AMBIT
Acumen at work

AMBIT
ASSET MANAGEMENT

DISRUPTION SERIES

JULY 2021 | VOL 013

TVS Motors: Navigating Disruptions. Swiftly!

DISRUPTION IS INEVITABLE: WE ARE PREPARED

We at Ambit are constantly trying to stay ahead of the curve by drowning out the noise and looking ahead. In keeping with our long term investment thesis, we like to stay up to date with not just the present impediments faced by your portfolio companies but also long term disruptions which can hit these companies. Hence we will regularly come out with our thoughts on disruptions in your portfolio companies/ sectors and for the **13th volume** of this series we have chosen **TVS Motors**.

A disruptive technology/ innovation is one that helps create a new market and value network, and eventually goes on to disrupt an existing market and value network (over a few years or decades), displacing conventional wisdom or technology. This note takes a closer look at the possible disruption that TVS Motors may face, especially in the advent of changing industry landscape due to Electric Vehicles.

TVS MOTORS: AN ALL-ROUNDER AMONG INDIAN AUTO OEM

Idea of a low-cost 2W for two

TVS Motors was initially set-up as a Moped Division of Sundaram Clayton (SCL) – a collaboration between Clayton Dewandre Holdings, UK and TVS Group – in 1979. The idea was to create a product that could comfortably carry two people at low-cost in the hills of Tirupati. TVS-50 – a 2-seater, 50CC 2W – was thus launched in 1980.

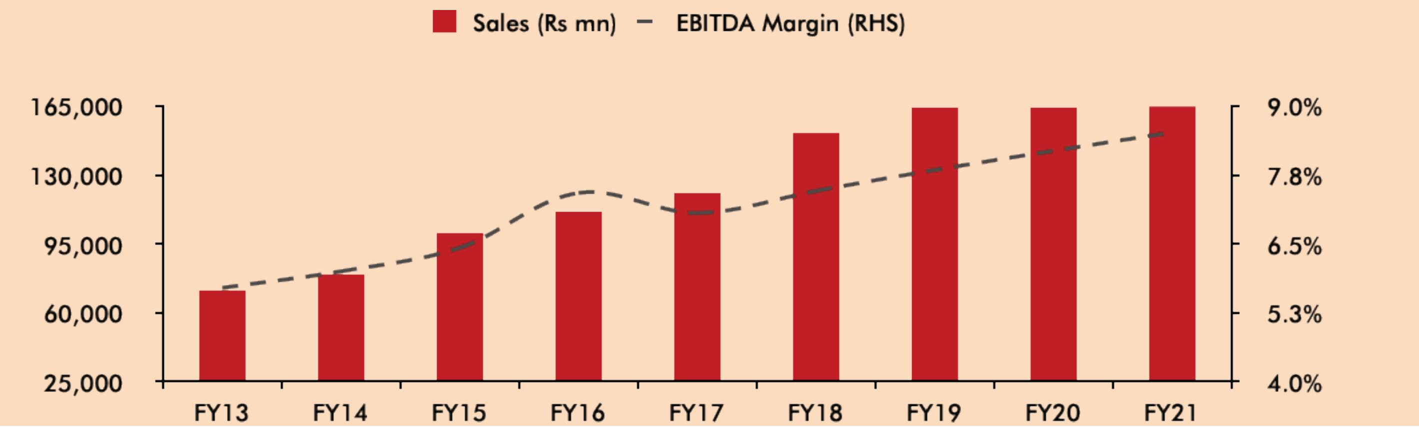
From Moped to Bikes

In 1982, SCL formed a JV with Suzuki Motor of Japan to form Ind-Suzuki Motorcycles Limited (ISML), which kick-started the motorcycle revolution in the country with the launch of 100cc Indo-Japanese motorcycles. ISML was later merged with Moped division of SCL in 1986 to form TVS-Suzuki Ltd. Shortly after, TVS encountered strong competition with many other domestic companies forming JVs or Tech partnerships with foreign 2W companies, like – Hero-Honda(1986); Kawasaki-Bajaj(1984); Escorts-Yamaha (1985. This increased competition acted as a nudge for TVS to differentiate itself by being more cost-effective, innovative and focusing on niche-categories.

Treading on its own

The TVS-Suzuki JV was ended in 2001 and the name of the company was changed to TVS Motors Company Ltd. Over the ensuing years, the company embarked on a journey to create a strong foothold in 2W space lead by its superior technology and innovative new product launches. With a focused product strategy – premium Bikes and scooters –, growing exports share, and focus on margin expansion. The result was evident in TVS' Revenue/EBITDA CAGR of 17%/19% from FY13 to FY20.

Exhibit 1: TVS has continued to expand its margins consistently over the years which has led to industry leading PAT growth

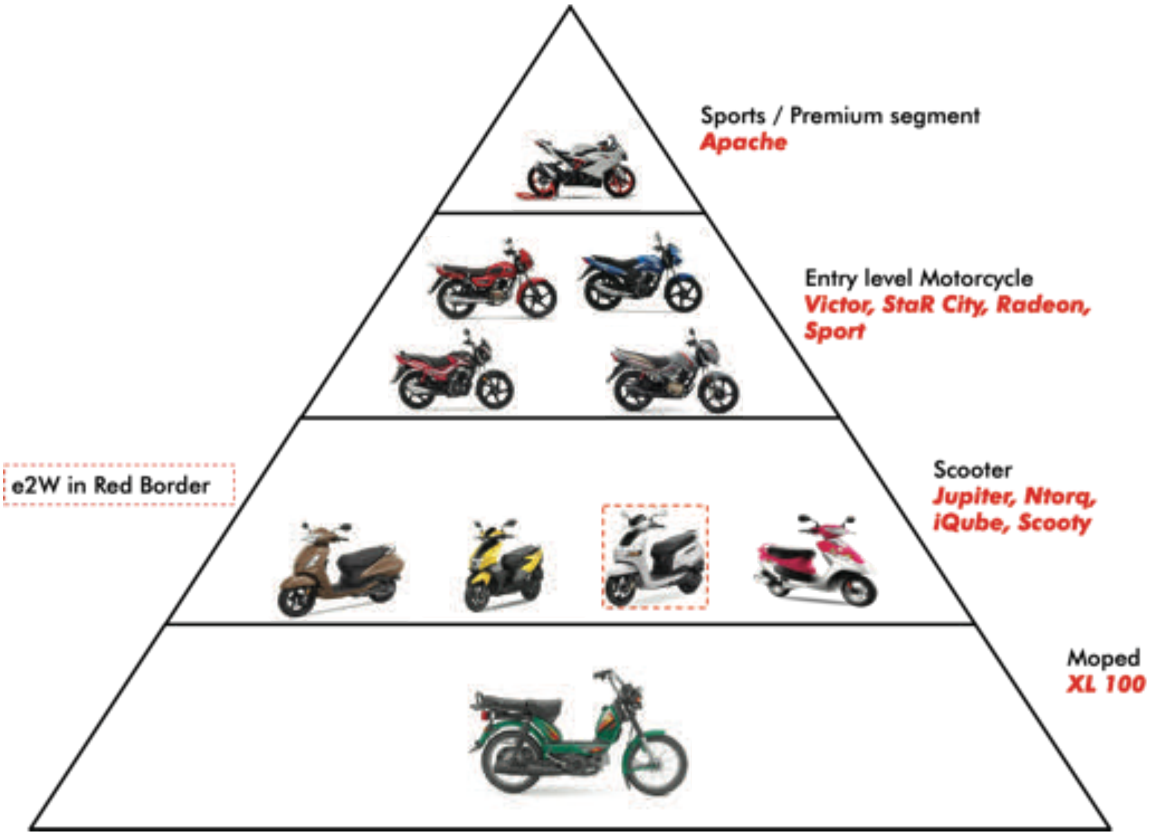


What's in the Name?!

The name TVS is after the founder T.V Sudaram Iyengar or Thirukkurungudi Vengaram Sundram Iyengar. According to the company, the letters TVS have always stood for Trust, Value, and Service within the company.

TVS' PRODUCT PORTFOLIO AND INNOVATIONS

Exhibit 2: TVS' 2W portfolio across segments



Source: Ambit Asset Management, carandbike.com, bikewale.com

Number of 'Industry-First' innovations

1. India's first 2-seater moped – TVS 50
2. India's first Digital Ignition – TVS Champ
3. India's first fully indigenous motorcycle – Victor
4. First Indian company to launch ABS in a motorcycle – Apache RTR Series
5. Indonesia's first dual-tone exhaust noise technology – Tormax
6. India's first connected scooter - TVS NTORQ
7. First 110cc scooter to have Stop-go technology (idle stop / start) - TVS Jupiter ZX Disc intelliGO
8. TVS Apache RTR 200 4V was introduced with ride modes. This is not just an industry first but also a technology usually seen in 650cc and above motorcycles.
9. First ever Augmented Reality experience by a two wheeler OEM- TVS A.R.I.V.E.
10. Recently launched India's first ethanol-based Motorcycle – Apache RTR 200

INDIAN 2W INDUSTRY AND TVS' POSITIONING

Exhibit 3: 10%/3% Scooters / Motorcycles(MC) volume CAGR from FY13-20 in domestic market

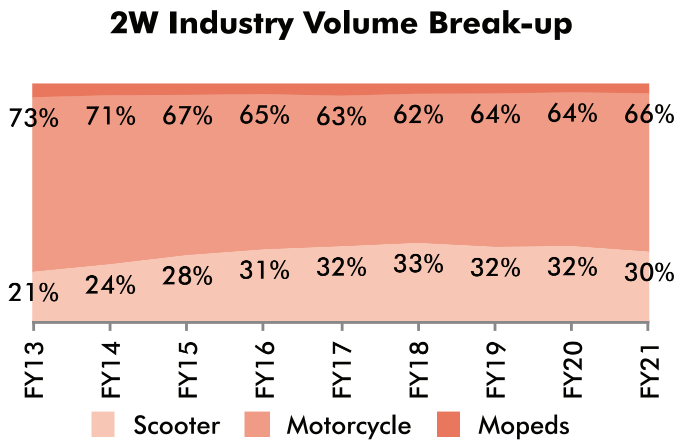


Exhibit 4: TVS (3rd largest by volume) has maintained its Domestic Market Share (MS) since FY13

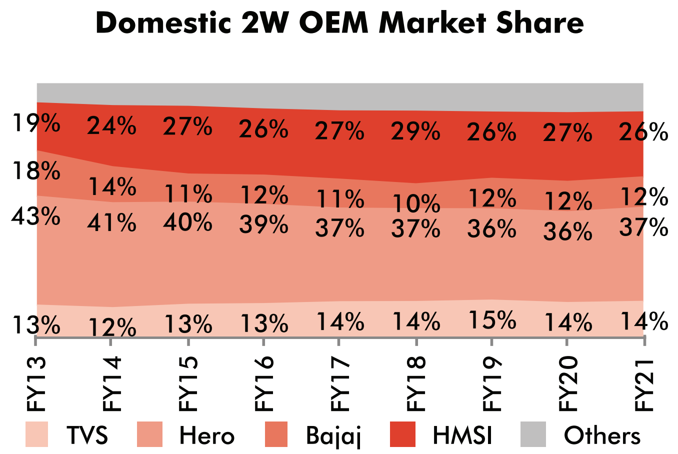


Exhibit 5: TVS' MS in Motor Cycle (MC) segment is optically low due to focus on exports market, especially in entry-level MC category (80% of total MC industry volume)

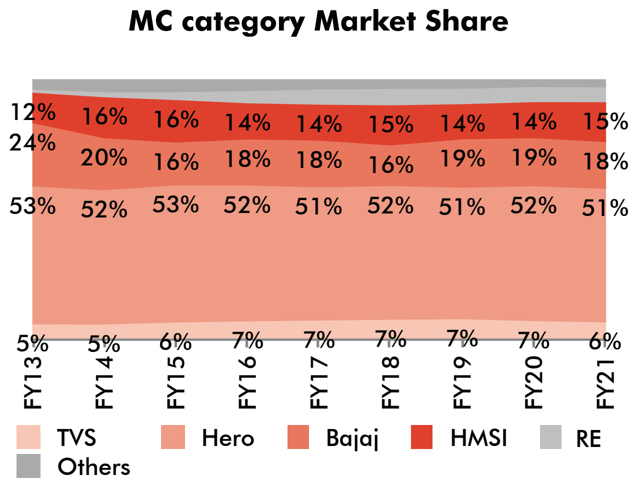


Exhibit 6: Domestic market focus is more on Premium category where TVS has doubled its MS, riding on the success of Apache

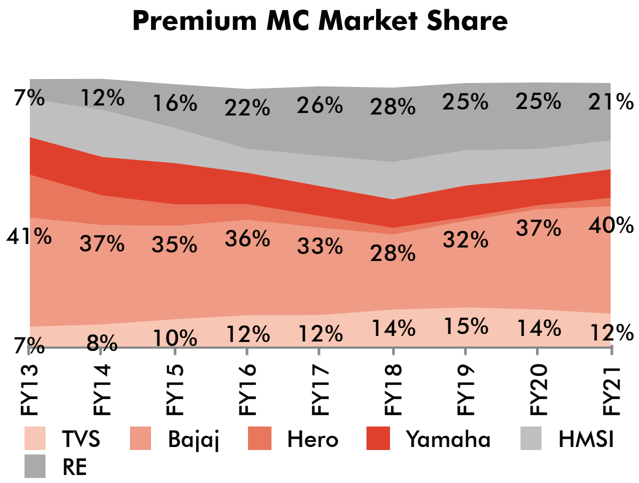


Exhibit 7: TVS has gained the highest MS in scooter segment since FY13 on the back of successful launches

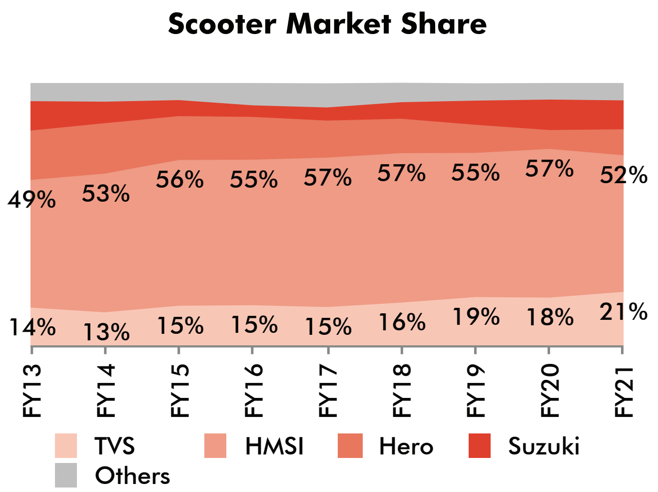
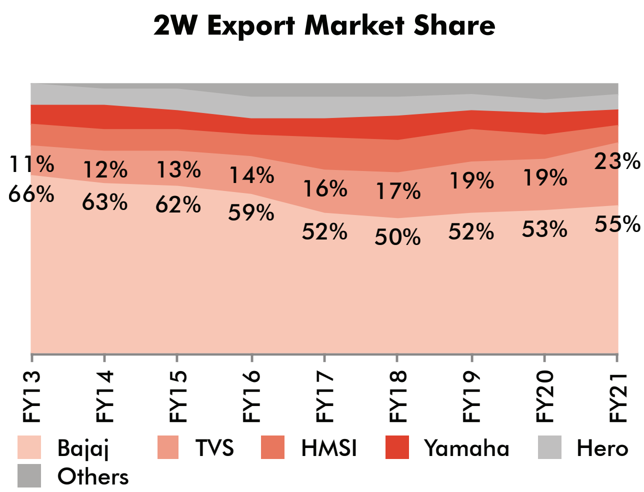


Exhibit 8: Growth in exports has been one key reason for the outperformance by TVS in the last few years



Source: Ambit Asset Management, SIAM

THE TRADITIONAL DISRUPTORS

1. Challenges for the Moped business

Mopeds, where TVS has a monopoly, are largely sold in Southern India with its affordability (<Rs50,000) and capacity to carry load proving a good value proposition for small businessmen and farmers. However, the segment has been slowing due to rising Urbanization, higher cost post BS6 transition and aggressive pricing from new entrant Bajaj. TVS' mix of moped segment in domestic volume /net revenue has reduced from 25%/42% in FY10 to 12%/29% in FY21. Since moped has the highest EBITDA margin, this has been one of the reasons for slower margin expansion for TVS. While the share has been declining gradually for TVS, a steep decline owing to stricter emission norms in the future or other factors, that may dissipate the price competitiveness and value proposition of Mopeds, may have a higher impact on EBITDA margins of TVS. Being an Economy / Mass level segment the ability to take price hikes are limited. TVS, however, has transitioned nicely by switching focus to exports which has helped them effectively use their expertise while negating the overall impact of domestic volume decline on the company.

2. Subsidiary and Ancillary business

As of FY21, investments of TVS in its key subsidiaries was ~Rs3,100Cr or 76% of standalone Net Worth. Of these, the major ones include:

A. PT TVS Indonesia: The Indonesian subsidiary was setup in 2007 with 3Lac Unit manufacturing capacity to manufacture and distribute 2Ws in the Indonesian Market and 3W for export. TVS has been investing in PTTVS to fund losses with cumulative investments now at ~Rs390Cr. PTTVS turned profitable for the first time in FY21 (Refer to Exhibit: 12). Any failure to sustain this performance and return back to losses may lead to impairment.

B. TVS Credit Services (TVSCS): Started in 2010, TVSCS offers Retail financing to 2W (of TVS), new tractors (TAFE & Eicher), used Tractors / Cars / CVs and Consumer Durables largely to customers in rural areas. TVSCS financed ~20% of TVS' sales by volume in FY20 and remains critical to its growth plans and market share increase. While the NPA levels have been largely similar to FY18 (Refer to Exhibit: 11), any sharp change in consumer behavior or technology led disruption to captive NBFCs leading to elevated credit cost or additional investment requirement into the business could impact the overall return ratios of the company. As of FY21, cumulative investments in the subsidiary stood at Rs1,414Cr or 34% of standalone Net Worth.

C. Investment in Rs6bn die-casting facility in US via Sundaram Auto Components Ltd (SACL): SACL Was set up in 1992 to manufacture wide range of automobile plastic components and assemblies. Sundaram Holdings USA Inc. (SHUI), a 75% Subsidiary of SACL, with the remaining 25% held by Sundaram Clayton, is investing Rs650Cr to set up a 10,000tpa aluminum die casting plant in the US.

D. TVS Singapore: TVS Singapore is leveraged to operationalize digital technology by delivering high quality solutions that addresses real life business challenges viz., harnessing the power of Analytics, AI, Augmented Reality, Machine Learning and IoT. Through this subsidiary, TVS has made investments in companies in the area of supply chain optimization, IoT and AI based credit underwriting with an aggregate investment of US$16.6m. It also acquired Norton Motorcycles in the UK for GBP16mn in 2020-21

Exhibit 9: Reducing dependence on Moped in domestic Volume/Revenue on the back of -3% CAGR since FY13

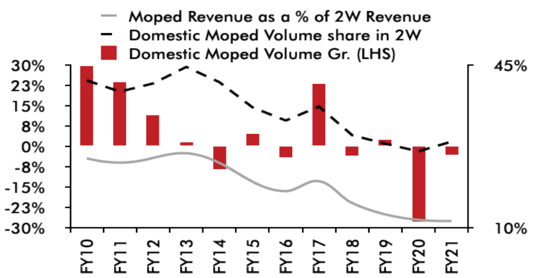


Exhibit 10: Moped Export volume growth for TVS has been better than Domestic growth (pre-COVID)

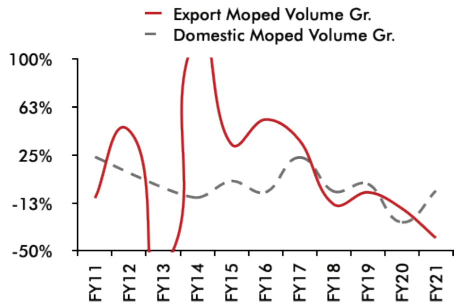


Exhibit 11: TVSCS Net NPA level maintained since FY18

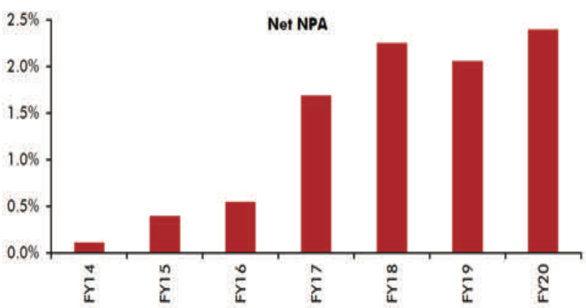
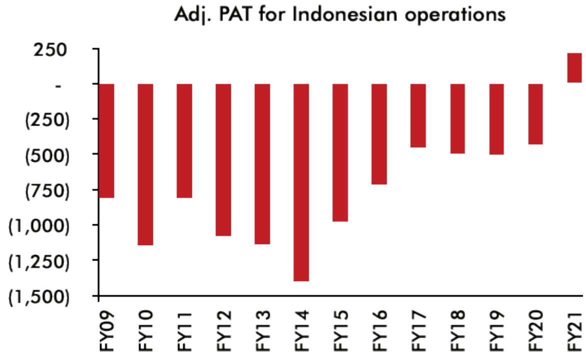


Exhibit 12: Indonesia operations turning around reducing the possibility of impairment



Source: Ambit Asset Management, Company

3. Export market struggle

Exports have been key to TVS's growth strategy over the past few years with the Volume share increasing from 11% in FY17 to 29% in FY21. After Bajaj, TVS has the largest export market share in India in 2W. We see a few challenges to TVS' Right-To-Win in exports market.

A. Competition from other OEMs: Scope for Market Share gain in exports market of Asia and Africa which are still under-penetrated and offer strong growth opportunities resulting in increased competition from other 2W OEMs like Hero Moto as they re-look their strategy which has not worked thus-far.

B. Lower export incentives: Discontinuation of the MEIS (Merchandise Exports from India Scheme) export incentive Scheme and replacing the same with the WTO compliant RoDTEP (Remission of Duties & Taxes on Exported Products) scheme will likely lead to lower benefit of 0.5-1.5% vs. 2% of revenue received earlier impacting the margin expansion in the near-term.

C. Local challenges in export markets: Economies of most of TVS' export destinations in Africa and LatAM are vulnerable to Crude and Commodity price volatility which impacts their forex. This could lead to volatile demand for TVS' product. TVS, at its end, is trying to diversify to other less affected countries and focus on product launches and leveraging financing solutions for customers.

4. Diversification benefits or spreading itself too thin

TVS is the only auto OEM in India which is present across all 2W sub-categories – Mopeds, Scooters and Motorcycle – and 3W. This diversification has presented certain challenges for TVS:

A. Pricing Power: Barring Mopeds, TVS does not enjoy leadership position in domestic market in any of these sub-segments (Refer to Exhibit: 18). This restricts TVS' ability to command pricing power in these segments, which it ideally should, considering its superior product design and engineering.

B. Branding Challenges: As TVS looks to transition away from the image of a 'Moped' company. Would TVS be perceived as a 'Scooter' company or a 'Motorcycle'.

Largely due to these challenges, TVS has been unable to scale its market share in Motorcycle Segment, 80% of which is dominated by high volume entry/executive segment where TVS does not have a strong positioning. However, it is this diversification that helped TVS gain volume and grow faster than peers during the industry slowdown in FY18 as it was not solely dependent on one segment. It also provided a good bouquet of products to establish its export stronghold.

Over the past few years, TVS is focusing on Sports / Cruise (Premium) segment in Domestic MC rather than entry / mass segment, attempting to build on the success of Apache. This also aligns well with TVS strategy of moving from 'Push' product to 'Pull' product which would imply operating leverage and lower volume sensitivity to A&P spend. In the Scooter segment, as the market shifts to 125cc, TVS is well positioned with the success of Jupiter and NTorq and is looking on developing the EV portfolio.

Exhibit 13: Some of the investments made by TVS Singapore in area of Digital Technologies

Investments by TVS Singapore	
Ambit Coffee Can Portfolio	Credit underwriting platform drive by AI for prudent underwriting
Predictronics Corp, USA	Our solutions combine expertise in IIoT, Industrial AI, Big Data, Machine Learning, Predictive Analytics and Business Impacts to remove the guesswork from industrial operations through process uptime, production planning, and optimized upkeep by providing actionable information and accurate predictions that empower you to have a transparent, worry-free business.
Altizon Inc, USA	Altizon brings IoT and operational intelligence together to power the digital transformation journey of enterprises.
TagBox PTE	Leveraging technology to help create reliable supply chains across the globe

Exhibit 14: Subsidiary financials have impacted Consolidated PAT in FY21

Standalone (Rs mn)	FY18	FY19	FY20	FY21
PAT	6,626	6,701	6,246	6,120
Shareholders' Equity	28,804	33,473	36,181	41,710
ROE	25%	22%	18%	16%
Consolidated	FY18	FY19	FY20	FY21
PAT	6,648	7,254	6,468	6,075
Shareholders' Equity	28,583	34,159	36,030	42,145
ROE	26%	23%	18%	16%
Subsidiaries	FY18	FY19	FY20	FY21
PAT	22	553	222	-45

Source: Ambit Asset Management, Company

Exhibit 15: A successful exports strategy has been vital in TVS' outperformance over the last few years

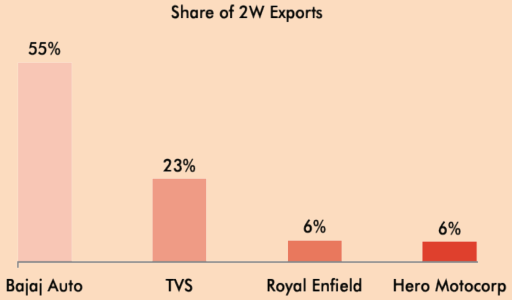
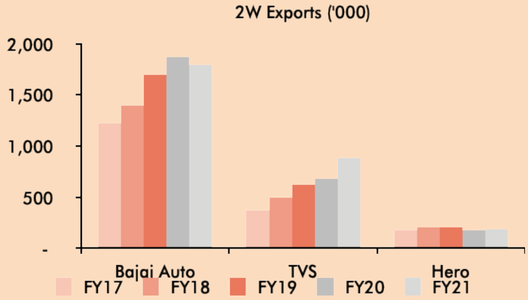


Exhibit 16: TVS' exports grew @25% CAGR since FY17 compared to 10% for leader Bajaj Auto



Source: Ambit Asset Management

5. Evolving consumer reach

Currently Auto OEM's in India and most other countries globally work through a dealership model wherein the Dealer would buy the vehicles from the OEM, create an inventory on its books and would then sell to the customers, in addition to after-sales and other ancillary services. However, with increased Digitalization this channel seems to be getting disrupted. According to Mercedes-Benz, customer visits to dealership before a purchase has reduced from an average of eight times to one-two times currently with almost every purchase beginning online. As a result, OEMs are looking to develop Direct-to-customer and Online sales channel.

Tesla, for example, sells its vehicles directly to customers through 420+ locations globally; while Mercedes-Benz in India is planning to move to Direct-to-Consumer approach by Q4CY21. This shift may benefit (1) Customers – By standardizing price and customer experience; and, (2) OEMs – By allowing better control over inventory and Working Capital and consumer insights (Refer to Exhibit: 19).

From a dealer's perspective, it will reduce their Working Capital as they will no longer have to hold inventory on their books and find place to store the same, thus improving their margins and return ratios. It will thus help the OEM increase number of touch-points and attract more dealers, which is not easy at present considering the capital requirement. A successful switch by one OEM, giving it a much needed cost and distribution advantage, may likely disrupt the ecosystem.

Exhibit 17: TVS is present across strata of 2W and 3W offerings...

	Entry Motorcycle	Premium Motorcycle	Entry scooter	Premium scooter
TVS MOTORS	✓	✓	✓	✓
Bajaj Auto	✓	✓	—	—
Eicher Motors	—	✓	—	—
Hero Motocorp	✓	—	✓	—
Honda	✓	✓	✓	✓

Exhibit 18: ...But barring Mopeds, it is not a strong leader in any other category

Segment	No.1	No. 2	No. 3
Scooter	Honda Motors	TVS	Suzuki
Entry / Executive MC	Hero Moto	Bajaj	TVS
Premium / Sports MC	Bajaj	Royal Enfield	TVS
Mopeds	TVS		
3W	Bajaj	Piaggio	Mahindra

Source: Ambit Asset Management

But this approach is more likely to be adopted by high-ticket, low-volume vehicles which require limited touch-points, unlike a company like TVS which has >11,000 dealers in 1,300+ cities. Replicating such a network via direct distribution would not be possible.

Exhibit 19: The new Sales process will enable customers to choose from all the options available in the brand's inventory across the country

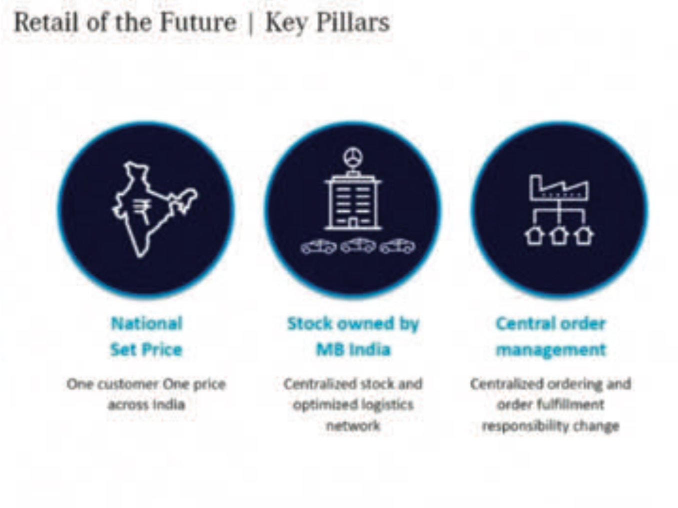
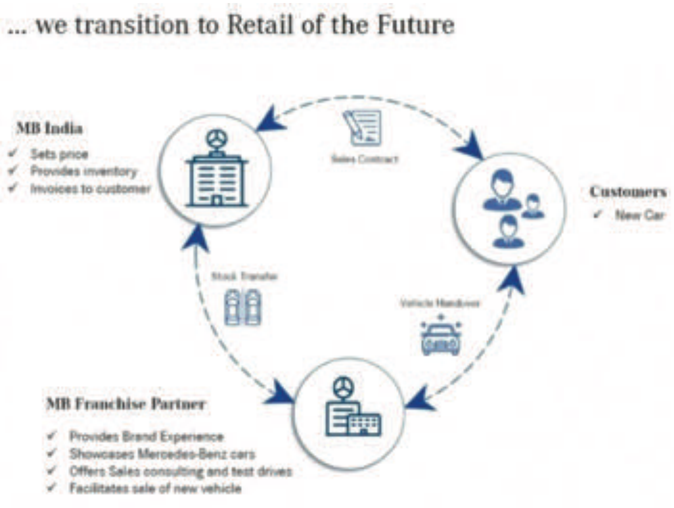


Exhibit 20: Customers will no longer be dependent on inventory availability at the dealer's end



Source: Ambit Asset Management, zigwheels.com

6. Competition in the Premium / Sports category bikes

With the start of the century, Indian 2W OEMs started to come out of their tech partnership / JVs with overseas counterparts as the learning curve, and subsequently the synergies, peaked (TVS-Suzuki 2001; Kawasaki-Bajaj 2004; Hero-Honda 2010-11). These OEMs then focused on building capabilities in higher variant motorcycles (200cc+) in the premium / sports categories. This ushered in a 2nd wave of tech-partnerships with global OEMs for building capabilities on these lines (Refer to Exhibit: 21). This move is expected to intensify competition in the premium/sports bike category, which, till a few years back was dominated by only a few players and variants.

TVS' partnership with BMW and acquisition of Norton Bikes is a step in towards building these capabilities. TVS and BMW are jointly manufacturing bikes in the range of 200-500cc. It is a win-win for both TVS – which manufactured bikes only up to 250cc – and BMW – which manufactures 600cc+ bikes. It also has the potential of opening up a completely new export market for TVS, if executed correctly.

7. Improving infrastructure and Public transport system in the country

Personal mobility is the need of the hour, especially in Urban areas, which account for ~50% of scooter sales in India. Entry / executive category 2W form a good alternative to swiftly navigate congested urban road infrastructure since the public-transport system is also over-burdened. This is one of the reasons why 2Ws are more widely used in Developing country compared to Developed country with adequate public transport system and road infrastructure. An improvement in public transport system network and urban road infrastructure could negatively impact demand of entry / executive 2W. OEM's with high-dependence on entry level 2W may be the most vulnerable while the ones focusing on premium / sports category would be the least impacted. TVS, at its end, has a well-balanced product portfolio.

8. Leadership change from FY23

Effective January 2023, Mr. Venu Srinivasan, current Chairman and Managing Director of TVS, who has been at the help for 21 years, will step down. He will be become Chairman Emeritus and will be replaced by Sir Ralf Dieter Speth – former Jaguar-Land Rover CEO. This will be the first instance of a person outside the TVS family being appointed as the top boss of a group company. While it will help TVS' global ambitions and foray in the export market, any headwinds in the transition may impact TVS' operations.

Exhibit 21: OEMs are adding capacities in category where they do not have expertise

Tech partnerships / tie-ups by Indian 2w OEMs				
	TVS Motors	Bajaj Auto	Eicher Motors (RE)	Hero Moto
Entry Motorcycle	Y	Y		Y
Premium Motorcycle (<250 cc)	Y	Y/ KTM/Triumph		
Premium Motorcycle (250-500 cc)	Y/ BMW	KTM/Triumph/ Husqvarna	Y	
Premium Motorcycle (>500 cc)	Norton	Triumph	Y	Harley-Davidson

Source: Ambit Asset Management, Company. Note: Y indicates organic presence in the category

Exhibit 22: Major regulation changes regarding 2W usage in various countries

Country	Regulations impacting 2Ws
Indonesia	Requirement of 25% down payment in 2012 resulted in significant decline in 2W sales in 2012 and 2013
China	Restrictions on the use ICE motorcycles in ~200 cities due to high pollution levels
Japan, Hong Kong	All motorcycles <125cc banned from freeways
South Korea	Banned motorcycles from toll-ways, major highways, and designated bridges
Taiwan	Banned all motorcycles from freeways
Africa	Banned use of 2Ws as taxis (popular in Africa) in some countries sighting safety issues
Philippines	Banned pillion riding in many cities in an effort to curb a wide range of crimes

Source: Industry, Ambit Capital Research, Ambit Asset Management

ELECTRIC VEHICLE – ARGUABLY THE BIGGEST DISRUPTION FOR 2WS

In May-2019, sighting the deteriorating environmental condition in India, NITI Ayog proposed legislation to discontinue sale of ICE (Internal Combustion Engine) powered 2Ws by 2025. The government, however, softened its stance later on. But there is certainly a push from the government for faster adoption of e-2Ws, especially considering that registered 2Ws in India are ~8x of PVs (implying 2.5x CO2 emission as compared to PVs). As a result, Electric Vehicle (EV) today is the biggest disruption faced by Auto and Auto-Ancillary industry. We tried to extrapolate how the trend might play out for the 2W OEM's in India. In FY21, Volume of e2W in India was ~0.15mn units or 1-2% of 2W sales, largely dominated by low speed vehicles (<25kmph top speed), which formed 70% of sales owing to no license/ registration requirement for these.

1. Key factors which may lead to faster adoption of e2W

A. Converging Cost of ownership with ICE variants will be a main factor in faster adoption of e2W

Change in various regulatory norms in the last few years like – BS-VI, Mandatory 5yr TP Insurance and ABS/CBS feature – have increased the on-road price of ICE 2Ws by ~25% (Refer to Exhibit: 24). However, declining battery cost (~40-50% of upfront cost), better production efficiency and government subsidy have reduced the cost of e2Ws. Further reduction in battery cell manufacturing cost owing to (1) Evolving Chemistry and better scale (2) Localisation aided by government PLI scheme, could further reduce battery cell prices by 50% to US$100/kwh resulting in 30% lower TCO for e2W by FY25 compared to Petrol models, as per Ambit Capital Research estimates. (Refer to Exhibit: 23).

B. Lower overall Cost of Ownership

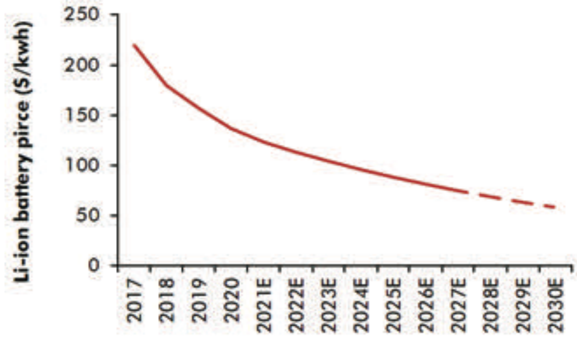
EVs have a higher upfront cost but much lower operational cost (maintenance, etc) which leads to Total Cost of Ownership (TCO) converging after ~30,000Km or 5 years. As per Ambit Capital Research, a continued reduction in upfront cost owing to localization of Battery and other component manufacturing will reduce time taken for this cost break-even to the first year of ownership itself (Refer to Exhibit: 25, 26).

C. Government Push for EV

Central government initiatives like (1) Subsidy under the FAME II scheme (Faster Adoption & Manufacturing of Electric Vehicles) which was recently raised from Rs10,000/KWh to Rs15,000/KWh and (2) Rs181bn PLI scheme for setting up 50 GWh annual production capacity ACC manufacturing facilities, would help to further reduce upfront cost due to lower tax rates, shipping and overheads (10-15% basic customs duty is applied on imported battery packs, cells and DC motors).

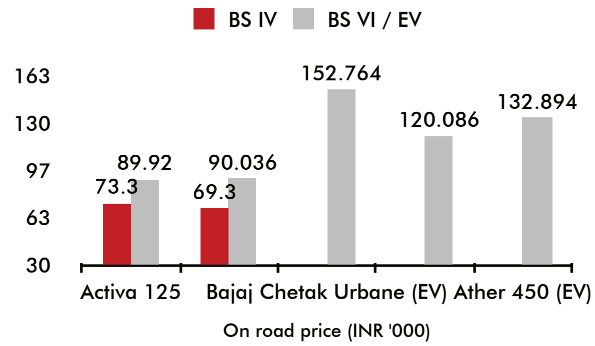
By 2020 end, market Cap of Telsa was more than the combined m. cap of nine largest car companies globally. Tesla sold ~0.5mn vehicle in 2020 compared to the ~9mn units each produced by Toyota and Volkswagen

Exhibit 23: Evolving chemistry and rising scale to lower global Li-ion battery cell prices to ~USD50/kwh by CY30



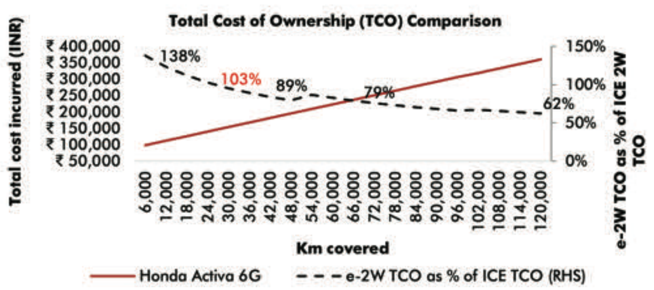
Source: Bloomberg, Ambit Capital Research

Exhibit 24: 2w price jumped ~25% post BS6 transition, reducing the gap with EV cost



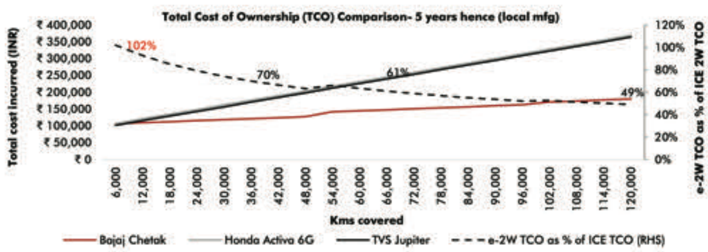
Source: Ambit Asset Management, MOSL, Google

Exhibit 25: Cost breakeven for paying the premium for high speed e-2Ws today would come after ~30,000 km of usage vs. a petrol model, i.e. after ~5 years



Source: Ambit Capital research, Honda dealer price chart

Exhibit 26: The TCO five years hence with localization reaches parity between e-2W and ICE 2W in the 1st year



Source: Ambit Capital research Note: The kinks in e-2W cost are due to battery replacement

2. Factors beyond Cost impacting transition to EVs

A. Faster Urban penetration: Lower range anxiety in Urban areas where 2W, especially scooters, are used to commute shorter driving distance and navigate the congested urban roads and traffic swiftly. While in Rural areas the travel distance is much longer – often between villages, on rocky terrain and used to carry loads thus requiring high Chassis 2W (Motorcycles).

B. Financing / Resale options: Currently, financing options for E2Ws are limited by large banks / NBFCs due to (1) Limited understanding of resale value (2) Low Speed (<25Kmph top speed) EVs which constitute 70% of EV sales cost <Rs60K thus requiring limited finance.

C. Utility based: Delivery / courier personnel could be an ideal target group for EV adoption. The need to reduce Carbon Footprint by start-ups like Zomato / Amazon may result in them incentivizing or even acquiring e2W for their delivery staff. (Refer to Exhibit: 27, 28).

D. How good is the charging infrastructure: Areas with relatively better charging infrastructure and uninterrupted electricity supply may see faster adoption.

3. Challenges involved in large-scale adoption of e-2Ws

A. Range anxiety: Limited charging options away from the buyer's premise – where the charging unit is installed – imply that vehicle is bound by the battery range (75-100Kms for e-2Ws). Increasing range would imply adding battery capacity which would further increase the proportionate weight of the 2W

B. Setting up battery charging/ swapping infrastructure: Adopting CNG powered vehicles was an earlier attempt to switch to more-cleaner, less polluting fuels. Conversion of public transport vehicles – 3Ws, buses and Taxis in big cities, especially in Delhi and Mumbai was an important nudge. However, despite strong government push, the CNG filling infrastructure has still not developed much limiting the growth of CNG variant beyond public transport vehicles.

C. Strain on Electricity need of the country: According to a study, an EV that is used to commute 30-40Km daily is estimated to consume ~6KW of power from DISCOMs which is the same as the daily power requirement of a small family. Therefore, ramping up EV adoption substantially in cities which still face power-cuts would burden the current power-supply ecosystem there (Refer to Exhibit: 29, 30)

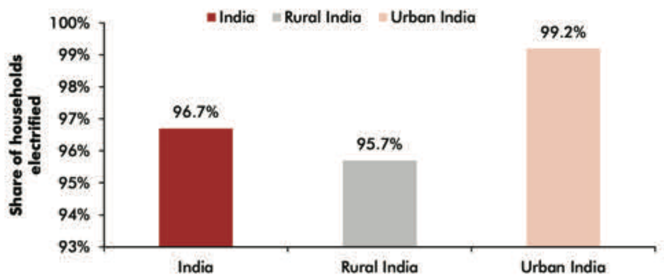
D. How long can/ will the subsidies continue: Incremental and continuous subsidy will create an additional burden on the government finances. A claw-back of Subsidies will increase upfront cost while a discontinuation of PLI Scheme post the initial 8 years will create uncertainty. Moreover, GST on E-2Ws is currently 5% as compared to 28% for ICE powered 2W. Any rationalization of the same will also hurt buyer sentiment.

Exhibit 27: Zomato has committed to 100% EV adoption by 2030

Exhibit 28: Amazon, too, is aiming to reduce its carbon footprint

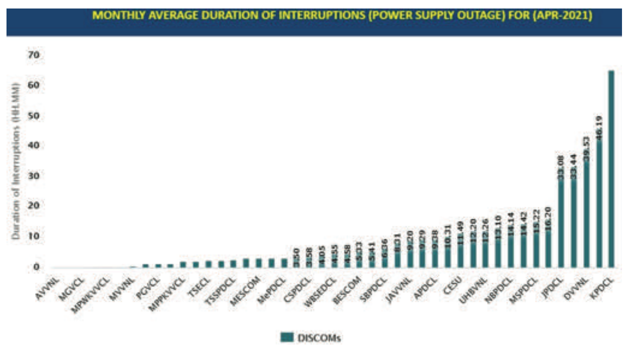
Source: Ambit Asset Management, Company

Exhibit 29: While 99% of the Urban areas are electrified, the figure is only 96% for Rural areas



Source: Ambit Capital Research, CCEW

Exhibit 30: Amazon, too, is aiming to reduce its carbon footprint



Source: Ambit Asset Management, National Power Portal

4. Are EVs completely environment friendly?

Cost savings apart, the main argument for transition to EVs has been the environment friendly properties. But how 'clean' would EV adoption really be at present, especially in India? The two key differences between EVs and ICE powered vehicles is the use of Battery instead of an Engine and Electricity instead of Crude Oil (Petrol/ Diesel).

Some of the key raw materials used in the manufacturing of EV batteries are Nickel, Cobalt and Lithium. About 58% of the world's Lithium reserves are in Chile, where mining the same is using 65% of the water in the country's region which is one of the driest desert areas in the world. Similarly, 50% of world cobalt reserves are in Congo and ~ 20% of that supply comes from artisanal mines where child labour and human rights abuses have been reported.

Power generation in India is still largely via fossil fuels (~70% via coal), unlike developed European countries like Norway (80% hydro-electricity) that have almost fully transitioned to clean energy. Hence the abrupt switch from Crude to Electricity for 1.8cr units (PV+2W) annual sales Auto industry may not be completely environment friendly, yet.

Exhibit 31: Magenta Power, a renewable energy solutions provider, has partnered with Exicom to install a solar-based DC charging station for electric vehicles (EV) in Turbhe, Navi Mumbai

Thought to ponder upon: People residing in rented apartments may face difficulty in installing the charging device in their buildings where they often do not have a dedicated parking space, especially in-case of 2Ws. Moreover, when moving houses, the device will have to be re-installed, defeating the purpose of urban mobility. This makes the need for a charging infra more important.

5. The impact

A. Faster electric adoption of 2/3W compared to PV owing to factors like: (1) Relatively lower ticket size, (2) Better performance compared to ICE models (3) Smaller / detachable batteries that would make swapping easy and charging infra less important. These would act as demand drivers in price sensitive 2W category in a cost conscious country like India.

B. Rate of adoption: The rate of this adoption would depend on factors discussed above, especially Upfront Cost, which would further depend on the success of Localized manufacturing encouraged by the government's PLI Scheme

C. Impact on current TVS portfolio: The impact on TVS is expected to be limited considering that only ~10% of its EBITDA is exposed to scooters (Jupiter / Scooty) and mass-market bikes (Star City/ Sport/ Radeon), where the margins are already low (Refer to Exhibit: 32, 33).

D. TVS' EV foray: TVS has committed Rs1,000Cr to manufacture EVs under a separate vertical by leveraging its in-house R&D. It has also invested in a startup – Ultraviolette – for development of high performance e-bikes (Refer to Exhibit: 34). It is preparing a complete portfolio of 2w and 3w range expected to be launched over the next 24 months. TVS iQube (TVS' e2W) would be available across 1,000 dealerships and >22 cities by FY22 end with a clear path to being Gross Margin positive by then. TVS has also partnered with CESL for setting up charging infra for the same.

Additionally, this disruption will also be an opportunity for new entrants at the cost of slow-moving, legacy OEMs that fail to innovate. New entrants like Ola Electric, Ather, Ampere backed by superior efficiency, new infrastructure and their own fixed charging infra would look to replicate what Tesla did to PVs in US.

At Ambit we believe in wealth creation by long term equity investment and through the power of compounding. We constantly try and stay ahead of the curve on what may possibly impede the growth of our portfolio companies. We do a long term scenario analysis on what could be the possible disruptions for TVS Motors in the 2W space. In our view: (1) Pace of adoption of e2W (2) New environmental norms impacting the Mopeds business (3) Extensive diversification across product categories (4) Macro Challenges in Export / Domestic markets will be the things to watch out for in the case of TVS Motors over the next decade.

Exhibit 32: Domestic Mass market 2W revenue of TVS will be the most susceptible to e2W disruption

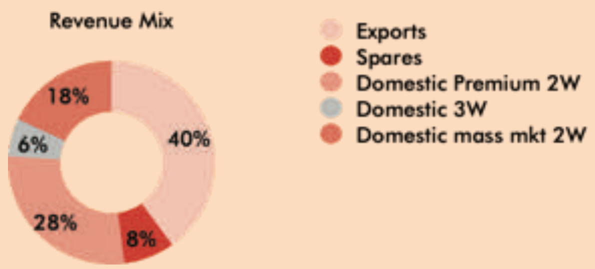
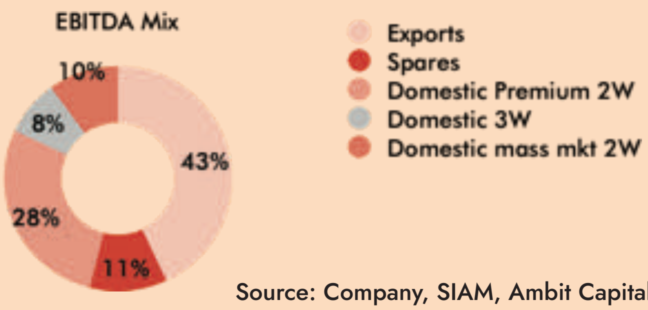


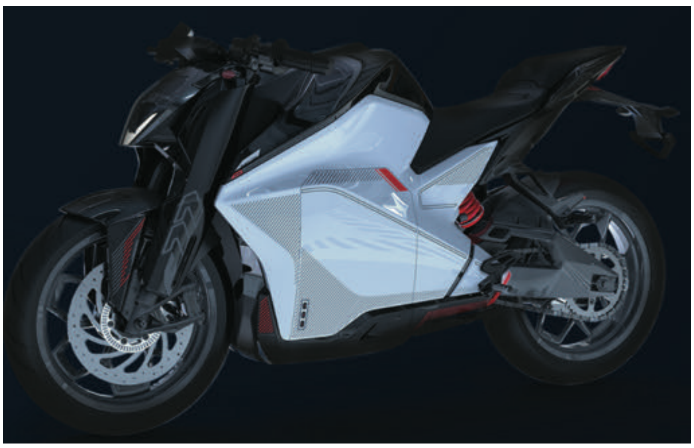
Exhibit 33: The EBITDA impact from the same will however be limited to ~10%



Source: Company, SIAM, Ambit Capital

Exhibit 34: TVS iQube eScooter – TVS' offering in the e-Scooter space

Exhibit 35: Ultraviolette F77 – a high performance e-bike that is being developed by TVS' investee company



Source: Ambit Asset Management, Company

APPENDIX

A journey down the memory lane

1988 BUYER'S GUIDE

TVS SUZUKI AX100

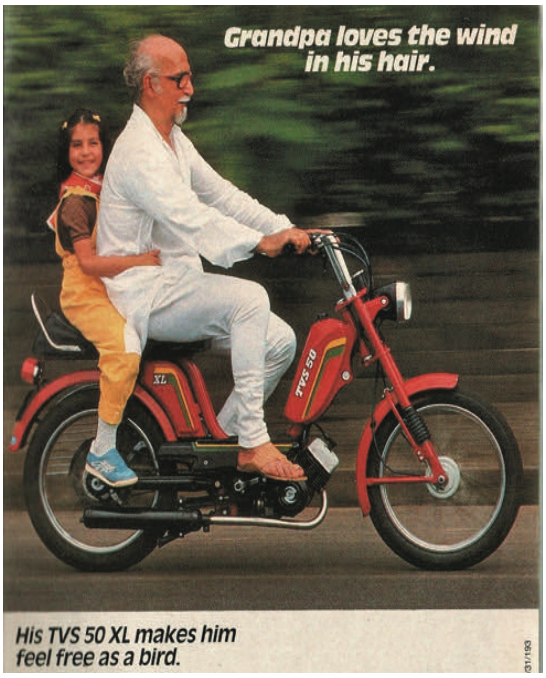
In this case the collaboration is between the T.V. Sundaram empire of the south and Suzuki of Japan. The result is one of the fastest bikes among the present generation of 100 cc bikes on the Indian market. However, it is not as economical as the Honda CD 100. T V S offers generous warranty terms — a 20,000 km warranty for the engine and a 10,000 km warranty for the bike. The AX 100 is a reliable, maintenance free bike and spares are easily available.

Technical specifications:
Engine: 98 cc, 2-stroke, 1-cylinder, petrol
Compression ratio: 6.6:1
Power (maximum): 6.16 KW (8.25 bhp) @ 6500 rpm
Torque (maximum): 9.3 Nm @ 5500 rpm
Cooling system: Air
Transmission: 4-speed
Brakes: Front, drum; Rear, drum
Suspension: Front, telescopic; Rear, swing arm
Wheelbase: 1215 mm
Length: 1865 mm
Width: 725 mm
Height: 1050 mm
Ground clearance: 140 mm
Weight (unladen): 100 kg
Wheel size: Front and rear, 2.50" x 18" - 4 PR
Seating capacity: Two
Fuel tank: 12 litres
Payload: 130 kg
Fuel consumption: Overall 47 kpl; Best: 60 kpl (approximately)
Maximum speed: 90 kph
Price: AX 100 AC - Rs 13,135; AX 100 - Rs 14,960; AX 100 R - Rs 15,385 (ex showroom, Pune)

TVS SUZUKI SUPRA

The Supra is a sporty derivative of the AX 100. The Supra is probably one of the best looking bikes in its class. The Supra incorporates a punchy 98.2 cc 9.65 bhp engine. The manufacturer's figures state that 0-60 kph can be reached in 7.35 seconds. Improvements include new speedlines, a stronger front fork assembly and a modified suspension system. Recently introduced into the Indian market, one has to wait and see how well the sporty Supra sells.

Technical specifications:
Engine: 98.2 cc
Compression ratio: 6.6:1
Power (maximum): 9.65 bhp @ 7000 rpm
Cooling system: Air
Transmission: 4-speed
Brakes: Front & rear: Internally expanding
Suspension: Front: Telescopic oil damped; Rear: Swinging arm, hydraulic shock absorber with a axial springs.
Wheel size: Front 2.75" x 18"; Rear: 3.00" x 18"
Wheelbase: 1208 mm
Length: 1865 mm
Width: 725 mm
Height: 1050 mm
Weight: 99 kg
Payload: 130 kg
Fuel tank capacity: 12 litres
Maximum speed: 100 kph
Price: N.A.



Source: Ambit Asset Management, team-bhp.com

AMBIT
Acumen at work

AMBIT
ASSET MANAGEMENT

FOR ANY QUERIES, PLEASE CONTACT:

Umang Shah- Phone: +91 22 6623 3281, Email - aiapms@ambit.co
Ambit Investment Advisors Private Limited -
Ambit House, 449, Senapati Bapat Marg,
Lower Parel, Mumbai - 400 013

RISK DISCLOSURE & DISCLAIMER

The performance of the Portfolio Manager has not been approved or recommended by SEBI nor SEBI certifies the accuracy or adequacy of the performance related information contained therein.

Ambit Investment Advisors Private Limited ("Ambit"), is a registered Portfolio Manager with Securities and Exchange Board of India vide registration number INP000005059.

This presentation / newsletter / report is strictly for information and illustrative purposes only and should not be considered to be an offer, or solicitation of an offer, to buy or sell any securities or to enter into any Portfolio Management agreements. This presentation / newsletter / report is prepared by Ambit strictly for the specified audience and is not intended for distribution to public and is not to be disseminated or circulated to any other party outside of the intended purpose. This presentation / newsletter / report may contain confidential or proprietary information and no part of this presentation / newsletter / report may be reproduced in any form without its prior written consent to Ambit. All opinions, figures, charts/graphs, estimates and data included in this presentation / newsletter / report is subject to change without notice. This document is not for public distribution and if you receive a copy of this presentation / newsletter / report and you are not the intended recipient, you should destroy this immediately. Any dissemination, copying or circulation of this communication in any form is strictly prohibited. This material should not be circulated in countries where restrictions exist on soliciting business from potential clients residing in such countries. Recipients of this material should inform themselves about and observe any such restrictions. Recipients shall be solely liable for any liability incurred by them in this regard and will indemnify Ambit for any liability it may incur in this respect.

Neither Ambit nor any of their respective affiliates or representatives make any express or implied representation or warranty as to the adequacy or accuracy of the statistical data or factual statement concerning India or its economy or make any representation as to the accuracy, completeness, reasonableness or sufficiency of any of the information contained in the presentation / newsletter / report herein, or in the case of projections, as to their attainability or the accuracy or completeness of the assumptions from which they are derived, and it is expected each prospective investor will pursue its own independent due diligence. In preparing this presentation / newsletter / report, Ambit has relied upon and assumed, without independent verification, the accuracy and completeness of information available from public sources. Accordingly, neither Ambit nor any of its affiliates, shareholders, directors, employees, agents or advisors shall be liable for any loss or damage (direct or indirect) suffered as a result of reliance upon any statements contained in, or any omission from this presentation / newsletter / report and any such liability is expressly disclaimed. Further, the information contained in this presentation / newsletter / report has not been verified by SEBI.

You are expected to take into consideration all the risk factors including financial conditions, risk-return profile, tax consequences, etc. You understand that the past performance or name of the portfolio or any similar product do not in any manner indicate surety of performance of such product or portfolio in future. You further understand that all such products are subject to various market risks, settlement risks, economical risks, political risks, business risks, and financial risks etc. and there is no assurance or guarantee that the objectives of any of the strategies of such product or portfolio will be achieved. You are expected to thoroughly go through the terms of the arrangements / agreements and understand in detail the risk-return profile of any security or product of Ambit or any other service provider before making any investment. You should also take professional / legal /tax advice before making any decision of investing or disinvesting. The investment relating to any products of Ambit may not be suited to all categories of investors. Ambit or Ambit associates may have financial or other business interests that may adversely affect the objectivity of the views contained in this presentation / newsletter / report.

Ambit does not guarantee the future performance or any level of performance relating to any products of Ambit or any other third party service provider. Investment in any product including mutual fund or in the product of third party service provider does not provide any assurance or guarantee that the objectives of the product are specifically achieved. Ambit shall not be liable for any losses that you may suffer on account of any investment or disinvestment decision based on the communication or information or recommendation received from Ambit on any product. Further Ambit shall not be liable for any loss which may have arisen by wrong or misleading instructions given by you whether orally or in writing. The name of the product does not in any manner indicate their prospects or return.

The product 'Ambit Coffee Can Portfolio' has been migrated from Ambit Capital Private Limited to Ambit Investments Advisors Private Limited. Hence some of the information in this presentation may belong to the period when this product was managed by Ambit Capital Private Limited.

You may contact your Relationship Manager for any queries.