

VISHNU C KARIYATTU

STRATEGY & TACTICS OF PRICING FINAL PAPER

Harley Davidson was and is a pioneer in the motorcycle industry and has continued to maintain the leadership position. Discovery TV's miniseries "*Harley and the Davidsons*" aired in 2016 is what inspired me to write about Harley Davidson. The series was able to capture the essence of Harley Davidson's story. This is particularly because Harley Davidson (HD/ HOG/ HDMC) created history and was at the forefront of motorcycle innovation. The coming few decades will create such a remembrance about HOG if Harley can create a similar revolution in Electric Motorcycle segment.

COMPANY BACKGROUND:

William S. Harley (Engineer) and Arthur Davidson (Marketing/Business Development) of Milwaukee, Wisconsin, founded the "Harley- Davidson Motor Company" in 1903. Its first motorcycle was sold in 1903. Today HDMC is a world leading world's leading motorcycle Company with a 118-year legacy as a premium brand – leading the industry through innovation. (Ref: Figure 1: *Harley Davidson (5th in The Global RepTrak Ranking)*). It is headquartered in Milwaukee and is famous for producing and selling heavyweight motorcycles (601cc+).

Main avenues of HDMC's revenue is from selling street-legal Harley-Davidson motorcycles, motorcycle parts & accessories (P&A) at wholesale to independent dealers, general merchandise, financing the wholesale and retail sales, through licensing fees, and the operation of the Harley-Davidson Museum in Milwaukee.

Harley Davidson acquired LiveWire to expand its R&D, operations, and future transition to electric segment. The details of the acquisition provided in the 10-k filing report of HDMC for the year 2022 are given in *Figure 2: Details of Acquisition of LiveWire*.

We will be focusing on the different aspects of pricing used by HD LiveWire for pricing their electric motorcycles.

INTRODUCTION

With a growing market demand and awareness towards the benefits of EVs, primarily founded by companies such as Tesla, Harley Davidson had to enter the segment. Most of its sales have plateaued because of the above-mentioned demand for EVs.

As H-D's CEO Jochen Zeitz explained:

“As part of The Hardwire Strategy, we made a commitment that Harley-Davidson would lead in electric. We recognized the pioneering spirit and brand value in LiveWire for our community and took the decision to evolve the original LiveWire motorcycle into a dedicated EV brand. Today's LiveWire ONE builds on the DNA of Harley-Davidson but with the electric focus and ambition of the new LiveWire brand. Harley-Davidson and LiveWire will continue to rewrite the motorcycle rulebook and we are excited about this next chapter in our legacy.”

LiveWire's Motorcycles are able to bring forward a deep technological underpinning, has long term growth potential, has attractive competitive benefits, and has the legacy of Harley Davidson name behind it (*Ref Figure3: LiveWire in Comparison to Auto OEMS and EMERGING EV OEMS*) and as such command **Value-Based pricing**.

CUSTOMER:

A typical customer of LiveWire is a **younger urban rider** aged **18-35**, which is exactly opposite to Harley-Davidson's target market. This expands the addressable market for HDMC and captures more area under the demand curve. This also ensure that LiveWire doesn't cannibalize legacy Harley-Davidson motorcycle

sales. The younger LiveWire customer is more focused on the practical use of the motorcycle and tends to prefer a motorcycle which is lighter, smaller, sleek & stylish, within budget and environmentally friendly. LiveWire is able to provide impressive list of values for this urban rider. The motorcycles come with a 4.3” TFT touchscreen with Bluetooth and voice recognition, a USB-C port, proximity security, and all-LED lighting in addition to the Brembo brakes (with cornering enhanced ABS tech) and the Showa suspension. LiveWire one has traction control for enhanced cornering and rear wheel slip control. The 2022 LiveWire One offers four pre-loaded riding modes: Sport, Range, Road and Rain and has three customizable mods including the ability to modify One’s motor response, regenerative braking, and power delivery.

Everything from navigation, charging status, music streaming, suspension control and GPS tracking can be controlled through the dedicated app. The fuel economy is great, and one can converse the streets for 220 miles for a price of \$ 4.43 whereas a single gallon of premium gasoline currently costs \$4.77.

There are more benefits on the technology side, which are depicted in the *Figure 4: Value to the customer on the technology side*.

This takes us to the point where we must analyze if a customer is willing to pay for the above value adds. Harley even though could have commanded a premium price for its motorbikes, which is good news for profit margins, but has not been able to do so in its EV segment. The failure of strong pricing power is depicted in case of LiveWire Motorcycle sale as is evident from the *Figure 5: Q1, 2023 sales of LiveWire Motorcycles*. This means Harley is subject to customers whose tastes are evolving, whose willingness to pay is low even considering legacy brand status and are open to consider alternate beneficial options.

LiveWire is in its nascent stage; HD cannot count on the consumer to pay for LiveWire being a "lifestyle product" unlike the traditional HD.

Most of the traditional customers do not prefer LiveWire motorcycles without the rumbling noise of Harley and the new segment of urban customer is price sensitive. It can be attributed to the fact that there are players such as Zero, Energica and Damon who provide best bang for their buck. This is evident from the *Figure 6: Attribute table*.

Another fact that depicts the fact that customer is price sensitive and has lower willingness to pay is the reduction of price for the LiveWire One price from \$ 30000 to \$ \$22,799 and the launch of lower priced model of S2 Del Mar priced at \$ 15,499.

This creates the view of a higher price elasticity and as such reduces the traditional pricing power that Harley processed in lieu of its legacy brand reputation. Harley's pricing strategy has to change to incorporate the fact that they have to make a name for themselves in this emerging market just like how they had done for Internal Combustion Engine (ICE) motorcycles. LiveWire has the capability to establish itself in the light motorcycle category and the medium and heavy category motorcycle segment. (*Ref Figure 7: Strategic Positioning*).

It will take less time for Harley to establish themselves in the segment compared to the timeline took to develop ICE motorcycles. This is evident in the way LiveWire was able to better its technology (*Figure 8: LiveWire Timeline*), coming up with better and latest technologies and HDMC's continues investment in R&D will help it achieve this.

During this phase Harley Should price its Motorcycles such that the younger, urban customer is able to afford it. Brands such as **Zero** have proven through its **20000 units sale** and **165,000,000 miles** of on-road and off-road experience that there is a demand for EV vehicles.

The attributes Customers value the most when choosing an EV motorcycle are range, charging time, performance, cost, and Technology. Harley should also understand that the typical customer is not willing to pay a premium at this point since there are no attributes that are that differentiating from the competition.

Overall, Harley has implemented a **third-degree price discrimination model** since it provides different pricing options for its traditional customers (Market segmented into 7 categories) (Ref: Extract 1: Market Segmentation of traditional Customers) and the younger customers who prefer EVs. This way Harley has been able to capture maximum area under the demand curve.

Branding the electric segment differently and targeting a different customer segment will make sure that there are no drastic changes because making drastic changes to the Harley-Davidson brand to suit younger consumers may not work out as anticipated, and also could risks alienating their existing customer base who value the iconic brand's century-old legacy.

COMPETITION:

The EV sector is emerging at a rapid pace and LiveWire has both EV peers and Traditional OEMs for competition (Ref: Figure 9: Competition). Earlier there was a difference between the price points of LiveWire and its peers in the sense that HD LiveWire was priced at \$ 30000 but was not able to differentiate itself. Now, since the price ranges are approximately the same, **LiveWire One priced at \$22799** and **S2 Del Mar priced at \$15,499**, except for *Damon HyperSport* priced at \$ 40000, Harley should expect to sell more motorcycles. (Ref Figure 6: Attribute comparison table for Price Details)

LiveWire is although positioned for commitment to Electric and also has the global capabilities to start up and scale. The unique positioning of LiveWire is shown in *Figure 10: Unique positioning of LiveWire compared to its competitors*. The Global capabilities can be attributed to Harley's established supply chain network of independent dealers, and presently whatever advantage LiveWire has is slightly on the differentiation side and more on the cost side, which is not sustainable for LiveWire in the long run. LiveWire has to capitalize on its technology capabilities and R&D effort to create unique product differentiation.

I have conducted a conjoint analysis (*Ref Figure 11: Conjoint Analysis*) and compared **Harley Davidson LiveWire One** to its competitors **ZERO SR/S**, **Energica Ego+** and **Damon HyperSport**. The results of the conjoint analysis reveal that the weighted score of **Harley Davidson - LiveWire One** is the lowest at **21.79** and the estimated price in comparison to all the three competitors have been given below.

Estimated Price of Harley Davidson - LiveWire One VS	ZERO SR/S	Energica Ego+	Damon HyperSport
Reservation Price Premium	0.889	0.803	0.820
Estimated Price	\$21,336	\$19,172	\$32,819

Presently, once Harley reduced the price of LiveWire One to \$22799, it closely reflects the result of the analysis that Harley should be priced at \$ 21336. This is approximately accurate since the closest competitor of Harley in the urban travel category has been **Zero SR/S** and **Energica Ego+**. I suggest the company should implement hedonic pricing model strategy to accurately understand where they stand in terms of the value delivered.

There are several key factors also that affect the pricing in the present Electric Motorcycle market such as **Cost of the Battery**, **availability of electronic components and cost of e-motors** (pertaining non availability to semiconductor chips – Harley had to stop product in 2022 because of this shortage), **difference in indirect cost because of volume**, **Government incentives** (*Equally available for all parties*), **charging infrastructure** and **brand positioning** (*Ref Figure 12: Cost of EV in comparison to*

ICE models & Figure 13: Cost reduction of EV in comparison to ICE models). LiveWire, since it's a part of the bigger brand Harley Davidson, has strategic advantages in terms of **indirect cost because of volume**, **reduced cost of batteries** (*Harley already has a partnership with Samsung*), and **brand positioning** (*Harley being a Legacy brand*). The additional advantages resulted in LiveWire being able to produce the cheapest, yet great quality S2 Del Mar priced at \$15499, thus taking a serious dig into the market share of its competitors.

COSTS

A detailed contribution Analysis was conducted, and the basis of the calculation has been the 10-K report of HDMC (*Figure 14: Form 10-K Financial*) and direct & indirect cost calculations from the McKinsey and company report: Making Electric Vehicles More Profitable published in 2019 (*Figure 12: Cost of EV in comparison to ICE models*).

Contribution Analysis

Price (LiveWire One)	\$22,799	
Profit % Overall	16.28%	
Cost	\$19,086	
Cost of Battery (Retail Price)	\$2,046	(30% of Cost)
Total Cost of the Motorcycle	6820	

Cost Split Up	Lower Limit	Upper Limit	Average	For Calculation	Manufacturers	Total Cost	TVC % Split up	TVC
Battery pack: 30-40%	30%	40%	35%	35%	Samsung	\$ 2,387	32%	\$ 2,148
Motor and controller: 15-	15%	25%	20%	20%	Harley-Davidson	\$ 1,364	19%	\$ 1,296
Chassis and body: 15-25%					Showa - Electric Components, Brembo - Brakes Tires - Michelin Frame - Harley-Davidson			
	15%	25%	20%	20%		\$ 1,364	18%	\$ 1,228
Other components (electronics, wiring,	10%	20%	15%	15%	RESS	\$ 1,023	14%	\$ 921
Direct Labor: Assembly, testing, and quality	5%	10%	8%	5%	Harley-Davidson	\$ 341	2%	\$ 110
Direct Labor: Accessories	5%	10%	8%	5%	Harley-Davidson	\$ 341	2%	\$ 110
				100%	TOTAL	\$ 6,820	85%	\$5,813
Contribution Margin (P-AVC)	\$16,985.95							

From the above contribution analysis, it is clear that LiveWire operates under specific cost advantages compared to its competitors. Most of the advantages as mentioned before are because of strategic partnerships and scale economies. This provides LiveWire with a high degree of operating leverage and this leverage will continue to grow as the sales of new LiveWire models increase.

We had earlier analyzed that the preferred attributes in this segment are range, charging time, performance, cost, and Technology. As per contribution analysis, LiveWire can afford to spend more on development of a better motor and a better battery pack by incurring an **additional variable cost of \$ 5000**, which still leaves enough on the table for LiveWire. These costs can be absorbed in future by producing more units. These costs will vary between the high-end model LiveWire One and lower end model S2 Del Mar, mainly because of the same type of components having **higher specification** used in LiveWire One and because the LiveWire One **weighs** higher than the S2 Del Mar model by **131 pounds**.

MISSION/STRATEGY:

Premium pricing is Harley-Davidson's go-to option and it involves setting higher prices for their motorcycles and other products than their competitors. Harley assumes that the customer will pay more for the high-quality product that is associated with a strong brand image.

HD's premium pricing strategy is supported by several factors, including their reputation for producing high-quality, American-made motorcycles, their strong brand image and heritage, and their emphasis on customization and personalization options for their customers.

In recent years, Harley, failing to attract younger customers have begun to explore several pricing options such as offering lower-priced models and electric motorcycles. This attracts younger, loyal customers now that Harley's existing customer base is in its 50s. As per the five-year plan set by Harley called

“**Hardwire**”, Harley will continue to focus on its existing customer base, where they can continue implementing **value-based pricing** for **improved profitability** and slowly transition into electric motorcycles in the coming decade. Its strategy to lead in the electric segment is given in its official website. (*Ref Figure 15: Lead in Electric*).

Harley has also started using **anchoring technique** by first showcasing the price of LiveWire at \$ **30000** and then reducing the price to \$ **22799**, which creates the perception in the minds of the customer that they are getting a better deal by buying a LiveWire One or S2 Del Mar from Harley. Apart from the anchoring technique, Harley has also resorted to sale tactics like charm pricing where customers tend to perceive prices ending in 9 as being significantly lower than the nearest round number. This perception is based on the psychological principle of "**left-digit effect**," where customers tend to focus on the left-most digit of a price when evaluating its value.

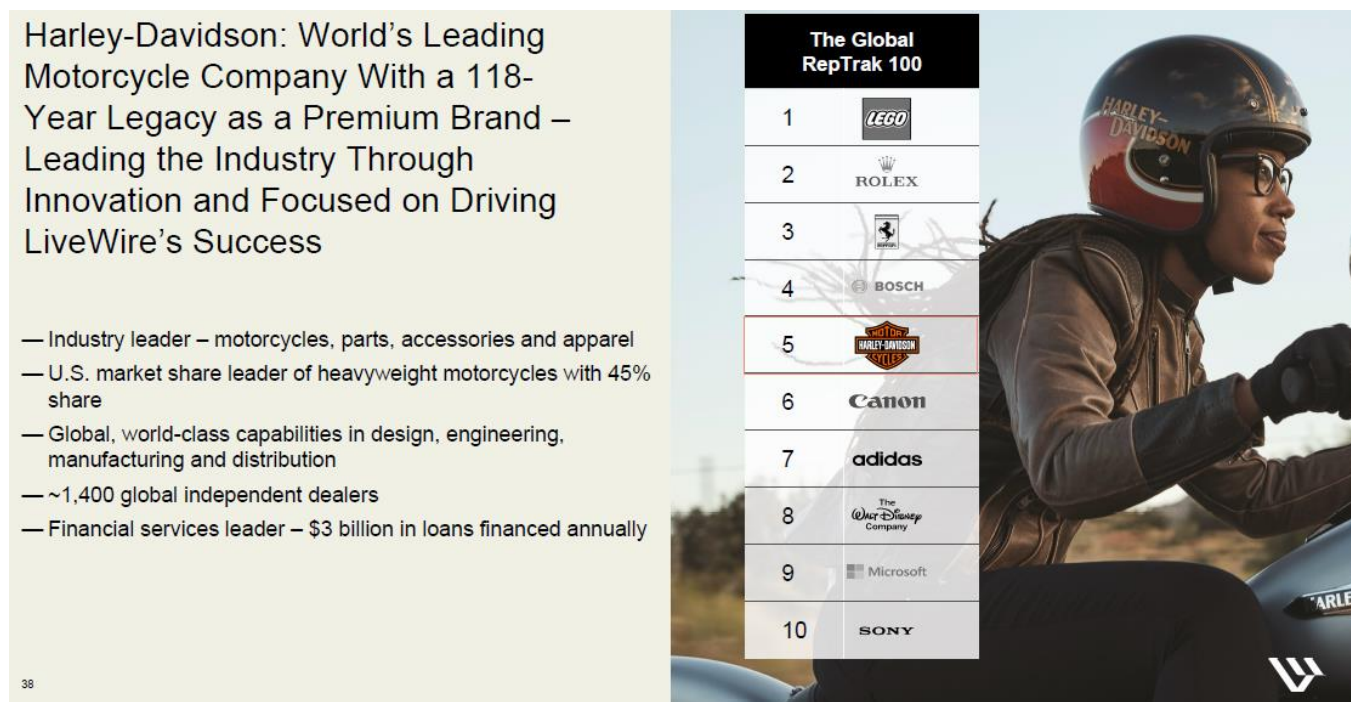
CONCLUSION:

The current pricing strategy implemented in the electric segment is to grow the customer base and even though doesn't align with HDMC's current overall corporate or marketing strategy, at a later stage, it will help HD have a continued customer base and its club engagements will sustain to help Harley maintain its image as a lifestyle brand. If it requires Harley to align its interest towards upcoming younger customers who are more inclined towards premium pure play electric (*Ref Figure 16: Customer Insights*), Harley should embrace the change to address the \$28 Billion-year 2030 EV market growing at a CAGR of 26% (*Ref Figure 17: Large Core Addressable Market*). Otherwise, Harley could face the consequences faced by brands like **Indian Motorcycles**, which eventually went out of business, before eventually getting revived in 2011 by Polaris Inc. **The projected sales of LiveWire of approximately \$3000 million by selling approximately 190,000 units by 2030** (*Ref Figure 18: Projected LiveWire units & Revenue*) are promising for Harley's future endeavors and will ensure a smooth transition of Harley in the EV segment.

Harley should carefully monitor its pricing strategy, continue to create product differentiation, and continue to invest in innovation to stay in front of its competition.

APPENDIX

Figure 1: Harley Davidson (5th in The Global RepTrak Ranking)



Source: LiveWire Investor Presentation Dec 2021

Figure 2: Details of Acquisition of LiveWire

LiveWire Transaction – On September 26, 2022, the Company's electric motorcycle subsidiary completed a merger with AEA-Bridges Impact Corp. (ABIC), a special purpose acquisition company, to create a new publicly traded company, LiveWire Group, Inc. (the "LiveWire Transaction"). As described below, the transaction was financed with ABIC's cash held in trust less redemptions, a cash investment from the Company and an investment from Kwang Yang Motor Co., Ltd. (KYMCO), an independent strategic investor. At the closing of the LiveWire Transaction, LiveWire Group, Inc. received net proceeds of approximately \$294 million, including a \$180 million investment from the Company, net of transaction expenses, a \$100 million investment from KYMCO and a \$14 million investment from ABIC, net of redemptions and transaction expenses. Following the closing, the Company had an equity \ interest in LiveWire Group, Inc. of approximately 89.4%. ABIC's shareholders and founders had an equity interest of approximately 5.7% and KYMCO had an equity interest of approximately 4.9%. As the controlling shareholder, the Company continues to consolidate LiveWire Group, Inc. results, with additional adjustments to recognize non-controlling shareholder interests.

Source: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended: December 31, 2022 (Form 10-K)

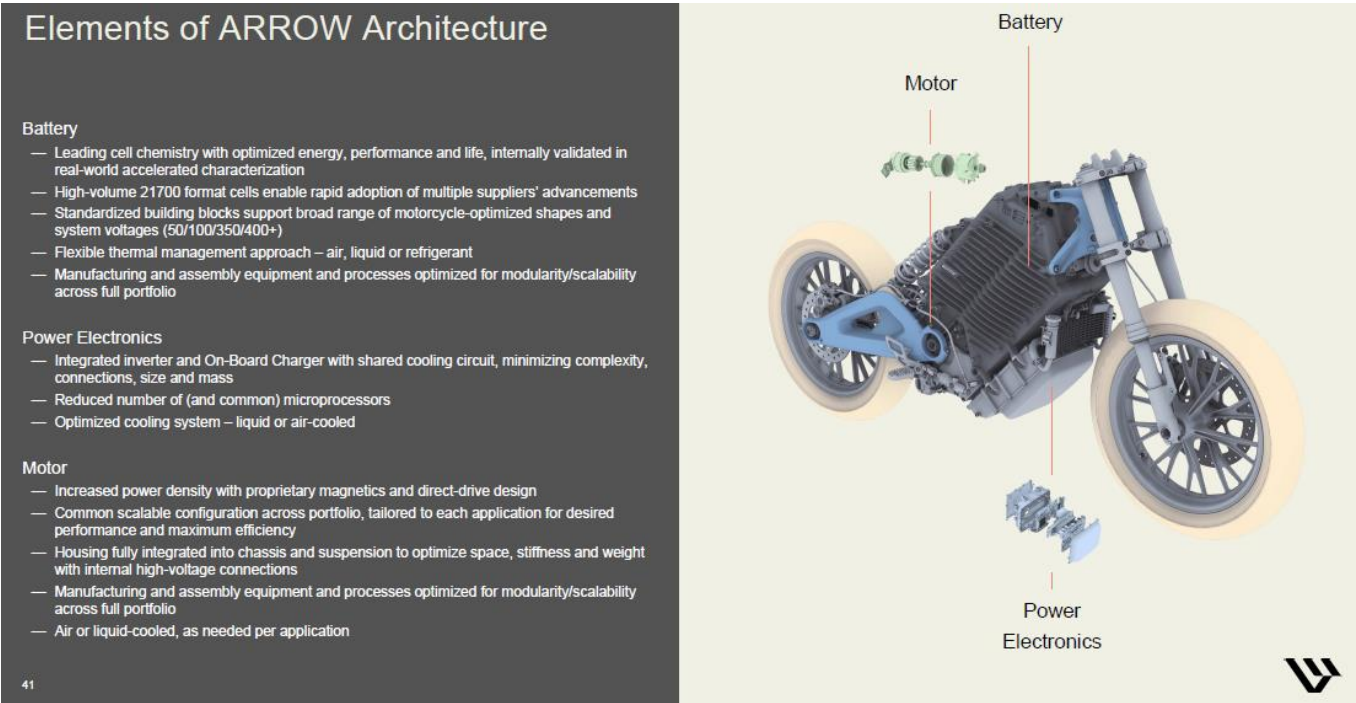
Figure 3: LiveWire in Comparison to Auto OEMS and EMERGING EV OEMS

LiveWire Presents an Attractive Risk-Adjusted Investment Opportunity in EV

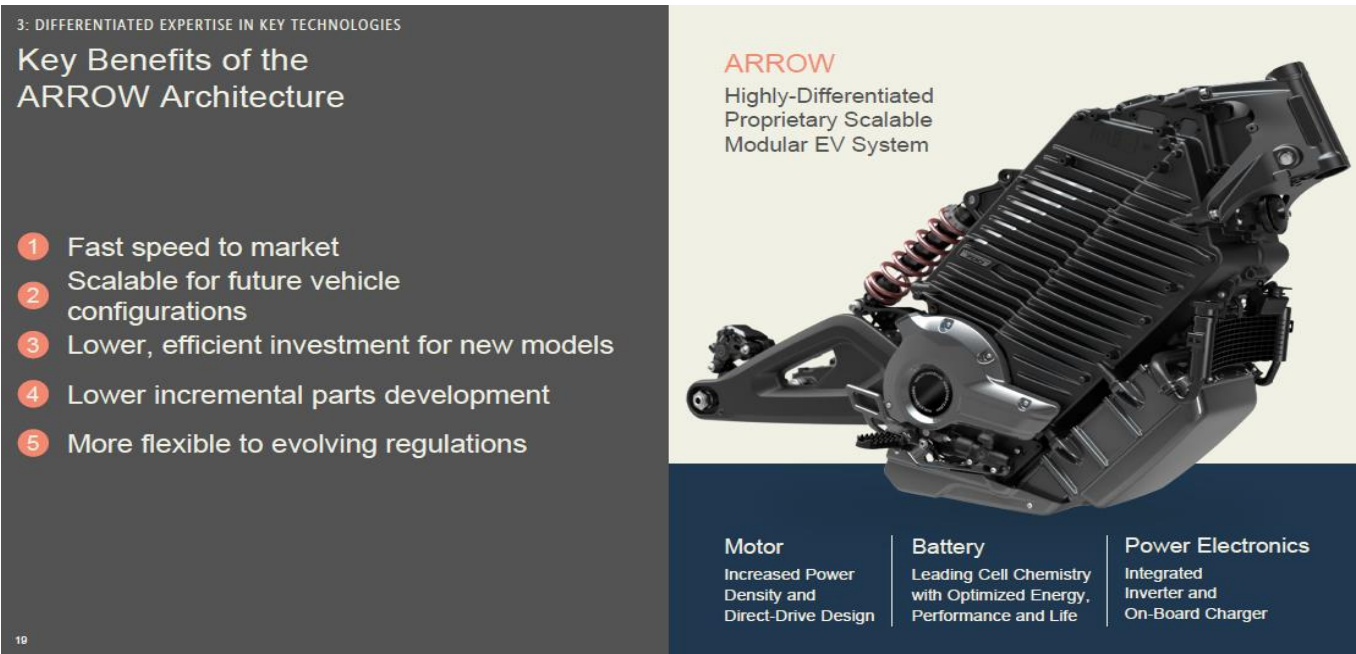
		AUTO OEMS	EMERGING EV OEMS
Deep Technological Underpinning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Commercially Viable Product Available Today	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Large Addressable Market	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Long-Term Growth Potential	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Attractive Industry Competitive Dynamics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Established Global Market Position	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Heritage of Manufacturing at Scale	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ability to Leverage Established Distribution & Dealership Network and Finance Company	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Funded Business Plan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Source: LiveWire Investor Presentation Dec 2021

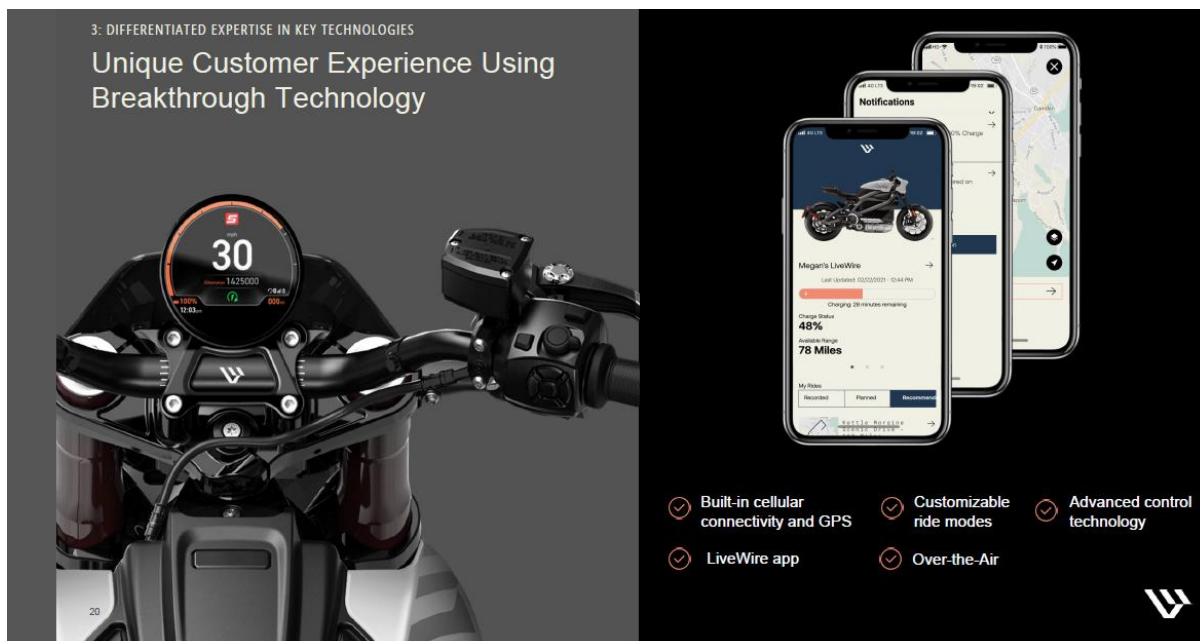
Figure 4: Value to the customer on the technology side.



Source: LiveWire Investor Presentation Dec 2021



Source: LiveWire Investor Presentation Dec 2021



Source: LiveWire Investor Presentation Dec 2021

Figure 5: Q1, 2023 sales of LiveWire Motorcycles

LIVEWIRE SEGMENT: Q1 2023 RESULTS AND EXPECTATIONS¹

\$ millions Actual Units	Q1 2022	Q1 2023	% vs PY
Motorcycle Units²	97	63	-35%
LiveWire ONE (units)	72	63	-13%
Harley-Davidson LiveWire (units)	25	0	NM
Revenue	\$10	\$8	-25%
Operating Loss	(\$16)	(\$25)	

¹ Represents results of the LiveWire reportable segment as determined in accordance with ASC

280 Segment Reporting which may differ from LiveWire Group, Inc. results

² Q1 2022 Motorcycle Units includes 25 H-D branded LiveWire motorcycles

- Continued development of the S2 platform with Del Mar first deliveries targeted for Q3 2023
- On track to expand distribution in 2023 in Europe with 34 contracted partners
- Operating loss resulting from planned development investments to advance EV systems and launch Del Mar
- Sufficient cash and liquidity available to support 2023 business plan

HD Quarterly report: Q1, 2023 sales of LiveWire Motorcycles

2023 HARLEY-DAVIDSON, INC. REAFFIRMING 2023 GUIDANCE

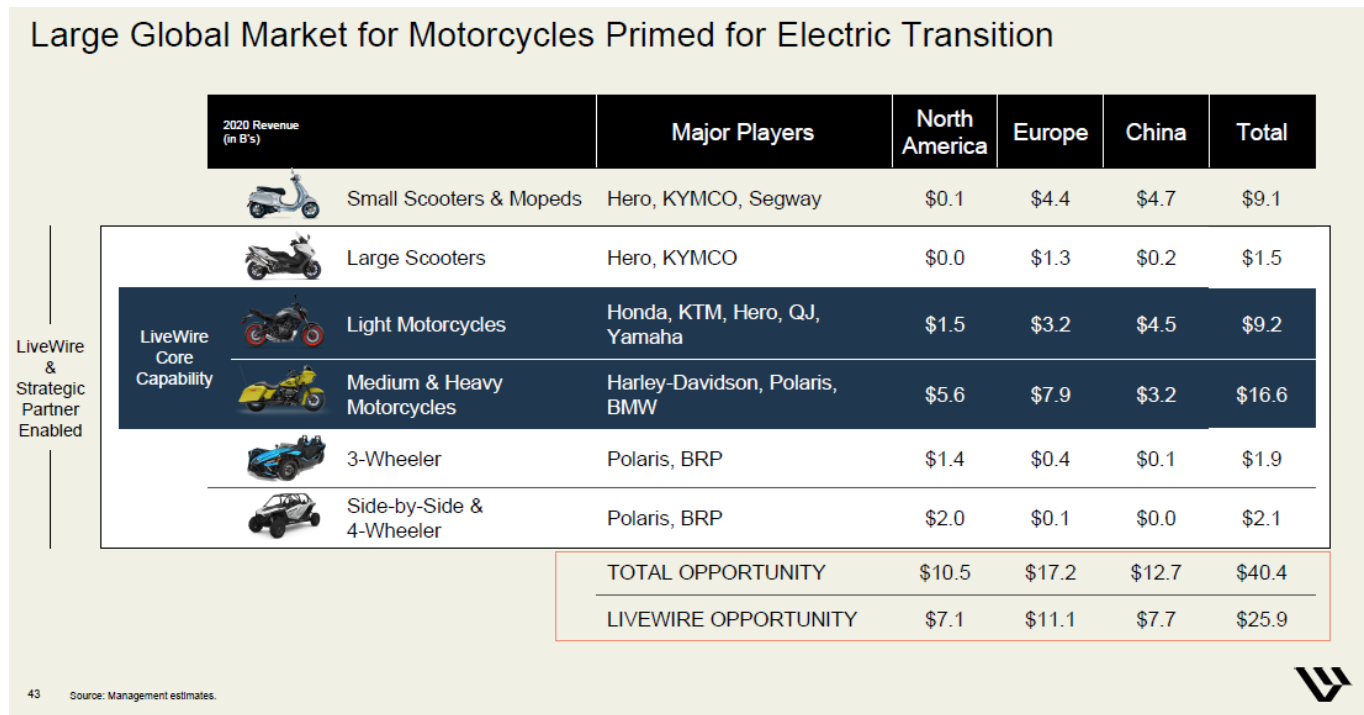
HDMC	HDFS	LiveWire
Revenue Growth +4 to 7%	Operating Income Y-o-Y Down 20 to 25%	LiveWire Units 750 - 2,000
Operating Income Margin +14.1 to 14.6%		Operating Loss (\$115M) to (\$125M)
Harley Davidson, Inc. Capital Investment \$225M – 250M		

HD Quarterly report: Q1, 2023 sales of LiveWire Motorcycles

Figure 6: Attribute comparison table

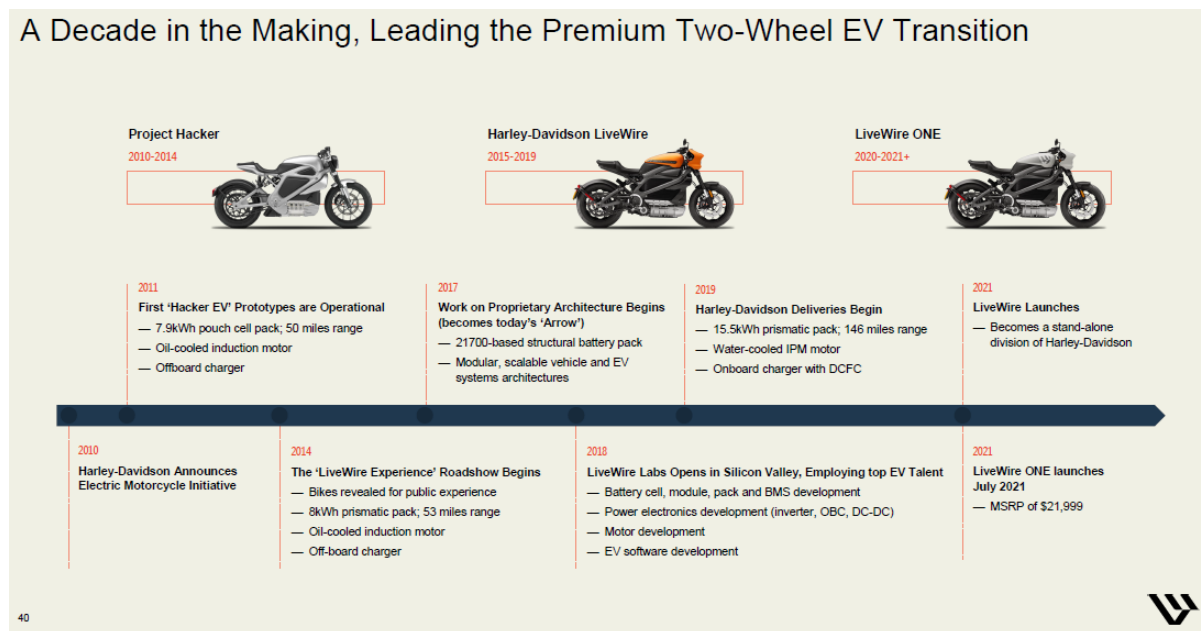
SL No	Attributes	Harley Davidson - LiveWire One	ZERO SR/S	Energica Ego+	Damon HyperSport
1	Maximum Range (Miles)	146	187	261	200
2	Peak Torque (Nm)	86	190	222	200
3	Peak Power (hp)	100	110	169	200
4	Top Speed (mph)	110	124	150	200
5	Power System Maximum Capacity (kWh)	15.4	17.3	21.5	20
6	Charging Time - DC Rapid (Mins)	60	60	60	57
8	Economy (Cost to Recharge for 100Miles (\$))	\$2.01	\$1.04	\$2.41	\$3.00
9	PRICING	\$22,799	\$23,995	\$23,870	\$40,000
10	Power Pack Warranty (Years)	5	5	3	2

Figure 7: Strategic Positioning



Source: LiveWire Investor Presentation Dec 2021

Figure 8: LiveWire Timeline



Source:

LiveWire Investor Presentation Dec 2021

Extract 1: Market Segmentation of traditional Customers

1) Sensitive Pragmatists (29%)

The largest segment of Harley owners tends to be blue-collar workers. They consider themselves easy going and practical. These owners take motorcycle riding seriously. They say, “You’d better know something about what you’re doing before riding a motorcycle.” They like the “high” of riding. They tend to be FL-series owners.

2) Laid Back Campers (24%)

Quiet and soft-spoken. This group likes to cruise, not speed or race. They also view their bikes as a way to get out of the city and in touch with nature. These bikers are patriotic: the “Made in America” label is their number one reason for buying a Harley. They tend to be Sportster owners.

3) Cool-Headed Loners (17%)

The loners consider a Harley motorcycle the perfect get-away vehicle to express their independence. They tend to be higher income “white collar” individuals. In their opinion the “Harley experience” is the ride itself. They describe Harley as a “fingerprint: you buy the basic cycle, then personalize it so no one else has one exactly like yours.” Loners also believe in “live and let live;” to them, riding a Harley reflects that attitude. They tend to be Softail owners.

4) Adventure-Loving Traditionalists (10%)

This market segment rides a Harley for its independence, freedom and adventure. These individuals love risk and seek thrills. Traditionalists consider new Harley-Davidson riders trendy and unappealing. Like the Laid Back Campers, this group believes the reason behind Harley’s great performance and quality is the “Made in America” label.

5) Classy Capitalists (8%)

Sometimes described as “Rich Urban Bikers” or “RUBS” this segment represents the traditional American success story – a class of winners. Famous stars are represented in this group; members are often 45 to 50 years old. Most promised themselves years ago they would reward themselves with a Harley-Davidson after making a certain amount of money. This group loves the attention they get when riding a Harley-Davidson. They tend to purchase Softails.

6) Cocky Misfits (7%)

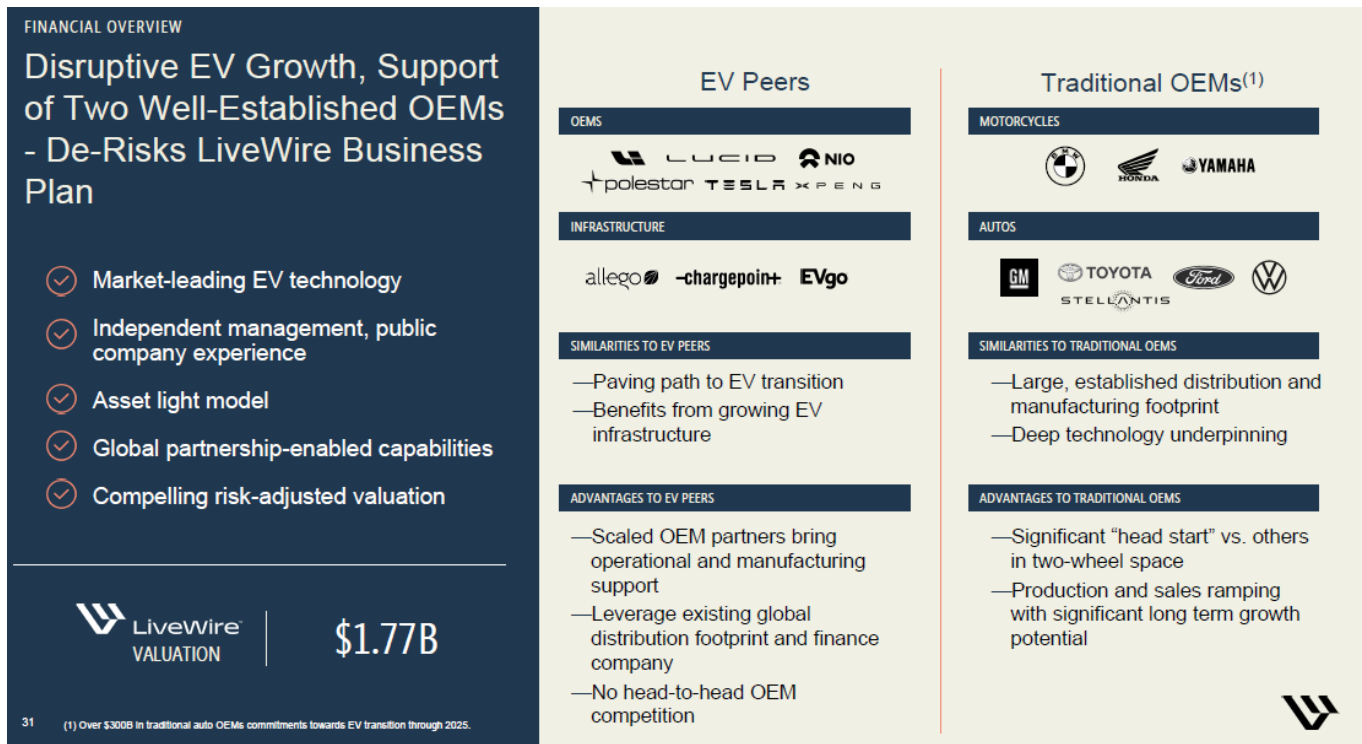
This buyer enjoys its reputation as the ‘bad guy’ and the “wild man.” These owners claim to have “tattoos with attitude.” The last thing they want is to be seen as stylish! They live for a chance to cut loose on their machine. The sound and speed of a Harley are important to this group. They’re always looking for an opportunity to “open it up.”

7) Stylish Status Seekers (5%)

The smallest Harley-Davidson market segment is young, stylish and elitist. This group tries to emulate the “famous stars” of the Classy Capitalists group. These riders say, “Riding a Harley separates you and makes you stand out.” Like the Classy Capitalists, this group wants to be noticed. Harley aesthetics have the biggest appeal to this group. Owners liken a Harley bike to a vintage car –both are made for a ride on a sunny day.

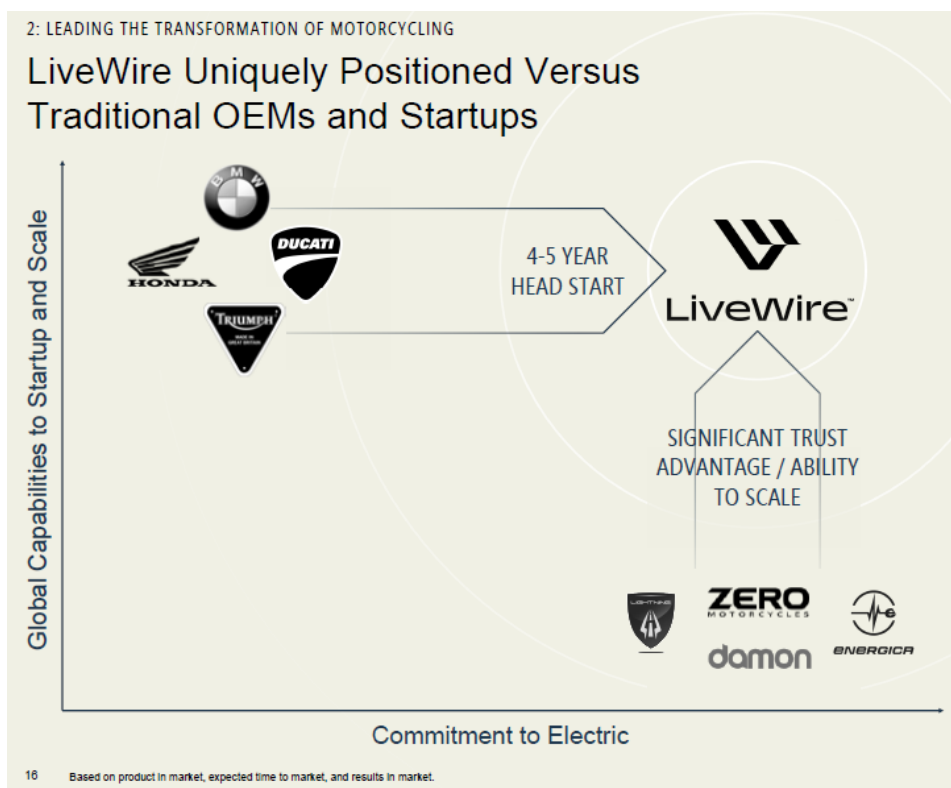
Source: <https://www.forbes.com/sites/larrylight/2020/05/26/harley-davidson-in-a-post-corona-world-keep-your-customers-close/?sh=23e685b487d1>

Figure 9: Competition



Source: LiveWire Investor Presentation Dec 2021

Figure 10: Unique positioning of LiveWire compared to its competitors.



Source: LiveWire Investor Presentation Dec 2021

Figure 11: Conjoint Analysis

CONJOINT ANALYSIS						
SL No	Attributes	Importance/ Weightage	Harley Davidson - LiveWire One	ZERO SR/S	Energica Ego+	Damon HyperSport
1	Maximum Range (Miles)		146	187	261	200
	Weightage	25%	20	23	32	25
	Points		5	5.75	8	6.25
2	Peak Power (hp)		100	110	169	200
	Weightage	15%	17	19	29	35
	Points		2.55	2.85	4.35	5.25
3	Top Speed (mph)		110	124	150	200
	Weightage	20%	19	21	26	34
	Points		3.77	4.25	5.14	6.85
4	Charging Time - DC Rapid (Mins)		60	60	60	56.5
	Weightage	23%	24.5	24.5	24.5	26.5
	Points		5.64	5.64	5.64	6.10
5	Economy (Cost to Recharge for 100Miles (\$))		\$2.01	\$1.04	\$2.41	\$3.00
	Weightage	17%	28.5	35.5	23.6	12.5
	Points		4.84	6.03	4.01	2.12
	Weighted Score		21.79	24.51	27.13	26.56
	PRICING (Actual)		\$22,799	\$23,995	\$23,870	\$40,000

Estimated Price of Harley Davidson - LiveWire One VS	ZERO SR/S	Energica Ego+	Damon HyperSport
Reservation Price Premium	0.889	0.803	0.820
Estimated Price	\$21,336	\$19,172	\$32,819

Figure 12: Cost of EV in comparison to ICE models

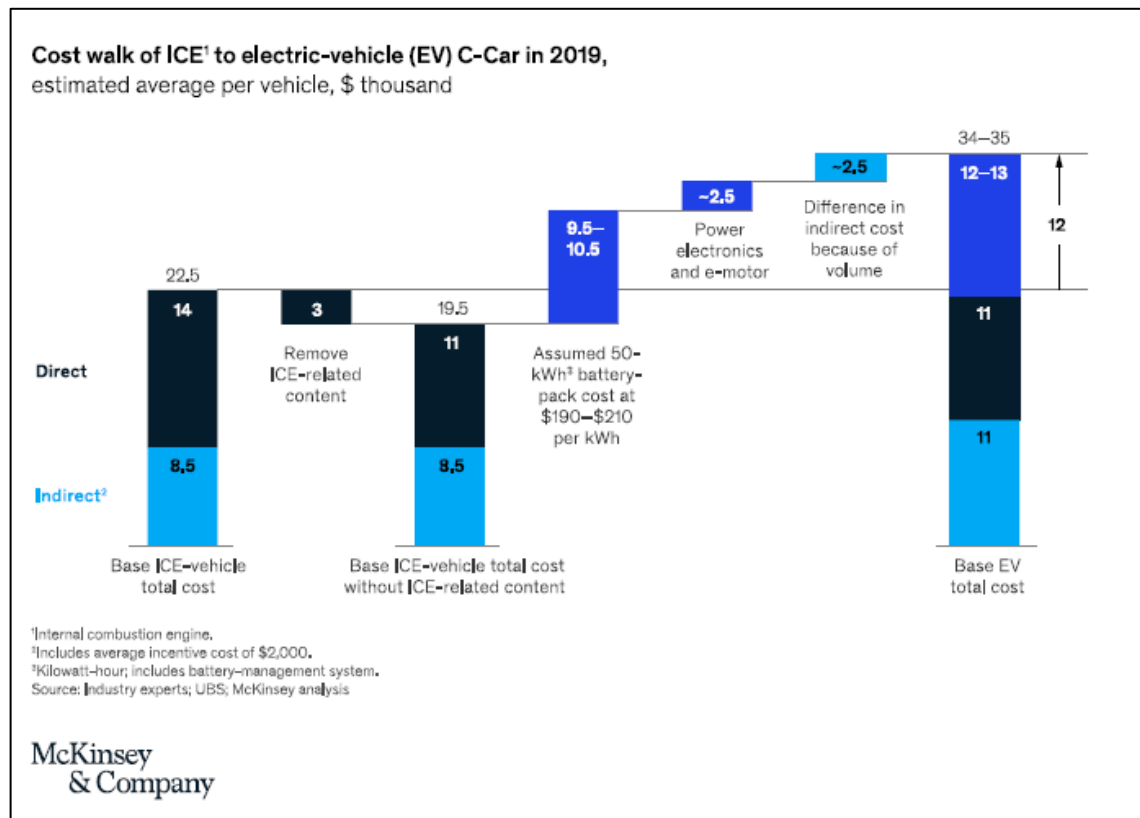


Figure 13: Cost reduction of EV in comparison to ICE models

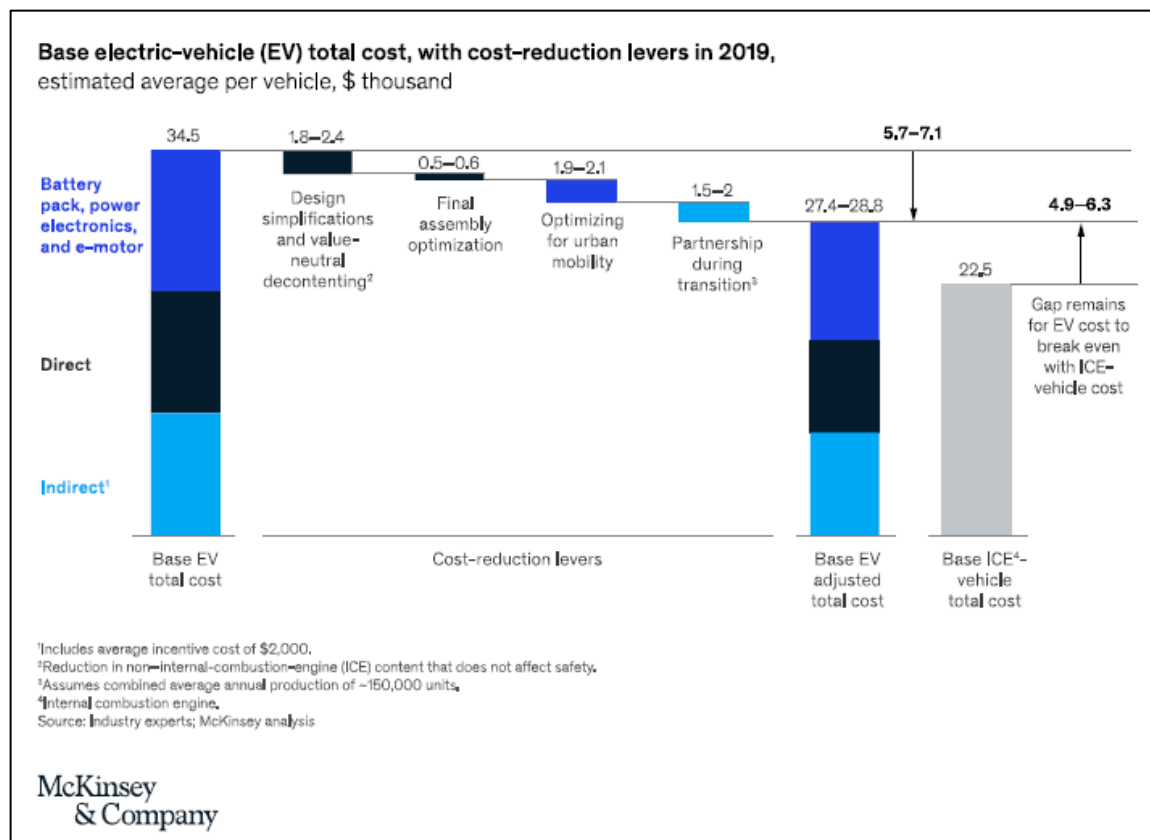


Figure 14: Form 10-K Financial


LiveWire revenue	7,762	10,401
Gross profit	1,264	53
Selling, administrative and engineering expense	25,811	16,112
Operating loss from LiveWire	(24,547)	(16,059)

Source: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 For the fiscal year ended: December 31, 2022 (Form 10-K)


SUPPLY CHAIN OUTLOOK					
2021 – 2023 Cost Inflation: Actual / Realized					
2021 Cost of Sales \$3.2B	2021 Actual	2022 Actual	Q1 2023 Actual	2023 Outlook	2023 Annual Outlook
Tariffs, Duties, Other	> +100%	+12%	-5%	+0-2%	Declining ocean freight offset by warehouse & labor increases
Logistics	+3%	+5%	+2%	+3-5%	Higher Labor Cost
Manufacturing	+5%	+3%	+3%	+2-3%	Supplier cost increased driven by labor rates; partially offset by decline in commodity costs.
Materials					

Source: https://s201.q4cdn.com/697889289/files/doc_presentations/2023/04/HOG-Q1-2023_Slides_042723-FINAL.pdf

Figure 15: Lead in Electric



[OVERVIEW](#)
[OUR STRATEGY](#)
[NEWS](#)
[EVENTS & PRESENTATIONS](#)
[STOCK INFO](#)
[FINANCIALS](#)
[GOVERNANCE](#)
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LEAD IN ELECTRIC

Investing in leading the electric motorcycle market

Electric motorcycles are important to Harley-Davidson's future and we are passionate about leading the electric motorcycle market and remain committed to staying at the forefront of electric motorcycle technology.

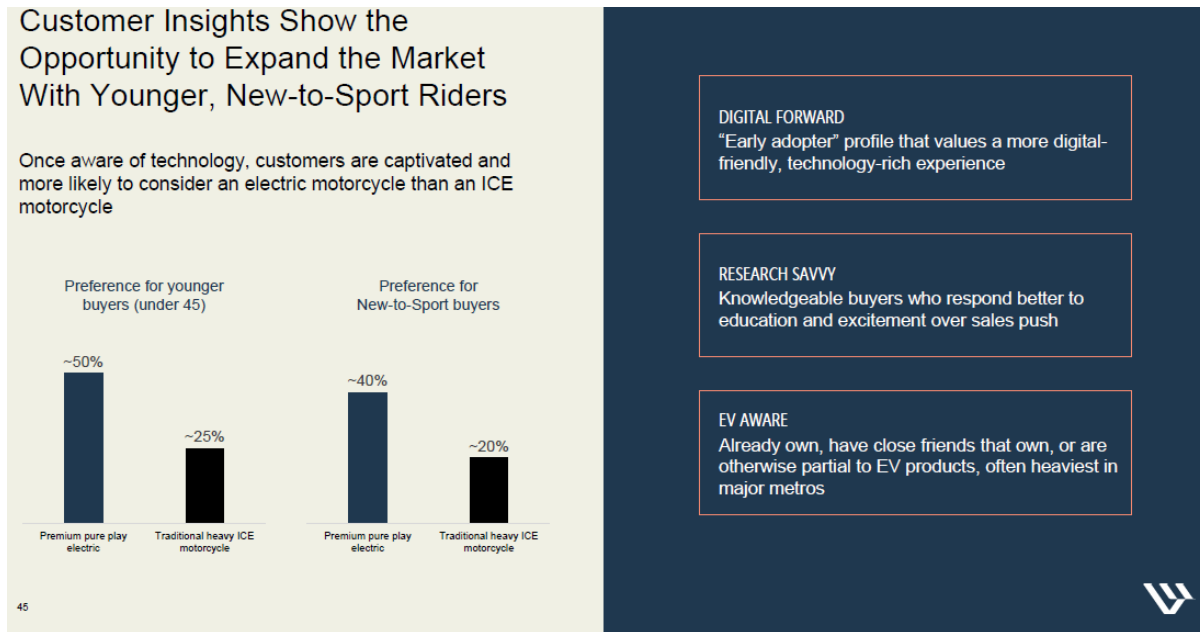
We are proud to be the pioneers in this space through LiveWire, widely regarded as the leading electric motorcycle in the world.

In 2021, we introduced LiveWire as a distinct brand and in 2022 we announced that through an agreement with AEA-Bridges Impact Corp., LiveWire would become a publicly traded company.

It is our ambition that LiveWire will become the most desirable electric motorcycle brand in the world.

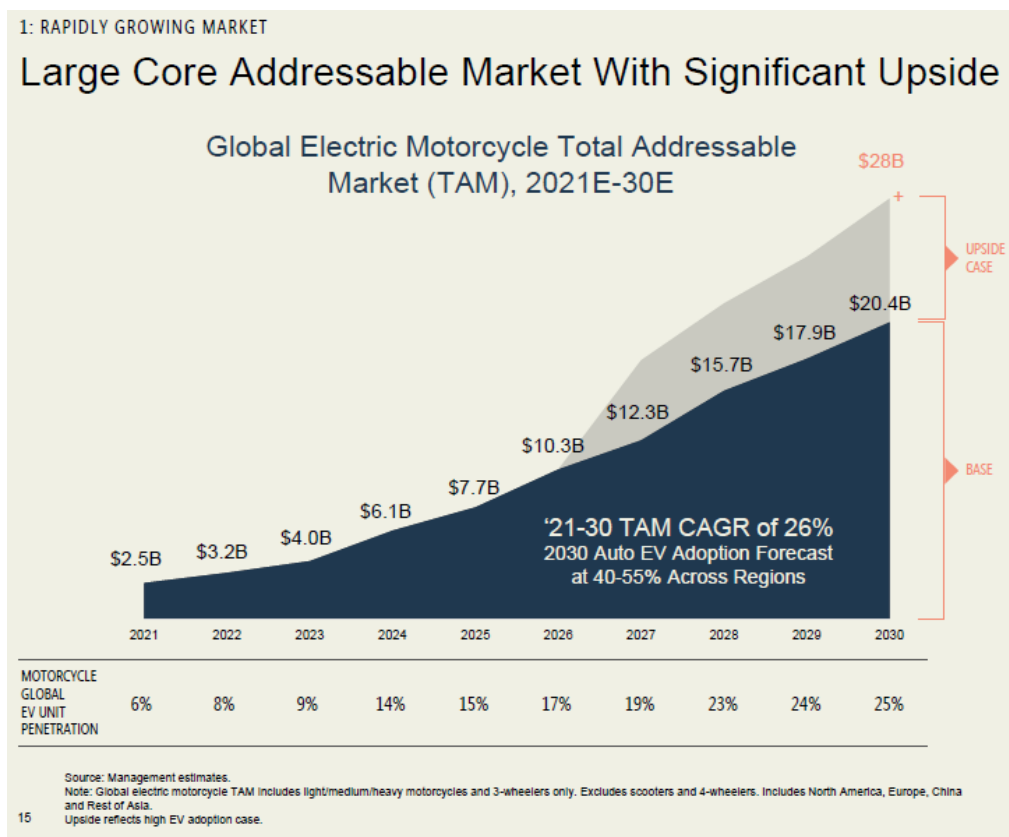
Source: HD Official Website (<https://investor.harley-davidson.com/our-strategy/default.aspx>)

Figure 16: Customer Insights



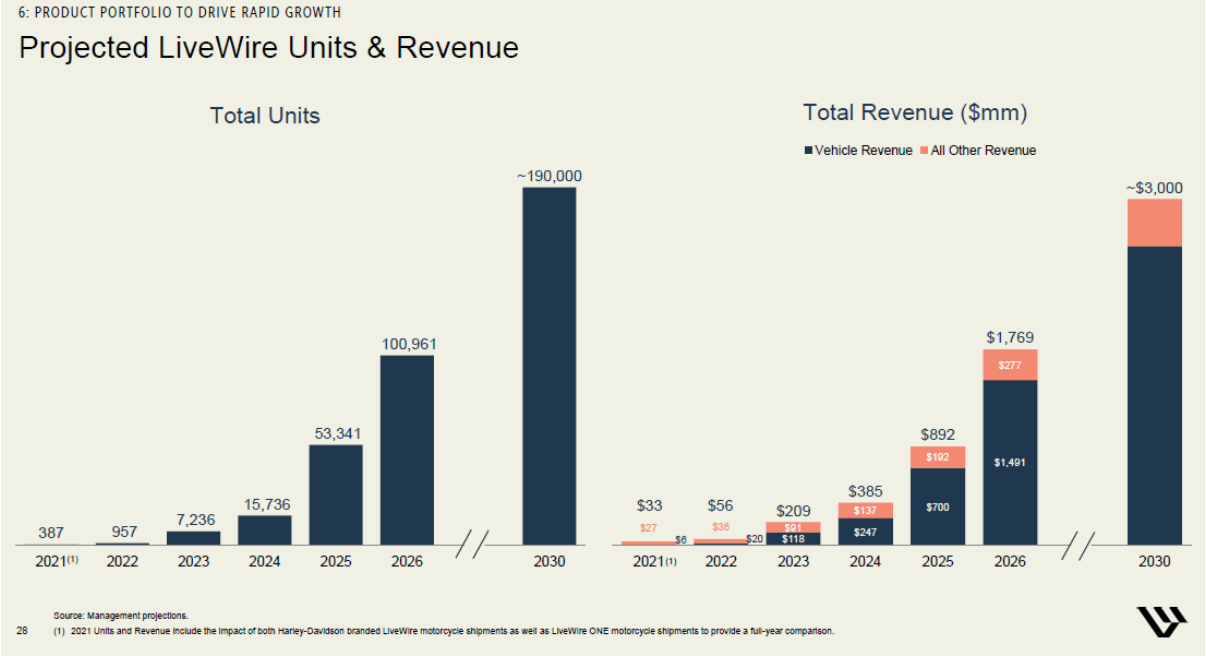
Source: LiveWire Investor Presentation Dec 2021

Figure 17: Large Core Addressable Market



Source: LiveWire Investor Presentation Dec 2021

Figure 18: Projected LiveWire units & Revenue



Source: LiveWire Investor Presentation Dec 2021