

**Railway Sector Note**



Source: Arihant Capital Research

Union Budget 2023-24, Railway capital outlay is INR 2.4 lakh cr which is 9x of the 2013-14 capital outlay. The wagon manufacturing is ramping up due to demand for freight & passenger wagons. There is a shift in commercial vehicles to Rail for transportation. Recently, National transporters raised a demand for 90,000 wagons and awarded 72,358 wagons to 7 manufacturers. Further, the industry is expected to manufacture around 30,000 wagons in the next 2 to 3 years. The government is coming up with 50 000 advanced tech wagons in global tenders and each wagon cost around INR 7mn to INR 10mn. It will be a game changer in the wagons business. The wagon manufacturers are in full swing mode for manufacturing and operating at full 70% - 90% capacity compared to 40% in past years. The railways currently operate 3,00,000 wagons and new wagons are expected to add going forward. The wagon manufacturing was impacted due to unavailability of wheel sets. Indian wagon manufacturers majorly procure wheelsets from China which was impacted due to supply chain issues. Post-Dec-22, wagon manufacturing ramped up due to the normalization of wheelset supplies.

Top wagon manufacturers' revenue is expected to grow at a 25% CAGR over the period of FY22-FY25E, backed by strong order inflows from the Indian railway along with an increase in price per wagon. Ramping up capacity utilization and better absorption of fixed costs led to EBITDA margin improvement of 200 bps for top wagon manufacturers over the period of FY22-FY25E. Wagon manufacturer's Debt/EBITDA is expected to reduce from ~4x to less than 2x going forward. The debt coverage metrics are expected to improve along with steady improvement of revenues and margins. Overall, Wagon manufacturers' credit profile is likely to improve over the medium term.

The price per wagon is currently in the range of INR 3.8mn to INR 4.5mn based on wagon models. Private wagon's price is INR 4lakh to INR 5lakh higher than railway wagons which is more than 10%. Private wagons are fixed price contracts, so wagon manufacturers are taking 20%-30% advance from customers to fix the raw material prices. The private wagon order execution period is around 9-12 months. Railway wagon contracts are pass-through to customers. Steel and labor cost is pass-through based on WPI. The rise in power demand leads to an increase in coal transportation. The wagon demand is witnessed from Cement, Steel, Coal, and Mining industries. Wagon transport is more convenient and economical than commercial vehicles.

Titagargh wagon's order book-to-revenue ratio stood at 4.43x (FY22 TTM revenue), which provides revenue visibility. The company has received orders for 24,177 wagons from Indian Railways. The order is worth around INR 78bn which is executable in 39 months. Recently, Titagargh Wagons and BHEL are L2 at INR 1.398bn per car. The order size is estimated for 80 cars is around INR 112bn. Titagargh wagons and Ramkrishna forgings emerged L1 for manufacturing and supplying wheelsets to Indian railways. The supply of ~1.6-million-wheel discs of different rolling stocks of Indian Railways over a period of 20 years at about 80,000 wheels per annum.

Jupiter wagon's order book-to-revenue ratio stood at 3.32x (FY22 TTM revenue), which provides revenue visibility. The order book stood at around INR 52bn which comprises 13,800 wagons. The company has placed orders of close to 20,000 wheel sets on foreign supplier. The company is commenced disc brake production with an initial order of INR 800mn. The company has participated in 40,000 brake discs and expects substantial orders from Indian Railways. The company is targeting commercial EV launch by Oct-Nov this year. The company is targeting B2B in commercial EV and focused capture a 7% to 10% market share.

Texmaco Rail's order book-to-revenue ratio stood at 4.85x (FY22 TTM revenue), which provides revenue visibility. The company has received orders for 20,067 wagons from Indian railways. The order is worth around INR 64.5bn which is executable in 39 months. The company is currently making 300 to 350 wagons per month. The company has a requirement to supply 550 wagons per month and is focused to deliver 675 wagons per month. Foundry is expected to reach maximum capacity in the next 4 to 6 months. The company has focused on small-duration contracts. The Rail EPC contracts are generally 9 – 18 months and a maximum of 24 months.

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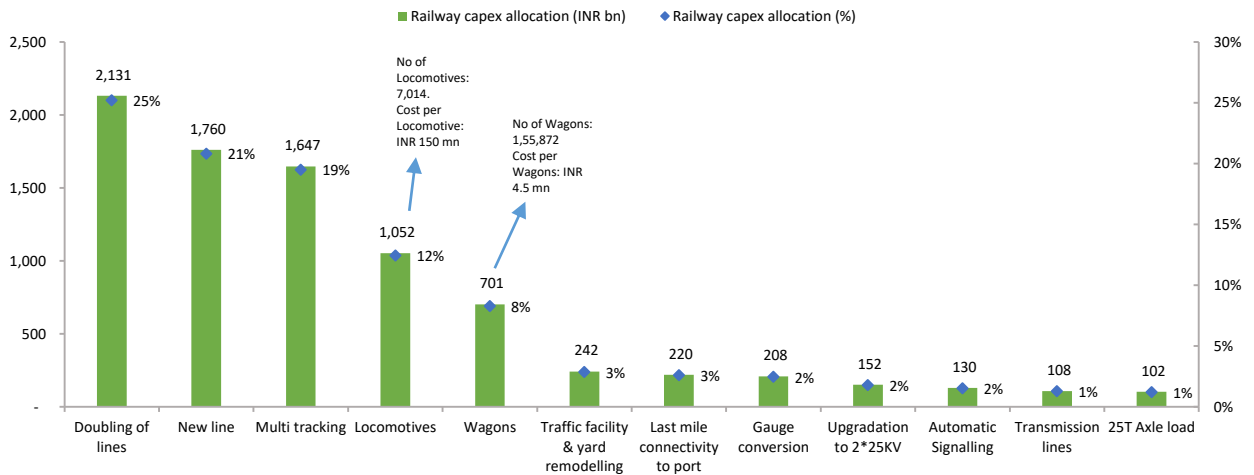
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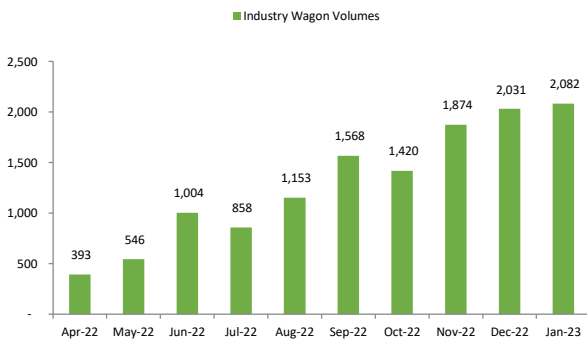
## Railways Capex allocation and Wagons Volumes – RSP (Railways)

**Exhibit 1: Snapshot of Railway capex allocation**



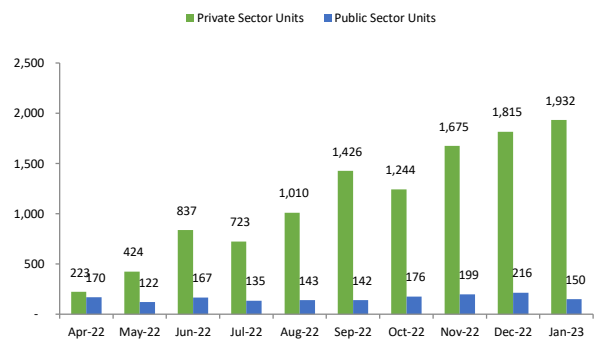
Source: Industry, Arihant Capital Research

**Exhibit 2: Wagon manufacturing picked-up over the period of Apr-22 to Jan-23.**



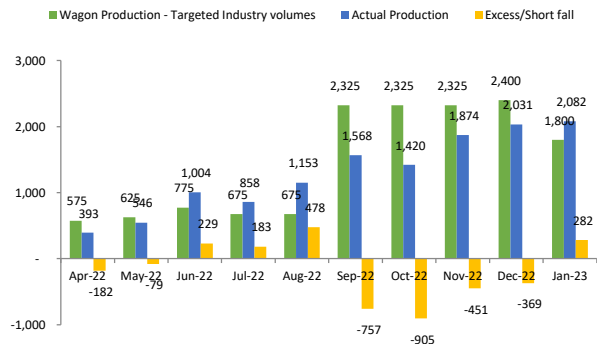
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 3: Private units manufactured at higher levels over the period of Apr-22 to Jan-23.**



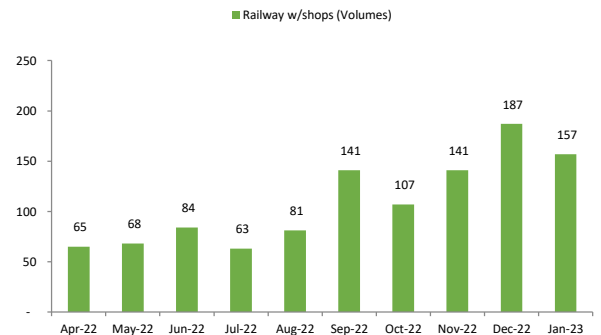
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 4: Sep-22 to Dec-22, Industry volumes were lower due to shortage of Wheelsets. The wheelsets shortage because on supply chain disruption in China. The production has exceeded in Jan-23.**



Source: Ministry of Railways, Industry, Arihant Capital Research

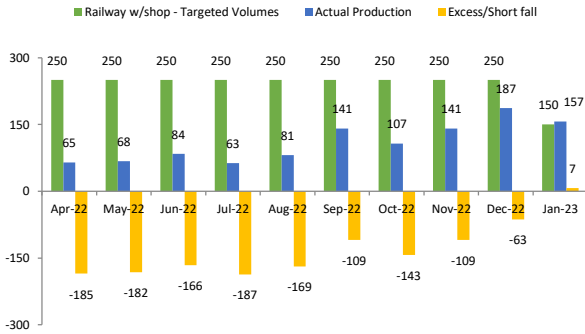
**Exhibit 5: Railway workshop volumes has increased over the period of Apr-22 to Jan-23.**



Source: Ministry of Railways, Industry, Arihant Capital Research

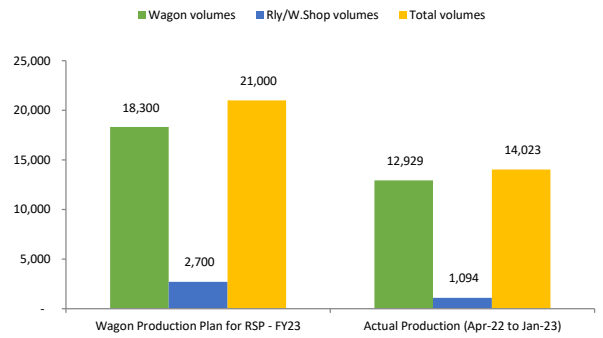
## Wagon Volumes – RSP (Railways)

**Exhibit 6: Wagon manufacturing picked-up over the period of Apr-22 to Jan-23.**



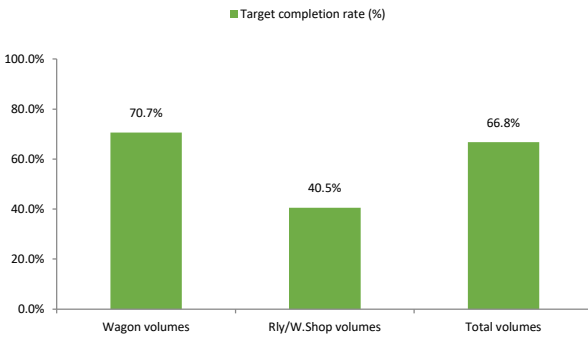
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 7: The industry has manufactured ~14,000 wagons over the period of Apr-22 to Jan-23.**



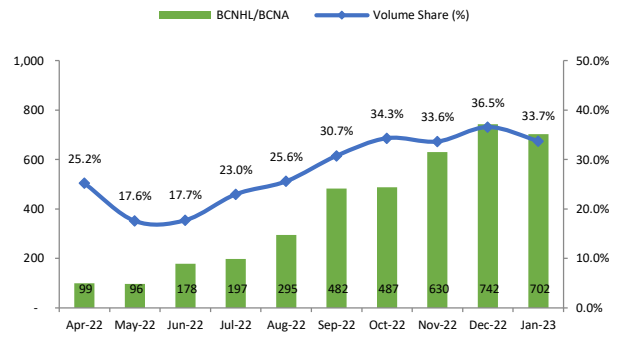
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 8: The industry has manufactured ~71% of targeted wagons by RSP over the period of Apr-22 to Jan-23.**



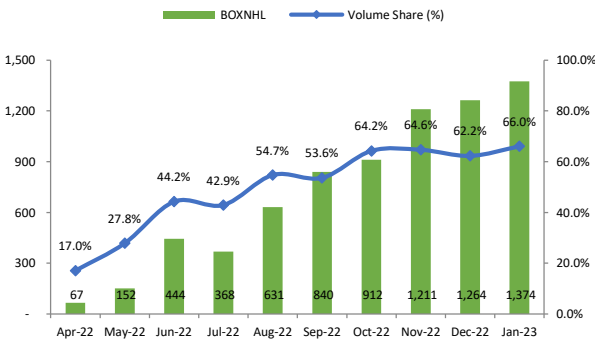
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 9: BCNHL/BCNA types wagons volume share increased over the period of Apr-22 to Jan-23.**



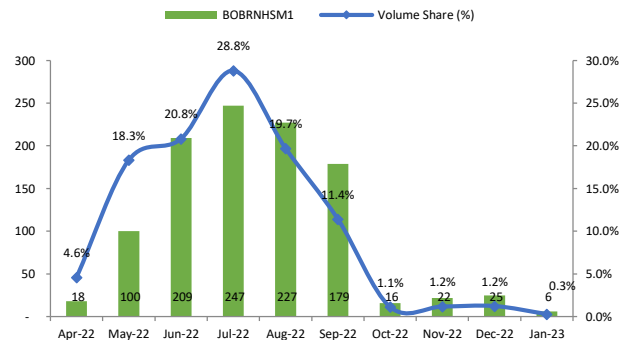
Source: Ministry of Railways, Industry, Arihant Capital Research

**Exhibit 10: BOXNHL type wagon volumes share substantially increased from 17% to 66% over the period of Apr-22 to Jan-23.**



Source: Ministry of Railways, Industry, Arihant Capital Research

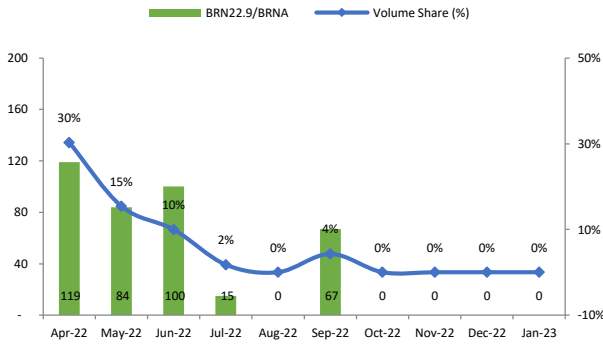
**Exhibit 11: Wagon Industry has reduced volumes for BOBRNHSM1 type wagons over past few months.**



Source: Ministry of Railways, Industry, Arihant Capital Research

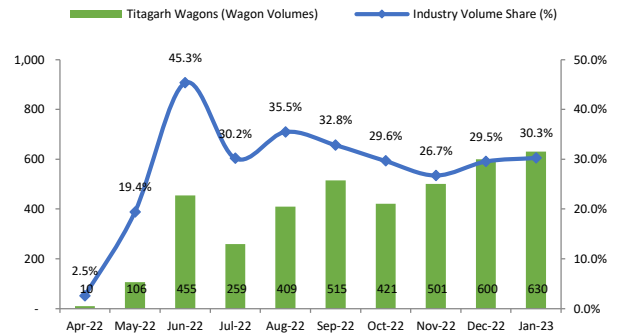
## Wagon Volumes – RSP (Railways)

**Exhibit 12: Wagon Industry has stopped manufacturing BRN22.9/BRNA type wagons over past few months**



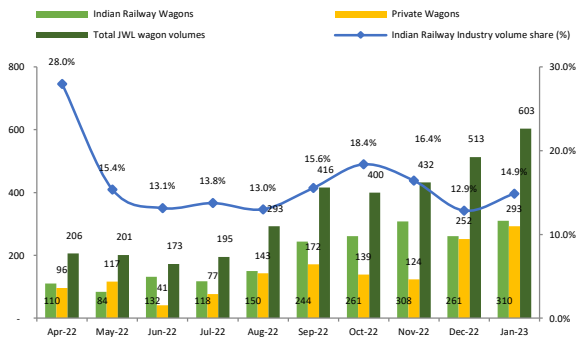
Source: Ministry of Railways, Industry, Aриhant Capital Research

**Exhibit 13: Titagarh Wagons ramped up production and maintains 30% volume share as of Jan-23.**



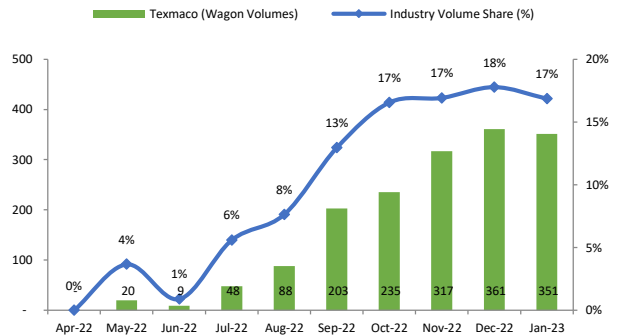
Source: Ministry of Railways, Industry, Aриhant Capital Research

**Exhibit 14: JWL has ramped-up Private wagon manufacturing over the period of Apr-22 to Jan-23. Private wagons are yielding higher realizations compared to Indian railway wagons.**



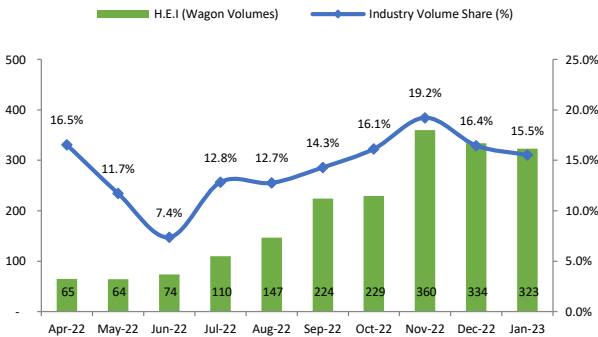
Source: Ministry of Railways, Industry, Aриhant Capital Research

**Exhibit 15: Texmaco Rail & Engineering volume share increased over the period of Apr-22 to Jan-23.**



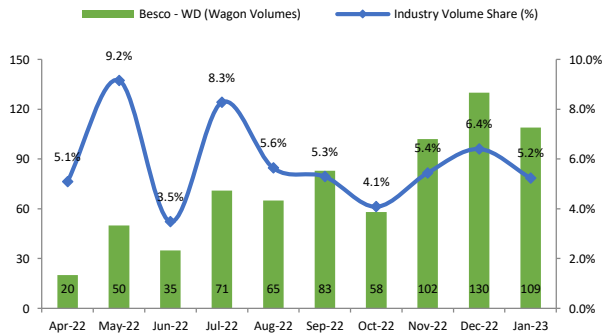
Source: Ministry of Railways, Industry, Aриhant Capital Research

**Exhibit 16: H.E.I maintained volume share around ~10% - 20% over the period of Apr-22 to Jan-23.**



Source: Ministry of Railways, Industry, Aриhant Capital Research

**Exhibit 17: Besco – WD maintained volume share around ~5 over the period of Apr-22 to Jan-23.**



Source: Ministry of Railways, Industry, Aриhant Capital Research

## Wagons Industry

### Wagon Volumes – RSP (Indian Railways)

Wagon Volumes (company wise)	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
Titagarh Wagons	10	106	455	259	409	515	421	501	600	630	3,906
Jupiter Wagons	110	84	132	118	150	244	261	308	261	310	1,978
Texmaco	-	20	9	48	88	203	235	317	361	351	1,632
Modern	18	100	132	117	151	140	-	-	-	44	702
H.E.I	65	64	74	110	147	224	229	360	334	323	1,930
Besco (WD)	20	50	35	71	65	83	58	102	130	109	723
Besco (FD)	-	-	-	-	-	-	13	28	44	79	164
Oriental	-	-	-	-	-	-	27	59	85	86	257
Amtek	-	-	-	-	-	17	-	-	-	-	17
CEBBCO	-	-	-	-	-	-	-	-	-	-	-
Braithwaite	120	102	136	95	83	72	130	115	140	97	1,090
SRBWIL	50	20	31	40	60	70	46	84	76	53	530
<b>Total Industry Wagons</b>	<b>393</b>	<b>546</b>	<b>1,004</b>	<b>858</b>	<b>1,153</b>	<b>1,568</b>	<b>1,420</b>	<b>1,874</b>	<b>2,031</b>	<b>2,082</b>	<b>12,929</b>

W/shop Wagons	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
ASR w/shop	40	43	50	13	23	50	55	60	63	60	457
GOC w/shop	0	0	0	0	0	0	0	0	24	-	24
SPJ w/shop	0	0	9	20	20	35	30	30	25	45	214
Jamalpur	25	25	25	30	38	56	22	51	75	52	399
<b>Total w/shops</b>	<b>65</b>	<b>68</b>	<b>84</b>	<b>63</b>	<b>81</b>	<b>141</b>	<b>107</b>	<b>141</b>	<b>187</b>	<b>157</b>	<b>1,094</b>

<b>Total Wagons</b>	<b>458</b>	<b>614</b>	<b>1,088</b>	<b>921</b>	<b>1,234</b>	<b>1,709</b>	<b>1,527</b>	<b>2,015</b>	<b>2,218</b>	<b>2,239</b>	<b>14,023</b>
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Source: Ministry of Railways, Arihant Capital Research, Volumes as per RSP (Indian Railways), Jupiter Wagons (JWL) Private supply wagons volume not included; JWL has increased private wagon manufacturing over the period of Apr-22 to Jan-23. for more details refer Exhibit 14.

Wagon Volumes (type wise)	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
BCNHL/BCNA	99	96	178	197	295	482	487	630	742	702	3,908
BOXNHL	67	152	444	368	631	840	912	1,211	1,264	1,374	7,263
BRN22.9/BRNA	119	84	100	15	-	67	-	-	-	-	385
BOBRNHSM1	18	100	209	247	227	179	16	22	25	6	1,049
BVCM	65	64	50	-	-	-	-	-	-	-	179
BTPN	10	50	23	31	-	-	-	-	-	-	114
BOBSN	15	-	-	-	-	-	5	11	-	-	31
BOBYN	0	-	-	-	-	-	-	-	-	-	-
<b>Total Industry Wagons</b>	<b>393</b>	<b>546</b>	<b>1,004</b>	<b>858</b>	<b>1,153</b>	<b>1,568</b>	<b>1,420</b>	<b>1,874</b>	<b>2,031</b>	<b>2,082</b>	<b>12,929</b>

Rly. Workshop Wagon Volumes (type wise)	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
BCNHL/BCNA	-	-	-	-	-	-	-	-	-	-	-
BOXNHL	1	-	9	5	12	48	55	79	105	115	429
BRN22.9/BRNA	-	-	9	20	25	27	22	27	20	22	172
BOBRNHSM1	-	-	-	-	-	66	-	-	-	-	66
BVCM	64	68	66	38	44	-	30	35	-	20	365
BTPN	-	-	-	-	-	-	-	-	62	-	62
BOBSN	-	-	-	-	-	-	-	-	-	-	-
BOBYN	-	-	-	-	-	-	-	-	-	-	-
<b>Total Rly.workshop Wagons</b>	<b>65</b>	<b>68</b>	<b>84</b>	<b>63</b>	<b>81</b>	<b>141</b>	<b>107</b>	<b>141</b>	<b>187</b>	<b>157</b>	<b>1,094</b>

<b>Total Wagons</b>	<b>458</b>	<b>614</b>	<b>1,088</b>	<b>921</b>	<b>1,234</b>	<b>1,709</b>	<b>1,527</b>	<b>2,015</b>	<b>2,218</b>	<b>2,239</b>	<b>14,023</b>
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Source: Ministry of Railways, Arihant Capital Research, Volumes as per RSP (Indian Railways)

## Wagons Industry

### Wagon Volumes – RSP (Indian Railways)

Production under RSP	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
Private Sector Units	223	424	837	723	1,010	1,426	1,244	1,675	1,815	1,932	11,309
Public Sector Units	170	122	167	135	143	142	176	199	216	150	1,620
Railway w/shops	65	68	84	63	81	141	107	141	187	157	1,094
<b>Total</b>	<b>458</b>	<b>614</b>	<b>1,088</b>	<b>921</b>	<b>1,234</b>	<b>1,709</b>	<b>1,527</b>	<b>2,015</b>	<b>2,218</b>	<b>2,239</b>	<b>14,023</b>

Industry Wagons Target vs Actual	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
Wagon Production - Targetted volumes	575	625	775	675	675	2325	2325	2325	2,400	1,800	14,500
Actual Production	393	546	1004	858	1153	1568	1420	1874	2,031	2,082	12,929
Excess/Short fall	<b>-182</b>	<b>-79</b>	<b>229</b>	<b>183</b>	<b>478</b>	<b>-757</b>	<b>-905</b>	<b>-451</b>	<b>-369</b>	<b>282</b>	<b>-1,571</b>

Rly/W.shop Target vs Actual	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Cum. (Apr-22 to Jan-23)
Rly/W.shop - Targetted Volumes	250	250	250	250	250	250	250	250	250	150	2,400
Actual Production	65	68	84	63	81	141	107	141	187	157	1,094
Excess/Short fall	<b>-185</b>	<b>-182</b>	<b>-166</b>	<b>-187</b>	<b>-169</b>	<b>-109</b>	<b>-143</b>	<b>-109</b>	<b>-63</b>	<b>7</b>	<b>-1,306</b>

Source: Ministry of Railways, Aриhant Capital Research, Volumes as per RSP (Indian Railways)

#### Listed Indian Wagon Players - Comparison

Particular	Titagargh Wagons	Jupiter Wagons	Texmaco Rail	*Oriental Rail Infrastructure
Product/Services	High speed and regional trains, Electric and diesel locomotives and coaches, Metro coaches, Static converters and traction engines, IGBT based propulsion systems for EMU and MEMU, etc	Shipping containers, Skip-Loaders, Garbage-Bin collectors, Troop carrier vehicle bodies, Prison van bodies, Water bowser bodies and Passenger coaches etc.	Rail EPC, Locomotive shells and assemblies, Coach Bogie Frames, Wagons, Bridges and Steel structures, Loco brakes and draft gears.	Seat & Berths, Compreg Board, Shuttering Plates, Lavatory door, Plywood & Phenolic resin & Hardner, Bogie, Coupler and Wagons, etc.
Wagons Capacity/month	700	600	550-600	80-100
Production as of Jan-23	630	310	351	86
Order book (INR bn)	101.3 (TWL India)	57.03	90	19
Order book/Revenue - FY22 (TTM)	4.43	3.32	4.85	7.45
Order book by geography	India (74%), Italy (24%), others (2%)	-	-	-
Order book by segments	Freight Rolling Stocks (85%), Passenger Rolling Stocks (12%), Ship building, bridges and defence (3%)	Public (40%), Private (60%)	Rolling Stocks (78%), Rail EPC (14%), Steel foundry and others (8%)	-
Key Triggers	Order book-to-revenue ratio stood at 4.43x, which provides revenue visibility. The company has received order for 24,177 wagons from Indian Railways. The order worth around INR 78bn which is executable in 39 months. Recently, Titagargh Wagons and BHEL is L2 at INR 1.398bn per car. The order size is estimated for 80 cars is around INR 112bn. Titagargh wagons and Ramkrishna forgings emerged L1 for manufacturing and supplying of wheel sets to Indian railways. The supply ~1.6-million-wheel discs of Indian Railways over a period of 20 years at about 80,000 wheels per annum.	Order book-to-revenue ratio stood at 3.32x, which provides revenue visibility. The order book stood around INR 52bn which comprises of 13,800 wagons. The company has placed order close to 20,000 wheel sets on foreign supplier. The company is commenced disc brake production with initial order of INR 80cr. The company has participated 40,000 brake discs and expects substantial order from Indian Railways. The company is targeting commercial EV launch by Oct-Nov this year. The company is targeting B2B in commercial EV and focused capture a 7% to 10% market share.	Order book-to-revenue ratio stood at 4.85x, which provides revenue visibility. The company has received orders for 20,067 wagons from Indian railways. The order is worth around INR 64.5bn which is executable in 39 months. The company is currently making 300 to 350 wagons per month. The company has a requirement to supply 550 wagons per month and is focused to deliver 675 wagons per month. Foundry is expected to reach maximum capacity in the next 4 to 6 months. The company has focused on small-duration contracts. The Rail EPC contracts are generally 9 – 18 months and a maximum of 24 months.	Order book-to-revenue ratio stood at 7.45x, which provides revenue visibility. The capacity expansion of 1,000 wagons/annum to 2,400 wagons/annum will provide significant opportunity to cater wagons demand. The company has achieved the orders of 2,964 wagons valued at INR 12.12bn. The company is well placed to cater demand for Railway Seats & Berths, Modern high tech wagons, Bogies and Coupler. The company is majorly supplying wide range of seats and berths for railway coaches like Rajadhani & Durondo express, Regular & Passenger Trains. Its supplying wagons, Bogies and Couplers to Indian Railways, Container Corporation, Jindal Rail, Braithwaite and others.

Source: Company reports, Industry, Aриhant Capital Research, \* - as of FY22, Order book/revenue – FY22 (TTM) is based Q3FY23 order book and FY22-TTM revenue.

## Global Railway/Wagon Players

### Global Wagon Players - Comparison

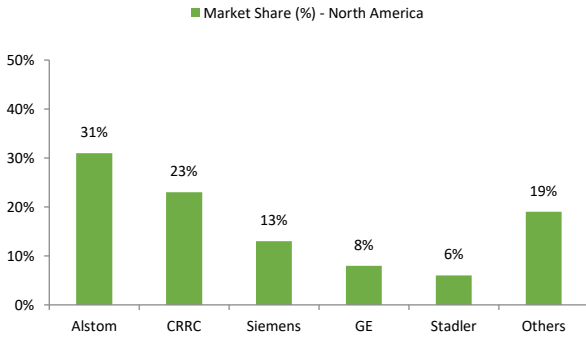
S.No	Company	Country	Products/Services	Employees	Market Share	Backlog order	Order breakup
1	CRRC Corporation	China	Rolling Stock - Electric Locomotives, Diesel Locomotives, High-speed, Trains, EMU, DMU, Metro Cars, LRVs, Coaches, Wagons, Track Machinery; Components, Other products.	1,70,000	South East Asia - 25% Market Share, High Speed Rail - 25% Global Market share	-	-
2	Siemens Mobility	Germany	Rail - Rolling Stock, Rail Services, Rail Automation and Rail Electrification; Road - eHighway, Intermodal - Services	39,600	Locomotives - 34% market share in Europe	-	-
3	Alstom Transport	France	Cyber Security, Digital Mobility, Infrastructure, Rolling Stock, Healthier Mobility, Services, Signalling and Turnkey etc.	74,000	33% market share - Global	85.9bn Euro #	America (17%), Europe (54%), Asia Pacific (15%) and Africa, Middle East & Central Asia (14%).
4	GE Transportation	US	Diesel - Electric Locomotives, Parts for Locomotives and Railroad cars, Railroad signalling Equipment, Repairing Services, Equipments for Marine, Mining, Drilling and Energy generation.	27,000+	8% Market Share - North America, 8% Global Market Share - Locomotives	-	-
5	Stadler Rail	Switzerland	Intercity, Regional Trains, City Transport, Locomotives, Tailor made, Signalling and Services.	13,000+	19% Market Share - Europe, 7% European Market Share - Metros	22bn CHF *	-
6	The Greenbrier Co	US	Rail - Auto Carrier Railcars, Boxcars, Centerbeam Railcars, Covered Hopper Railcars, Intermodal Units, Flatcars, Gondolas, Open-Top Hopper Railcars, Tankcars, Sustainable Conversions and Marine etc.	-	60% market share for new freight cars (Brazil), 40% market share - North America	3.4bn dollar &	-
7	Trinity Rail Group	US	Tank Cars, Covered Hoppers, Autoracks, Box Cars, Flat & Intermodal, Gondolas.	15,000+	-	-	-
8	Hundai Rotem	South Korea	Rail - Trams & light rail vehicles, High speed rails, Diesel & Electric multiple units, Metro cars; Defence Products and Plant & equipments, etc.	3,800	4% Global Market Share - Metros, 4% Global Market Share - Multiple Units.	-	-
9	Hitachi Rail Systems	Japan	Rolling Stock Solutions - Driverless Trains, Metro, Commuter, Intercity, High Speed Trains, Battery Powered Trains, Tram and Monorail; Operations & Services Maintenance; Digital Signalling & Systems; Turnkey rail solutions and Rail components.	4,000+	5% Global Market Share - Multiple Units, 5% Global Market Share - High Speed Rails.	-	-
10	TMH	Russia	Rolling Stock, Engines & Components, Parts & Components, Digital Technologies, Services and Traffic Control	85,000+	16% Global Market Share - Passenger Coaches.	-	-

Source: Company reports, Arihant Capital Research, \* - as of FY22, # - as of H1FY23, & - as of Nov -2022.



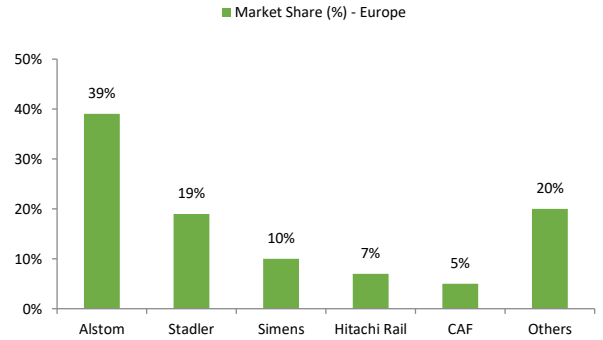
## Global Players Market Share – Regions and Segments

**Exhibit 18: Alstom has major market share in North America.**



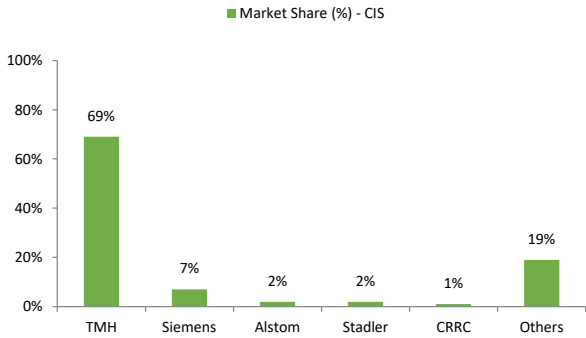
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 19: Alstom has major market share in Europe.**



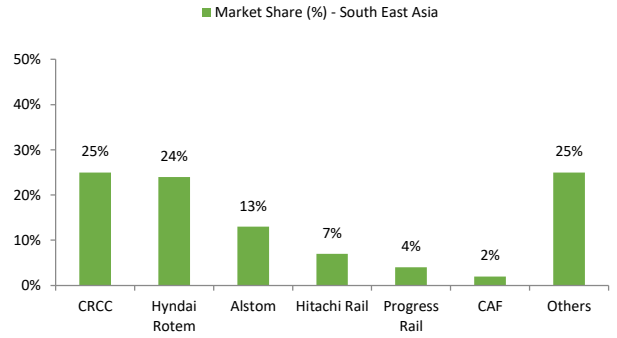
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 20: TMH has major market share in Common wealth Independent States (CIS).**



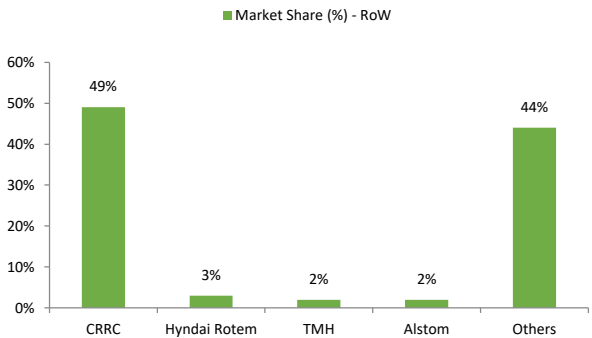
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 21: CRCC has major market share in South East Asia.**



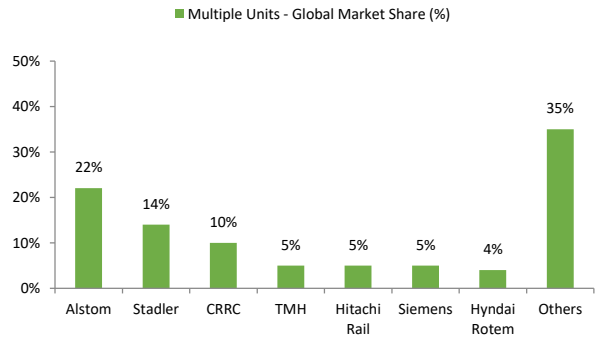
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 22: CRCC has major market share in Rest of the World (RoW).**



Source: SCI, Stadler Reports, Arihant Capital Research

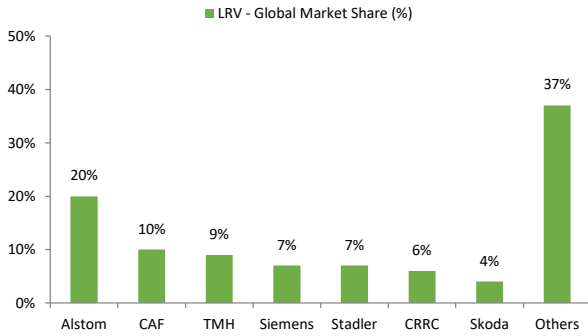
**Exhibit 23: Alstom has major market share in Multiple units at global levels.**



Source: SCI, Stadler Reports, Arihant Capital Research

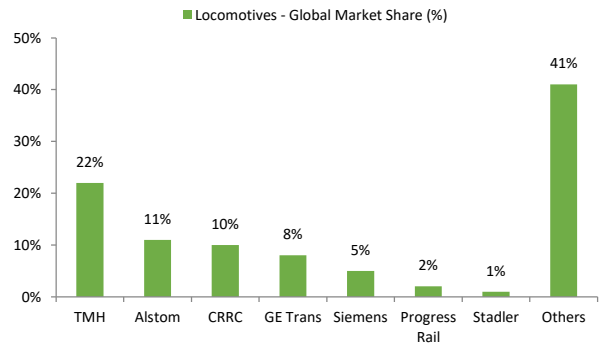
## Global Players Market Share – Segments

**Exhibit 24: Alstom has major market share in LRV at global levels.**



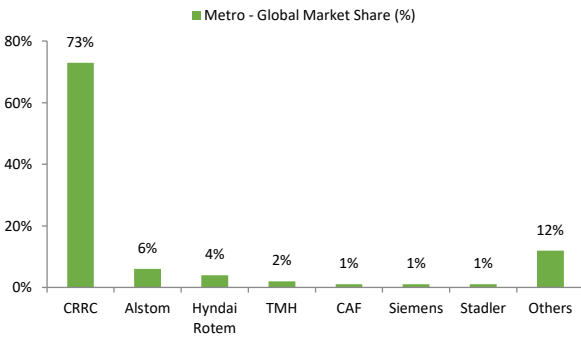
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 25: TMH has major market share in Locomotives at global levels.**



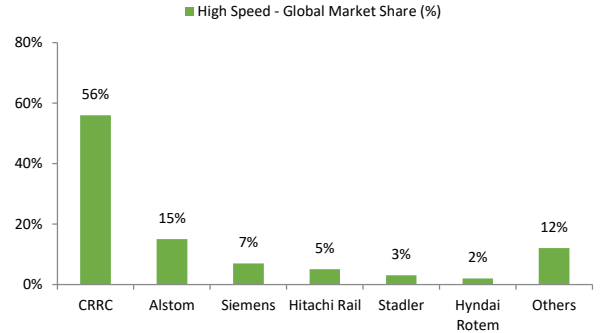
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 26: CRRC has major market share in Metros at global levels.**



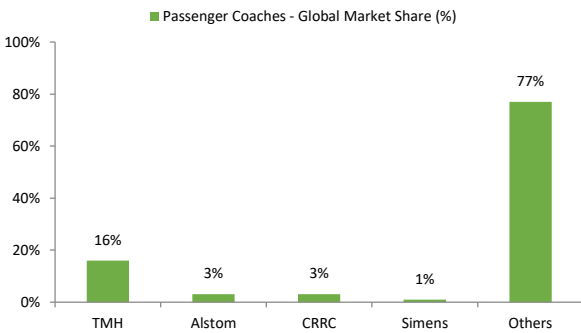
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 27: CRRC has major market share in High-speed Rail at global levels.**



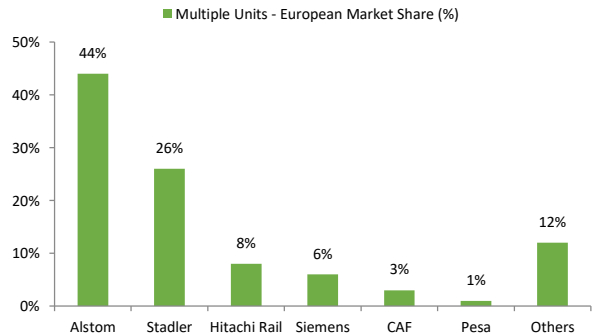
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 28: TMH has major market share in Passenger coaches at global levels.**



Source: SCI, Stadler Reports, Arihant Capital Research

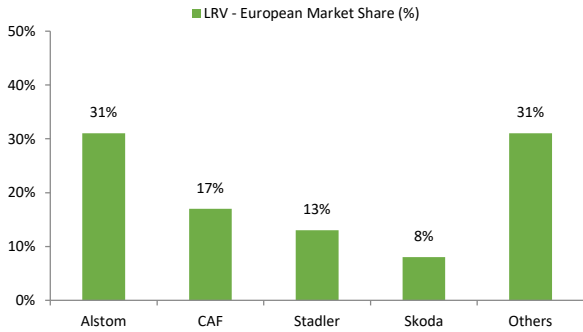
**Exhibit 29: Alstom has major market share in Multiple units at European Markets.**



Source: SCI, Stadler Reports, Arihant Capital Research

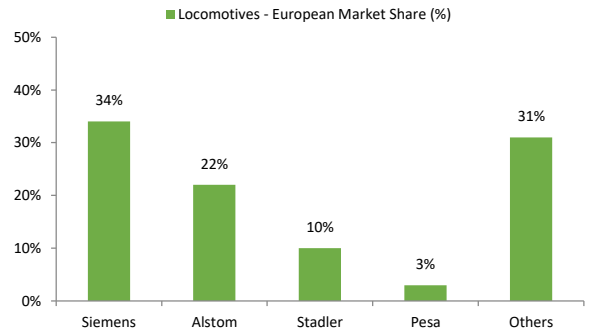
## Global Players Market Share – Segments

**Exhibit 30: Alstom has major market share in LRV at European Markets.**



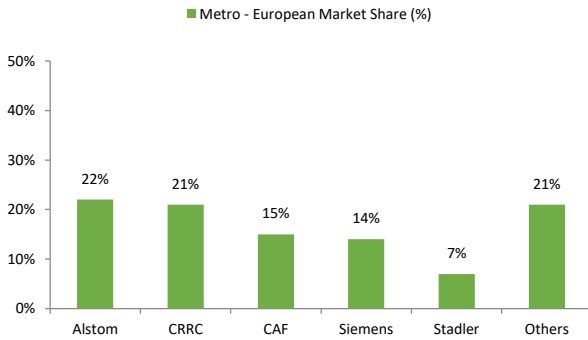
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 31: Siemens has major market share in Locomotives at European Markets.**



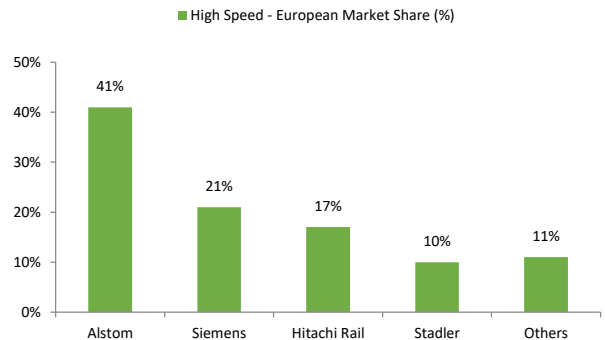
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 32: Alstom has major market share in Metros at European Markets.**



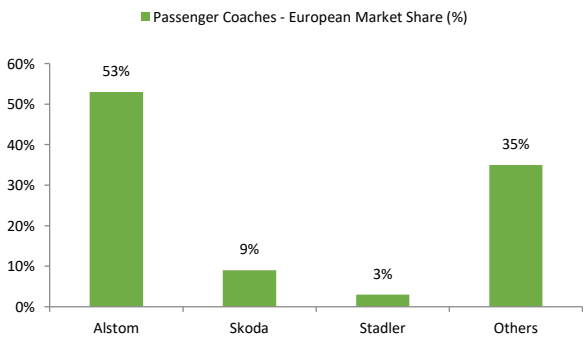
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 33: Alstom has major market share in High-speed Rail at European Markets.**



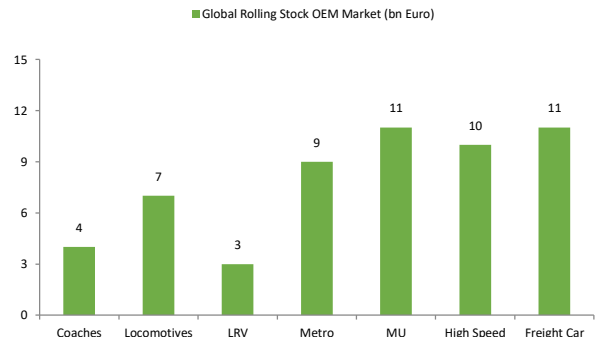
Source: SCI, Stadler Reports, Arihant Capital Research

**Exhibit 34: Alstom has major market share in Passenger Coaches at European Markets.**



Source: SCI, Stadler Reports, Arihant Capital Research

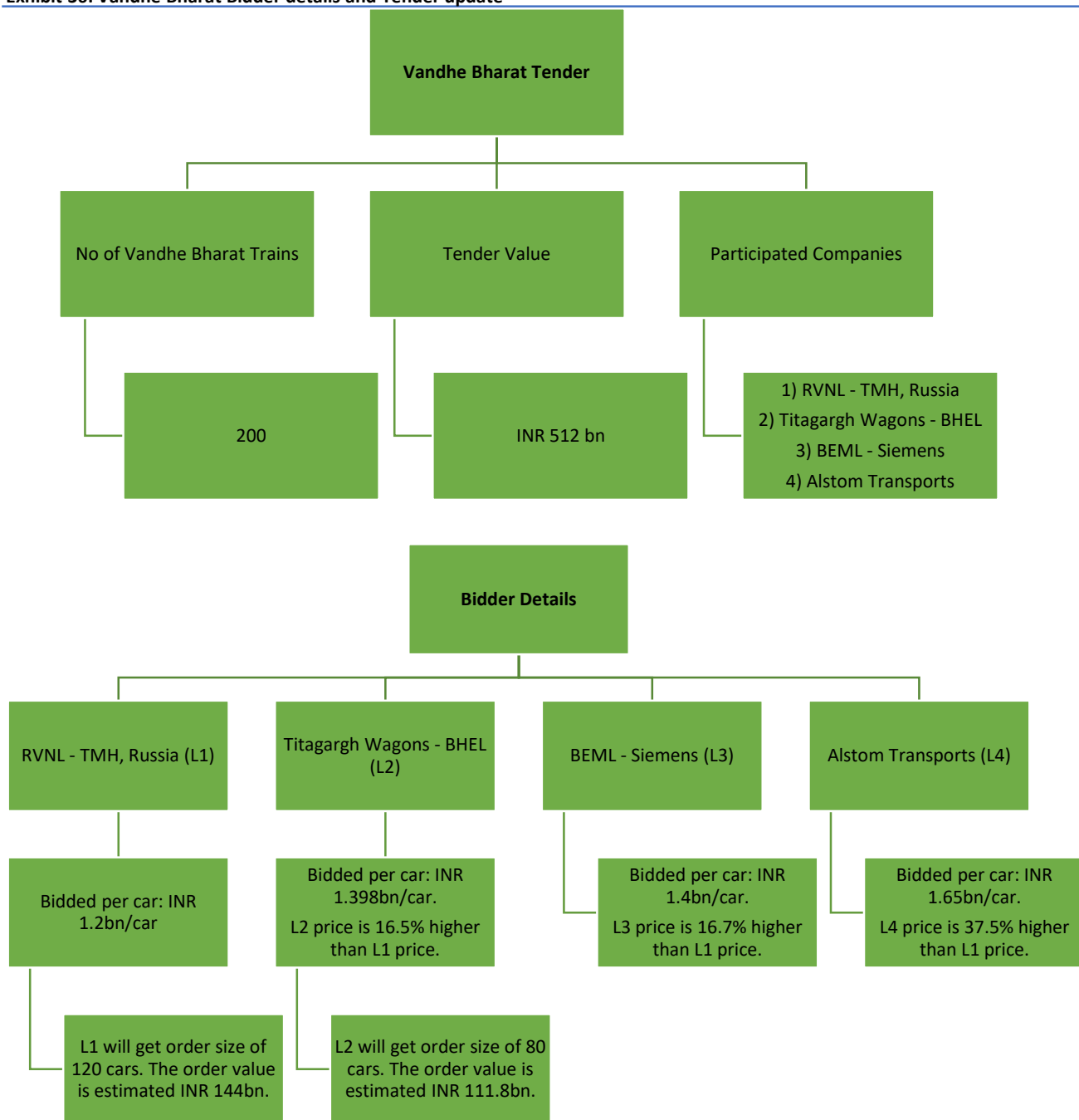
**Exhibit 35: The global rolling-stock market estimated ~123bn Euro and Global OEM market accounted around 55bn euros and remaining comes from After sales services. Freight cars accounted for 11 bn euro in global markets.**



Source: SCI, Stadler Reports, Arihant Capital Research

**Vandhe Bharat Tender update**

**Exhibit 36: Vandhe Bharat Bidder details and Tender update**



Source: Industry, Aриhant Capital Research

**Summary:** RVNL – TMH, Russia is L1 and expected to get order value of INR 144bn. Titagargh Wagons – BHEL is L2 and expected to get order value of INR 111.8bn. The total cost for Indian railways for 200 Vandhe Bharat trains around INR 256bn (INR 1.28bn/car). L1 and L2 is expected to get 35 years maintenance orders which bring recurring revenue going forward. Overall, the order size is expected including maintenance for 200 Vandhe Bharat Trains around INR 512bn.

### Jupiter Wagons Plant Visit and Management Meet Highlights

Jupiter Wagons | CMP: INR 86 | Mcap: INR 33.34bn

We visited Shahgunj, Chinsurah (Kolkata) plant and interacted with Mr. Sanjiv Keshri – CFO, Mr. S.K Chaudhury – Plant Head, and other experienced teammates.

#### Jupiter Wagon Plant – Kolkata

##### Wagon Manufacturing

- In the factory, 5 bays are manufacturing wagons, and each bay has manufacturing capacity of 4 wagons per day which comes to 600 wagons per month.
- The plant is manufacturing in-house other than wheelsets and brake systems.
- Two Bogies and most of the components are required for 1 wagon.

##### Foundry – Molding

- In the foundry, there are two silica sand mixer. One mixer has a capacity of 60 tonne/hour and another has a capacity of 30 tonne/hour.
- Alloy steel material in various grades is used for the molding process. The mold is prepared based on design and melted liquid metal of section required for wagons. The process takes time around 10 hours. The mold life cycle is around 30 years. The plant is procuring 50% of mold from outside and the remaining is from in-house.

##### Cold Rolling

- The plant has 3 types of Cold rolling processes based on size and applications.

##### Furnace capacity

- Two furnace capacity is around 15 tonnes each heat. The plant is doing 8 to 10 heats per day.

##### Wagon weight

- The wagon weight comes to around 21 tonnes, the Bottom base (Wheel, Bogie, etc) weight is around 11 tonnes and the outside structure comes to about 10 tonnes.

##### Other updates

- The company is doing multiple engineering processes like CNC cutting, Shearing, Welding, etc to manufacture intermediate products for Wagons.
- The plant is having 4 km of railway siding for for stabling and dispatch of wagons by rail.
- The land bank is around 80-100 acres in Kolkata and around 150 acres in MP and Jharkhand.

**Exhibit 37: Sand Mixer is used to mix sand for molding process.**



Source: Company, Aриhant Capital Research

**Exhibit 38: Molding made by Silica sand**



Source: Company, Aриhant Capital Research

## Jupiter Wagons Plant Visit Clicks

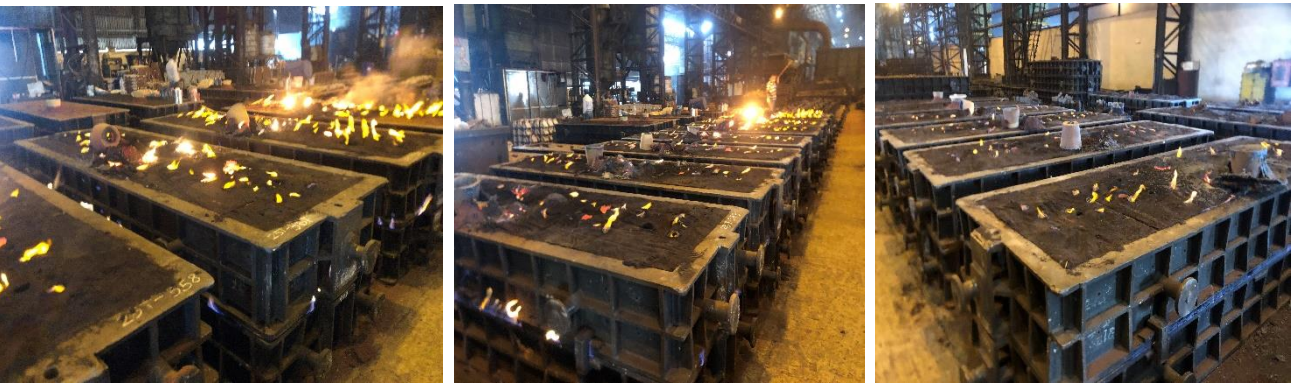
**Exhibit 39: Molding made by Silica sand**



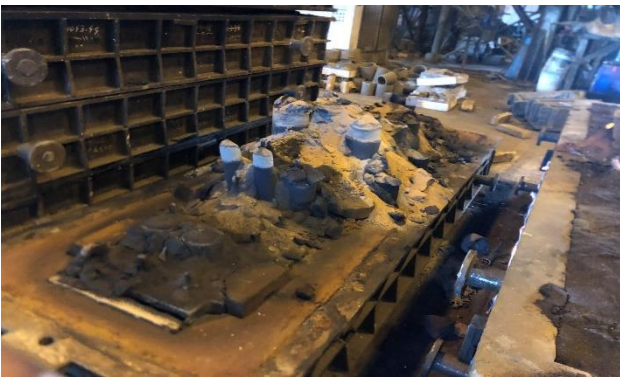
**Exhibit 40: Complex mold design made by Silica sand.**



**Exhibit 41: Molten alloy steel poured into mold to make components. The process take around 10 hours.**



**Exhibit 42: Components made post molding process.**



**Exhibit 43: Railway track and components**



**Exhibit 44: Cold rolled components.**



**Exhibit 45: Sheet metals for Cold Rolling**



Source: Company, Arihant Capital Research

## Jupiter Wagons Plant Visit Clicks

Exhibit 46: Sheet metals are used to make desired shape through cold rolling process.



Exhibit 47: Bogie system with wheel sets

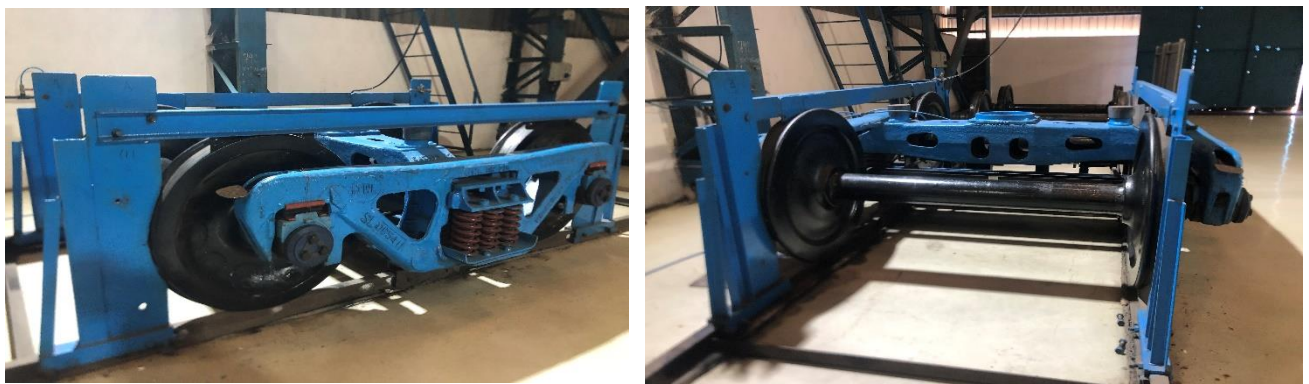


Exhibit 48: Freight wagon



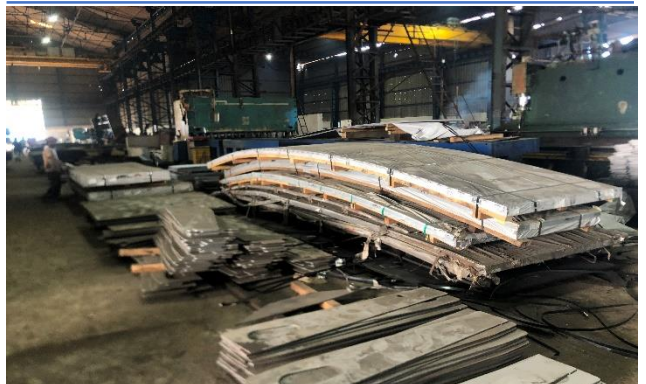
Exhibit 49: Railways wagon and Wagon for Military.



Exhibit 50: CNC Plasma cutting machine for making intermediate components.



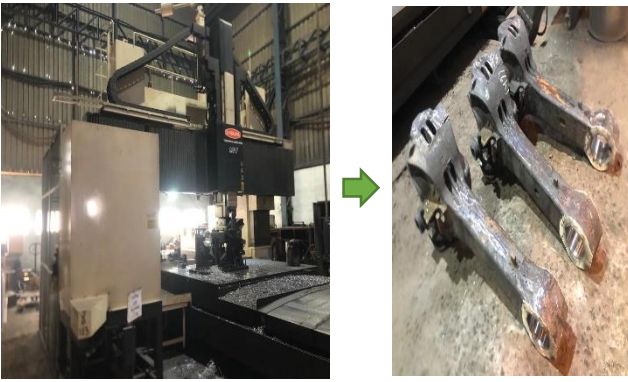
Exhibit 51: Shearing machine



Source: Industry, Arihant Capital Research

## Jupiter Wagons Plant Visit Clicks

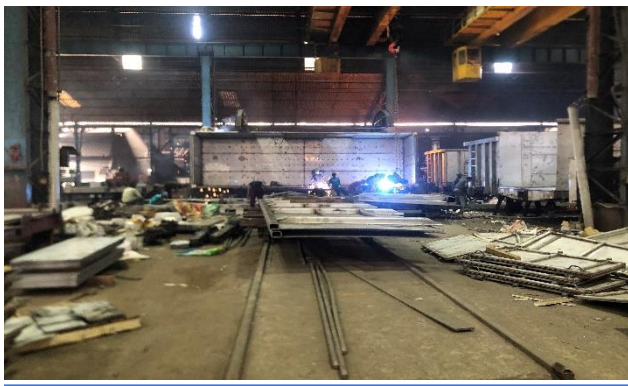
**Exhibit 52: Machining process**



**Exhibit 53: Wheelsets**



**Exhibit 54: Wagon structure work.**



**Exhibit 55: Wagon without wheelset and outer structure.**



**Exhibit 56: Brake Systems.**



**Exhibit 57: Bogie mounted for freight wagons.**



**Exhibit 58: Subsystem axle mounted disc brake system.**



**Exhibit 59: Brake system for LHP passenger coaches.**



Source: Company, Arihant Capital Research



### Jupiter Wagon Management Meet Highlights

Jupiter Wagon | CMP: INR 86 | Mcap: INR 33.34bn

#### Order book

- The order book stood at INR 57.03bn (~3.32x of FY22-TTM revenue). The order book is sufficient for execution in the next three years.

#### Margins

- Load bodies' gross margins are around 23%, container gross margins are around 25%, and Wagon's gross margin is around 26%-27%.
- Load bodies' EBITDA margin is around 8%, container EBITDA margin is around 13% to 14%, and Wagon's EBITDA margin is around 14%.

#### Wagons

- The company has manufacturing capacity of 600 wagons per month. Each wagons realization is around INR 3.8mn to INR 4mn.
- Private and Railways wagons mix 60:40.
- Private wagon realization is INR 4 lakhs to INR 5 lakhs higher than railway wagons.
- The private wagons orders execution period is around 9 to 12 months.
- In wagons, the company is importing wheelsets from China. The company is importing wheel sets for Private wagons and buying domestically for Railway wagons.
- Indian railway wagons are pass-through while private wagons are fixed-price contracts. Railway wagon steel and labour costs pass through based on WPI.
- In a private wagon contract, the company will get a 30% advance from customers to fix the Raw materials.
- The company is buying steel from Jindal steel and Tata steel.
- The company is looking for opportunities in Metro.

#### Brake Systems

- The Brake system market is around INR 30bn The company focused to capture a sizable market in FY25.
- Around INR 6bn to INR 8bn turnover is expected for braking systems in FY25.

#### Industry

- The government is coming up with 50,000 advanced technology wagons in global tenders. Each wagon cost around INR 7mn to INR 10mn. It will be a game changer in the wagons business.
- Railways coming up with 30,000 to 50,000 wagons at domestic levels.

#### Demand Scenario

- The company witnessing new inquiries and new orders from Cement, Steel, Coal, and Mining industries.
- Strong demand from the auto sector. The shift is expected from road to rail for transport going forward.

#### EV and Vehicle bodies

- In EV, the company has entered a strategic alliance with North America-based Green Power Motor for Electric Commercial Vehicles.
- In EV, the Capex is expected around INR 500mn
- The company is targeting commercial EV launch by Oct-Nov this year. The company is targeting B2B in commercial EV and focused capture a 7% to 10% market share.
- Around 100km distance is expected to cover by 20 minutes charge in EV.
- EV plant is based in Indore. EV products are indigenous products.
- The company has a long relationship with Tata motors and Eicher for commercial vehicle bodies.

#### Container

- Normal channel container realization is around INR 4.5lakh per container. The company is manufacturing 3 containers per day. GE container manufacturing cycles come to around 1.5 containers per day.
- In the container business, around INR 1bn revenue is expected in FY23, and INR 1.5bn to INR 2bn revenue is expected in FY24.
- The container order period is around 30 days.

### Jupiter Wagon Management Meet Highlights

#### Working Capital Cycle

- Debtor's days stood around 20-22 days, Inventory days stood around 120 days, and payables days stood at 45-60 days. Overall Working capital days are 60-80 days.

#### Investment in subsidiary

- The company is expected to invest in subsidiaries around INR 4bn; INR 2.5bn from internal accruals, and the remaining from investors.

#### JV

- The company is a joint venture with Kavis for manufacturing brake discs. It's used in high-speed trains.

**Outlook & Valuation:** The company has a strong order book of INR ~57bn (~3.32x of FY22 - TTM revenue), Well positioned for new government wagon tenders, strong focus on the EV market will drive growth going forward. At CMP INR 86, the stock is trading at an EV/EBITDA of 18.4 of its FY22 EBITDA (TTM). We have a positive outlook on the stock.

## Jupiter Wagons Consolidated Financial Statements

### Income statement summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Revenue	1,053	972	2,158	1,257	9,958	11,784
Net Raw Materials	846	778	1,779	998	7,416	8,968
Employee Cost	58	50	68	90	262	338
Other Expenses	76	143	192	148	1,216	1,336
<b>EBITDA</b>	<b>16</b>	<b>1</b>	<b>119</b>	<b>21</b>	<b>1,063</b>	<b>1,141</b>
<b>EBITDA Margin (%)</b>	<b>1.5%</b>	<b>0.1%</b>	<b>5.5%</b>	<b>1.7%</b>	<b>10.7%</b>	<b>9.7%</b>
Depreciation	(104)	(104)	(104)	(83)	(212)	(234)
Interest expense	(273)	(278)	(221)	(62)	(211)	(182)
Other income	4	12	8	33	18	34
<b>Profit before tax</b>	<b>(356)</b>	<b>(369)</b>	<b>887</b>	<b>(26)</b>	<b>658</b>	<b>756</b>
Taxes	-	-	-	24	(124)	(260)
<b>PAT</b>	<b>(356)</b>	<b>(369)</b>	<b>887</b>	<b>(1)</b>	<b>534</b>	<b>497</b>
<b>PAT Margin (%)</b>	<b>-33.8%</b>	<b>-38.0%</b>	<b>41.1%</b>	<b>-0.1%</b>	<b>5.4%</b>	<b>4.2%</b>
Other Comprehensive income	(0)	1	(0)	(3)	(5)	0
<b>Net profit</b>	<b>(356)</b>	<b>(369)</b>	<b>887</b>	<b>(4)</b>	<b>529</b>	<b>497</b>
EPS (INR)	(6.5)	(6.7)	9.9	(0.0)	1.4	1.3

Source: Company Reports, Aриhant Capital Research

### Balance sheet summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Equity capital	549	549	895	895	3,874	3,874
Reserves	(853)	(1,221)	64	60	2,456	2,952
<b>Net worth</b>	<b>(303)</b>	<b>(672)</b>	<b>959</b>	<b>954</b>	<b>6,330</b>	<b>6,827</b>
Minority Interest	-	-	-	-	2	2
Provisions	7	21	22	28	51	61
Debt	1,775	2,071	451	527	1,410	1,432
Other non-current liabilities	329	339	286	-	-	-
<b>Total Liabilities</b>	<b>1,807</b>	<b>1,759</b>	<b>1,718</b>	<b>1,510</b>	<b>7,793</b>	<b>8,323</b>
Fixed assets	1,447	1,345	1,127	1,095	3,842	3,951
Capital Work In Progress	20	20	1	56	205	222
Other Intangible assets	-	-	3	6	126	110
Goodwill	-	-	-	-	204	204
Investments	0	0	0	-	73	180
Other non current assets	273	278	279	33	595	362
<b>Net working capital</b>	<b>50</b>	<b>50</b>	<b>49</b>	<b>271</b>	<b>1,839</b>	<b>2,357</b>
Inventories	70	93	144	476	2,443	3,194
Sundry debtors	157	69	177	111	721	710
Loans & Advances	29	24	31	25.6	10.2	10.2
Other current assets	238	191	65	149	783	844
Sundry creditors	(355)	(256)	(253)	(344)	(1,415)	(1,437)
Other current liabilities & Prov	(89)	(70)	(115)	(145)	(704)	(965)
Cash	17	44	239	45	714	689
Other Financial Assets	1	22	19	4	195	248
<b>Total Assets</b>	<b>1,807</b>	<b>1,759</b>	<b>1,718</b>	<b>1,510</b>	<b>7,793</b>	<b>8,323</b>

Source: Company Reports, Aриhant Capital Research

## Jupiter Wagons Consolidated Financial Statements

### Cashflow summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Profit before tax	(356)	(369)	887	(26)	658	756
Depreciation	104	104	104	83	212	234
Tax paid	-	-	-	24	(124)	(260)
Working capital Δ	(448)	0	0	(222)	(1,568)	(518)
Change in Goodwill	-	-	-	-	(204.2)	-
<b>Operating cashflow</b>	<b>(700)</b>	<b>(265)</b>	<b>991</b>	<b>(140)</b>	<b>(1,026)</b>	<b>212</b>
Capital expenditure	34	(2)	133	(105)	(3,109)	(359)
<b>Free cash flow</b>	<b>(666)</b>	<b>(267)</b>	<b>1,124</b>	<b>(246)</b>	<b>(4,135)</b>	<b>(147)</b>
Equity raised	(66)	1	744	(3)	4,844	0
Investments	-	-	-	0	(73)	(107)
Others	(75)	(26)	(1)	258	(873)	196
Debt financing/disposal	519	297	(1,620)	76	883	22
Other items	304	24	(52)	(280)	23	11
<b>Net Δ in cash</b>	<b>16</b>	<b>27</b>	<b>195</b>	<b>(194)</b>	<b>669</b>	<b>(25)</b>
<b>Opening Cash Flow</b>	<b>1</b>	<b>17</b>	<b>44</b>	<b>239</b>	<b>45</b>	<b>714</b>
<b>Closing Cash Flow</b>	<b>17</b>	<b>44</b>	<b>239</b>	<b>45</b>	<b>714</b>	<b>689</b>

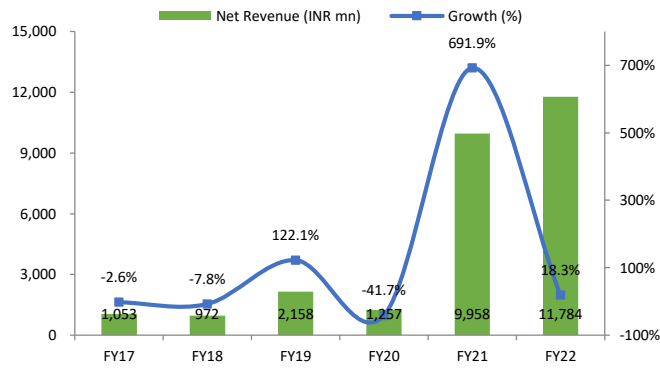
Source: Company Reports, Arihant Capital Research

### Ratio analysis

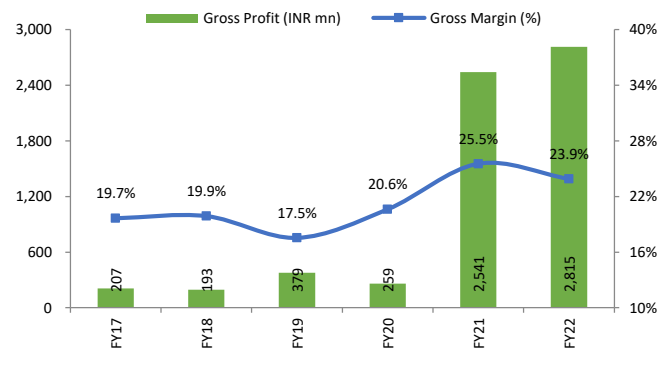
Y/e 31 Mar	FY17	FY18	FY19	FY20	FY21	FY22
<b>Growth matrix (%)</b>						
Revenue growth	-2.6%	-7.8%	122.1%	-41.7%	691.9%	18.3%
Op profit growth	-112.6%	-96.6%	21582.3%	-82.5%	4995.0%	7.3%
<b>Profitability ratios (%)</b>						
OPM	1.5%	0.1%	5.5%	1.7%	10.7%	9.7%
Net profit margin	-33.8%	-38.0%	41.1%	-0.1%	5.4%	4.2%
RoCE	-	-	-	-0.1%	15.2%	7.7%
RoNW	-	-	-	-0.1%	14.7%	7.5%
RoA	-	-	-	-0.1%	6.9%	6.0%
<b>Per share ratios (INR)</b>						
EPS	(6.5)	(6.7)	9.9	(0.0)	1.4	1.3
Dividend per share	-	-	-	-	-	-
Cash EPS	-	-	11.1	0.9	1.9	1.9
Book value per share	-	-	10.7	10.7	16.3	17.6
<b>Valuation ratios (x)</b>						
P/E	-	-	8.7	-	63.0	67.1
P/CEPS	-	-	7.8	94.1	44.7	45.6
P/B	-	-	8.0	8.1	5.3	4.9
EV/EBITDA	-	-	66.4	391.9	31.9	29.7
<b>Payout (%)</b>						
Dividend payout	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tax payout	0.0%	0.0%	0.0%	94.5%	18.8%	34.4%
<b>Liquidity ratios</b>						
Debtor days	49	42	21	42	15	22
Inventory days	36	38	24	113	72	115
Creditor days	124	115	46	88	36	49
WC Days	(39)	(34)	(0)	67	51	88
<b>Leverage ratios (x)</b>						
Interest coverage	-0.3	-0.4	0.1	-1.0	4.0	5.0
Net debt / equity	-5.8	-3.0	0.2	0.5	0.1	0.1
Net debt / op. profit	108.9	3,692.6	1.8	23.1	0.7	0.7

Source: Company Reports, Arihant Capital Research

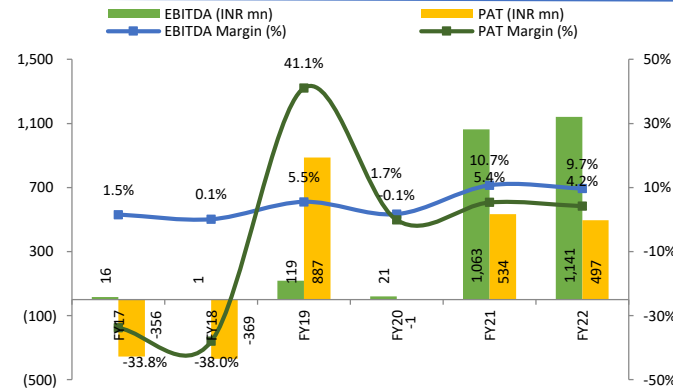
**Exhibit 60: Wagons business is mainly driven the revenue.**



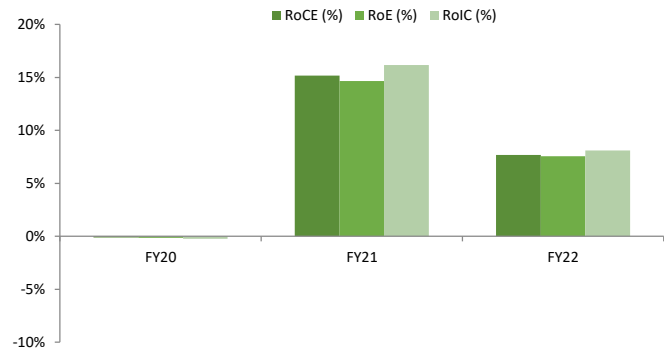
**Exhibit 61: Gross margins were improved over the period of FY17-22.**



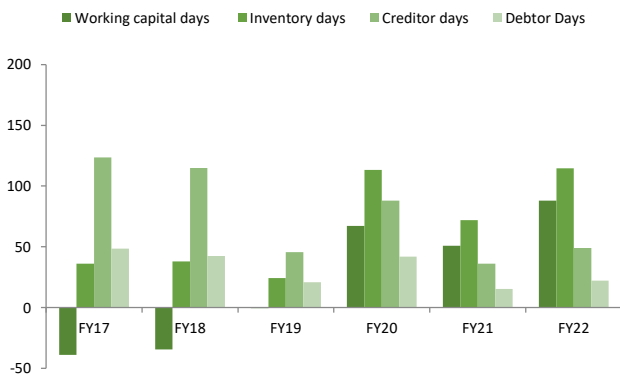
**Exhibit 62: Growth in EBITDA & PAT levels**



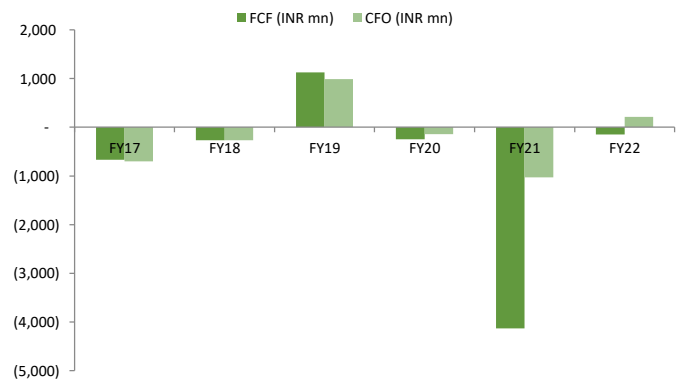
**Exhibit 63: Return ratios to be improve**



**Exhibit 64: Working capital days has increased over the period of FY17-22.**



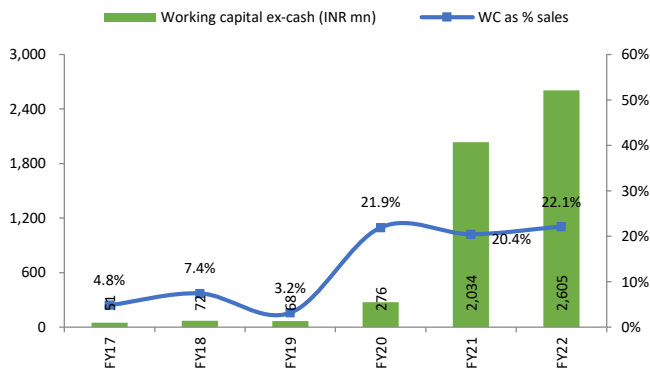
**Exhibit 65: CFO and FCF has improved in FY22.**



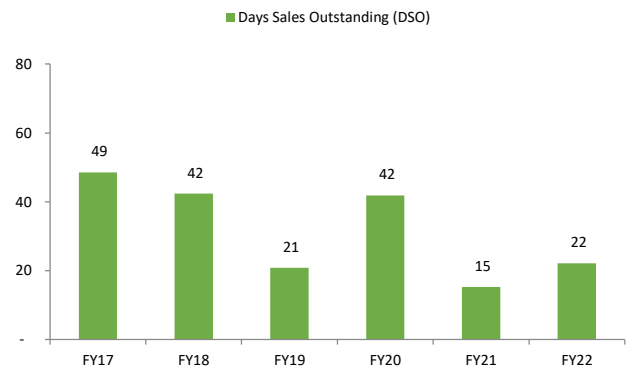
Source: Company Reports, Arianth Capital Research

## Jupiter Wagons – Story in Charts

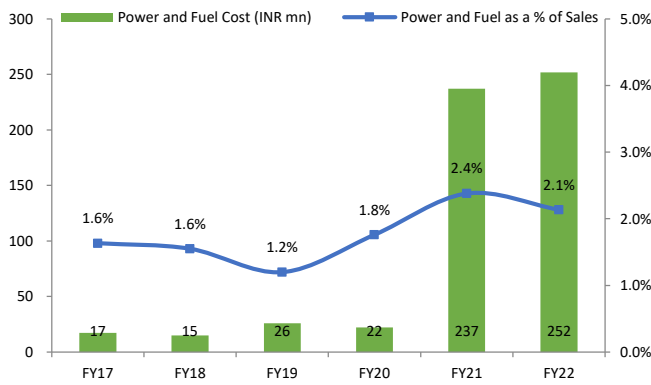
**Exhibit 66: Working capital in-terms of sales are maintained around 22% over past 3 years.**



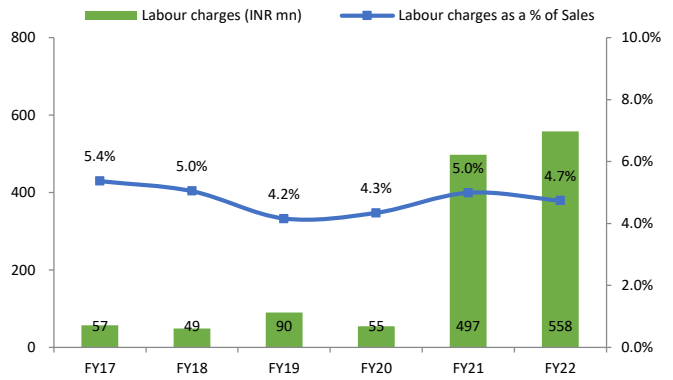
**Exhibit 67: DSO has reduced over the period of FY17-22.**



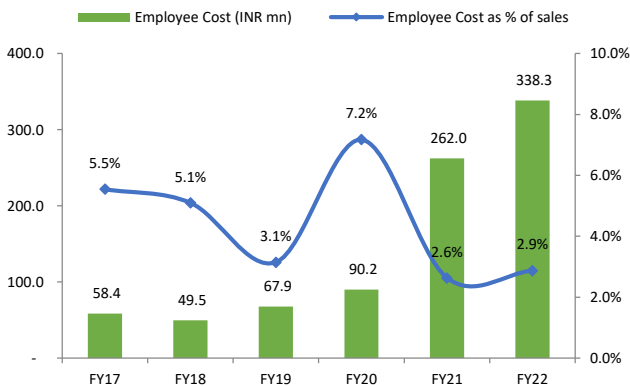
**Exhibit 68: Power and fuel cost was maintained less than 2.5% of sales over the period of FY17-22.**



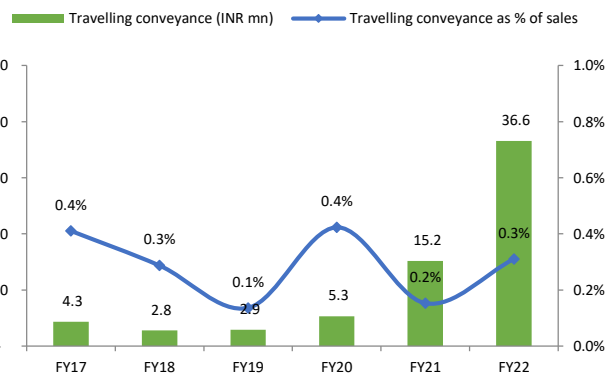
**Exhibit 69: Labour charges was maintained less than 6% of sales over the period of FY17-22.**



**Exhibit 70: Employee cost has reduced over the period of FY17-22.**



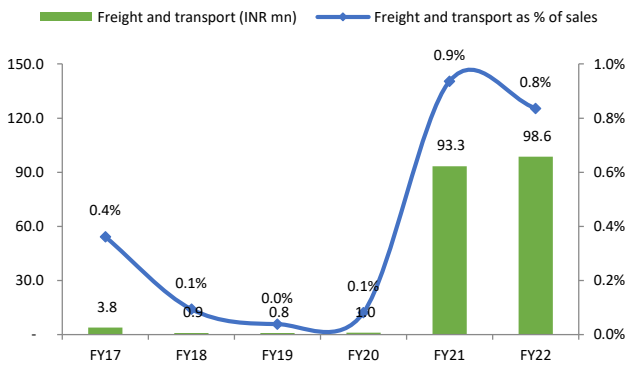
**Exhibit 71: Labour charges was maintained less than 0.5% of sales over the period of FY17-22.**



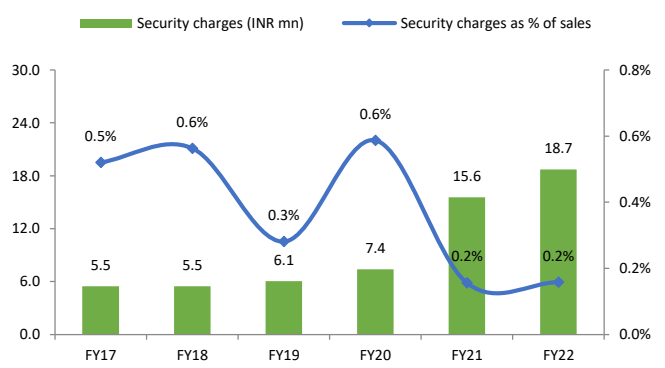
Source: Company Reports, Arihant Capital Research

## Jupiter Wagons – Story in Charts

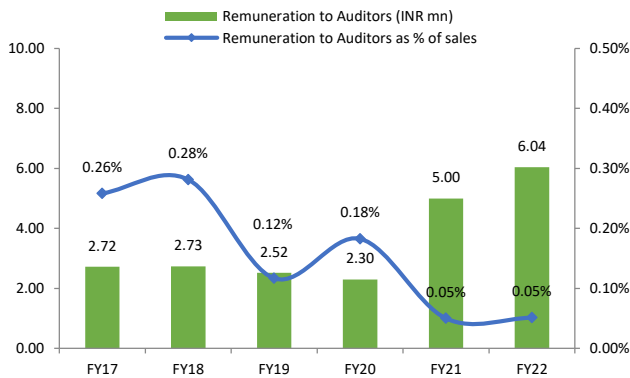
**Exhibit 72: Freight and transports cost risen in-terms of sales over the period of FY17-22.**



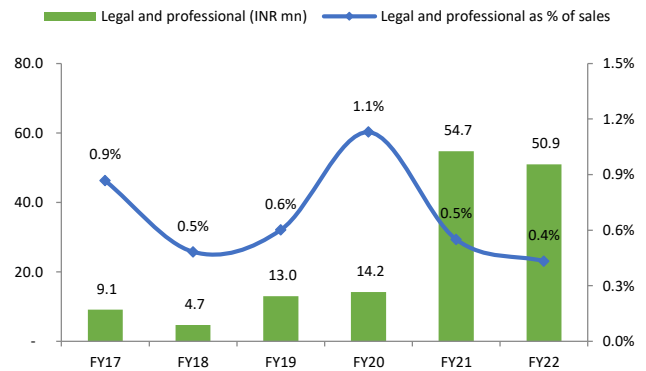
**Exhibit 73: Security charges has reduced in-terms of sales over the period of FY17-22.**



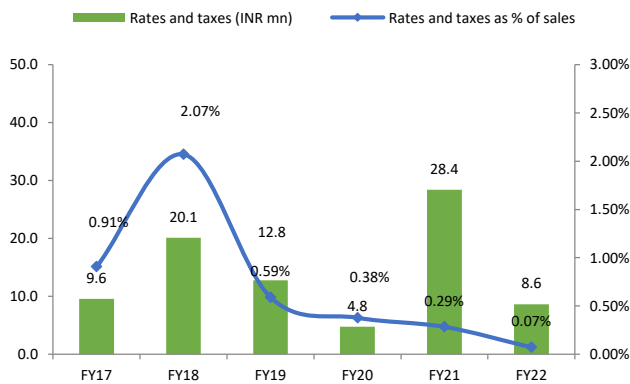
**Exhibit 74: Auditors remuneration has reduced in-terms of sales over the period of FY17-22.**



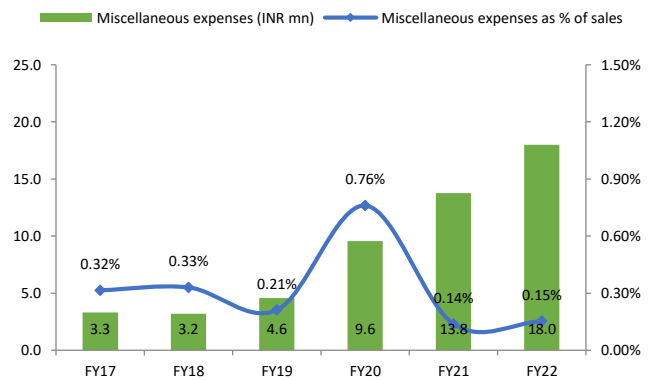
**Exhibit 75: Legal and professional expenses normalised in past 2 years.**



**Exhibit 76: Rates and taxes has reduced in-terms of sales over the period of FY17-22.**



**Exhibit 77: Miscellaneous expenses has maintained less than 1% over the period of FY17-22.**



Source: Company Reports, Arianth Capital Research

### Titagarh Wagons Management Meet Highlights

Titagarh Wagons Ltd | CMP: INR 238 | Mcap: INR 28.49bn

#### Revenue

- Around INR 25bn to INR 26bn revenue is expected in FY23.

#### Margins

- Passenger rail rolling stock's EBITDA margins are expected to be 8% to 11% and Blended EBITDA Margin is expected to be 9% to 10% going forward. The propulsion business is expected to improve the margin going forward.
- The company is working on backward integration for some of the products and margin improvements are expected going forward.

#### Wheelsets – Titagarh and Ramkrishna Forgings

- Three players participated in the wheelsets tender. Titagarh Wagons – Ramkrishna Forgings has emerged as L1 for manufacturing and supplying wheelsets to Indian railways. The supply of ~1.6-million-wheel discs of different rolling stocks of Indian Railways over a period of 20 years at about 80,000 wheels per annum. The company has 50:50 partnerships with RK forgings.
- The cost of the project is around INR 10bn and will be funded through internal accruals (50%) and long-term debts. The funding is expected to complete in the next 2 years.
- The company is setting up a capacity of 2 lakh wheelsets per annum. Around 80,000 wheelsets are expected to supply to Indian railways and the remaining to others.
- In the Wheelset plant, the breakeven is expected at 40,000 to 50,000 wheels normally.
- Wheelsets business is a higher margin business and margins above 15%.
- The company has potential export opportunities, currently, 2-3 players are producing wheels globally and supplying to rolling stock manufacturers.
- 1<sup>st</sup> delivery is expected to happen in 2 years.
- Currently, the company is importing wheelsets from china for Private wagons and procuring domestically for railway wagons.

#### Capex

- Around INR 2bn to INR 2.5bn Capex has already been incurred over the last few years, and another INR 5-6bn Capex is planned in the next 2 years.
- The Capex includes wheelsets plant equity infusion, freight wagon expansion of 8,400 to 12,000 wagons p.a., Foundry capacity expansion of 30,000 MT to 50,000 MT, setting up of stainless steel facility and enhancement of 240 coaches to 800-850 coaches p.a., etc.

#### Order book and completion

- TWL India's order book stood at INR 101.3bn (~4.43x of FY22 TTM revenue).
- Railways contracts will be complete in FY25. Pune Metro will be completed in the next 3 to 4 months. CRRC Project for Bangalore metro is expected to complete in the next 18 to 24 months from the start of the project.
- The average execution timeline for projects is around 3 years from FY23 onwards. The execution timeline will vary based on projects.

#### Wagons

- The company is adding lots of private wagons orders in the last 3 to 4 months.
- The company has achieved 630 - 650 wagons per month and its capacity is stood around 700 wagons per month. The company focused to increase the capacity to 1,000 wagons per month in the next 12 to 14 months.
- Private wagon's margins are higher than railway wagons. Railway wagons are complete pass-through contracts while Private wagons are fixed contracts.
- Private wagons account for 15% of the order book.



### Titagargh Wagons Management Meet Highlights

#### Wagons Industry

- The company is working with technology partners for new-age wagons. The new age wagons are the game changer in the business.
- Around 30,000 wagons per annum are expected for the next 10 to 15 years. The government is expected to come up with 50,000 wagons orders in the next 4 to 5 months.
- Private wagons demand around 4,000 – 5,000 wagons out of 30,000 wagons in Industry.
- Government wagon's price is around INR 35-36 lakhs and private wagon's prices are around INR 40-50 lakhs based on variants.
- Wagon demand comes from the cement, iron ore, coal, and steel industries. Even witnessing demand from Tier 2 steel makers for the transportation of sheet metals and coils.

#### Vandhe Bharat Trains and Metro

- 1,000 Vandhe Bharat trains are projected by Indian railways.
- Vandhe Bharat trains maintenance contract is around 35 years. Maintenance contracts are generally 3% to 4% of goods. The maintenance business is a high-margin business.
- Around 30-40 metro tenders are coming up and each metro has average cars of 100.
- The company entered into a tri-partite agreement with CRRC for Bangalore metro. The production is expected to start from August-September onwards.
- The Pune metro is expected to complete in July/Aug.
- Tenders are expected from Chennai, Bangalore, Surat, and Ahmedabad metros in the next 1 year.

#### Propulsion business

- Propulsion includes a Traction motor, traction converter, and Traction control monitoring systems. The propulsion system cost is around INR 20mn to INR 25mn (20-25% of coach cost). The company has to buy outside propulsion systems currently. In FY24, the company can be able to supply complete propulsion. The in-house manufacturing of propulsion would improve by 4% to 5% in the train business.
- The company has a partnership with BHEL for Propulsions for Vandhe Bharat trains. In the future, the company might participate alone in Vandhe Bharat Trains.
- The traction motors are under development mode and the trail runs around 60,000 km without any failures. The approval takes a couple of months, post that it will be supplied to Indian railways, CLW, metro, EMU, etc.
- Propulsion annual demand is around INR 40bn to 50bn. Around INR 10bn to 15bn business is expected from the Titagargh wagons.

#### Italy business

- Titagargh Firema's order book stood at 500 mn Euro.
- EBITDA break-even is expected in Q4FY23 and net breakeven is expected in FY24.
- Italy's business EBITDA margin is expected around 5% to 6% over the medium term. The Italy competitor's EBITDA margins are around 8% to 9%. The company is expected to reach same kind of margins once the company reaching full capacity.
- Most of the legacy orders completed and the company is having new orders in Italy business.
- The company is participating in new tenders in Italy.

#### Opportunity in Italy

- European Union allocated 190bn Euro to Italy to revamping of Infrastructure. Around 50bn Euro allocated for rolling stocks. Around 700mn Euro tender is expected in the next couple of months and Titagargh Firema is eligible for that.

#### Working capital

- Working capital is around 90 days and the company is focused to bring down to 60 - 70 days.
- Working capital is around INR 1,500mn to INR 1,600mn.

**Outlook & Valuation:** Titagargh Wagons has a strong order book (~4.43x of FY22 TTM revenue), well positioned to benefit from railways, Italy's business net profitability is expected in FY24, Capacity expansion, backward integration, New orders for Vandhe Bharat Trains and Wheelsets will drive business growth going forward. At CMP INR 238, the stock is trading at an EV/EBITDA of 14.3 of its FY22 EBITDA (TTM). We have a positive outlook on the stock.

## Titagargh Wagons Consolidated Financial Statements

### Income statement summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Revenue	17,136	12,682	15,593	17,663	15,206	19,308
Net Raw Materials	10,798	7,572	9,358	11,515	9,934	12,083
Employee Cost	2,121	2,393	1,761	1,518	2,106	2,235
Other Expenses	2,801	3,684	3,640	3,421	2,360	3,661
<b>EBITDA</b>	<b>1,081</b>	<b>(967)</b>	<b>834</b>	<b>1,209</b>	<b>806</b>	<b>1,329</b>
<b>EBITDA Margin (%)</b>	<b>6.3%</b>	<b>-7.6%</b>	<b>5.3%</b>	<b>6.8%</b>	<b>5.3%</b>	<b>6.9%</b>
Depreciation	(515)	(508)	(240)	(291)	(299)	(333)
Interest expense	(313)	(441)	(652)	(883)	(812)	(934)
Other income	290	299	326	340	249	358
<b>Profit before tax</b>	<b>497</b>	<b>(1,672)</b>	<b>189</b>	<b>375</b>	<b>(55)</b>	<b>290</b>
Taxes	(223)	199	330	205	(132)	(296)
<b>PAT</b>	<b>274</b>	<b>(1,472)</b>	<b>519</b>	<b>580</b>	<b>(187)</b>	<b>(7)</b>
<b>PAT Margin (%)</b>	<b>1.6%</b>	<b>-11.6%</b>	<b>3.3%</b>	<b>3.3%</b>	<b>-1.2%</b>	<b>0.0%</b>
<b>Loss from Discontinued operations</b>	-	-	<b>(745)</b>	<b>(941)</b>	-	-
<b>Net PAT</b>	<b>274</b>	<b>(1,472)</b>	<b>(225)</b>	<b>(361)</b>	<b>(187)</b>	<b>(7)</b>
Other Comprehensive income	(122)	353	(73)	53	81	57
<b>Net profit</b>	<b>152</b>	<b>(1,120)</b>	<b>(298)</b>	<b>(309)</b>	<b>(106)</b>	<b>50</b>
EPS (INR)	2.4	(12.7)	4.5	5.0	(1.6)	(0.1)

Source: Company Reports, Arianant Capital Research

### Balance sheet summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Equity capital	231	231	231	231	239	239
Reserves	9,445	8,316	7,931	7,435	8,167	8,182
<b>Net worth</b>	<b>9,676</b>	<b>8,547</b>	<b>8,162</b>	<b>7,666</b>	<b>8,406</b>	<b>8,421</b>
Minority Interest	788	636	726	789	-	1
Provisions	1,167	1,650	1,225	1,017	814	912
Debt	4,593	7,369	9,629	7,644	8,584	9,316
Other non-current liabilities	692	639	288	1,441	1,868	145
<b>Total Liabilities</b>	<b>16,916</b>	<b>18,840</b>	<b>20,030</b>	<b>18,556</b>	<b>19,672</b>	<b>18,796</b>
Fixed assets	8,810	9,143	8,847	8,254	8,330	8,790
Capital Work In Progress	123	232	332	-	162	152
Other Intangible assets	430	348	441	381	536	646
Goodwill	40	40	2	-	-	-
Investments	1,092	1,015	954	799	923	765
Other non current assets	340	527	679	789	739	1,419
<b>Net working capital</b>	<b>31</b>	<b>2,135</b>	<b>4,869</b>	<b>4,615</b>	<b>7,034</b>	<b>5,729</b>
Inventories	5,373	4,415	5,213	3,763	3,852	5,039
Sundry debtors	2,370	2,779	3,468	2,538	5,672	6,591
Loans & Advances	456	970	488	531.6	-	-
Other current assets	1,935	2,327	2,834	1,944	2,576	2,093
Sundry creditors	(4,425)	(3,063)	(5,352)	(3,512)	(3,980)	(4,387)
Other current liabilities & Prov	(5,678)	(5,293)	(1,781)	(649)	(1,085)	(3,606)
Cash	462	737	1,195	561	1,240	421
Other Financial Assets	5,589	4,662	2,710	3,159	706	874
<b>Total Assets</b>	<b>16,916</b>	<b>18,840</b>	<b>20,030</b>	<b>18,556</b>	<b>19,672</b>	<b>18,796</b>

Source: Company Reports, Arianant Capital Research

## Titagarh Wagons Consolidated Financial Statements

### Cashflow summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Profit before tax	497	(1,672)	189	375	(55)	290
Depreciation	515	508	240	291	299	333
Tax paid	(223)	199	330	205	(132)	(296)
Working capital Δ	2,288	(2,104)	(2,734)	254	(2,419)	1,305
Change in Goodwill	-	-	37.7	2.5	-	-
<b>Operating cashflow</b>	<b>3,078</b>	<b>(3,068)</b>	<b>(1,937)</b>	<b>1,127</b>	<b>(2,307)</b>	<b>1,631</b>
Capital expenditure	100	(951)	(44)	635	(538)	(782)
<b>Free cash flow</b>	<b>3,178</b>	<b>(4,019)</b>	<b>(1,981)</b>	<b>1,762</b>	<b>(2,845)</b>	<b>849</b>
Equity raised	(126)	191	(814)	(1,013)	138	24
Investments	(707)	76	61	155	(124)	158
Others	(4,309)	822	1,707	(498)	2,347	(957)
Debt financing/disposal	1,143	2,776	2,259	(1,985)	941	732
Other items	(754)	429	(776)	945	224	(1,625)
<b>Net Δ in cash</b>	<b>(1,575)</b>	<b>275</b>	<b>457</b>	<b>(634)</b>	<b>680</b>	<b>(820)</b>
<b>Opening Cash Flow</b>	<b>2,037</b>	<b>462</b>	<b>737</b>	<b>1,195</b>	<b>561</b>	<b>1,240</b>
<b>Closing Cash Flow</b>	<b>462</b>	<b>737</b>	<b>1,195</b>	<b>561</b>	<b>1,240</b>	<b>421</b>

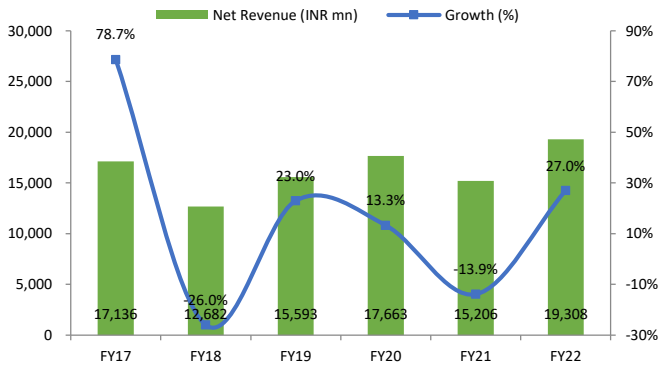
Source: Company Reports, Aриhant Capital Research

### Ratio analysis

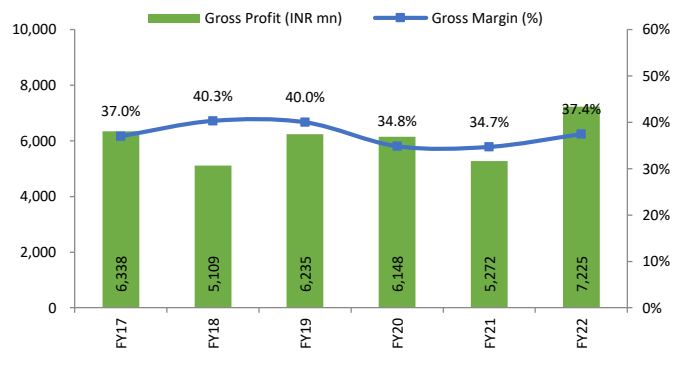
Y/e 31 Mar	FY17	FY18	FY19	FY20	FY21	FY22
<b>Growth matrix (%)</b>						
Revenue growth	78.7%	-26.0%	23.0%	13.3%	-13.9%	27.0%
Op profit growth	255.5%	-189.5%	-186.2%	45.1%	-33.3%	64.8%
<b>Profitability ratios (%)</b>						
OPM	6.3%	-7.6%	5.3%	6.8%	5.3%	6.9%
Net profit margin	1.6%	-11.6%	3.3%	3.3%	-1.2%	0.0%
RoCE	3.1%	-6.3%	13.8%	11.0%	15.1%	-0.2%
RoNW	2.9%	-16.2%	6.2%	7.3%	-2.3%	-0.1%
RoA	1.6%	-7.8%	2.6%	3.1%	-1.0%	0.0%
<b>Per share ratios (INR)</b>						
EPS	1.3	(9.7)	(2.6)	(2.7)	(0.9)	0.4
Dividend per share	-	-	-	-	-	-
Cash EPS	6.8	(8.3)	6.6	7.5	0.9	2.7
Book value per share	83.8	74.0	70.6	66.3	70.4	70.4
<b>Valuation ratios (x)</b>						
P/E	181.1	-	-	-	-	565.4
P/CEPS	34.8	(28.6)	36.3	31.6	255.1	87.4
P/B	2.8	3.2	3.4	3.6	3.4	3.4
EV/EBITDA	28.3	-	42.0	28.0	43.2	27.6
<b>Payout (%)</b>						
Dividend payout	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Tax payout	44.8%	11.9%	-174.3%	-54.7%	-239.9%	102.4%
<b>Liquidity ratios</b>						
Debtor days	50	74	73	62	99	116
Inventory days	212	236	188	142	140	134
Creditor days	93	100	104	98	95	85
WC Days	169	210	157	106	143	165
<b>Leverage ratios (x)</b>						
Interest coverage	1.8	-3.3	0.9	1.0	0.6	1.1
Net debt / equity	0.4	0.8	1.0	0.9	0.9	1.1
Net debt / op. profit	3.8	-6.9	10.1	5.9	9.1	6.7

Source: Company Reports, Aриhant Capital Research

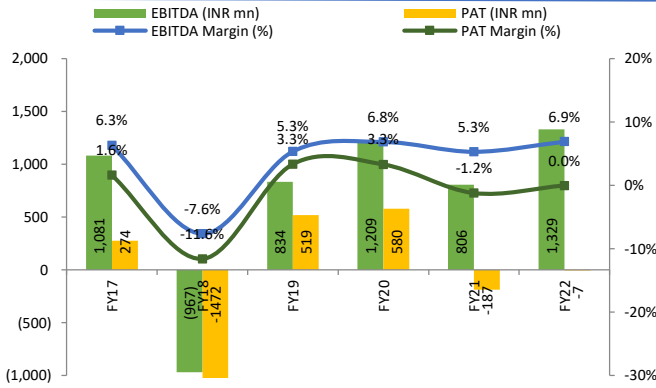
**Exhibit 78: Wagons business is mainly driven the revenue.**



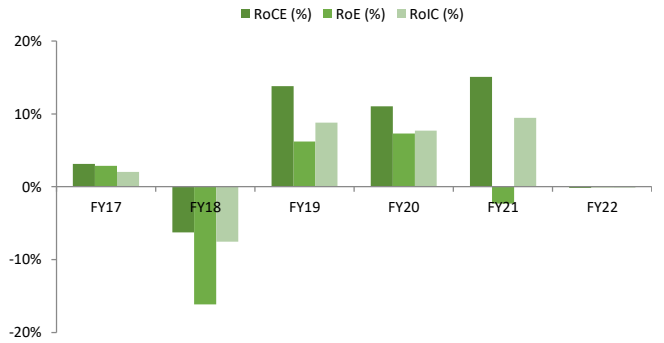
**Exhibit 79: Gross margins were improved over the period of FY17-22.**



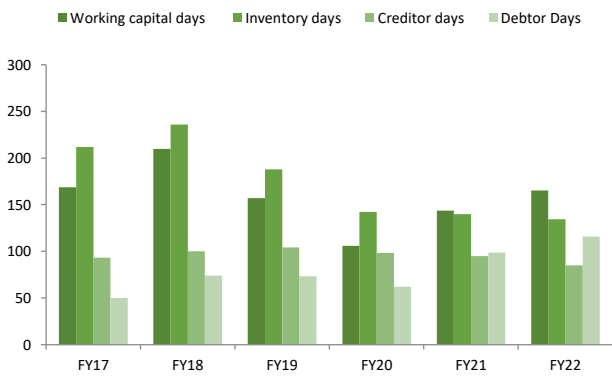
**Exhibit 80: Growth in EBITDA & PAT levels**



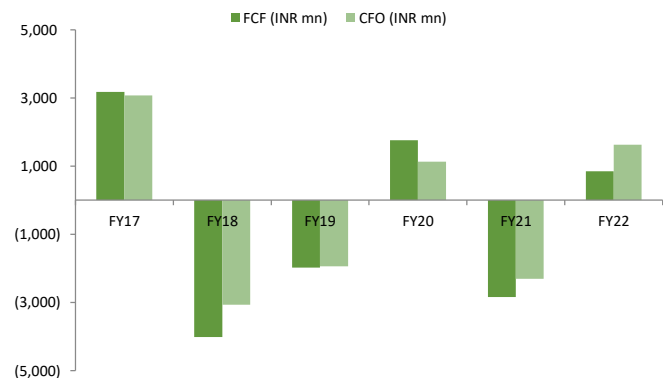
**Exhibit 81: Return ratios to be improve**



**Exhibit 82: Working capital days has reduced over the period of FY17-22.**



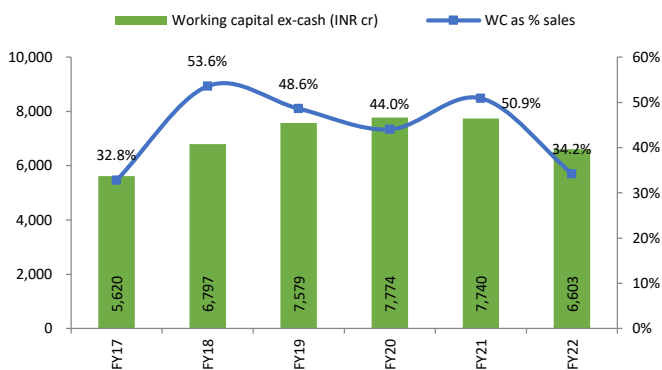
**Exhibit 83: Cash flows has improved compared to past years.**



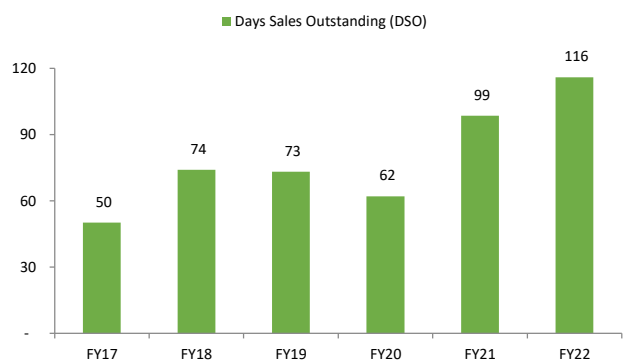
Source: Company Reports, Arianth Capital Research

## Titagarh Wagons – Story in Charts

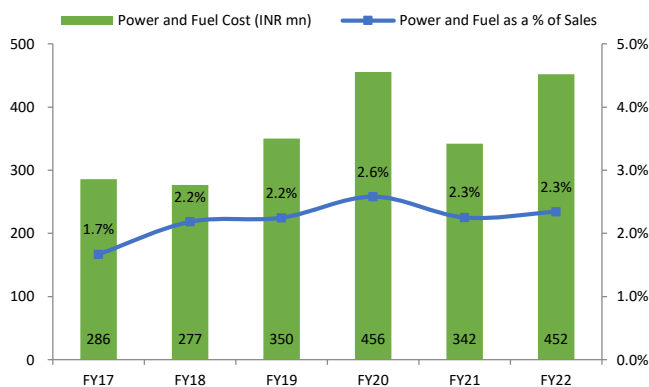
**Exhibit 84: Working capital in-terms of sales are back to FY17 levels.**



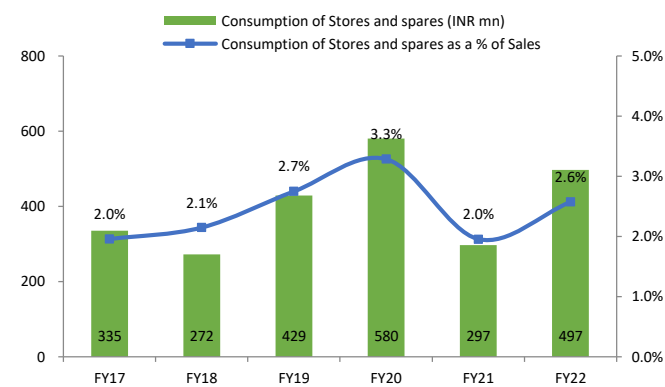
**Exhibit 85: DSO has increased over the period of FY17-22.**



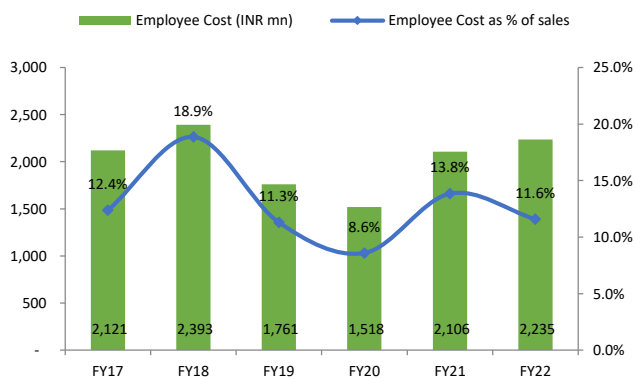
**Exhibit 86: Power and fuel cost has increased in-terms of sales over the period of FY17-22.**



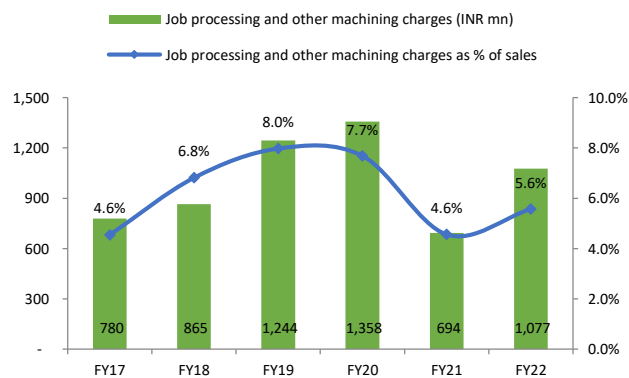
**Exhibit 87: Consumption of stores and spares has back to pre-covid levels.**



**Exhibit 88: Employee cost has reduced in-terms of sales over the period of FY17-22.**



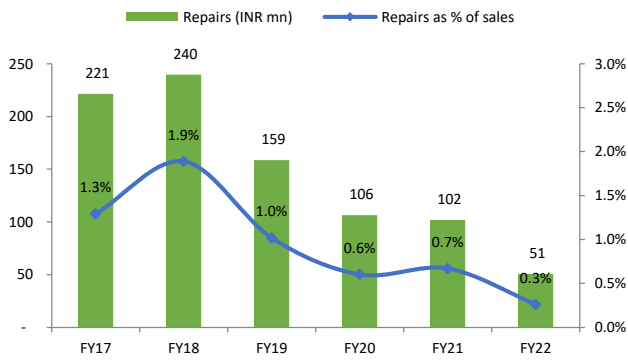
**Exhibit 89: Job processing and other machining charges has increased in-terms of sales over the period of FY17-22.**



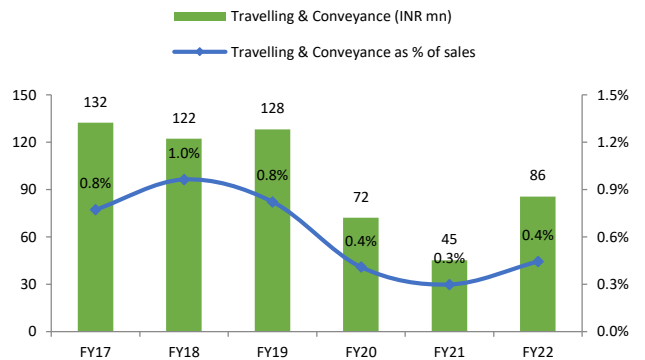
Source: Company Reports, Arihant Capital Research

## Titagarh Wagons – Story in Charts

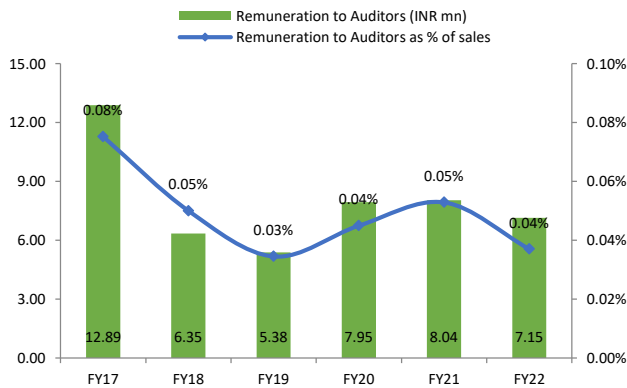
**Exhibit 90: Repairs expenses has reduced in-terms of sales over the period of FY17-22.**



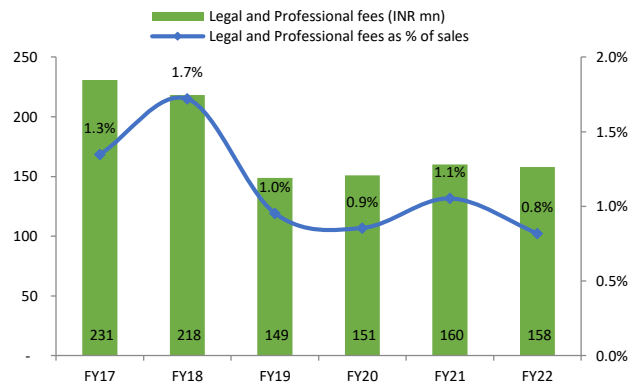
**Exhibit 91: Travelling and Conveyance expense has reduced in-terms of sales over the period of FY17-22.**



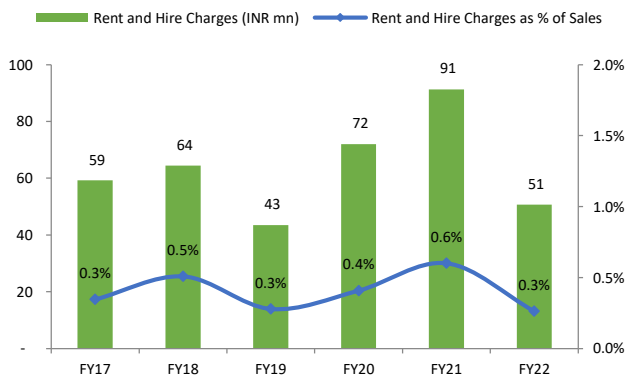
**Exhibit 92: Auditors remuneration has reduced in-terms of sales over the period of FY17-22.**



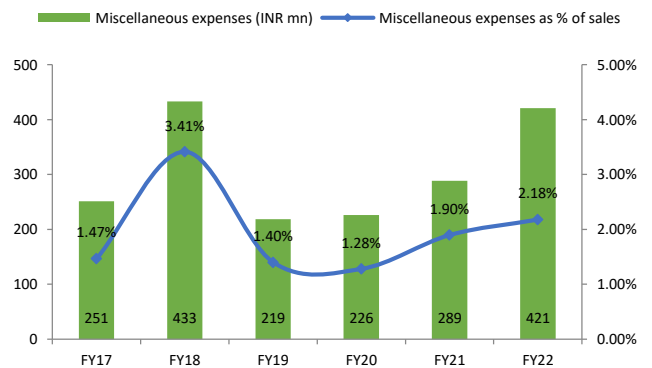
**Exhibit 93: Legal and Professional fees has reduced in-terms of sales over the period of FY17-22.**



**Exhibit 94: Rent and Hire charges has maintained in-terms of sales over the period of FY17-22.**



**Exhibit 95: Miscellaneous expenses has increased in-terms of sales over the period of FY17-22.**



Source: Company Reports, Arianth Capital Research

### Texmaco Rail & Engineering Management Meet Highlights

Texmaco Rail & Engineering | CMP: INR 41.4 | Mcap: INR 13.31bn

#### Order book breakup

- The current order book stood at INR 90bn. Around INR 77bn order book from rolling stocks and the remaining INR 13bn from Railway EPC contracts.
- The government is expected to float another larger tender wagon in the coming months.

#### Wagons production is expected to improve

- The company is currently making 300 to 350 wagons per month. The company has a requirement to supply 550 wagons per month and is focused to deliver 675 wagons per month.
- The company has focused to increase production and productivity by increasing shifts, investing in balancing equipment and making sure the transaction facilities are duly provided with working capital.
- Railway wagons are pass-through while Private wagons are fixed-price contracts. Railway wagons are conventional wagons while Private Wagons are commodity specified.
- The industry produced less than 20,000 wagons per year till now and is expected to produce 30,000 wagons per annum going forward.

#### Ramping up in steel foundry division

- The Foundry division capacity stood at 42,000 tonnes per annum.
- The increase in wagon production would lead to an increase in foundry operation. The majority of key components come from foundry operations.
- Foundry is expected to reach maximum capacity in the next 4 to 6 months.

#### Railway EPC

- The company has focused on small-duration contracts. The contracts are generally 9 – 18 months and a maximum of 24 months.
- The EPC order book stood at INR 13bn as of Q3FY23. The company is focusing on high-profit EPC contracts.

#### Wheelsets

- The company is importing wheelsets from china to manufacture private wagons. The company is procuring wheelsets from railways to manufacture railway wagons.
- Wheelsets procurement normalized due to resuming in china and restriction removed from the government.

#### Focused on the proper mix

- The company has a large chunk of orders from private players while peers have larger chunks of orders from the government. The company has focused on the proper order book and revenue mix going forward.
- The larger chunk of private orders is yielding better margins compared to government orders.

#### Debt and working capital

- The debt stood around INR 8bn. The long-term debt is around INR 4.5bn which is expected to repay gradually in the next 5 years and the remaining is working capital debt.

#### Capex

- The CAPEX is expected around INR 500mn to INR 750mn by FY23.
- The recurring normal Capex is expected around INR 300mn – INR 400mn per annum. There is no Capex for existing products and maybe Capex is expected for new products based on industry requirements.

#### Other Highlights

- The company experiencing lots of demand from private customers and exports.
- Robust demand from the railway and non-railway segments.
- The company is working on metro and bullet train opportunities.
- The MD search for the company is in progress.
- The company has formed a committee for restructuring which focuses on balancing out its existing capacity to exert full production achieving core competencies across all the verticals.

**Outlook & Valuation:** At CMP INR 41.4, the stock is trading at an EV/EBITDA of 13.6 of its FY22 EBITDA (TTM). The demand outlook remains strong. The company has around INR 90bn worth of order book (~4.85x of FY22 – TTM revenue), larger order bagged from Indian railways, and post prototype approval, the company ramped up production. The railway Capex theme and increasing production would lead the business going forward. We have a positive outlook on the stock.

## Texmaco Consolidated Financial Statements

### Income statement summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Revenue	13,235	11,352	18,582	18,318	16,888	16,217
Net Raw Materials	9,498	7,572	12,971	12,198	11,816	10,942
Employee Cost	961	974	1,133	1,280	1,169	1,260
Other Expenses	1,473	2,168	2,780	3,242	2,716	2,613
<b>EBITDA</b>	<b>741</b>	<b>638</b>	<b>1,699</b>	<b>1,599</b>	<b>1,187</b>	<b>1,402</b>
<b>EBITDA Margin (%)</b>	<b>5.6%</b>	<b>5.6%</b>	<b>9.1%</b>	<b>8.7%</b>	<b>7.0%</b>	<b>8.6%</b>
Depreciation	(221)	(249)	(291)	(361)	(375)	(360)
Interest expense	(581)	(609)	(705)	(966)	(1,030)	(1,002)
Other income	455	475	154	207	250	224
<b>Profit before tax</b>	<b>417</b>	<b>248</b>	<b>883</b>	<b>(978)</b>	<b>117</b>	<b>347</b>
Taxes	(123)	(122)	(129)	329	3	(142)
<b>PAT</b>	<b>294</b>	<b>126</b>	<b>754</b>	<b>(649)</b>	<b>120</b>	<b>205</b>
<b>PAT Margin (%)</b>	<b>2.2%</b>	<b>1.1%</b>	<b>4.1%</b>	<b>-3.5%</b>	<b>0.7%</b>	<b>1.3%</b>
Other Comprehensive income	51	117	0	(139)	232	100
<b>Net profit</b>	<b>344</b>	<b>243</b>	<b>754</b>	<b>(788)</b>	<b>352</b>	<b>305</b>
EPS (INR)	1.3	0.6	3.4	(2.9)	0.5	0.6

Source: Company Reports, Arihant Capital Research

### Balance sheet summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Equity capital	219	225	225	225	250	322
Reserves	9,830	10,484	11,162	10,048	11,164	12,984
<b>Net worth</b>	<b>10,050</b>	<b>10,708</b>	<b>11,387</b>	<b>10,273</b>	<b>11,414</b>	<b>13,305</b>
Minority Interest	200	0	0	(1)	(22)	(22)
Provisions	155	164	189	1,754	411	341
Debt	4,744	5,670	6,091	8,053	8,234	7,431
Other non-current liabilities	0	-	2,067	1,781	1,195	1,152
<b>Total Liabilities</b>	<b>15,149</b>	<b>16,542</b>	<b>19,734</b>	<b>21,860</b>	<b>21,231</b>	<b>22,208</b>
Fixed assets	3,661	3,698	3,911	4,044	3,753	3,592
Capital Work In Progress	16	54	138	74	39	25
Other Intangible assets	28	25	15	10	6	5
Goodwill	-	-	-	-	-	-
Investments	537	679	726	978	1,038	1,149
Other non current assets	471	520	483	897	1,170	735
<b>Net working capital</b>	<b>6,504</b>	<b>9,359</b>	<b>13,220</b>	<b>14,560</b>	<b>13,715</b>	<b>14,834</b>
Inventories	2,316	2,907	4,501	5,371	3,093	3,611
Sundry debtors	5,484	6,797	8,155	6,445	6,115	5,699
Loans & Advances	119	68	68	219.6	179.2	227.7
Other current assets	3,217	5,530	7,692	9,530	9,515	9,728
Sundry creditors	(2,977)	(3,288)	(5,565)	(5,542)	(4,302)	(3,116)
Other current liabilities & Prov	(1,655)	(2,656)	(1,631)	(1,464)	(886)	(1,316)
Cash	555	346	532	947	1,156	1,868
Other Financial Assets	3,378	1,862	710	350	355	2
<b>Total Assets</b>	<b>15,149</b>	<b>16,542</b>	<b>19,734</b>	<b>21,860</b>	<b>21,231</b>	<b>22,208</b>

Source: Company Reports, Arihant Capital Research



## Texmaco Consolidated Financial Statements

### Cashflow summary

Y/e 31 Mar (INR Mn)	FY17	FY18	FY19	FY20	FY21	FY22
Profit before tax	417	248	883	(978)	117	347
Depreciation	221	249	291	361	375	360
Tax paid	(123)	(122)	(129)	329	3	(142)
Working capital Δ	(794)	(2,855)	(3,861)	(1,340)	845	(1,119)
Change in Goodwill	-	-	-	-	-	-
<b>Operating cashflow</b>	<b>(279)</b>	<b>(2,479)</b>	<b>(2,816)</b>	<b>(1,628)</b>	<b>1,339</b>	<b>(554)</b>
Capital expenditure	(596)	(325)	(586)	(430)	(49)	(184)
<b>Free cash flow</b>	<b>(874)</b>	<b>(2,804)</b>	<b>(3,403)</b>	<b>(2,058)</b>	<b>1,290</b>	<b>(737)</b>
Equity raised	88	398	(9)	(387)	1,023	1,712
Investments	(40)	(141)	(48)	(252)	(59)	(111)
Others	637	1,469	1,199	(50)	(273)	789
Debt financing/disposal	44	927	421	1,961	181	(803)
Other items	33	9	2,092	1,279	(1,930)	(112)
<b>Net Δ in cash</b>	<b>(177)</b>	<b>(209)</b>	<b>186</b>	<b>415</b>	<b>209</b>	<b>712</b>
<b>Opening Cash Flow</b>	<b>732</b>	<b>555</b>	<b>346</b>	<b>532</b>	<b>947</b>	<b>1,156</b>
<b>Closing Cash Flow</b>	<b>555</b>	<b>346</b>	<b>532</b>	<b>947</b>	<b>1,156</b>	<b>1,868</b>

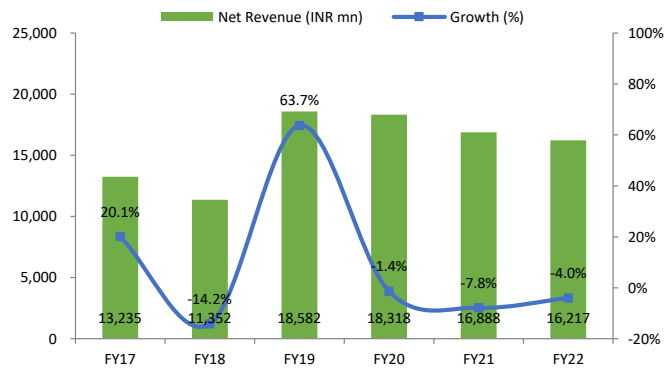
Source: Company Reports, Arihant Capital Research

### Ratio analysis

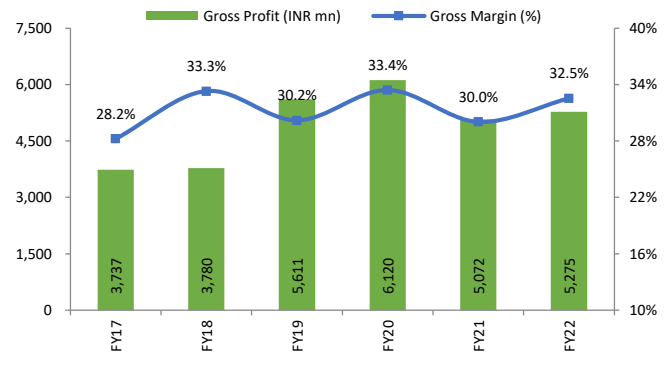
Y/e 31 Mar	FY17	FY18	FY19	FY20	FY21	FY22
<b>Growth matrix (%)</b>						
Revenue growth	20.1%	-14.2%	63.7%	-1.4%	-7.8%	-4.0%
Op profit growth	48.4%	-13.8%	166.1%	-5.9%	-25.7%	18.1%
<b>Profitability ratios (%)</b>						
OPM	5.6%	5.6%	9.1%	8.7%	7.0%	8.6%
Net profit margin	2.2%	1.1%	4.1%	-3.5%	0.7%	1.3%
RoCE	4.7%	2.8%	7.8%	5.1%	5.4%	3.6%
RoNW	3.0%	1.2%	6.8%	-6.0%	1.1%	1.7%
RoA	1.9%	0.8%	3.8%	-3.0%	0.6%	0.9%
<b>Per share ratios (INR)</b>						
EPS	1.6	1.1	3.4	(3.5)	1.4	0.9
Dividend per share	0.2	0.2	0.2	0.3	0.1	0.1
Cash EPS	2.3	1.7	4.6	(1.3)	2.0	1.8
Book value per share	45.8	47.7	50.6	45.7	45.6	41.3
<b>Valuation ratios (x)</b>						
P/E	26.4	38.3	12.3	-	29.5	43.6
P/CEPS	17.6	24.7	8.9	-	20.9	23.6
P/B	0.9	0.9	0.8	0.9	0.9	1.0
EV/EBITDA	17.2	21.8	8.3	9.7	13.8	12.7
<b>Payout (%)</b>						
Dividend payout	21.5%	52.1%	8.8%	-12.1%	19.7%	12.2%
Tax payout	29.5%	49.0%	14.6%	33.6%	-2.3%	40.9%
<b>Liquidity ratios</b>						
Debtor days	142	197	147	145	136	133
Inventory days	112	126	104	148	131	112
Creditor days	98	107	96	121	114	91
WC Days	156	217	155	172	152	153
<b>Leverage ratios (x)</b>						
Interest coverage	0.9	0.6	2.0	1.3	0.8	1.0
Net debt / equity	0.4	0.5	0.5	0.7	0.6	0.4
Net debt / op. profit	5.7	8.3	3.3	4.4	6.0	4.0

Source: Company Reports, Arihant Capital Research

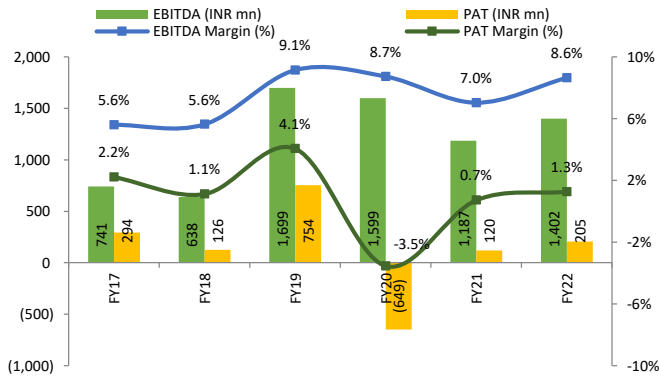
**Exhibit 96: Revenue grew at a CAGR 4.1% over the period of FY17-22.**



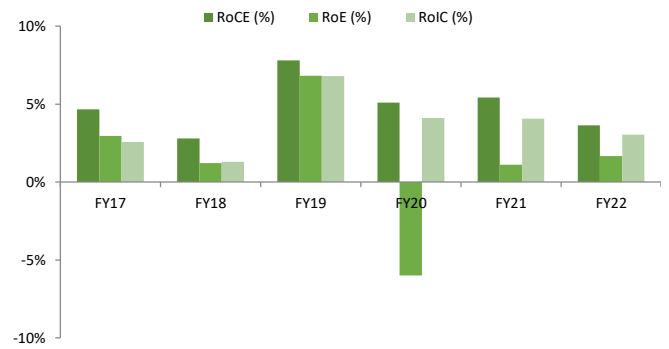
**Exhibit 97: Gross margins were improved over the period of FY17-22.**



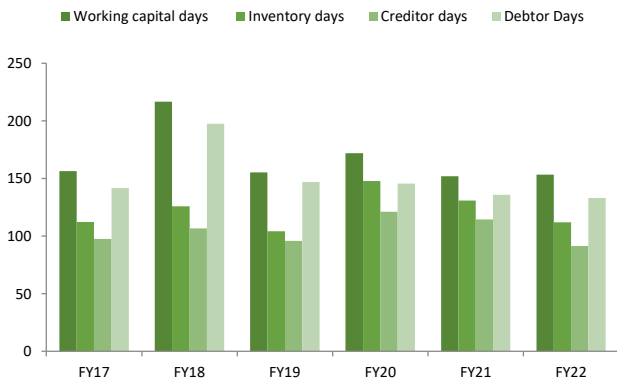
**Exhibit 98: Growth in EBITDA & PAT levels**



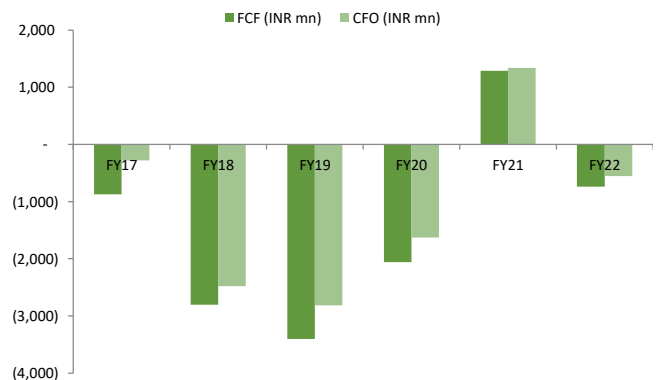
**Exhibit 99: Return ratios to be improve**



**Exhibit 100: Working capital days has reduced over the period of FY17-22.**

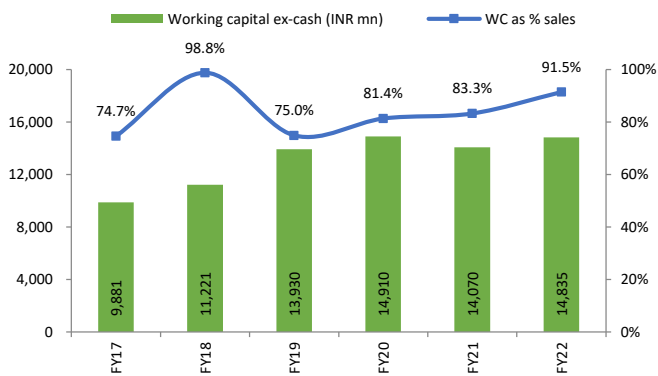


**Exhibit 101: Cash flows has improved compared to past years.**

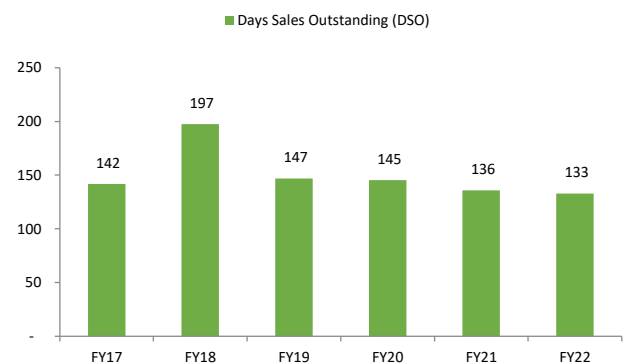


Source: Company Reports, Arianth Capital Research

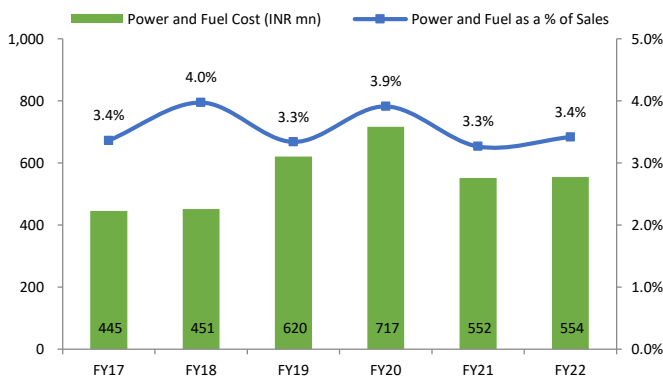
**Exhibit 102: Working capital in-terms of sales are increased over the period of FY17-22.**



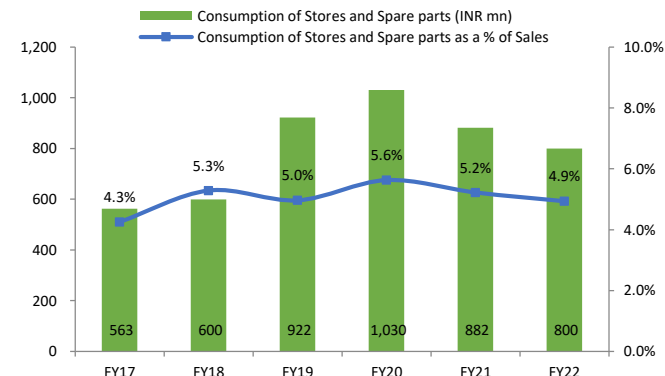
**Exhibit 103: DSO has decreased over the period of FY17-22.**



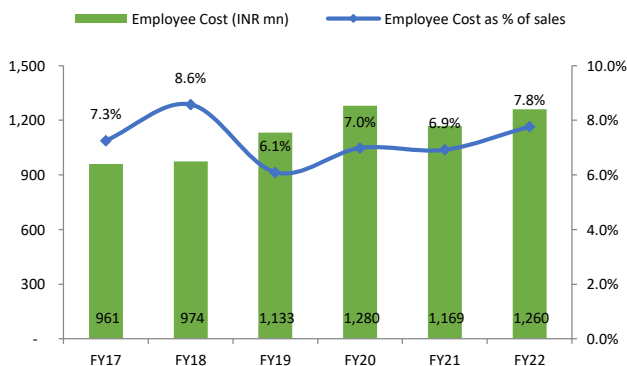
**Exhibit 104: Power and fuel cost has maintained less than 5% of sales over the period of FY17-22.**



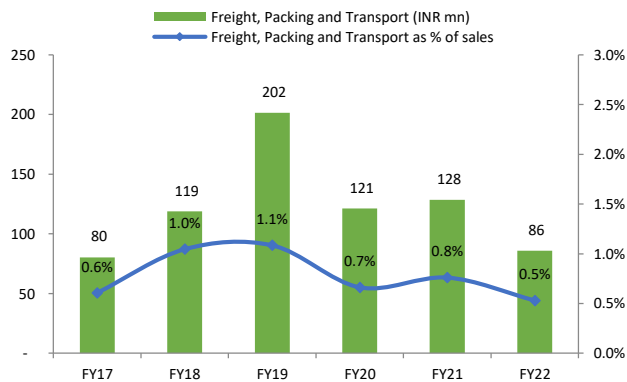
**Exhibit 105: Consumption of stores and spares has back to pre-covid levels.**



**Exhibit 106: Employee cost has increased in-terms of sales over the period of FY17-22.**

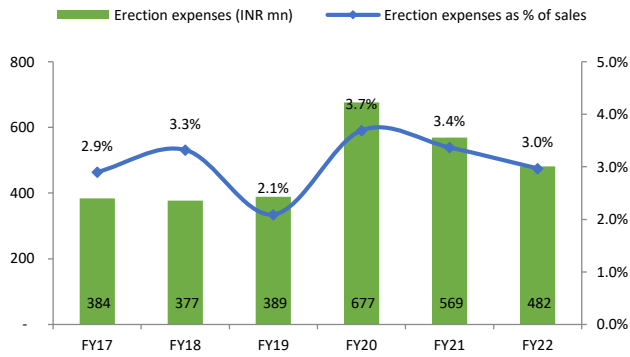


**Exhibit 107: Freight, Packing and Transport cost has decreased in-terms of sales over the period of FY17-22.**

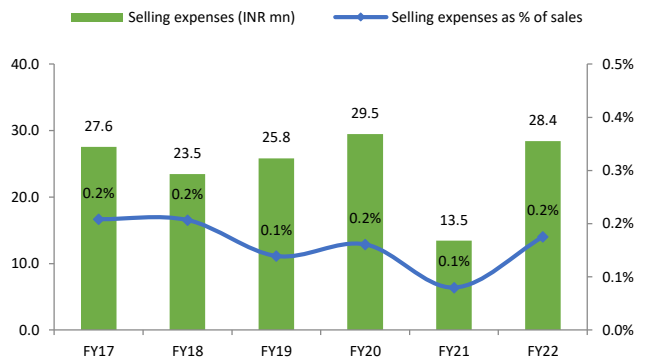


Source: Company Reports, Arianth Capital Research

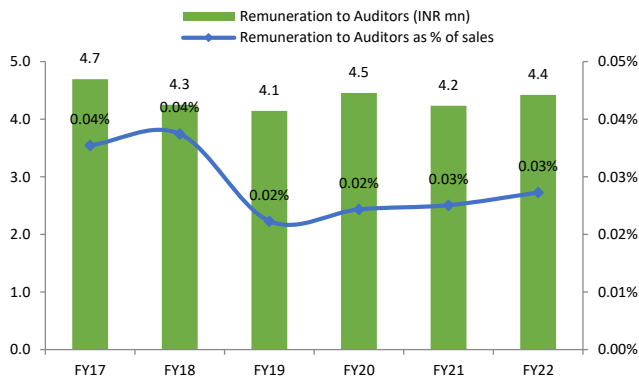
**Exhibit 108: Repairs expenses has maintained less than 5% of sales over the period of FY17-22.**



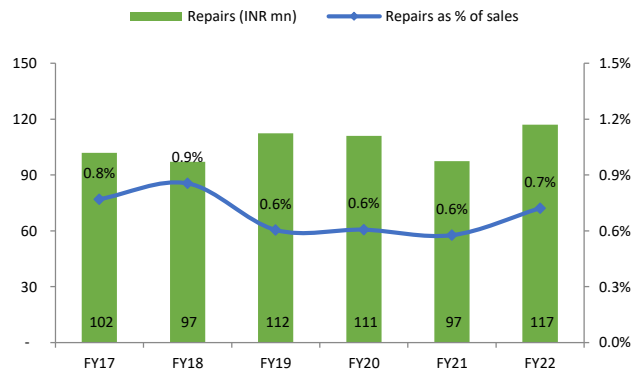
**Exhibit 109: Selling expenses has maintained in-terms of sales over the period of FY17-22.**



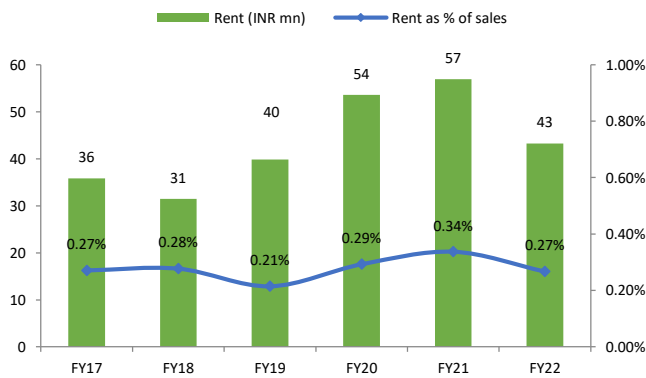
**Exhibit 110: Auditors remuneration has reduced in-terms of sales over the period of FY17-22.**



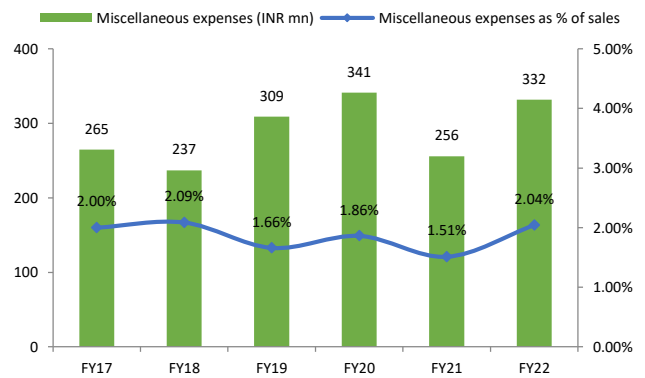
**Exhibit 111: Repairs cost has maintained in-terms of sales over the period of FY17-22.**



**Exhibit 112: Rent and Hire charges has maintained in-terms of sales over the period of FY17-22.**



**Exhibit 113: Miscellaneous expenses has maintained in-terms of sales over the period of FY17-22.**



Source: Company Reports, Arihant Capital Research

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Stock Rating Scale	Absolute Return
BUY	>20%
ACCUMULATE	12% to 20%
HOLD	5% to 12%
NEUTRAL	-5% to 5%
REDUCE	-5% to -12%
SELL	<-12%

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