

Hesai

# 4Q23 preliminary shipment/sales beat guidance and BofAe

Maintain Rating: BUY | PO: 16.00 USD | Price: 8.21 USD

## Expect more order win to come, maintain Buy

Hesai announced preliminary 4Q23 and 2023 revenue and LiDAR shipment: Hesai expects 4Q23 sales to surpass the higher-end of the prior guidance range (RMB535mn-555mn), vs. RMB409mn in 4Q22. Hesai also expects 2023 sales to exceed its target of RMB1.8bn. It expects 2023 total LiDAR shipment to surpass the prior guidance of 220k units, compared vs. 80k units shipments in 2022. Among 2023 total LiDAR shipment, Hesai expects ADAS LiDAR shipment to exceed its target of 200k units. Hesai have secured ADAS design wins with 15 leading OEMs and Tier-1 suppliers, covering over 50 models, and management is confident on significant order win in coming year. We just hosted a conference call for the company lately. (See more on [Hesai: Call takeaways: looking forward to more orders breakthrough 04 January 2024](#)) We maintain Buy on Hesai as we believe the company, as an industry leader, will ride on the explosive Lidar demand growth in coming years and also see positive breakthrough in overseas orders gain.

Estimates (Dec) (CNY)	2021A	2022A	2023E	2024E	2025E
Net Income (Adjusted - mn)	(2,456)	(747)	(442)	(142)	298
EPS	(23.39)	(6.47)	(3.52)	(1.13)	2.37
EPS Change (YoY)	NM	72.3%	45.6%	67.9%	NM
Dividend / Share	0	0	0	0	0
Free Cash Flow / Share	(4.68)	(8.03)	(5.41)	(12.27)	1.54
Valuation (Dec)					
P/E	NM	NM	NM	NM	24.86x
EV / EBITDA*	NM	NM	NM	NM	12.72x
Free Cash Flow Yield*	-6.65%	-12.53%	-9.19%	-20.84%	2.62%

\* For full definitions of *IQmethod*<sup>SM</sup> measures, see page 6.

11 January 2024

## Equity

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## Stock Data

Price	8.21 USD
Price Objective	16.00 USD
Date Established	14-Nov-2023
Investment Opinion	C-1-9
52-Week Range	7.35 USD-30.36 USD
Mrkt Val / Shares Out (mn)	1,032 USD / 125.7
Average Daily Value (mn)	6.18 USD
Free Float	7.9%
BofA Ticker / Exchange	HSAI / NAS
Bloomberg / Reuters	HSAI US / HSAI.OQ
ROE (2023E)	-95.0%
Net Dbt to Eqty (Dec-2022A)	-64.77%

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Timestamp: 11 January 2024 11:44AM EST

# iQprofile<sup>SM</sup> Hesai

Key Income Statement Data (Dec)	2021A	2022A	2023E	2024E	2025E
(CNY Millions)					
Sales	721	1,203	1,847	3,453	5,351
Gross Profit	382	472	604	1,166	1,867
Sell General & Admin Expense	(306)	(306)	(411)	(574)	(749)
Operating Profit	(265)	(378)	(539)	(255)	218
Net Interest & Other Income	19	77	97	113	105
Associates	NA	NA	NA	NA	NA
Pretax Income	(246)	(301)	(442)	(142)	323
Tax (expense) / Benefit	1	0	0	0	(26)
Net Income (Adjusted)	(2,456)	(747)	(442)	(142)	298
Average Fully Diluted Shares Outstanding	105	116	126	126	126

## Key Cash Flow Statement Data

Net Income	(245)	(301)	(442)	(142)	298
Depreciation & Amortization	28	53	89	131	167
Change in Working Capital	(234)	(540)	(27)	(1,201)	9
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	223	92	0	0	0
Cash Flow from Operations	(228)	(696)	(380)	(1,212)	474
Capital Expenditure	(263)	(231)	(300)	(330)	(280)
(Acquisition) / Disposal of Investments	(1,699)	1,392	0	0	0
Other Cash Inflow / (Outflow)	(18)	(41)	0	0	0
Cash Flow from Investing	(1,980)	1,120	(300)	(330)	(280)
Shares Issue / (Repurchase)	NA	NA	NA	NA	NA
Cost of Dividends Paid	0	0	0	0	0
Cash Flow from Financing	2,404	15	2,362	800	(1,000)
Free Cash Flow	(492)	(927)	(680)	(1,542)	194
Net Debt	(2,792)	(1,841)	(2,523)	(981)	(1,175)
Change in Net Debt	1,758	(445)	(682)	1,542	(194)

## Key Balance Sheet Data

Property, Plant & Equipment	322	505	724	932	1,054
Other Non-Current Assets	137	199	191	182	173
Trade Receivables	86	485	405	1,260	1,321
Cash & Equivalents	2,792	1,859	3,542	2,800	1,993
Other Current Assets	615	791	995	1,674	1,764
Total Assets	3,952	3,839	5,857	6,847	6,305
Long-Term Debt	0	18	18	18	18
Other Non-Current Liabilities	10	24	24	24	24
Short-Term Debt	0	0	1,000	1,800	800
Other Current Liabilities	892	956	1,053	1,385	1,545
Total Liabilities	903	998	2,095	3,227	2,387
Total Equity	3,050	2,842	3,762	3,620	3,918
Total Equity & Liabilities	3,952	3,839	5,857	6,847	6,305

## iQmethod<sup>SM</sup> - Bus Performance\*

Return On Capital Employed	-10.0%	-9.7%	-10.5%	-2.5%	5.7%
Return On Equity	NA	NA	-95.0%	-3.8%	7.9%
Operating Margin	-36.8%	-31.4%	-29.2%	-7.4%	4.1%
EBITDA Margin	-33.0%	-27.1%	-24.3%	-3.6%	7.2%

## iQmethod<sup>SM</sup> - Quality of Earnings\*

Cash Realization Ratio	NM	NM	NM	NM	1.6x
Asset Replacement Ratio	9.6x	4.4x	3.4x	2.5x	1.7x
Tax Rate (Reported)	0.5%	0%	0%	NM	8.0%
Net Debt-to-Equity Ratio	-91.5%	-64.8%	-67.1%	-27.1%	-30.0%
Interest Cover	NA	NA	NA	NA	NA

## Key Metrics

\* For full definitions of iQmethod<sup>SM</sup> measures, see page 6.

## Company Sector

Auto Parts

## Company Description

Hesai, set up in 2014, is a global leader in LiDAR, which generates high-resolution 3D image. By industries, Hesai's product lines and revenue could be divided into: 1) ADAS - applied in passenger/commercial vehicle, 2) autonomous mobility (robotaxi) - autonomous vehicles that provide passenger/freight mobility service, 3) robotics. Hesai have become a leading supplier in the global LiDAR market, securing 47% share in 2022.

## Investment Rationale

We have a Buy rating on Hesai. We expect 1) Hesai to post 70% revenue CAGR in 2023-25E, driven by solid new client/project lineup, 2) GPM come in at the lowest point (30%) in 2023, recovering to 35% in 2025E, owing to new in-house capacity ramp-up and ASICs design upgrade for further cost down, 3) a visible breakeven timeline.

## Stock Data

Price to Book Value

2.0x



## Price objective basis & risk

### Hesai (HSAI)

Our PO of USD16 is based on average from DCF valuation and EV/sales valuation.

#### DCF valuation methodology:

The fair value of USD15.2 is derived from our DCF calculation, with an assumption of 2% FCF perpetuity growth and 15.3% WACC. We come up with WACC of 15.3%, consisting of 2.7% risk free rate and 12% expected market return. Lastly, we assigned 3.5% perpetual growth rate to the company, which is reasonable, in our view, given the overall LiDAR penetration in ADAS is still relatively low and CAGR growth could be sustained in longer term.

#### EV/Sales methodology:

The fair value of USD16.8 is derived from our EV/sales valuation, as we assign 4x EV/sales to Hesai's 2024E sales, in line with its peers' average. We believe that Hesai deserves a valuation premium considering its leading position in the industry (market share in terms of shipment, order gain), superior margins, faster breakeven timeline, and stronger B/S management. This characteristic set Hesai a solid foundation to survive through industry shuffling and remain as one of the top suppliers in the segment. However, this is offset by the stock's low liquidity, resulting in a peers' average multiple.

Risk: client concentration, ASP/GPM downside, slower EV/ smart vehicle growth

## Analyst Certification

I, Jessie Lo, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

### APR - Autos Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	Aima Technology	XIHF	603529 CH	Joey Yang, CFA
	Ashok Leyland	XDBVF	AL IN	Gunjan Prithyani
	Bajaj Auto	XBJBF	BJAUT IN	Gunjan Prithyani
	BYD	BYDDF	1211 HK	Ming Hsun Lee, CFA
	BYD	XYMPF	002594 CH	Ming Hsun Lee, CFA
	BYD	BYDDY	BYDDY US	Ming Hsun Lee, CFA
	CATL	XMOQF	300750 CH	Ming Hsun Lee, CFA
	DENSO	DNZOF	6902 JP	Kei Nihonyanagi
	Desay SV	XGDF	002920 CH	Jessie Lo
	EVE	XEVF	300014 CH	Ming Hsun Lee, CFA
	Fuyao Glass	XFGF	600660 CH	Edward Leung, CFA
	Fuyao Glass	FIGF	3606 HK	Edward Leung, CFA
	Great Wall Motor	GWLLF	2333 HK	Ming Hsun Lee, CFA
	GS Yuasa	GYUAF	6674 JP	Kentaro Hosoda
	Guangzhou Automobile Group	GNZUF	2238 HK	Ming Hsun Lee, CFA
	Hankook Tire	XHTRF	161390 KS	KJ Hwang
	Hero Motocorp	HRHDF	HMCL IN	Gunjan Prithyani
	Hesai	HSAI	HSAI US	Jessie Lo
	HL Mando	XMADF	204320 KS	KJ Hwang
	Honda Motor	HMC	HMC US	Kei Nihonyanagi
	Honda Motor	HNDAF	7267 JP	Kei Nihonyanagi
	Huayu	XHASF	600741 CH	Jessie Lo
	Hyundai Motor	HYMLF	005380 KS	KJ Hwang
	Isuzu Motors	ISUZF	7202 JP	Kei Nihonyanagi
	Leapmotor	XZSSF	9863 HK	Ming Hsun Lee, CFA
	Li Auto	LI	LI US	Ming Hsun Lee, CFA

## APR - Autos Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Li Auto	LAAOF	2015 HK	Ming Hsun Lee, CFA
	Maruti	MUDGF	MSIL IN	Gunjan Prithyani
	Mazda Motor	MZDAF	7261 JP	Kei Nihonyanagi
	Minth	MNTHF	425 HK	Jessie Lo
	Nissan Motor	NSANF	7201 JP	Kei Nihonyanagi
	Nissan Motor	NSANY	NSANY US	Kei Nihonyanagi
	PARK24	PKCOF	4666 JP	Kei Nihonyanagi
	SAMIL (Motherson International)	XMSUF	MOTHERSO IN	Gunjan Prithyani
	Shenzhen Kedali	XWCSF	002850 CH	Jessie Lo
	Shuanghuan Driveline	XZSHF	002472 CH	Jessie Lo
	Sumitomo Rubber Industries	SMTUF	5110 JP	Kentaro Hosoda
	Suzuki Motor	SZKMF	7269 JP	Kei Nihonyanagi
	Tata Motors	XTTSF	TTMT IN	Gunjan Prithyani
	Toyo Tire	TOTTF	5105 JP	Kentaro Hosoda
	Toyota Motor	TOYOF	7203 JP	Kei Nihonyanagi
	Toyota Motor	TM	TM US	Kei Nihonyanagi
	Wuxi Lead	XZSRF	300450 CH	Ming Hsun Lee, CFA
	XPeng Inc	XPEV	XPEV US	Ming Hsun Lee, CFA
	XPeng Inc.	XPNGF	9868 HK	Ming Hsun Lee, CFA
	Yadea	YADGF	1585 HK	Joey Yang, CFA
	Yongda	CYYHF	3669 HK	Joey Yang, CFA
	Yunnan Energy	XLGFF	002812 CH	Jessie Lo
	Zhejiang Sanhua	XZSIF	002050 CH	Jessie Lo
	Zhongsheng Auto	ZHSHF	881 HK	Joey Yang, CFA
<b>NEUTRAL</b>				
	Aisin	ASEKF	7259 JP	Kei Nihonyanagi
	Bridgestone	BRDCF	5108 JP	Kei Nihonyanagi
	Bridgestone	BRDCY	BRDCY US	Kei Nihonyanagi
	CALB	XCLSF	3931 HK	Ming Hsun Lee, CFA
	Dong Feng	DNFGF	489 HK	Ming Hsun Lee, CFA
	Eicher Motors	XEIMF	EIM IN	Gunjan Prithyani
	Hino Motors	HINOF	7205 JP	Kei Nihonyanagi
	Hyundai Mobis	HYPLF	012330 KS	KJ Hwang
	Kia Corp	KIMTF	000270 KS	KJ Hwang
	Mahindra & Mahindra (M&M)	XKQRF	MM IN	Gunjan Prithyani
	MeiDong Auto	CMEIF	1268 HK	Joey Yang, CFA
	Mitsubishi Motors	MMTOF	7211 JP	Kei Nihonyanagi
	Motherson Sumi Wiring	XMWDF	MSUMI IN	Gunjan Prithyani
	NIO	NIO	NIO US	Ming Hsun Lee, CFA
	NIO	NIOIF	9866 HK	Ming Hsun Lee, CFA
	NIO	XLTWF	NIO SP	Ming Hsun Lee, CFA
	Shenzhen Senior	XHYRF	300568 CH	Jessie Lo
	Subaru Corp	FUJHF	7270 JP	Kei Nihonyanagi
	Subaru Corp	FUJHY	FUJHY US	Kei Nihonyanagi
	Toyota Industries Corporation	TYIDF	6201 JP	Kentaro Hosoda
	Toyota Industries Corporation	TYIDY	TYIDY US	Kentaro Hosoda
	TVS Motors	XFKMF	TVSL IN	Gunjan Prithyani
	Wencan	XSCDF	603348 CH	Joey Yang, CFA
	Yokohama Rubber	YORUF	5101 JP	Kentaro Hosoda
<b>UNDERPERFORM</b>				
	Astra International	PTAIF	ASII IJ	Paul Dewberry
	BAIC Motor	BMCLF	1958 HK	Ming Hsun Lee, CFA
	Bharat Forge	XUUVF	BHFC IN	Gunjan Prithyani
	China Grand Auto	XMURF	600297 CH	Joey Yang, CFA
	Escorts Kubota	XSCOF	ESCORTS IN	Gunjan Prithyani
	GAC	XGNHF	601238 CH	Ming Hsun Lee, CFA
	Great Wall Motor	XGWMF	601633 CH	Ming Hsun Lee, CFA
	Hyundai Wia	XWHYF	011210 KS	KJ Hwang
	Joyson	XQMWF	600699 CH	Jessie Lo
	Nextage	NXAGF	3186 JP	Kentaro Hosoda
	Nexteer	NTXVF	1316 HK	Jessie Lo
	Putailai	XVHGF	603659 CH	Jessie Lo
	SAIC Motor	XZNF	600104 CH	Ming Hsun Lee, CFA
	Sona Comstar	XBNXF	SONACOMS IN	Gunjan Prithyani



## APR - Autos Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Tinci Materials	XCVHF	002709 CH	Miriam Chan, CFA
	Yamaha Motor	YAMHF	7272 JP	Kei Nihonyanagi
<b>RVW</b>				
	Geely	GELYF	175 HK	Ming Hsun Lee, CFA

**iQmethod<sup>SM</sup> Measures Definitions****Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

**Numerator**

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

**Denominator**

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

**Quality of Earnings**

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

**Numerator**

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash &amp; Equivalents

EBIT

**Denominator**

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

**Valuation Toolkit**

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

**Numerator**

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

**Denominator**

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

EV / EBITDA

Basic EBIT + Depreciation + Amortization

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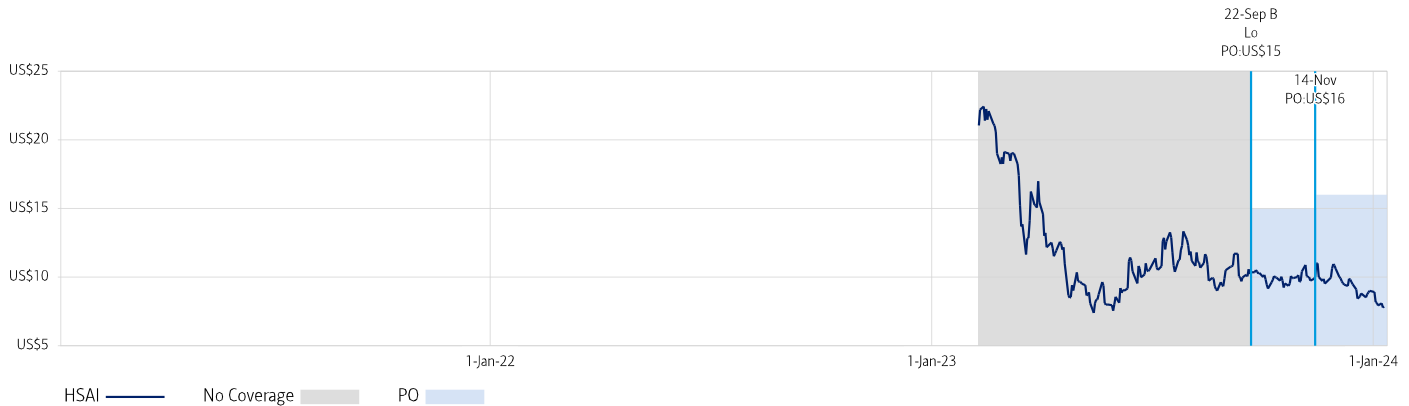
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### Hesai (HSAI) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

### Equity Investment Rating Distribution: Autos Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	67	55.83%	Buy	39	58.21%
Hold	30	25.00%	Hold	15	50.00%
Sell	23	19.17%	Sell	12	52.17%

### Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

<sup>R1</sup> Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

<sup>R2</sup> Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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