HBL Power Systems Limited



About the Company and Financial Results Analysis



20th June, 2023







Contents

About the company	2
Why HBL Power Systems?	3
Future Prospects	7
Financials	9
Conclusion	11

Market Cap as on 14 th	
June, 2023 (Rs. in crores)	4156
СМР	150
52 Week High/Low	154/74

Shareholding Pattern (as on 30.03.2023)				
Promoters	59.08%			
FII's	0.91%			
DII's	0.00%			
Public	40.00%			

Research Analyst

Krishna Agarwal Karan Sanwal research@niveshaay.com



About the company

- HBL Power Systems Ltd. (HBL) was incorporated in 1986 by Dr. A.J. Prasad with the aim to be at the forefront of technological innovation.
- The company specializes in developing and manufacturing batteries and electronic systems for telecom, industrial, railways and defence applications.
- It is a research-based manufacturing company which aims to organize engineering talent to fill technology gaps that exist in Indian market. It focuses on niche markets which are too small for large players and too big for small players.
- It is trying to move from low margin business of industrial batteries to high margin business by focusing on specialized batteries, electronics, products related to railways, defence, etc.

Key Business Verticals

It has 3 key business verticals: Battery, Electronics, and Defence. The Battery division includes the development, manufacturing, and supply of industrial battery for various applications in areas of Telecom, Oil & Gas, Data Centre, Transport, etc. Electronics include Railway products and Electric mobility. The Defence segment includes both specialized batteries for defence application and electronic products.

Battery	Electronics	Defence		
Lead Acid Batteries Pure Lead Tin Batteries	Train Collision Avoidance Systems (TCAS) also known as KAVACH	Defence batteries for Submarines, Torpedoes, Missiles, and Aircraft		
Nickel-Cadmium battery (Ni-Cd battery)	Train Monitoring System (TMS) Rail Electronic Interlocking System	Electro Optics Products Electronic Fuses for Artillery Rockets, Bombs, and Gun.		
Lithium-Ion Batteries	Electric Mobility and Electronics for E-Trucks	Armoured Vehicle Communication Systems		

Manufacturing Facilities and Development Center

Locations	Product Line
Vizianagaram Near Visakhapatnam, Andhra Pradesh	2V/12V-AGM VRLA and Tubular Gel
Shamirpet Hyderabad, Telangana	Ni-Cd & Specialty batteries and power electronics
Nandigaon Near Hyderabad, Telangana	PLT, Lithium-Ion and Submarine Batteries
Thumkunta, Hyderabad, Telangana	Electronics
Visakhapatnam (Sez) Andhra Pradesh	Ni-Cd batteries
YAPRAL (Development Centre) Hyderabad	Product development initiatives



THUMKUNTA Hyderabad, Telangana



VISAKHAPATNAM (SEZ) Andhra Pradesh



YAPRAL (Development Centre) Hyderabad, Telangana







VIZIANAGARAM Near Visakhapatnam, Andhra Pradesh

SHAMIRPET Hyderabad, Telangana

NANDIGAON Near Hyderabad, Telangana

Revenue breakup

Following is the detailed percentage break up of standalone revenue across segment and verticals for the FY18-FY22 period.

	2018		2019		2020		2021		2022	
%	Battery	Electronic & other	Batte- ry	Electronic & other						
Railways	5%	2%	9%	0.4%	10%	4%	9%	7%	12%	6%
Telecom/Industry	71%	8%	59%	13%	57%	7%	54%	4%	43%	4%
Defence	3%	0%	5%	0%	1%	3%	1%	6%	0%	15%
Exports	9%	1%	13%	2%	13%	5%	14%	5%	10%	10%
Total	89%	11%	85%	15%	81%	19%	78%	22%	64%	36%

Following table shows the revenue segment for the last two years as a detailed bifurcation is not available for FY23 yet.

Rs. in cr	2022	2023
Batteries	89%	87%
Electronics	9%	11%
Unallocated	2%	2%

The increasing revenue contribution from Electronics, Defence battery and Electronics has helped HBL to improve margins. In the similar way, the focus on high margins business will help drive growth going forward.

Why HBL Power Systems?

1. Changing dynamics of the business

- The telecom batteries which constitute majority of the revenue had lower margins as compared to other verticals. They have recalibrated less attractive business like traditional industrial batteries to make them self-sustaining.
- They are shifting their focus towards high margin business like railways, defence batteries and electronics, etc., to drive profitability.
- The increasing contribution from Defence, Railways, and Exports have helped them to increase with margins from single digit (around 7-8%) to double digits (around 11%).
- It has spent around Rs. 300 cr in last 10 years on Research and Development of products which was expensed and not capitalized. R&D provides them with competitive advantage and it is expecting to



generate revenue through that research.

- Defence and Railway have high lead time- from R&D to commercialization. However, these segments are expected to increase penetration due to recent approvals, order flows, export opportunities, and new avenues.
- Battery vertical comprises a combination of decent and low margin segments. The Nickel Cadmium Pocket Plate (NCPP) batteries and Pure Lead-Tin (PLT) batteries generate decent margins. NCPP batteries are used in Oil & Gas, Utilities, and Metro coaches. While the PLT batteries are used in engine starting application and data centers.

2. Opportunities in Railways

a. Train Collision Avoidance System (TCAS)

TCAS is an indigenous developed SIL-4 certified system which works as an anti-collision device. It will ensure the safety and optimum utilization of tracks. Such systems are a necessity to improve the overall speed of the trains. The Indian Railways announced adoption of TCAS/Kavach as India's national Automatic Train Protection (ATP) System in 2021

Industry opportunity for TCAS

- There are three approved vendors: HBL, Kernex (listed) and Medha Servo (Unlisted). There are chances for entry of 2-3 more players but their approval will take few years.
- Kavach costs Rs. 50 lakhs per km, compared to Rs. 2 crores offered by global players. Indian Railways is estimated to implement Kavach for its 70,000 km long network. It has a potential to create Rs. 35,000 crores worth of opportunities in a 10-year period.
- The opportunity would have market opportunity of around Rs. 3000-3500 cr of industry size per year with an ideal execution of 1.5-2 years execution period.
- The EPC part is subcontracted. The TCAS part varies from Tender to Tender. For tenders on hand, the TCAS part averaged at 70%. Each contract needs two years to complete.
- This segment has around 30% EBITDA Margins and 15% Net Profit Margins.
- Tenders for Kavach were rolled out for 3000 kms in FY23 and it will be rolled out for 5000 kms in FY24
- The Vande Bharat trains will be equipped with TCAS ATP system in the factory itself. This requires direct installation on trains which would translate to higher margins. Such orders have already commenced and are expected to be awarded going forward.

Opportunity for HBL

- They have gone through more than a decade long journey to develop, conduct field trials and commercialize the TCAS technology in India. The efforts of the company have finally borne fruit and TCAS has emerged as sought-after solution by the Indian Railways.
- They have successfully completed an installation last year of order given by South Central Railway spread over 347 km and 30 locomotives.
- With successful installation and order conversion, it is expected to generate an opportunity of around Rs. 700 crores in 6-7 quarters starting from FY24 with around 30% EBITDA margins.
- It has a potential to generate roughly around Rs. 100- Rs. 120 cr EBITDA from TCAS alone for FY24. This could as well flow to PBT as the company has no significant depreciation or interest cost from this segment.
- It has already received orders for installation of TCAS ATP systems in Vande Bharat and the management is expecting a significant jump in orders for next few years. This opportunity will result in increasing profitability margins.
- The operations and maintenance contract of these projects will provide opportunity of around 5% of order size every year based on the projects executed. This would be a phase wise implementation based on execution and will ensure a consistent revenue source and margin contribution from FY25 onwards.



Company involved	Railways Zone	Order Date	Order size (Rs. cr)	HBL Share (Rs. cr)	Track covered (KM)	Locomotive (number)	Delivery begins	Completion schedule	Remarks
HBL with	Eastern								
Siemens	Railway	02-09-22	286.69	205.88	260	120	-	700 days	
	Vande Bharat								
HBL	Trainset	02-09-22	31.66	31.66	NA	46	Nov-22	Jul-23	
HBL with	West Central			Not					Lowest
Shivakriti	Railway	02-09-22	353.84	known	549	87	-	-	Bidder.
									Result
									will be
HBL with	Western			Not					shortly
Shivakriti	Railways	02-09-22	81.67	known	96	-	-	-	released

b. Train Monitoring System (TMS)

- The focus of Indian Railways is to improve the utilization of its track network. The TMS increases the line capacity and improves the run-time of the trains.
- It also offers centralized traffic control and faster emergency response time.
- HBL has developed a comprehensive Traffic Management System (IRTMS) to integrate the functions of sub-systems like TCAS, Electronic Interlock, etc. which will deliver better operational benefits.
- The industry size would be around Rs. 500-700 cr with higher margins. HBL is expected to execute around Rs. 70 cr per year worth of orders starting from FY25.

c. Electronic Interlocking System

- It refers to a safety mechanism that ensures the safe and orderly movement of trains through complex railway junctions, crossings, and stations.
- It is a vital part of the signaling system in a railway network. It is ready for field trial after successful testing by RDSO.
- At an industry level, it is a Rs 500 cr per year opportunity spread across next 3 years.
- For HBL, this can potentially be a Rs 75-100 cr per year opportunity starting from H2 FY24, with average EBITDA margins of 15%.

3. Opportunities in Industrial Battery

- They are used in Telecom, Data Centers, Engine starting application, Oil & Gas plant backup, Metro coaches, and other battery backup systems. These are traditional low growth business.
- The Tubular Gel batteries were developed to meet solar PV and Battery Energy Storage Systems (BESS) requirements. They have secured several orders from L&T, BEL, Government programs to electrify 312 villages, etc.
- Value Regulated Lead Acid (VRLA) is a preferred battery for telecom application. During the last few years, the prices depressed and margins remained low due to excess capacity which led to lower overall margins. 5G towers addition and demand from older towers will increase demand for next few years. According to management, they won't supply much to the BSNL revival package announced recently until they get clarity on the receivable's cycles.
- Pure Lead Tin (PLT) batteries are used for stationary engine starting for tanks and army trucks. EnerSys and HBL are selling PLT batteries in India. It is also used for Data center application. The Indian data centers industry capacity is expected to increase five-fold in next five years
- Globally, they are second largest producer of industrial Nickel Cadmium (NiCd) batteries which are used in Oil and Gas industry, Thermal power station, Railways, etc. It is an OEM supplier for new generation coaches of Siemens-Germany and Siemens-America. The opportunities from Flue Gas



Desulphurization (FGD) to remove sulfur dioxide from exhaust flue gases of fossil-fuel power plants could be beneficial as well.

4. Opportunities in Defence segment

The defence segment consist of batteries and electronics verticals. These are better margin business with moderate to high growth. There were a few unexpected delays in final customer inspection in FY23 which decreased the margins. However, from FY24 this segment along with Railways will probably drive revenue and margins. Specialized batteries are used in Torpedoes, Aircraft, Missiles, and Submarines for defence application which are moderate growth business with better margins.

a. The TONBO Acquisition

- HBL has taken a stake in an Indian company, Tonbo Imaging to focus on defence electronics business by investing Rs. 150 cr in the form of CCPS. The investment will be done in 3 tranches subject to fulfillment of conditions. It will have around 35% stake through this investment.
- Tonbo Imaging indigenously design and manufactures electro-optics and imaging systems for surveillance, reconnaissance and targeting. Electro-optics and imaging subsystems are "the eyes" and "the brain" of surveillance platforms and weapon systems.
- They have built a large portfolio of products to address the need of land, air, and missile systems. Their customers include global military forces, special forces and international Tier I defense manufacturers.
- HBL will use its Electronics manufacturing capacity to support Tonbo. The manufacturing facility has been set up and sales to Tonbo should begin early in FY 24. The potential sales could reach a few hundred crores a year by FY 28.
- HBL will bid based on Tonbo for large contracts where Tonbo is not financially eligible. These will be HBL sales direct to user, with the purchase of necessary parts from Tonbo.

b. Artillery Fuses

- They are complex devices that ignites ammunition. With evolving technology and better reliability, electronic fuses are being preferred over mechanical fuses.
- The companies like BEL and ECIL supplying electronic fuses for artillery have high level of imported component i.e., around 80% which means that mere assembly is being done.
- Through AatmaNirbhar Bharat campaign, government is looking to indigenize the product. HBL has worked for a decade and a half to develop a completely in-house technology for electronic fuses or grenades and other ammunition like artillery guns with 100% indigenization.
- The fuses have already been tested and are eligible for supply by the end of FY24. There are export opportunities in this space as well.

c. Defence Batteries

- It signed a Technology Transfer Agreement with Naval Science and Technological Laboratory (NSTL) to manufacture Lithium-ion batteries for Defense applications. It has obtained order from NSTL for supply of these batteries in next two years.
- It has also been awarded a contract by DRDO/NSTL to develop prototype modules for Li-Ion batteries for Submarine application.
- The batteries used in missile are majorly designed, developed, and manufactured by HBL. They are even exported to USA and Israel.
- Almost all the Sintered Plate NiCD batteries used by Indian Air Force are supplied by HBL.
- Tubular lead acid batteries are used for submarine propulsion. It is competing with Exide in this space. Type-I batteries for kilo class submarine and Type IV batteries for Scorpene class submarine are manufactured and supplied. Production for Type II batteries for HDW (Germany) class submarine are yet to start.



- Government wants indigenization of torpedoes at a faster scale after years of import which will eventually help domestic players like HBL to provide batteries. Silver oxide zinc batteries are used for torpedo propulsion in torpedo like Varunasthra. It is one of the two suppliers to Indian Navy and there is limited export opportunity.
- It has contract with NSTL/DRDO for developing AI AgO Torpedo batteries which is made by only two players globally. It is expected to complete development order for Light weight and Heavy weight Torpedo batteries for Indian Navy.

5. Opportunities in E-Mobility

- HBL has developed Electric Drive Train kits for retrofitting light commercial vehicles and passenger buses. It is looking to convert old diesel trucks to Electric Drive using HBL's Electric Drive Trains.
- One motor and one battery module have received the International Centre for Automotive Technology (ICAT) approval.
- The revenues are expected to begin in FY25. Even though there are large number of old trucks, their solution will only be viable for a small percentage of them. Still, there is a large scope as there are no competitors, because there is no subsidy for electric trucks.

Future Prospects

HBL is involved in manufacturing of many products under Batteries, Electronics, and Railways segment. The business of the company has been bifurcated based on growth and opportunities that lie ahead. The following table helps to identify those focus area for the next few years.

Traditional; Low Growth Industrial Batteries for	Established; Moderate Growth <i>Defence Batteries for</i>	Emerging ; Rapid Growth FY 24 Plus Electronics for Rail & Defence	Future FY 25 Plus Electronic Fuzes and Electric Drive Trucks
Telecom Towers, Rail Coaches, UPS (VRLA)	Torpedoes	Train Collision Avoidance Systems (Kavach)	EV Motors for E-Trucks
Engine Starting, Data Centres (PLT)	Missiles	Train Monitoring Systems (TMS) Armoured Vehicle Communication Systems (DCH)	Electronics for E-Trucks
Oil & Gas, Utilities, Metro Coaches (Nickel)	Aircraft	Electro Optics Products (Made for Tonbo Imaging)	Batteries for E-Trucks
Battery Backup Systems (Lithium)	Submarines	Grenades, Electronic Fuzes, Reserve Batteries	Electronic Fuzes for Artillery Guns, Rockets, Bombs



Based on the opportunities highlighted in the above table, the management has provided the following guidance.

Traditional	Established	Emerging	Future			
Low Growth Industrial Batteries	Moderate Growth Defence Batteries	Rapid Growth FY 24, Plus Electronics for Rail & Defence	FY 25 Plus Electric Drive Trains. Electronic Fuzes.	SALES	EBITDA	EBIDTA %
959	183	65		1308*	170	13
37	18	12	23	Excluding Tonbo Imag	equity Investm ging Ltd of 150	nent in) cr
1060	220	420	50	1750	262	15
1100	250	800	150	2300	414	18
1160	300	1200	240	2900	522	18
	Traditional Low Growth Industrial Batteries 959 37 1060 1100 1160	Traditional Low Growth Industrial BatteriesEstablished Moderate Growth Defence Batteries9591833718106022011002501160300	Traditional Low Growth Industrial BatteriesEstablished Moderate Growth Defence BatteriesEmerging Rapid Growth FY 24, Plus Electronics for Rail & Defence959183653718121060220420110025080011603001200	Traditional Low Growth Industrial BatteriesEstablished Moderate Growth Defence BatteriesEmerging Rapid Growth FY 24, Plus Electronics for Rail & DefenceFuture FY 25 Plus Electroic Drive Trains. Electronic Fuzes.95918365-37181223106022042050110025080015011603001200240	Traditional Low Growth Industrial BatteriesEstablished Moderate Growth Defence BatteriesEmerging Rapid Growth FY 24, Plus Electronics for Rail & DefenceFuture FY 25 Plus Electronic Fuzes.TOTAL SALES95918365-1308*37181223Excluding of Tonbo Image106022042050175011002508001502300116030012002402900	Traditional Low Growth Industrial BatteriesEstablished Moderate Growth Defence BatteriesEmerging Rapid Growth FY 24, Plus Electronics for Rail & DefenceFuture FY 25 Plus Electric Drive Trains. Electronic Fuzes.TOTAL SALESEBITDA SALES95918365-1308*17037181223Excluding uity Investm Tombo Image Itd of 150106022042050175026211002508001502300414116030012002402900522

* Including sales of 101 cr of products not shown in any of the three segments

Analysis of FY23 guidance

- During the last AGM i.e., FY22, the chairman guided that they will be generating similar revenue for FY23 as they did in FY22 with marginal improvement in profitability.
- Similarly, the presentation mentioned similar guidance in tune of Rs. 1308 cr revenue and 13% EBITDA.
- With respect to guidance provided, it achieved Rs. 1369 in sales with 11% margins. The margins improvement that was expected were not achieved. Following clarification has been provided for the same:
 - The share of industrial batteries which has lower EBITDA, increased in the overall sales mix. Due to unexpected delays in final customer inspection, the contribution of defence batteries decreased. This led to shrinkage in EBITDA margins for FY23.



Financials

Consolidated Statement of Profit and Loss

Rs. in crores	2019	2020	2021	2022	2023
Sales	1,265.88	1091.78	912.04	1236.21	1368.68
		-14%	-16%	36%	11%
Expenses					
COGS	815.69	687.16	562.67	753.12	832.71
Gross Profit	450.19	404.62	349.37	483.09	535.97
Gross Profit Margin	35.56%	37.06%	38.31%	39.08%	39.16%
Employee	87.45	90.70	82.17	99.91	110.38
Other Expenses	265.55	233.38	199.82	244.20	274.15
Total Expenses	1,168.69	1,011.25	844.67	1,097.23	1,217.24
EBITDA	97.19	80.54	67.37	138.98	151.44
EBITDA Margins	7.68%	7.38%	7.39%	11.24%	11.06%
Other Income	13.31	16.58	9.63	14.37	17.68
Depreciation	44.48	40.75	38.81	35.08	35.46
EBIT	66.01	56.37	38.19	118.27	133.66
EBIT Margins	5.21%	5.16%	4.19%	9.57%	9.77%
Finance Cost	30.64	22.20	14.71	7.48	6.55
Exceptional Gain/(Loss)	6.64	4.89	-5.40	10.73	1.33
Share in P/L of associate/JV	0.79	1.03	1.34	0.88	1.35
Profit/(Loss) Before Tax	42.80	40.09	19.42	122.40	129.80
Tax expenses	15.07	13.88	5.70	28.69	31.35
Tax %	35%	35%	29%	23%	24%
PAT	27.73	26.22	13.73	93.71	98.45
		-5%	-48%	583%	5%
PAT Margin	2.19%	2.40%	1.51%	7.58%	7.19%
EPS (Basic)	1.00	0.95	0.50	3.39	3.56

Consolidated Statement of Cash Flow

Cash Flow Statement	2019	2020	2021	2022	2023
Cash Flow from Operating activities	167.07	148.78	121.12	62.47	122.44
Cash Flow from Investing activities	0.92	-5.73	-32.02	-16.77	-49.71
Cash Flow from Financing activities	-163.41	-114.04	-103.55	-22.32	9.56
Net cash	4.58	29.01	-14.45	23.38	82.28



Consolidated Balance Sheet

B/S (Rs. In cr)	2019	2020	2021	2022	2023
Non-current asset					
Fixed Asset	357.92	330.66	321.87	353.54	379.20
Other non-current asset	35.41	29.44	54.26	30.80	42.81
Total Non-current Assets	393.32	360.10	376.12	384.34	422.02
Current Asset					
Inventories	324.85	304.32	289.86	307.03	336.25
Cash and Bank	33.02	74.93	68.24	104.72	145.96
Trade receivables	363.09	305.16	253.72	292.66	312.01
Other current asset	46.43	58.02	48.32	43.86	77.94
Total Current Asset	767.39	742.43	660.14	748.28	872.17
Total Assets	1160.71	1102.52	1036.26	1132.61	1294.18
Equity					
Equity Share Capital	27.72	27.72	27.72	27.72	27.72
Other Equity	738.51	745.15	754.33	838.04	923.73
Total shareholders equity	766.23	772.87	782.05	865.76	951.45
Liabilities					
Non-current Liabilities					
Borrowings	7.39	0.75	10.53	27.66	39.30
Lease liabilities	0.00	8.12	9.57	10.53	5.29
Other non-current liabilities	14.37	14.08	14.26	12.31	12.33
Total non-current liabilities	21.77	22.95	34.36	50.50	56.92
Current liabilities					
Borrowings	208.51	139.59	47.78	22.50	38.35
Trade payables	76.19	78.09	67.34	87.59	98.27
Other current liabilities	88.02	89.03	104.74	106.26	149.19
Total Current liabilities	372.72	306.70	219.86	216.35	285.81
Total Liabilities	394.48	329.65	254.22	266.85	342.73
Total Equity and Liabilities	1160.71	1102.52	1036.27	1132.61	1294.18



Return Matrix	2019	2020	2021	2022	2023
ROE	3.62%	3.39%	1.76%	10.82%	10.35%
Dupont					
Net Profit Margins	2.19%	2.40%	1.51%	7.58%	7.19%
Gross Profit Margins	35.56%	37.06%	38.31%	39.08%	39.16%
EBITDA Margins	7.68%	7.38%	7.39%	11.24%	11.06%
EBIT Margins	5.21%	5.16%	4.19%	9.57%	9.77%
Asset Turnover	1.09	0.99	0.88	1.09	1.06
Fixed Asset Turnover	3.54	3.30	2.83	3.50	3.61
Working Capital Turnover	3.21	2.51	2.07	2.32	2.33
Equity Multiplier	1.51	1.43	1.33	1.31	1.36
Debt to Equity	0.28	0.18	0.07	0.06	0.08
Interest Coverage Ratio	2.15	2.54	2.60	15.82	20.42
ROCE	6.72%	6.17%	4.54%	12.91%	12.99%
ROIC	5.68%	4.81%	3.54%	10.23%	10.50%

Consolidated Return Matrix

Conclusion

The company is expecting stable growth in battery business and revenues from TCAS to provide considerable visibility for next year i.e., FY24. This gives the business ample time for other large opportunity size and high margin opportunities to develop like Defence batteries, TMS, Artillery Fuses, etc. – for further growth in FY25 and beyond. Under the existing set up batteries constitute for 65% of turnover, Defence 25% and Electronics 10%. In 3 years, Batteries would constitute to 40%, and balance defence, electronics, mobility.

The company expect revenue of defence battery to increase to Rs. 300 cr in FY26 vs Rs180 cr in FY23, while revenue of electronics for defence and railway to increase to Rs. 1200 cr vs Rs. 65 cr in FY23.

The introduction of policy surrounding the Make in India and AatmaNirbhar Bharat have led to significant changes in every industry especially Defence and Railways. The domestic content requirement and focus on import substitution have led to inflow of orders to domestic companies like HBL. It has been making considerable efforts to develop in-house technology for its products and fill the technological gaps that exist in the Indian market.



Disclaimer:

Niveshaay is a SEBI Registered (SEBI Registration No. INA000017541) Investment Advisory Firm. Our research expresses our opinions which are based on available public information, field research, inferences and deductions through our due diligence and analytical process. To the best of our ability and belief, all information contained here is accurate and reliable and has been obtained from public sources, which we believe to be accurate and reliable. We make no representation, express or implied, as to the accuracy, timeliness, or completeness of any such information or with regard to the results obtained from its use. This report does not represent investment advice or a recommendation or a solicitation to buy any securities.