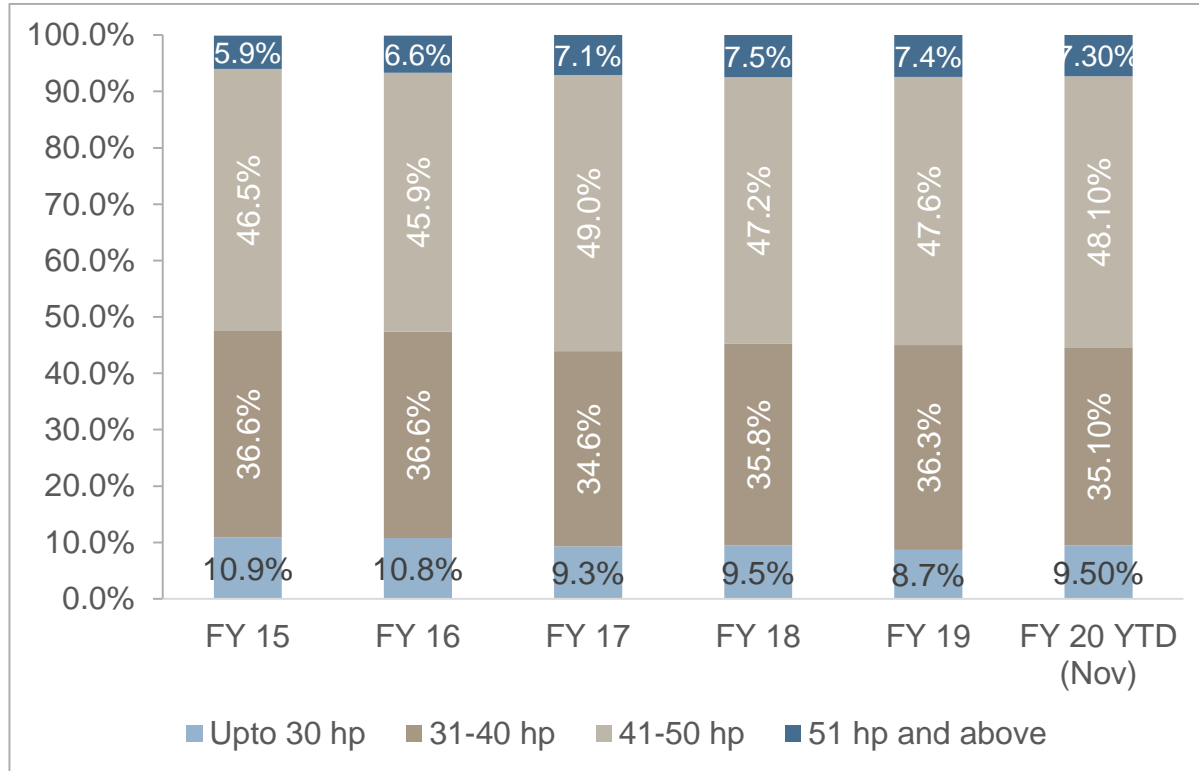


Rural wages includes general non-agricultural labour.
Source: Ministry of Labour and Employment, CRISIL Research

- Irrigation intensity is highest in northern region, followed by the southern and eastern regions. And higher irrigation intensity will boost usage of higher hp tractors.
- The growth in rural wages and increasing mechanization on farm fields bode well for structural tractor demand growth

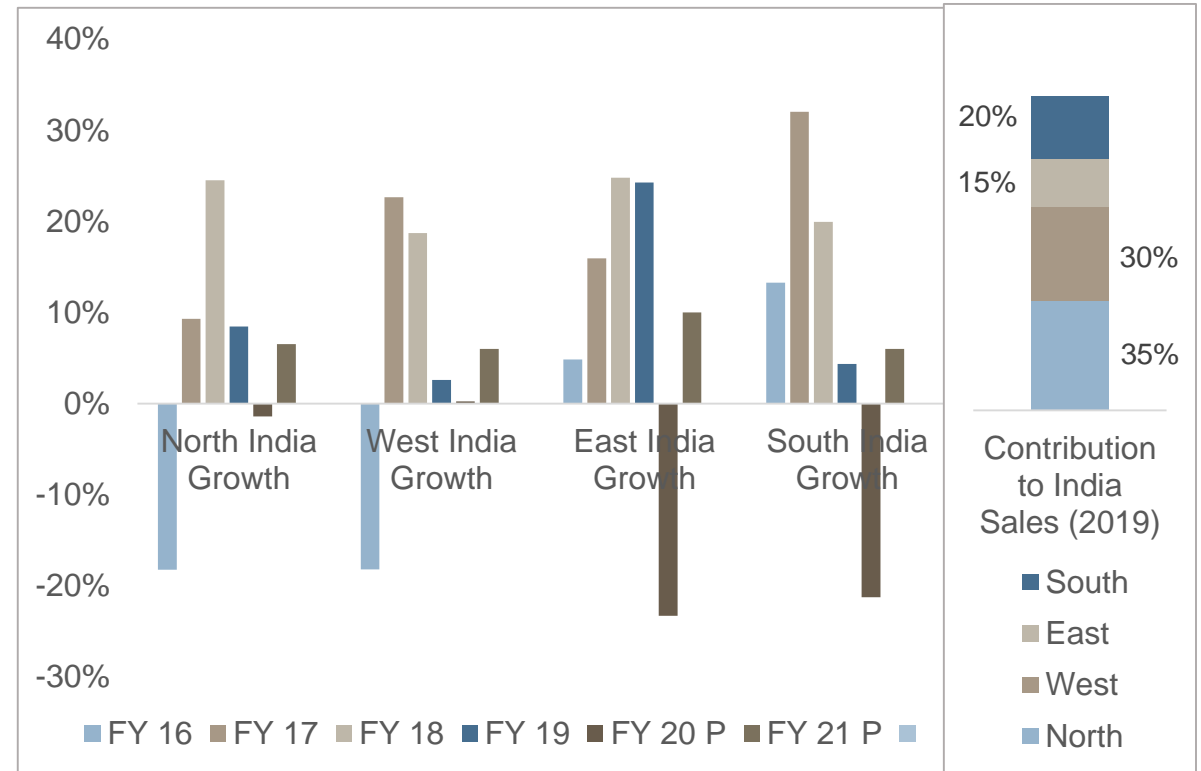
Segment-wise tractor sale shows a shift towards higher horsepower

Segment-wise tractor sales



Source: CRISIL Research
P: Projected

Regional growth

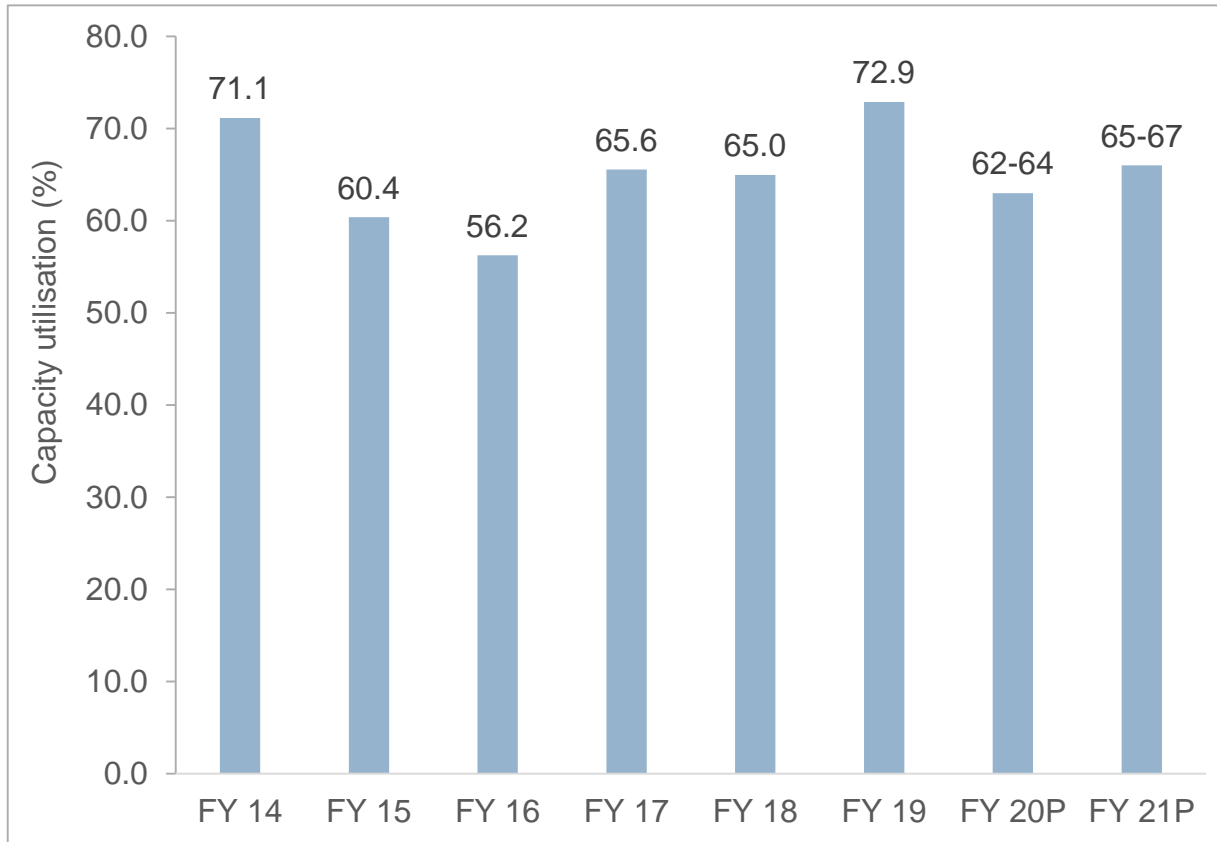


Source: CRISIL Research
P: Projected

- Based on the evaluation of structural parameters across states, the northern and eastern regions are expected to grow the fastest over next five years.
- Slight upgradation from 31-40 hp tractors to 41-50 hp tractors is expected over the next five years, as farmers are likely to upgrade to higher hp segments, realising the benefits of mechanization and higher productivity from increased usage of implements along with tractors.

Utilisation to fall in fiscal 2020 before improving in fiscal 2021

Capacity utilisation



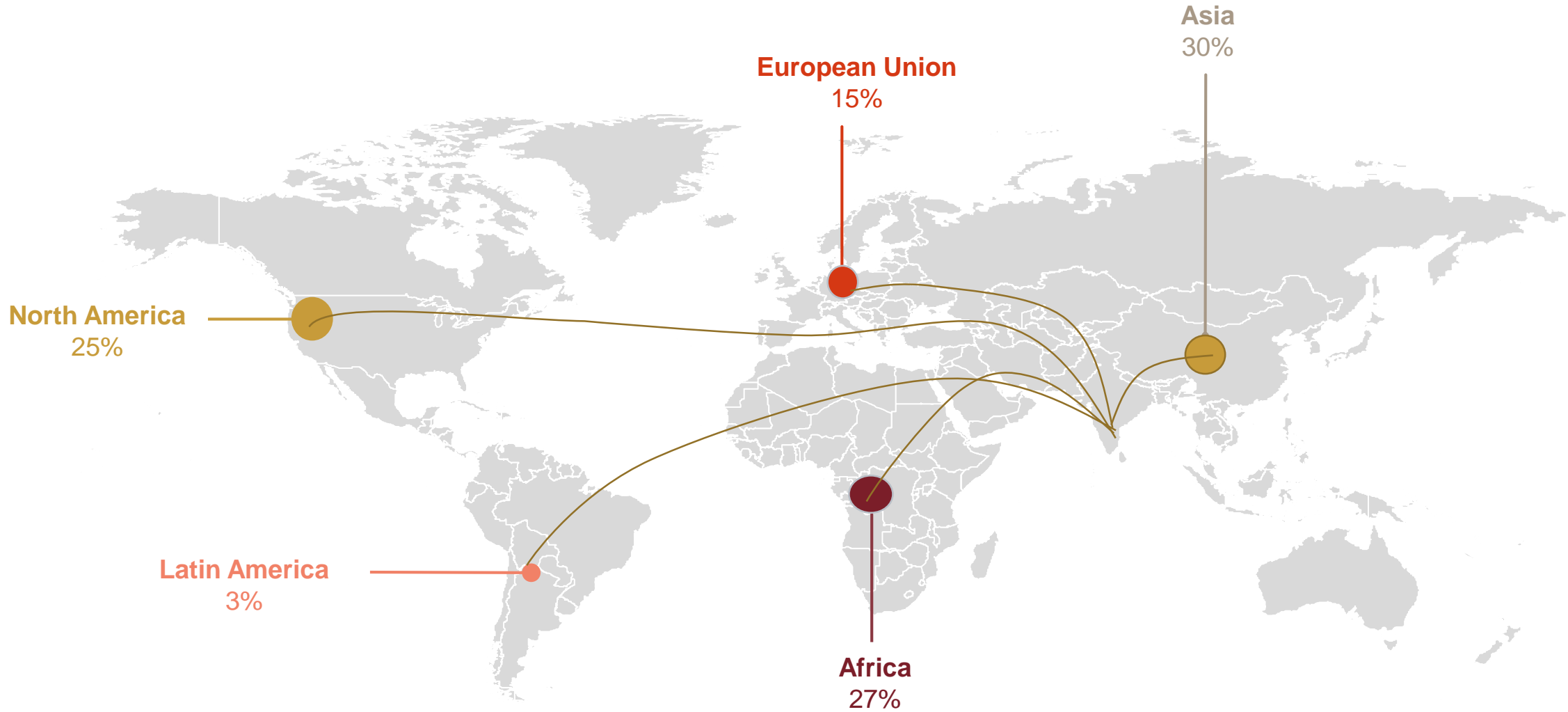
P = Projected
Source: CRISIL Research

Player	Effective Capacity estimate (in '000) (as on 31st Mar 2019)	Production (FY19) (in '000)	Capacity utilization in FY19E
Escorts Ltd.	1,00,991	98,940	102.1
Force Motors Ltd.	3,856	24,000	16.1
International Tractors Ltd.	1,07,813	3,00,000	35.9
Johndeere	94,956	1,30,000	73.0
Mahindra & Mahindra Ltd.	3,38,236	3,76,000	90.0
New Holland India	42,889	60,000	71.5
SAME DEUTZ-FAHR	9,938	15,000	66.3
TAFE	1,59,915	1,58,000	101.2
VST	8,451	37,000	22.8
Industry Total	8,67,045	11,98,940	72.9

Source: CRISIL Research

- In fiscal 2020, capacity utilization levels are expected to decline significantly due to decline in volumes and capacity addition by players.
- Thus, capacity additions by players and moderate growth in tractor production will lead to a decline in capacity utilisation to 60-62% levels in fiscal 2020

Tractor Exports



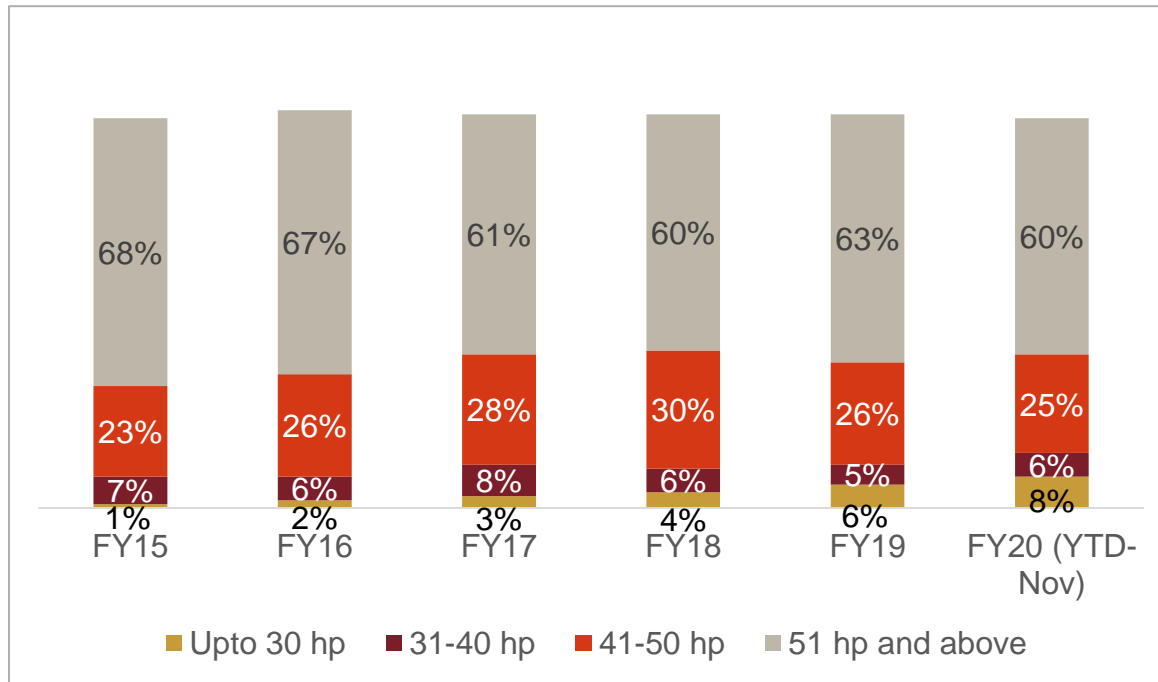
NOTE: Represents FY19 exports

Source: Directorate General of Foreign Trade (DGFT), CRISIL Research

Research

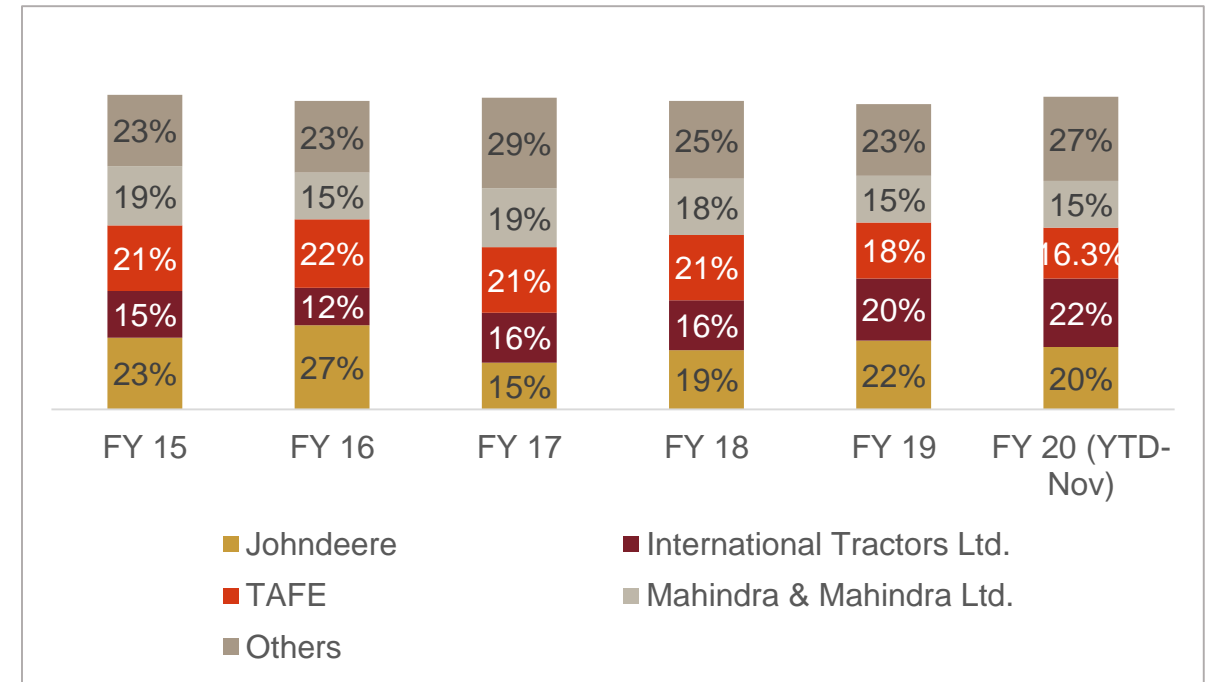
Regulatory norms in Europe and slowdown in demand sentiments in african countries is leading to decline in exports in 2020

Segment wise market share of exports



Source: CRISIL Research

Player wise market share of exports



Source: CRISIL Research

- Tractor exports to decline by (14)-(16)% in fiscal 2020 and increase by 7-9% in fiscal 2021.
- Tractor demand is expected to decrease in Europe and North America on the back of global emission norms and economic slowdown.
- Drought in parts of Africa(Kenya, Zambia) have further dampened the sentiments for fiscal 2020.

Trem IV norms applicable only on 50HP and above

Trem IV applicable from 1st October 2020 mandates significant reduction in PM for 50HP and above tractors

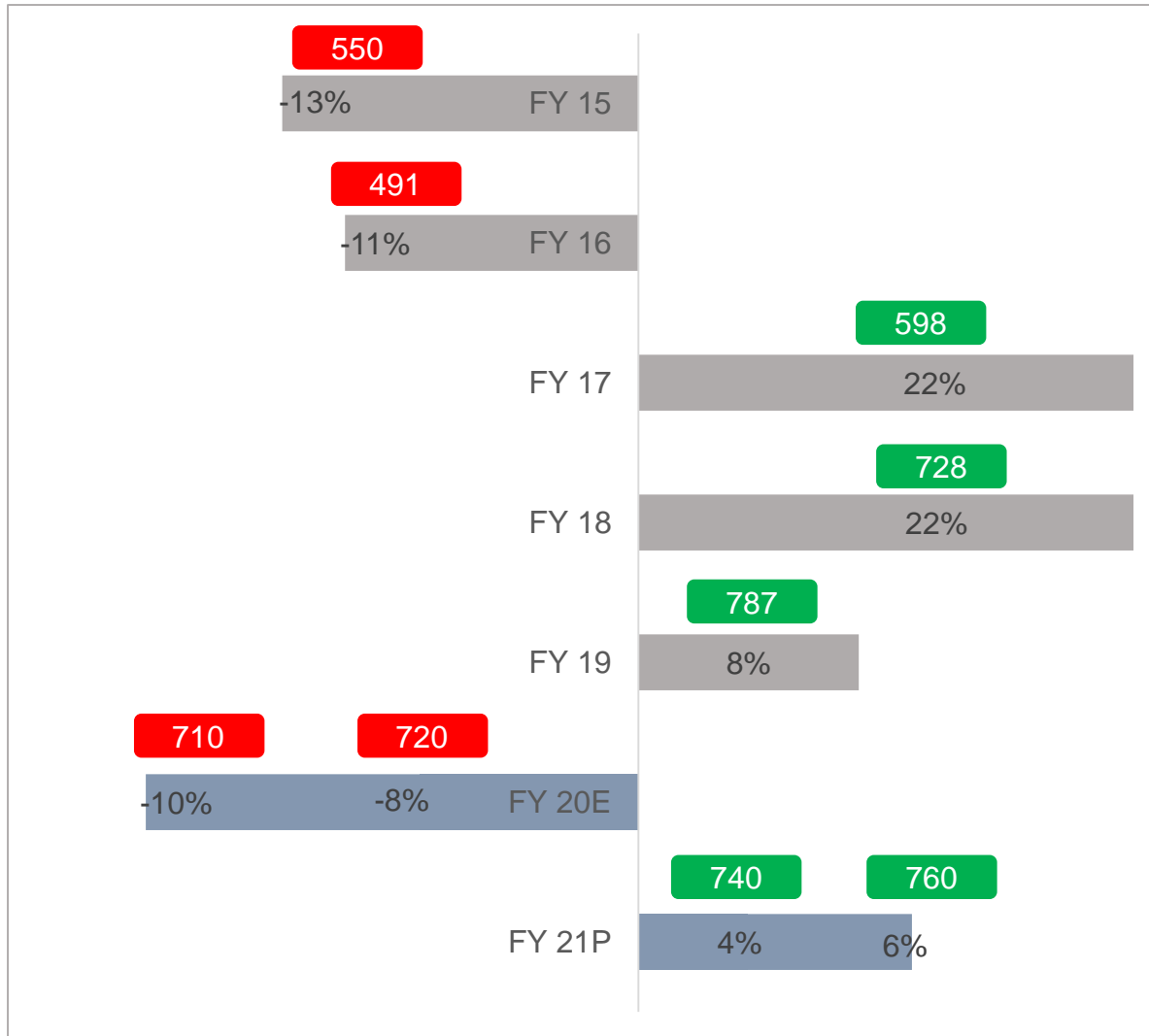
Emission standard stage	Engine Power	Market share	Date	CO	HC+Nox	PM
	HP			g/kWh		
Trem Stage III A	11 to 25HP	9%	1st April 2010	5.5	8.5	0.8
	25 to 50HP	84%	1st April 2010	5.5	7.5	0.6
	50 to 75 HP	7%	1st April 2010	5	4.7	0.4
Trem Stage IV	11 to 25HP	9%	No change			
	25 to 50HP	84%				
	50 to 75 HP	7%	1st October 2020	5	4.7	0.025

Source: Industry, CRISIL Research

- As tractor with more than 50HP contribute only 8% to overall tractor sales, we expect limited impact on tractor industry.
- Cost is expected to increase by a tune of 15%.
- However, within the segment we expect some 0-2% pre-buying in second quarter of fiscal 2021.

Domestic sales – Tractors

Annual trend



Quarterly trend

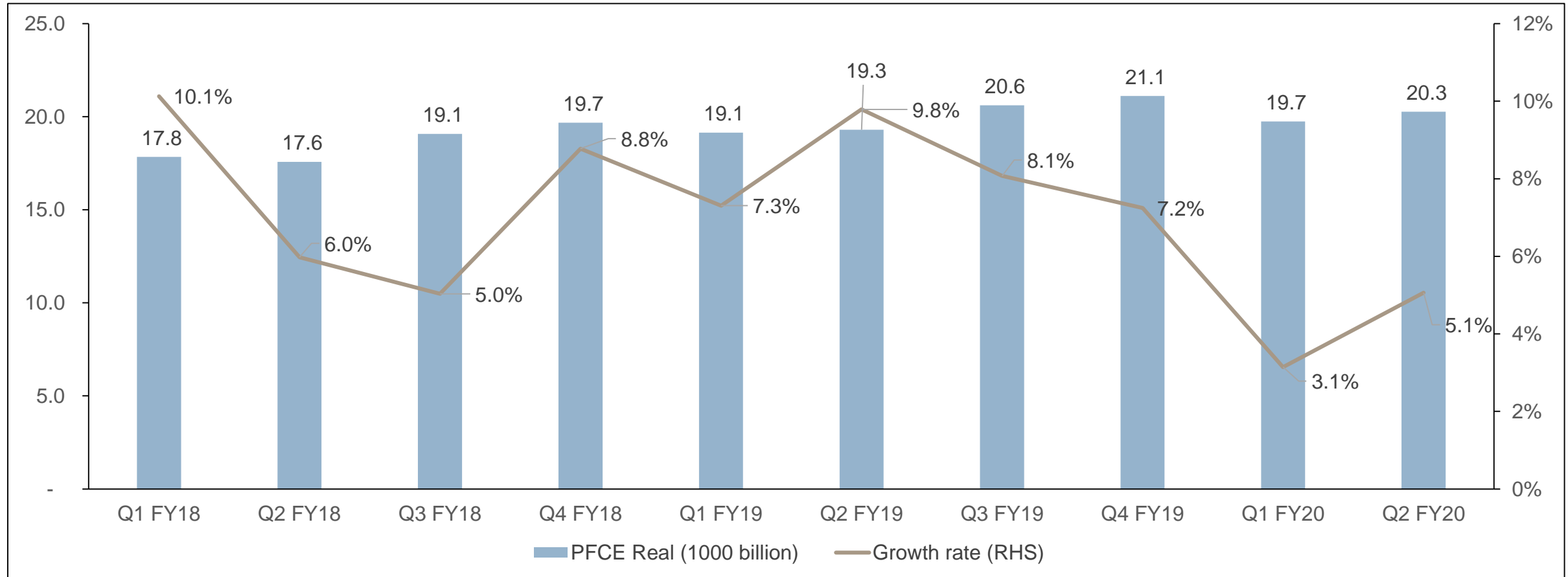
Period		Volume (mn)	YoY Growth	QoQ Growth
FY19	Q4	161	(8)%	(26)%
FY20E	Q1	191	(15)%	19%
	Q2	168	(9)%	(12)%
	Q3	204	(6)%	22%
	Q4E	165-169	3-5%	(17)-(19)%
FY21P	Q1	199-203	4-6%	19-21%
	Q2	165-168	(2)-0%	(16)-(18)%
	Q3	212-217	4-6%	28-30%

- Tractor sales to post decline in fiscal 2020 due to high inventories amid muted demand both in rural and construction segments.
- However domestic tractor demand is expected to moderately improve in fiscal 2021 on the back of increased rabi profitability.
- Lower subsidies compared to last year and collective decision of manufacturers to not participate in subsidy schemes, largely in southern states (where subsidies account for 50% of the sales) is expected to shave off moderate quantum of tractor volumes.



Three-wheeler

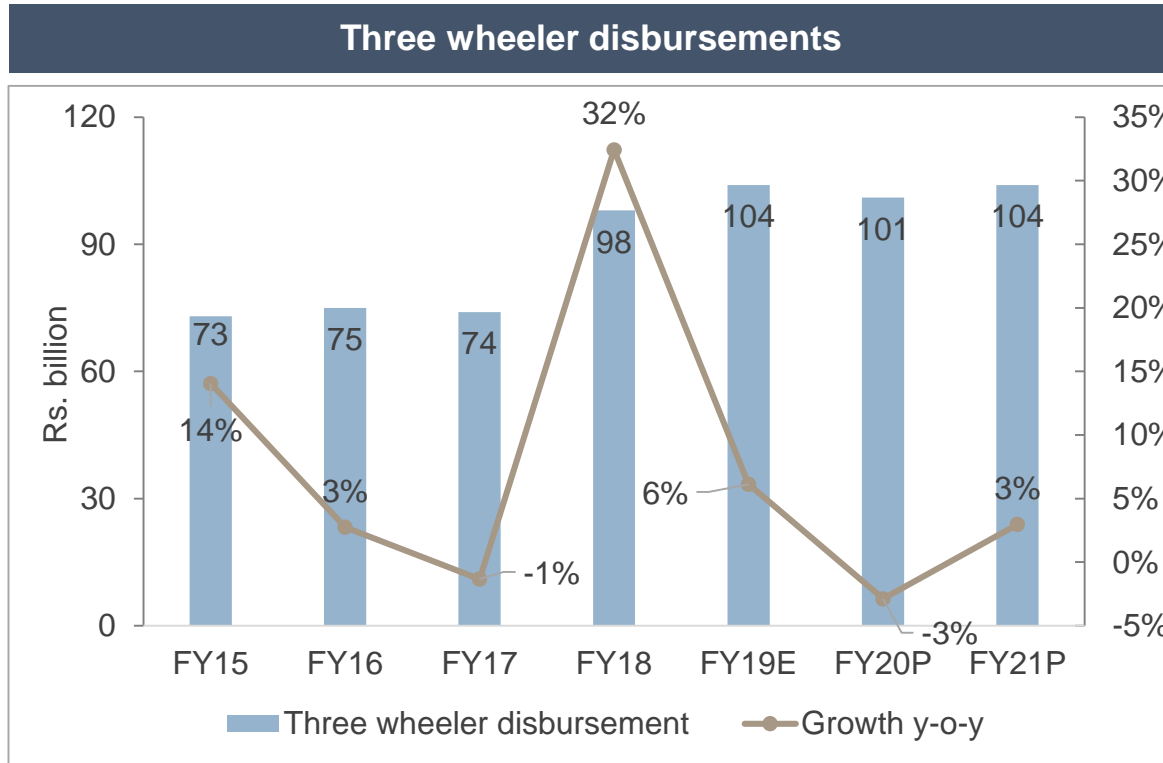
PFCE grew at a slower pace compared to last two fiscals



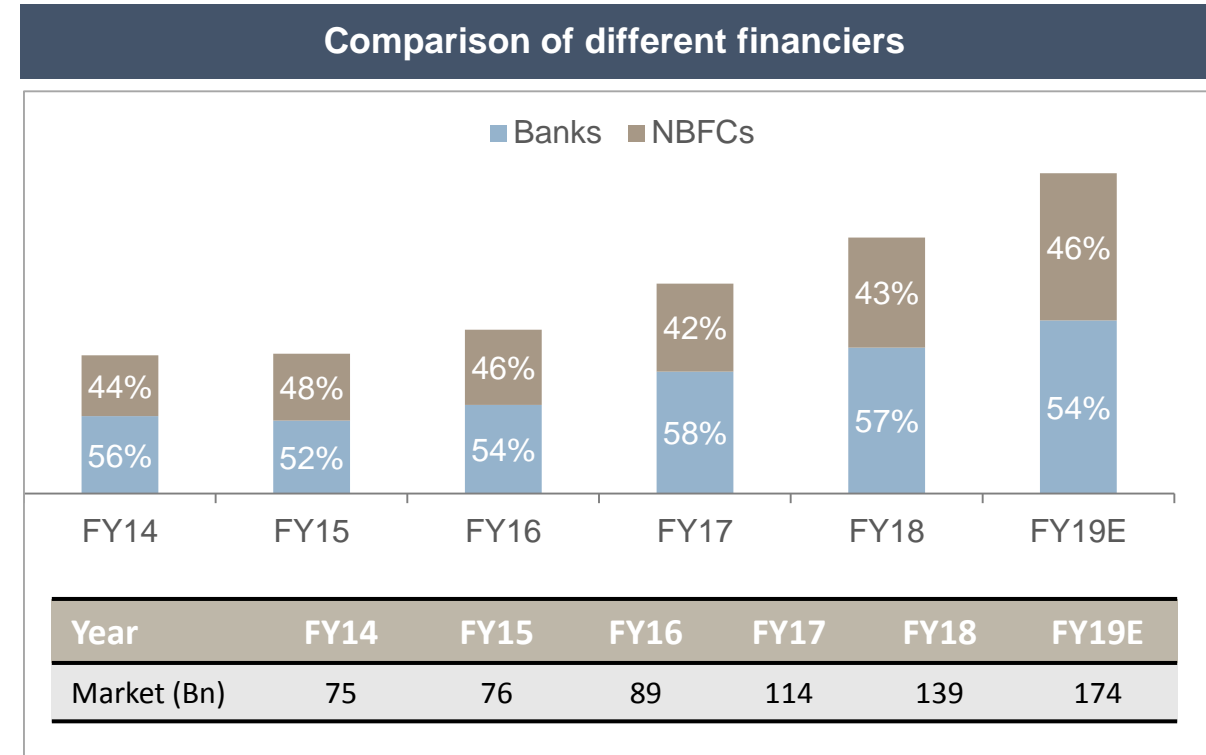
Source: CRISIL Research

- Growth rate nearly halved in Q2 y-o-y owing to muted consumer sentiments resulting in reluctance in spending
- Short term indicators like auto sales, FMCG sales, imports have indicated sluggishness in demand
- Domestic sentiments remain subdued – both at household and corporate level – despite monetary policy turning supportive

Deepening NBFC penetration into rural markets to drive three-wheeler financing growth



Source: CRISIL Research

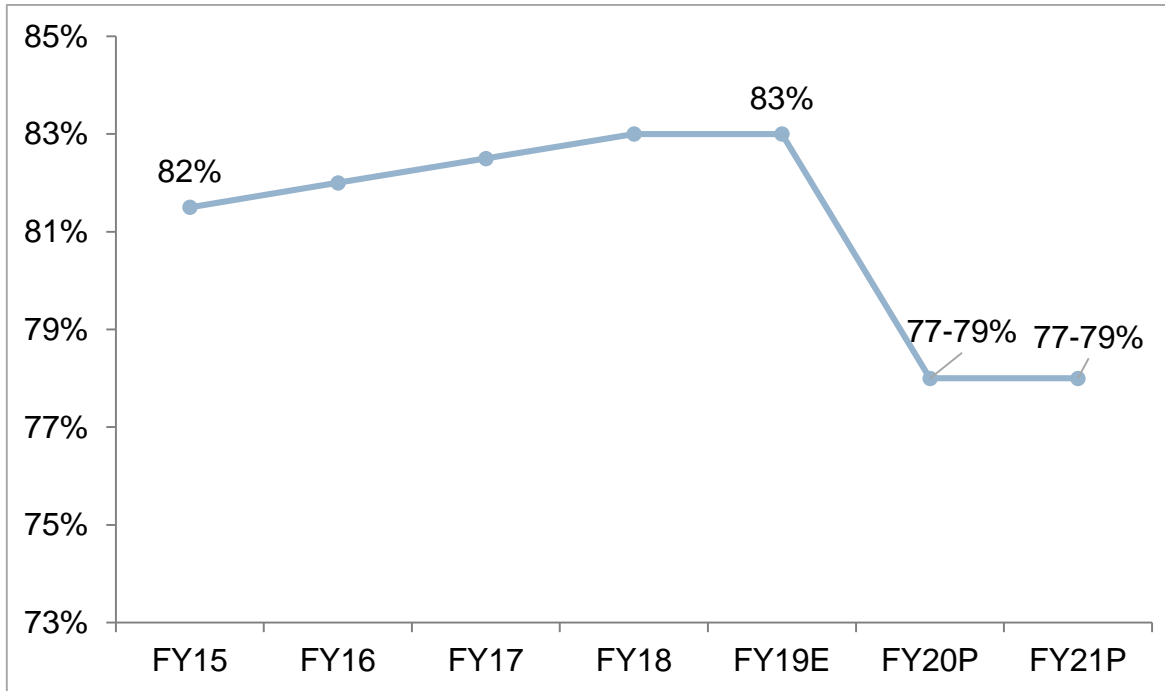


Note – Values include data for NBFCs, banks and small finance banks
Source: SIAM, Company reports, CRISIL Research

- In fiscal 2020, retail sales are estimated to have remained afloat despite decline in wholesale offtake. With discounting expected in the second half, which will reduce the quantum of loan required, disbursements are expected to remain flat despite aggressive steps to liquidate BS-IV inventory by dealers.
- Driven by greater ability to tap rural markets, NBFCs are expected to gain further share in the overall three wheeler financing market over the next fiscals.

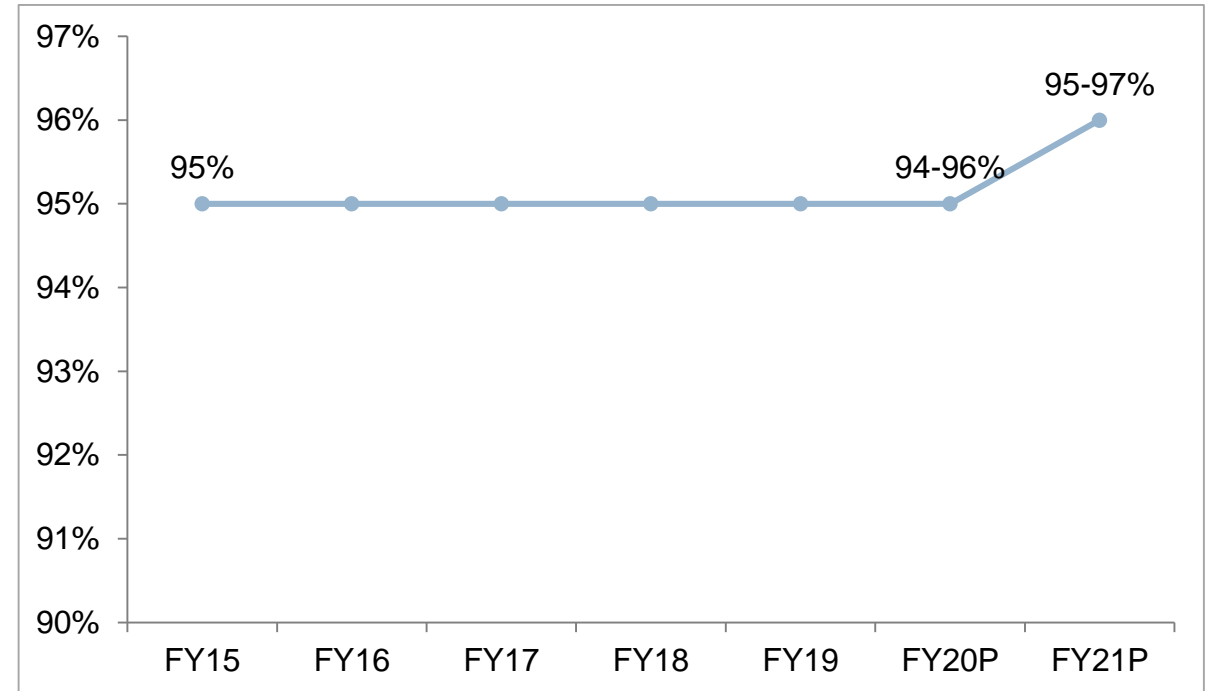
Financing penetration to increase marginally on increasing rural penetration of NBFCs

Loan-to-Value for 3W



Source: Crisil Research

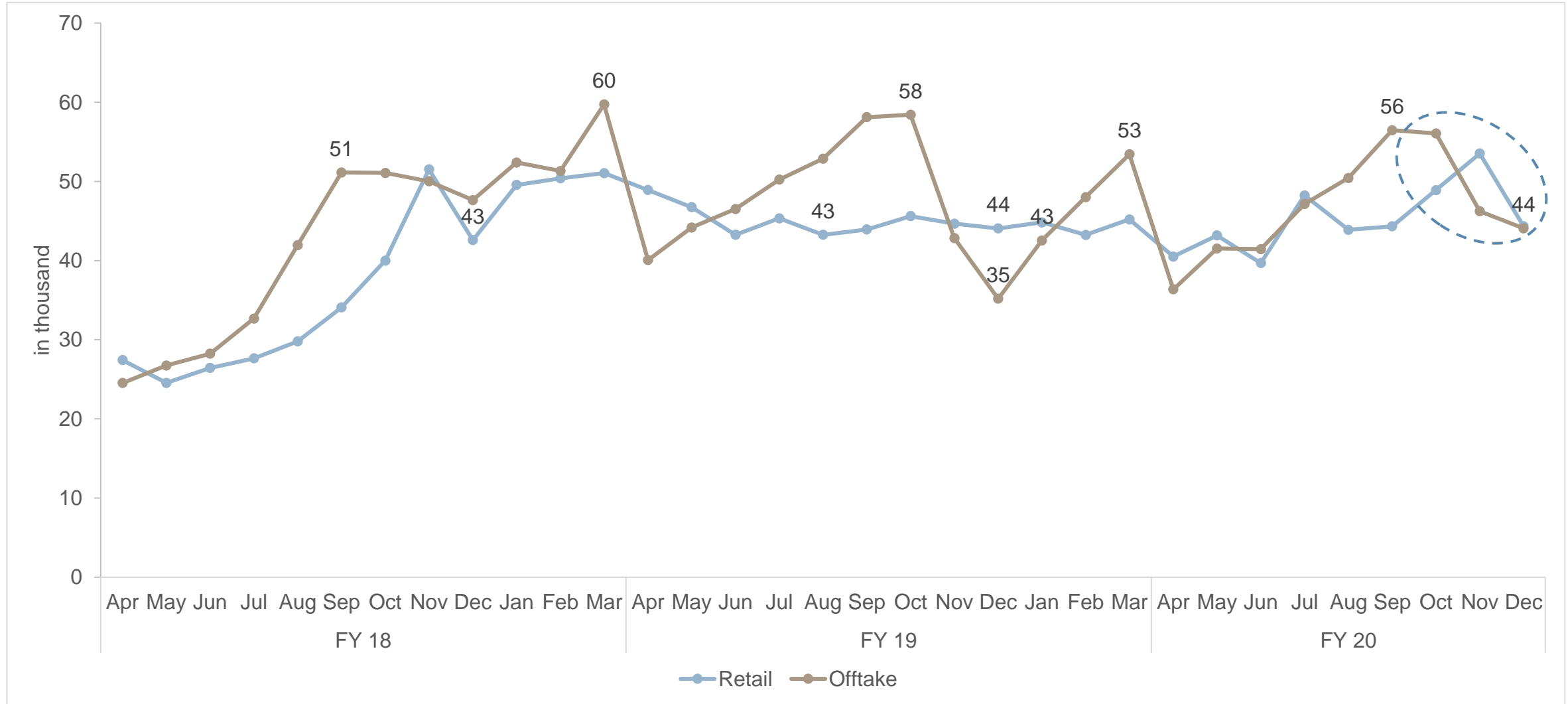
3W Finance Penetration



Source: Crisil Research

- Financing penetration is expected to remain high, as incumbents take a share from unorganised players by offering relatively lower interest rates. Further, penetration of NBFCs in rural market is expected to drive up finance penetration levels.
- LTV has declined marginally in recent time due to increased risk perception post declining freight rates and declining profitability of operators.

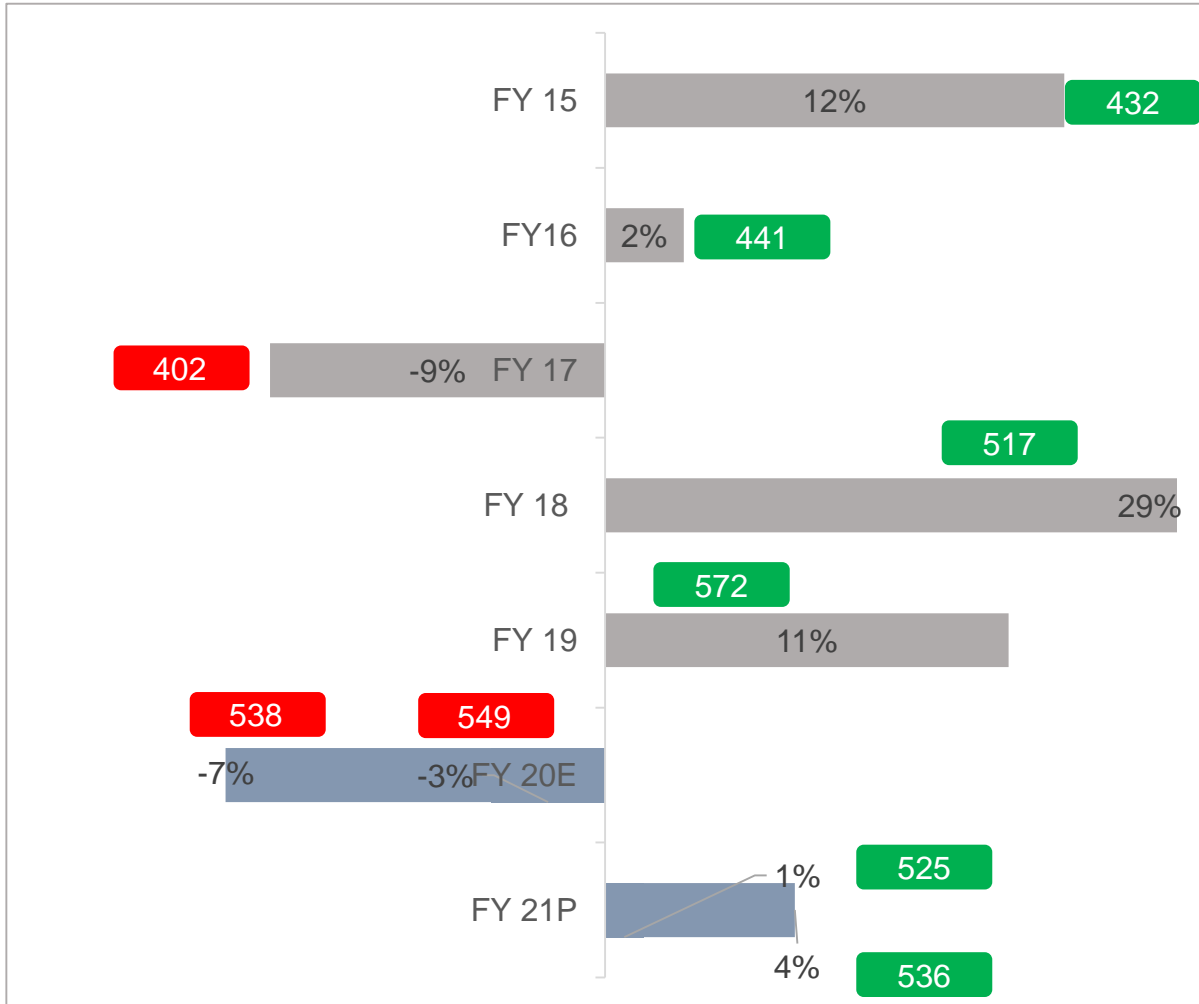
Retail in sync with off-take



Source: SIAM, Vahan, CRISIL Research

Domestic sales – 3W Passenger

Annual trend



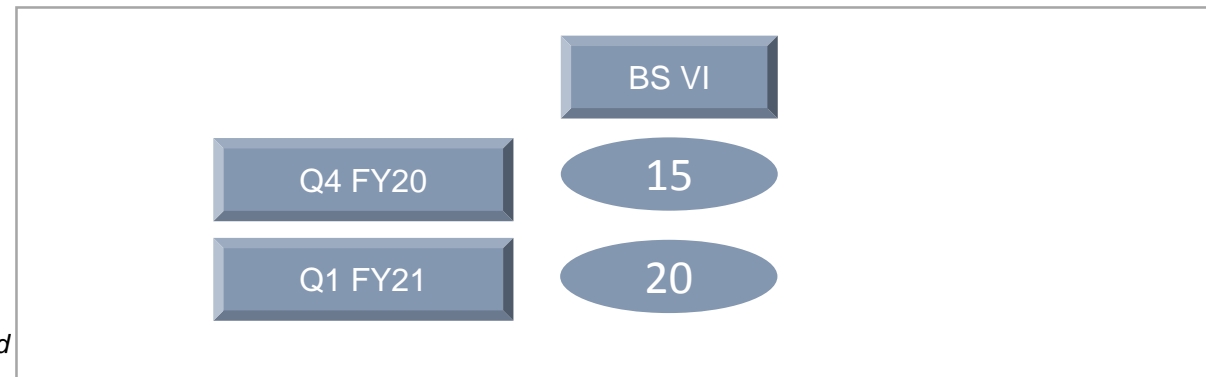
NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

Source: SIAM, CRISIL Research

Quarterly trend

Period		Volume ('000)	YoY Growth	QoQ Growth
FY19	Q4	144	(12)%	6%
FY20E	Q1	119	(9)%	(17)%
	Q2	154	(4)%	29%
	Q3	146	7%	(5)%
	Q4E	123-125	(13)-(15)%	(14)-(16)%
FY21P	Q1	121-124	2-4%	(2)-0%
	Q2	136-139	(10)-(12)%	11-13%
	Q3	146-149	0-2%	6-8%

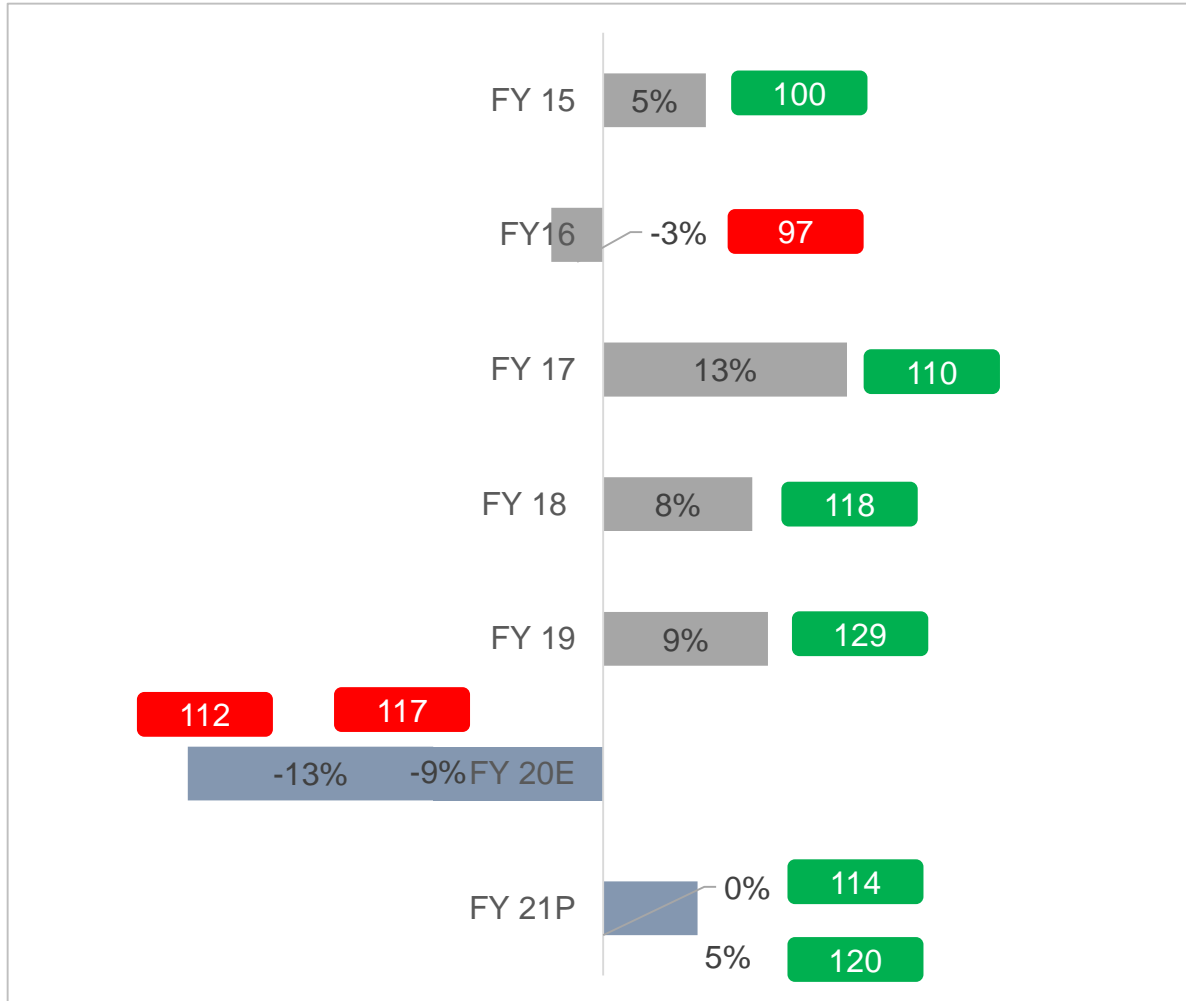
Inventory assumption



NOTE: Inventory calculated using sales of last 12 months. Represents end of quarter inventory

Domestic sales – 3W Cargo

Annual trend



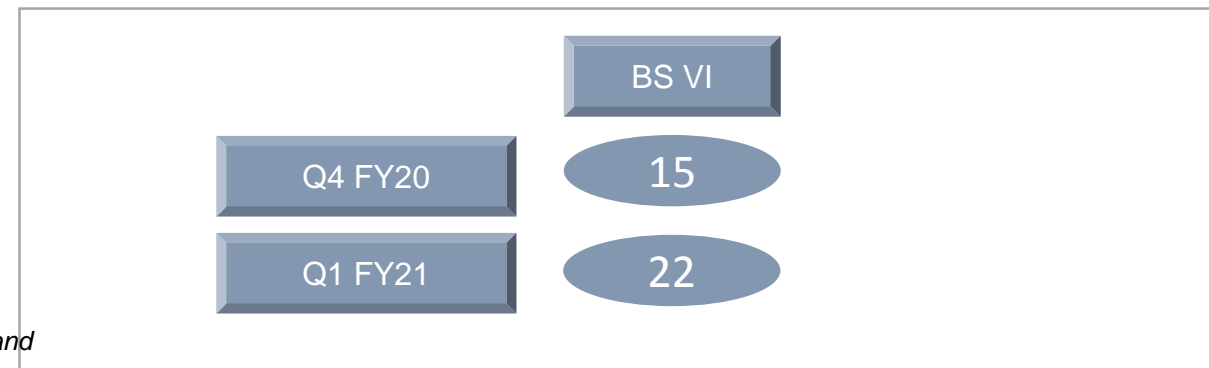
NOTE: Figures in bars represent yoy growth rates and in boxes represent domestic volumes in thousand

Source: SIAM, CRISIL Research

Quarterly trend

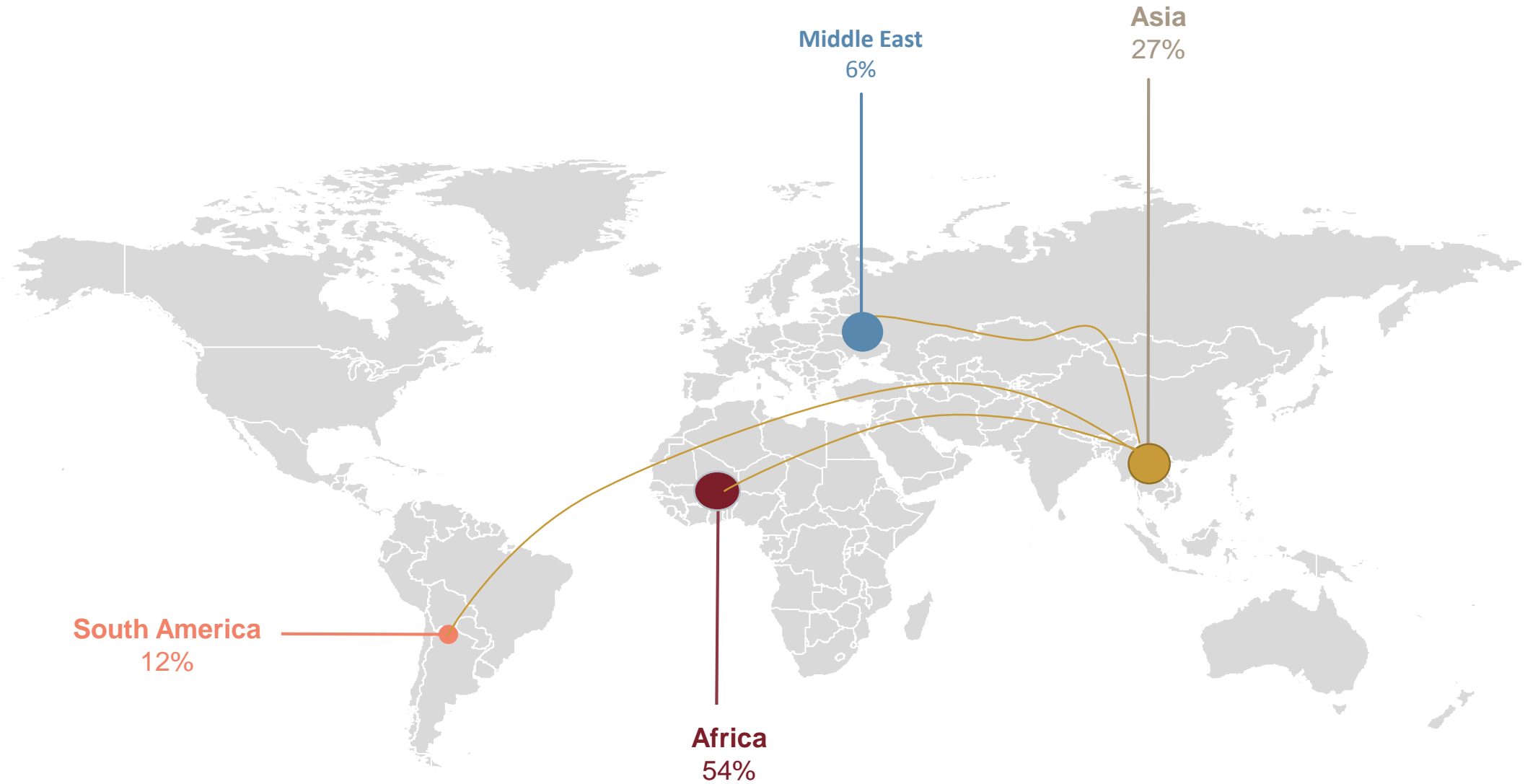
Period	Volume ('000)	YoY Growth	QoQ Growth	
FY19	Q4	36	6%	20%
FY20E	Q1	30	(1)%	(16)%
	Q2	27	(14)%	(12)%
	Q3	30	(1)%	10%
	Q4E	27-28	(22)-(24)%	(6)-(8)%
FY21P	Q1	28-29	(5)-(7)%	3-5%
	Q2	27-28	4-6%	(1)-(3)%
	Q3	28-30	(2)-0%	3-5%

Inventory assumption



NOTE: Inventory calculated using sales of last 12 months.
Represents end of quarter inventory

Three-wheeler exports



NOTE: Represents FY19 exports

Source: Directorate General of Foreign Trade (DGFT), CRISIL Research

Research

Inventory scenario

Inventory levels a concern across segments

Vehicle segment	Normal inventory in days	Current inventory levels	Actions being taken
Passenger Vehicles	25-30	22-27	Dealers and OEMs are aggressively giving discounts to clear the stock.
Two Wheelers	30-35	35-40	
Commercial Vehicles	25-35	20-25	Discounts plus major production cuts have led to cutting down of inventory with the dealers
Tractors	30-35	40-45	Inventory similar to previous quarter levels.
Three-wheeler	20-25	22-25	Inventory was slightly higher due to built up of BS IV stock till mid Jan

NOTE: Inventory days for passenger three-wheeler is 15-20 days and for goods three-wheeler is 25-30 days

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.

Thank you

For any further queries please contact:

Mr. Hemal N Thakkar

Associate Director – CRISIL Research

hemal.thakkar@crisil.com