

Integral Ad Science Holding Corp.

4Q23 Results: Concerns over price-based competition likely overblown

Reiterate Rating: BUY | PO: 18.00 USD | Price: 11.33 USD

Q4 results slightly ahead, no major surprises

Q4 Revenue was up 14% Y/Y, ahead of BofA/Street at +12%/12% and EBITDA margin was in line at 35%. Optimization growth of +16% Y/Y surprised BofA/Street (+10%/12% Y/Y) and Measurement was in line with Street but below BofA expectations. Management called out noteworthy acceleration in international revenues of 17% Y/Y in 2H23 vs. only 10% in 1H23; 40% of new hires were outside of the Americas in 2023, whereas only 31% of revenues were international. Overall Q4 was uncontroversial.

1Q24 & CY24 guided below Street, BofA

1Q24 Revenue growth outlook of +6% Y/Y negatively surprised BofA/Street, especially in the context of ramping its Brand Safety and Suitability service on Facebook & Instagram Feeds & Reels post February 5th launch; Management noted the immediate impact from renewals at lower prices from several competitors. IAS guided CY24 Revenues to +13% Y/Y, below BofA/Street at +16% Y/Y, with the Optimization segment growing slightly below consolidated. We believe some additional renewals at lower prices (and higher volumes) are embedded in guidance. IAS also guided to sequential growth in quarterly EBITDA margins in the context of FY margin down 1% at midpoint, a surprise to us.

Price power driven by premium, not table stakes services

Commentary that a select group of less than 12 large customers renewed their measurement contracts for a combination of lower prices and higher minimum volumes as a result of competition will raise concerns that IAS, DV, and potentially other vendors are engaged in price-based competition, that their services are commoditized, or that pricing trends downwards as volumes expand. We view pricing power in the industry as driven by additional value-added services, more so optimization as compared to measurement, which we view as table stakes. IAS guided to a stronger 2H, driven both by (2) measurement volumes and (2) cross- and up-sell of solutions with higher CPMs.

Maintain Buy; PO cut to \$18 on lower estimates

Our PO of \$18 (was \$19) is based on an EV/CY24 EBITDA ratio of 18x (unchanged). Although IAS's guidance will not outgrow the digital advertising market, we look to its 2H catalysts to dispel this notion. We continue to believe in an eventual duopoly which should confer some level of price stability.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	0.38	0.55	0.66	0.89	1.08
GAAP EPS	0.10	0.04	0.24	0.34	0.47
EPS Change (YoY)	850.0%	44.7%	20.0%	34.8%	21.3%
Consensus EPS (Bloomberg)			0.43	0.50	0.50
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	29.8x	20.6x	17.2x	12.7x	10.5x
GAAP P/E	113.3x	283.3x	47.2x	33.3x	24.1x
EV / EBITDA*	14.0x	11.1x	10.1x	8.6x	7.6x
Free Cash Flow Yield*	3.9%	7.2%	7.4%	9.5%	10.4%

* For full definitions of *IQmethod*SM measures, see page 8.

28 February 2024

Equity

Key Changes

(US\$)	Previous	Current
Price Obj.	19.00	18.00
2024E Rev (m)	545.7	535.0
2025E Rev (m)	632.0	619.6
2026E Rev (m)	NA	689.8
2024E EPS	0.75	0.66
2025E EPS	0.95	0.89
2026E EPS	NA	1.08

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Stock Data

Price	11.33 USD
Price Objective	18.00 USD
Date Established	28-Feb-2024
Investment Opinion	C-1-9
52-Week Range	10.33 USD - 20.88 USD
Mkt Val (mn) / Shares Out (mn)	1,807 USD / 159.5
Free Float	58.8%
Average Daily Value (mn)	9.61 USD
BofA Ticker / Exchange	IAS / NAS
Bloomberg / Reuters	IAS US / IAS.OQ
ROE (2024E)	11.2%
Net Dbt to Eqty (Dec-2023A)	3.2%

Acronyms:

CPM: Cost per Mile

DV: DoubleVerify

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Timestamp: 28 February 2024 09:39AM EST

iQprofileSM Integral Ad Science Holding Corp.

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	5.0%	8.0%	8.2%	10.2%	11.5%
Return on Equity	7.5%	10.3%	11.2%	13.2%	13.9%
Operating Margin	14.7%	20.7%	22.0%	24.9%	26.9%
Free Cash Flow	70	130	133	172	189

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	1.2x	1.5x	1.3x	1.2x	1.1x
Asset Replacement Ratio	0x	0x	0x	0.1x	0.1x
Tax Rate	NM	NM	21.0%	21.0%	21.0%
Net Debt-to-Equity Ratio	16.9%	3.2%	-7.3%	-18.5%	-27.6%
Interest Cover	6.6x	8.0x	NA	NA	NA

Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	408	474	535	620	690
% Change	26.2%	16.2%	12.8%	15.8%	11.3%
Gross Profit	333	375	417	483	538
% Change	23.8%	12.7%	11.1%	15.9%	11.3%
EBITDA	127	160	175	206	232
% Change	22.5%	26.0%	9.7%	18.0%	12.4%
Net Interest & Other Income	(9)	(12)	0	4	9
Net Income (Adjusted)	59	88	108	144	174
% Change	945.2%	48.8%	21.8%	33.5%	21.3%

Free Cash Flow Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	15	7	39	55	76
Depreciation & Amortization	50	55	58	52	46
Change in Working Capital	(31)	6	(25)	(16)	(19)
Deferred Taxation Charge	(9)	(22)	(5)	(5)	(10)
Other Adjustments, Net	46	85	69	89	99
Capital Expenditure	(2)	(2)	(3)	(3)	(3)
Free Cash Flow	70	130	133	172	189
% Change	12.5%	84.0%	2.8%	28.8%	9.8%
Share / Issue Repurchase	NA	NA	NA	NA	NA
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	(37)	(145)	(80)	(100)	(100)

Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	87	125	188	289	403
Trade Receivables	68	75	85	95	119
Other Current Assets	66	66	69	83	86
Property, Plant & Equipment	220	183	139	101	67
Other Non-Current Assets	728	744	768	788	814
Total Assets	1,169	1,192	1,249	1,356	1,490
Short-Term Debt	NA	NA	NA	NA	NA
Other Current Liabilities	68	82	79	87	97
Long-Term Debt	223	154	114	74	34
Other Non-Current Liabilities	69	46	37	32	22
Total Liabilities	360	282	230	193	152
Total Equity	808	909	1,020	1,163	1,337
Total Equity & Liabilities	1,169	1,192	1,249	1,356	1,490

* For full definitions of iQmethodSM measures, see page 8.

Company Sector

PC Software

Company Description

IAS is a leading digital media quality company with a mission to be the global benchmark for trust and transparency in digital advertising. Its cloud-based platform offers ad measurement & optimization solutions to ad buyers and publishers on digital ads delivered across all devices, channels, and formats. IAS generates revenue by charging a CPM based on the volume of purchased ads measured.

Investment Rationale

IAS is well positioned to operate as a duopolist (second only to DV) in an underpenetrated (BofA est. 10%), fast growing addressable market. We see multiple tailwinds to support double-digit revenue CAGR in the next 5 years: 1) deeper penetration of ad verification solutions within \$300bn of global digital ad spend, 2) fast growing adoption from Social Media platforms, and 3) opportunity to improve monetization from upselling to the existing customer base.

Stock Data

Average Daily Volume 848,577

Quarterly Earnings Estimates

	2023	2024
Q1	0.09A	0.09E
Q2	0.30A	0.15E
Q3	0A	0.18E
Q4	0.16A	0.25E

Analysis of Results vs Forecasts

Exhibit 1: IAS 4Q23E Results vs. BofA Estimates

Results vs. BofA Estimates

					Y/Y Growth		Q/Q Growth			
(\$Mn)	4Q23A	4Q23E	Variance (Abs.)	Variance %	Actual	Estimate	Variance %	Actual	Estimate	Variance %
Non-GAAP Income Statement										
Total Revenue	134.3	131.7	2.6	2.0%	14.4%	12.1%	2.2%	11.6%	9.4%	2.2%
Cost of Revenue	28.1	27.0	1.1	4.2%	30.0%	24.7%	5.3%	10.4%	5.9%	4.5%
Gross Profit	106.2	104.7	1.5	1.4%	10.8%	9.3%	1.6%	11.9%	10.4%	1.6%
S&M	24.9	25.7	(0.8)	-3.0%	-2.1%	0.9%	-3.0%	4.3%	7.5%	-3.2%
Tech & Development	15.0	13.8	1.1	8.2%	-22.6%	-28.5%	5.8%	4.5%	-3.4%	7.9%
G&A	20.2	19.1	1.1	6.0%	12.4%	6.0%	6.4%	16.0%	9.4%	6.6%
D&A	14.6	13.7	0.9	6.7%	13.9%	6.8%	7.1%	4.0%	-2.5%	6.5%
EBIT	32.0	32.4	(0.4)	-1.3%	68.7%	71.0%	-2.3%	38.4%	40.3%	-1.9%
Adj. EBITDA	47.5	46.1	1.4	3.1%	18.7%	15.1%	3.6%	17.1%	13.6%	3.5%
Segments										
Measurement	52.6	53.7	(1.1)	-2.0%	17.6%	20.0%	-2.4%	10.0%	12.2%	-2.2%
Optimization	63.6	60.5	3.1	5.1%	15.5%	9.9%	5.6%	11.6%	6.1%	5.4%
Publisher	18.1	17.5	0.6	3.4%	2.6%	-0.8%	3.4%	16.7%	12.8%	3.9%
% of Revenue										
Cost of Revenue	20.9%	20.5%		45 bps	2.5%	2.1%	4 bps	-0.2%	-0.7%	4 bps
S&M	18.5%	19.5%		-95 bps	-3.1%	-2.2%	-10 bps	-1.3%	-0.4%	-10 bps
Tech & Development	11.1%	10.5%		63 bps	-5.3%	-6.0%	6 bps	-0.8%	-1.4%	6 bps
G&A	15.1%	14.5%		57 bps	-0.3%	-0.8%	6 bps	0.6%	0.0%	6 bps
D&A	10.9%	10.4%		48 bps	0.0%	-0.5%	5 bps	-0.8%	-1.3%	5 bps
EBIT	23.8%	24.6%		-80 bps	7.7%	8.5%	-8 bps	4.6%	5.4%	-8 bps
% EBITDA Margin	35.4%	35.0%		38 bps	1.3%	0.9%	4 bps	1.7%	1.3%	4 bps

Source: BofA Global Research estimates, Company Reports

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Exhibit 2: BofA vs Street Forecasts, FY22 to FY25

We lower FY Revenue/EBITDA estimates to reflect pricing headwinds from several contract renewals of measurement customers

	2022	23Q1	23Q2	23Q3	23Q4	2023	2024E	2025E
Total Revenue								
B of A (After)	408	106	114	120	134	474	535	620
B of A (Before)					132	472	546	632
STREET					131	472	548	631
Delta vs. STREET					2.1%	0.6%	-2.3%	-1.9%
GUIDE						462	535	-
Total Revenue YoY Growth %								
B of A (After)	26.2%	18.9%	13.3%	18.7%	14.4%	16.2%	12.8%	15.8%
B of A (Before)					12.1%	15.5%	15.7%	15.8%
STREET					12.0%	15.5%	16.2%	15.3%
Delta vs. STREET					2.4%	0.7%	-3.4%	0.5%
GUIDE						13%	13%	
Optimization revenue (fka Programmatic)								
B of A (After)	191	51	53	57	64	224	244	276
B of A (Before)					61	221	256	279
STREET					61	222	257	291
Delta vs. STREET					3.6%	1.0%	-5.2%	-5.4%
Optimization revenue (fka Programmatic) Y/Y Growth								
B of A (After)	41.8%	25.8%	10.3%	21.1%	15.5%	17.8%	8.5%	13.2%
B of A (Before)					9.9%	16.1%	15.5%	9.2%
STREET					11.5%	16.6%	15.7%	13.4%
Delta vs. STREET					4.0%	1.2%	-7.2%	-0.2%
Measurement revenue (fka Advertiser Direct)								
B of A (After)	155	41	45	48	53	186	223	273
B of A (Before)					54	187	224	281
STREET					52	186	223	267
Delta vs. STREET					0.7%	0.2%	0.1%	2.1%
Measurement revenue (fka Advertiser Direct) Y/Y Growth								
B of A (After)	5.9%	17.6%	22.6%	22.8%	17.6%	20.1%	20.1%	22.0%
B of A (Before)					20.0%	20.8%	19.8%	25.3%
STREET					16.9%	19.9%	20.2%	19.5%
Delta vs. STREET					0.8%	0.2%	-0.2%	2.5%
Publisher revenue (fka Supply side)								
B of A (After)	63	14	16	16	18	64	68	71
B of A (Before)					18	63	66	72
STREET					17	62	66	72
Delta vs. STREET					3.7%	3.2%	2.6%	-0.7%
Publisher revenue (fka Supply side) Y/Y Growth								
B of A (After)	46.7%	2.2%	0.9%	1.2%	2.6%	1.7%	6.5%	5.0%
B of A (Before)					-0.8%	0.8%	4.3%	9.1%
STREET					-1.1%	-1.4%	7.1%	8.6%
Delta vs. STREET					3.7%	3.2%	-0.6%	-3.6%
Operating Income - NON-GAAP								
B of A (After)	60	21	22	23	32	98	118	154
B of A (Before)					32	99	133	167
STREET					33	102	129	163
Operating Margin - NON-GAAP								
B of A (After)	14.7%	19.7%	19.6%	19.2%	23.8%	20.7%	22.0%	24.9%
B of A (Before)					24.6%	20.9%	24.4%	26.4%
STREET					24.9%	21.6%	23.5%	25.9%

Exhibit 2: BofA vs Street Forecasts, FY22 to FY25

We lower FY Revenue/EBITDA estimates to reflect pricing headwinds from several contract renewals of measurement customers

	2022	23Q1	23Q2	23Q3	23Q4	2023	2024E	2025E
Adj. EBITDA								
B of A (After)	127	34	37	41	48	160	175	206
B of A (Before)					46	158	187	219
STREET					46	158	186	223
Delta vs. STREET					2.8%	0.8%	-6.1%	-7.3%
GUIDE						151	175	-
Adj. EBITDA Margin %								
B of A (After)	31.0%	32.1%	32.9%	33.7%	35.4%	33.6%	32.7%	33.3%
B of A (Before)					35.0%	33.5%	34.2%	34.7%
STREET					35.2%	33.6%	34.0%	35.3%
Delta vs. STREET					0.2%	0.1%	-1.3%	-1.9%
GUIDE						32.7%	32.7%	
Free Cash Flow								
B of A (After)	56	15	21	13	49	98	101	141
B of A (Before)					24	72	109	137
STREET					34	88	133	169
Delta vs. STREET					46.5%	11.4%	-24.2%	-16.9%

Source: Company Reports, BofA Global Research estimates

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Exhibit 3: Comparable Company Analysis - Global AdTech & Self Attributing Networks

Our comparator set includes AdTech companies and Self Attributing Networks

			EV/Sales			Sales	EV/EBITDA			EBITDA				
Company	Ticker	Price	(Consensus)			CAGR	Consensus			CAGR	EBITDA Margin			
			2023E	2024E	2025E	CY23-CY25	2023E	2024E	2025E	CY23-CY25	2023E	2024E	2025E	
Advertising Technology														
Roku	ROKU US	\$63.78	2.2x	2.0x	1.8x	12%	1799.5x	81.7x	32.2x	648%	0%	2%	5%	
Trade Desk	TTD US	\$85.08	21.6x	17.6x	14.5x	22%	54.5x	43.9x	35.3x	24%	40%	40%	41%	
Unity Software, Inc.	U US	\$30.52	7.0x	8.5x	7.6x	(3%)	34.4x	37.7x	25.0x	17%	20%	23%	30%	
DoubleVerify	DV US	\$42.02	13.0x	10.5x	8.6x	23%	41.1x	34.1x	27.2x	23%	32%	31%	32%	
Live Ramp	RAMP US	\$35.90	3.5x	3.2x	2.9x	9%	31.8x	19.7x	15.5x	43%	11%	16%	19%	
Integral Ad Sciences	IAS US	\$17.21	6.3x	5.4x	4.7x	16%	18.9x	16.0x	13.4x	19%	34%	34%	35%	
Zeta Global	ZETA US	\$10.84	3.2x	2.7x	2.3x	17%	18.5x	14.7x	11.6x	26%	17%	19%	20%	
AppLovin Corp.	APP US	\$60.73	7.7x	6.2x	5.6x	17%	16.9x	12.1x	10.7x	26%	46%	51%	52%	
Viant	DSP US	\$8.75	1.6x	1.4x	1.3x	13%	13.2x	10.7x	8.2x	27%	12%	13%	15%	
Adtheorant	ADTH US	\$3.12	1.3x	1.2x	1.1x	10%	11.2x	9.6x	8.0x	18%	12%	12%	13%	
Magnite	MGNI US	\$11.51	3.1x	2.8x	2.5x	10%	10.6x	9.6x	8.0x	15%	29%	30%	32%	
PubMatic	PUBM US	\$20.47	2.9x	2.6x	2.3x	11%	9.9x	8.6x	7.2x	18%	29%	30%	33%	
Taboola	TBLA US	\$4.74	1.2x	0.9x	0.7x	28%	21.5x	8.5x	6.2x	87%	5%	11%	12%	
Digital Turbine, Inc.	APPS US	\$3.38	1.2x	1.2x	1.1x	4%	7.1x	6.9x	5.9x	10%	17%	17%	19%	
Criteo	CRTO US	\$32.97	1.4x	1.3x	1.3x	4%	4.8x	4.5x	4.2x	6%	30%	30%	30%	
Median			3.1x	2.7x	2.3x	12%	18.5x	12.1x	10.7x	23%	20%	23%	30%	
Average			5.1x	4.5x	3.9x	13%	139.6x	21.2x	14.6x	67%	22%	24%	26%	
Index			6.4x	5.7x	5.0x	14%	27.9x	21.7x	17.6x	26%	23%	26%	28%	

Priced at the close, 27 February 2024. **Source:** Visible Alpha, Factset, Bloomberg

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Price objective basis & risk

Integral Ad Science Holding Corp. (IAS)

Our \$18 PO is based on 18x FY24 EBITDA, consistent with the weighted average valuation of AdTech stocks. Our target multiple of 18x represents a discount to DV, IAS' main competitor, justified by slower forecasted growth.

Downside risks to our PO include: 1) significant worsening of macroeconomic conditions that lead to a decline in ad transaction volume, 2) inability to retain market share under the competitive pressure from DV, 3) slower than expected adoption of new Optimization products, 4) potential for a price-based competition with DV

Analyst Certification

I, Omar Dessouky, CFA, 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.

US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	DoubleVerify Holdings, Inc.	DV	DV US	Omar Dessouky, CFA
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Integral Ad Science Holding Corp.	IAS	IAS US	Omar Dessouky, CFA
	LegalZoom	LZ	LZ US	Michael McGovern
	Match Group	MTCH	MTCH US	Curtis Nagle, CFA
	Meta Platforms Inc	META	META US	Justin Post
	Pinterest	PINS	PINS US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Squarespace, Inc.	SQSP	SQSP US	Michael McGovern
	Uber	UBER	UBER US	Justin Post
	Udemy Inc	UDMY	UDMY US	Curtis Nagle, CFA
	Vivid Seats	SEAT	SEAT US	Curtis Nagle, CFA
	Wayfair	W	W US	Curtis Nagle, CFA
	Wix.com	WIX	WIX US	Michael McGovern
NEUTRAL				
	ACV Auctions	ACVA	ACVA US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	Beyond Inc	BYON	BYON US	Curtis Nagle, CFA
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	Bumble	BMBL	BMBL US	Curtis Nagle, CFA
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA
	Duolingo	DUOL	DUOL US	Curtis Nagle, CFA
	eBay	EBAY	EBAY US	Justin Post
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	Expedia	EXPE	EXPE US	Justin Post
	Instacart	CART	CART US	Justin Post
	Magnite, Inc.	MGNI	MGNI US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA
UNDERPERFORM				
	Chewy Inc	CHWY	CHWY US	Curtis Nagle, CFA
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern



US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	Peloton	PTON	PTON US	Curtis Nagle, CFA
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
	Shutterstock	SSTK	SSTK US	Curtis Nagle, CFA

iQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

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

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

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

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

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

Basic EBIT + Depreciation + Amortization

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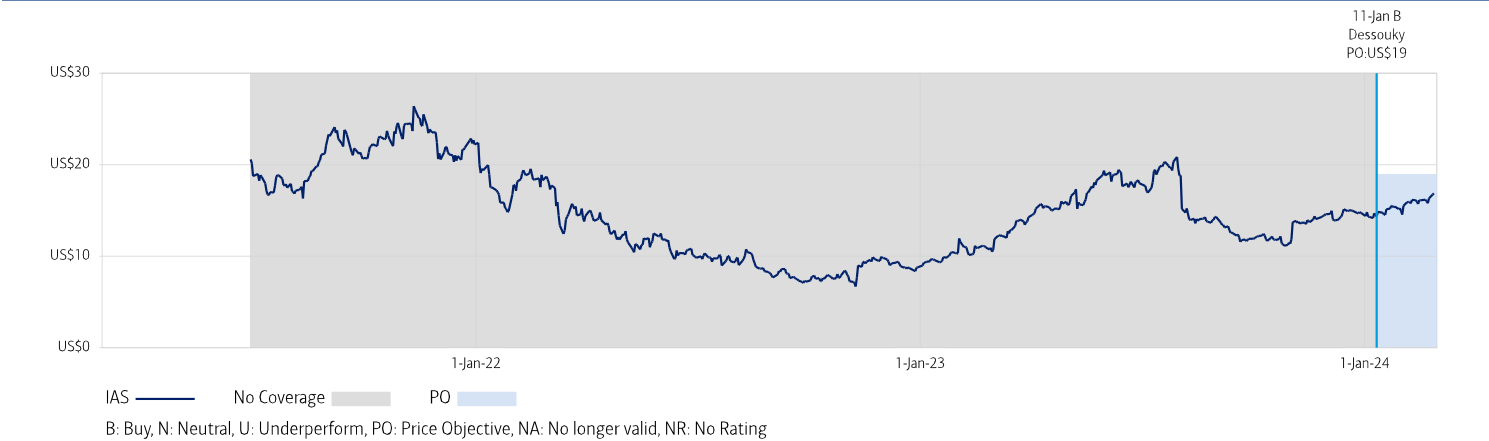
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Integral Ad Science (IAS) Price Chart



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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	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%

^{R1} 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 ^{R2}
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Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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