

# Boeing

# Intervention: all-hands-on Boeing's flight deck

Reiterate Rating: NEUTRAL | PO: 225.00 USD | Price: 209.38 USD

### Boeing's engineering strength in the spotlight

The MAX crashes in 2018 sparked concerns about the strength of Boeing's engineering. The 787 development was highly outsourced, both MAX and 787 fleets were grounded within the first year and a half after entry into service, the 777X program is delayed and Boeing has done little military aircraft development on its own. The pandemic exodus of more experienced employees only emphasized that engineering vulnerability. Pre-COVID, >50% of the IAM 751 members had 6+ years of experience, post-pandemic it is <25% (see our 26 Jan note).

# FAA intervention: short term pain, possible long term gain

The recently announced FAA freeze of 737 production (see our 25 Jan note) puts significant pressure on Boeing's 2025/2026 production and FCF targets. However, we think the forced slowdown will ultimately benefit Boeing in the long term. The slowdown will enable Boeing, its suppliers, and regulators to focus on quality assurance and best-inclass production practices. In our view, the resulting stronger production system should ultimately allow to ramp up 737 rates beyond 50 more effectively with less rework.

# Strong demand & duopoly support mid-term market share

Boeing is one of two players in a global duopoly for commercial aircraft which are in short supply. The robust demand environment coupled with OEMs struggling to meet customer orders should enable Boeing to continue benefiting from its albeit shrinking share of the global duopoly for commercial aircraft. We reiterate our Neutral rating.

# New model is the only change to regain #1 position

Despite the industry and investors' skepticism about Boeing's success on developing a new aircraft, we continue to think a new middle-of-the-market aircraft is the only way for Boeing to regain the #1 position in the narrowbody market. See our report <u>A case remains for Boeing to develop a new midsize aircraft 07 September 2023</u>.

# Increasing 2024-25e EPS on strong commercial aftermarket

Boeing Global Services (BGS) reported a strong quarter and we expect BGS to continue to benefit from strong aero recovery. We are updating our EPS estimates mainly to reflect this strength, offset by higher interest. We raise 2024e to \$0.70 from \$0.25, 2025e to \$6.55 from \$6.35, and lower 2026e to \$8.90 from \$9.15. Maintain PO at \$225.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	(11.05)	(5.81)	0.70	6.55	8.90
GAAP EPS	(8.29)	(3.67)	2.34	8.03	10.24
EPS Change (YoY)	-17.1%	47.4%	NM	835.7%	35.9%
Consensus EPS (Bloomberg)			3.35	8.20	10.75
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	NM	NM	299.1x	32.0x	23.5x
GAAP P/E	NM	NM	89.5x	26.1x	20.4x
EV / EBITDA*	NM	183.3x	37.7x	21.3x	17.5x
Free Cash Flow Yield*	1.8%	3.5%	3.3%	4.9%	6.3%
* For full definitions of <i>IQ</i> method <sup>SM</sup> measures, see page 8.					

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Refer to important disclosures on page 9 to 11. Analyst Certification on page 7. Price
Objective Basis/Risk on page 7.

05 February 2024

#### Equity

Key Changes		
(US\$)	Previous	Current
2024E Rev (m)	82,259.1	83,300.0
2025E Rev (m)	90,209.0	90,983.0
2026E Rev (m)	95,958.4	96,530.6
2024E EPS	0.25	0.70
2025E EPS	6.35	6.55
2026E EPS	9.15	8.90

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#### Stock Data

209.38 USD
225.00 USD
25-Jan-2024
B-2-9
176.25 USD - 267.54 USD
127,750 USD / 610.1
99.9%
2573.81 USD
BA / NYS
BA US / BA.N
NA
NA
High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

# **iQ**profile<sup>™</sup> Boeing

iQmethod <sup>™</sup> – Bus Performance*					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Return on Capital Employed	-5.8%	-1.4%	6.8%	15.2%	18.6%
Return on Equity	NM	NM	NM	NM	NM
Operating Margin	-5.3%	-1.0%	4.1%	8.2%	9.8%
Free Cash Flow	2,290	4,433	4,217	6,324	8,030
i <b>Q</b> method <sup>™</sup> – <b>Quality of Earnings*</b>					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash Realization Ratio	NM	NM	13.5x	2.0x	1.8x
Asset Replacement Ratio	0.6x	0.8x	0.8x	0.9x	0.9
Tax Rate	NM	NM	4.1%	13.0%	19.0%
Net Debt-to-Equity Ratio	NM	NM	NM	NM	NM
Interest Cover	-1.5x	-0.4x	1.4x	3.4x	4.6>
Income Statement Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Sales	66,608	77,794	83,300	90,983	96,531
% Change	6.9%	16.8%	7.1%	9.2%	6.1%
Gross Profit	3,530	7,724	12,288	16,663	19,083
% Change	15.8%	118.8%	59.1%	35.6%	14.5%
EBITDA	(1,568)	1,088	5,290	9,359	11,379
% Change	-106.9%	NM	386.3%	76.9%	21.6%
Net Interest & Other Income	(1,475)	(1,232)	(1,863)	(1,772)	(1,662
Net Income (Adjusted)	(6,577)	(3,521)	429	4,032	5,506
% Change	-18.5%	46.5%	NM	840.4%	36.6%
Free Cash Flow Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Net Income from Cont Operations (GAAP)	(5,171)	(2,262)	1,435	4,943	6,334
Depreciation & Amortization	1,979	1,861	1,912	1,883	1,872
Change in Working Capital	4,139	4,089	422	(653)	(94
Deferred Taxation Charge	NA	NA	NA	NA	N/
Other Adjustments, Net	2,565	2.272	2,000	1,800	1,620
Capital Expenditure	(1,222)	(1,527)	(1,552)	(1,649)	(1,702
Free Cash Flow	2,290	4,433	4,217	6,324	8,030
% Change	NM	93.6%	-4.9%	49.9%	27.0%
Share / Issue Repurchase	50	45	0	0	(
Cost of Dividends Paid	0	0	0	0	(
Change in Debt	(1,276)	(5,141)	(4,000)	(5,500)	(8,000
Balance Sheet Data (Dec)					
(US\$ Millions)	2022A	2023A	2024E	2025E	2026
Cash & Equivalents	14,614	12,691	12,908	13,732	13,762
Trade Receivables	2,517	2,649	2,510	2,991	3,438
Other Current Assets	92,392	93,935	87,867	84,587	82,022
Property, Plant & Equipment	10,550	10,661	10,557	10,568	10,629
Other Non-Current Assets	17,027	17,076	16,820	16,576	16,344
Total Assets	137,100	137,012	130,662	128,453	126,195
Short-Term Debt	5,190	5,204	5,204	5,204	5,204
Other Current Liabilities	84,862	90,623	87,247	86,079	85,851
Long-Term Debt	51,811	47,103	43,103	37,603	29,603
Other Non-Current Liabilities	11,085	11,310	10,901	10,417	10,053
		154,240	146,455	139,303	130,711
Total Liabilities	152,948	•		•	•
	152,948 (15,848) 137,100	(17,228) 137,012	(15,793) 130,662	(10,850) 128,453	(4,516) 126,195

#### **Company Sector**

Aerospace

#### **Company Description**

Boeing (BA) is the world's leading aerospace company and the largest manufacturer of commercial jetliners and military aircraft combined. The different segments in the company are Commercial Airplanes, Boeing Defense, Space & Security (BDS), Boeing Global Services, and Boeing Capital Corporation, which provide financial solutions facilitating sale and delivery of Boeing commercial and military aircraft, satellites, and launch vehicles. BA is based in Arlington, Virginia.

#### **Investment Rationale**

Boeing is participating in the commercial aerospace recovery, as part of the global duopoly in large commercial aircraft manufacturing. However, there are some company-specific challenges. Boeing is confronted with losing market share in the narrowbody jet market, refocusing it on engineering excellence and execution, and deleveraging its balance sheet.

#### Stock Data

Average Daily Volume

12,292,527

### Focus on quality control measures post 737-9 accident

After the Alaska Airlines 737-9 incident, Boeing began implementing more rigorous quality controls measures. The FAA approved a detailed inspection protocol for the 737-9 variant, ensuring comprehensive examinations. Currently, all 737-9 are returning to service.

Boeing implemented specific actions, including running the door plug through every position at Wichita and Boeing's lines, with added inspection in each turn, demonstrating a commitment to enhanced scrutiny.

Internally, Boeing implemented additional quality controls and inspections, issued bulletins to suppliers emphasizing conformance, and opened factories to 737 operators for additional direct oversight. A quality production stand-down across Renton, Seattle, and Moses Lake was conducted for a day two weeks ago, demonstrating an intensified focus on safety and quality.

Additionally, an outside expert advisor was appointed for an independent review of Boeing's commercial airplane quality management system.

### BCA reported mgns turn positive for 1st time since 1Q19

Boeing's Commercial segment exhibited robust growth, with revenue increasing 13% Y/Y (above BofAe of 9%), driven by strong deliveries and a substantial backlog valued at \$441bn, up 34% Y/Y.

The operating margin turned positive at 0.4%, exceeding BofAe of (4.6%), influenced by 1) a return to normal 737 delivery levels, 2) favorable mix, 3) reduced abnormal costs associated with the 787 and 777X production, and 4) increased accounting quantity levels up by 100 units for 787 and 400 units for 737).

However, Commercial unit cost accounting continues to print negative margins, despite the positive cash contribution from declining 787 deferred costs.

# But surge in 737 deferred costs suggest softer cash mgn

737 accounting quantity increased from a steady 400-unit rise in the previous three years to total 800 units in 2023. The increase is in line with the 883 net orders accumulated through 2023. We remind investors that usually an increase in accounting block implies higher margin recognition in the P&L for each and all the remaining future deliveries.

In line with the still challenged cash profitability at Commercial, the 737 program experienced a noteworthy shift with deferred production costs. These doubled to \$6.0bn in 2023 (from \$3.0bn in 2022). We will keep an eye on these 737 deferred production costs levels as a proxy for 737 current profitability levels.



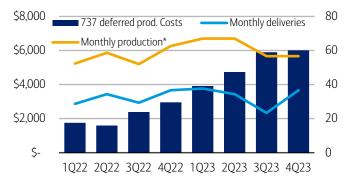
#### Exhibit 1: 737 deferred production costs doubled in 2023

To \$6bn vs. \$3bn in 2022



# Exhibit 2: Deferred production up by ~\$735mn each quarter

On average since 3Q22



**Source:** BofA Global Research estimates, company report | \* Monthly production implied in the reported level of inventories

BofA GLOBAL RESEARCH

### 737 rate at 38/mo: BofA still thinks avg 31/mo reasonable

BofA GLOBAL RESEARCH

Despite recent challenges from the <u>recent 737-9 accident (see our 7 Jan note)</u>, the 737 production rate reached the targeted 38/month output capacity. This is encouraging when contemplating the recently announced FAA mandate to freeze production rate at "current levels" (see our <u>25 Jan</u> note). We note, however, that Boeing has only been able to roll out 737s at average mid-20s per month for the last four months. We continue to think an average production rate of 31 per month is reasonable considering a slow start to the year (in line with latest output rate) and 2H24 monthly rates in the mid-to-high 30s.

# BofAe sees half of 737s in inventory to be shipped in '24

The company ended the year with 200 737 MAXs in inventory (vs. 250 in 4Q22). 4Q23 inventory includes:

- 140 737-8s built prior to 2023. These are mainly related to customers in China and India. Boeing expects to deliver most of these airplanes by year-end.
- 25 airplanes produced in 2023, still in work in progress. Boeing also anticipates delivering these in 2024.
- 35 737-7/-10s. As these aircraft are awaiting certification, they are not eligible for delivery.

The resumption of deliveries to Chinese customers is a huge catalyst in qualifying 80+ aircraft for delivery. However, we are more conservative on how many total aircraft can Boeing ultimately deliver before any non-critical FAA requirement forces them to make modifications in all inventories. On a net basis, we only see 737 inventories coming down by mid-80 units.

# 787 at 5/mo rate, BofAe ramp to 10/mo might take longer

On 787, Boeing achieved a transition to rate 5 per month in 4Q23. Management continues to expect a gradual increase to rate 10 by 2025-26. However, we continue to think that a monthly production at 7 per month is more reasonable in the near term. This is the peak rate that South Carolina facility has produced 787s at, and the upside to 10 per month might be sloppier and more challenging than planned (particularly under increased FAA scrutiny across aero programs).

#### Accounting block upsize suggests 2-3ppts incremental margin print in the P&L

The accounting quantity for the 787 increased by 100 units in 2023, in line with the last two previous years' additions. Assuming the increased pricing and margins on these added units (considering favorable mix towards more profitable 787-10 variant), the 100

units add up suggests 2-3ppts incremental margins to be booked through the income statement.

### BofAe 30 787s to come off inventory in 2024

Boeing closed 2023 with 60 787 airplanes in inventory. 50 of those aircraft still require rework. The program booked \$77mn of abnormal costs in the quarter and have approximately \$300mn left to go that will wind down by year end.

According to management, the rework process is steadily advancing, and the company anticipates delivering most of these by year-end. This would enable BA to finally shut down its shadow factories and reassign employees to production lines. We expect 90 787 deliveries in 2024, that implies a net decrease of 30 aircraft in inventory.

### 777X resumed production, BofAe \$2.3bn investment in '24

On 777X, Boeing resumed production in the quarter. The program timeline remains unchanged and BA production rates remain on schedule. 777X accounting block increased by 100 units to more than 400 aircraft. The increase is in line with 2023 orders.

4Q23 saw the last tranche of 777X abnormal costs as after resuming production (booking of \$71mn). However, management highlighted a substantial investment will come ahead. We expect a ~\$2.3bn headwind from inventory build up, R&D and deferred production costs.

# BDS's unprofitable programs continue to pressure FCF

Boeing Defense, Space & Security (BDS) backlog and 4Q revenues benefited from \$8bn in quarterly orders, including a significant US Air Force award for 15 KC-46 tankers. Core margins impressed slightly to 0.6% from 0.2% in 3Q23. However, the quarter was impacted by \$139mn additional charges on fixed price development programs, unfavorable performance, and mix on other projects.

For 2023, BDS cash burn was higher than Boeing's original target of \$500-1,000mn. Despite Boeing's expectations to get BDS back to high single-digit margins by 2025-26, about 50% of 2022-2023 cumulative of \$6.3bn remain to come out of cash flow. This puts pressure to the overall company target \$10bn FCF.

#### Fighter & satellites losing FCF in excess of \$1bn

Our back of the envelope calculation implies fighter and satellite programs burn margins at around 20% in 2023, or a \$1bn cash headwind. We expect BDS to continue to burn cash in 2024e, with return to breakeven in 2025e.

- Boeing's core business, constituting 60% of revenue, remains robust with mid to high single digit margins.
- The other 25% of revenue, which is primarily comprised of fighter and satellite programs, saw stabilization at the end of the year. BA expects these programs to return to historical levels as new contracts are undertaken with tighter underwriting disciplines in the 2025-26 timeframe.
- Lastly, Boeing is focused on maturing the programs that make up the remaining 15% of revenue, aiming for improvement as it retires these challenged programs.

# BGS to continue to benefit from strong aero recovery

Boeing Global Services (BGS) reported another strong quarter, securing \$6bn in orders and boosting the backlog to \$20bn, up 3% Y/Y. We continue to expect this segment to benefit from strong aftermarket demand and air-traffic growth. Commercial aftermarket was up 15% in 2023. BGS remains well positioned to generate strong FCF in 2024.

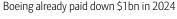


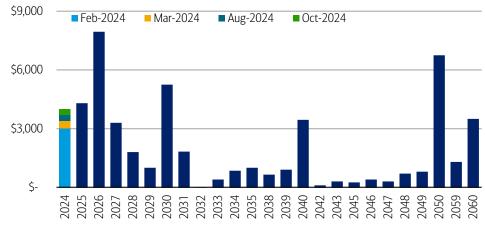
### Net leverage to normalize by ~2027e

Boeing closed the quarter with a robust cash position, totaling \$16bn in cash and cash equivalents and \$13bn in short term investments.

The company already paid down \$1bn of maturing debt and plans to cancel another \$3bn coming due this month, using available cash on hand. Boeing maintains access to \$10bn in undrawn revolving facilities, reinforcing its strong liquidity position.

Exhibit 3: Boeing has \$4bn debt due in 2024e and \$4.3bn in 2025





Source: BofA Global Research estimates, Bloomberg

BofA GLOBAL RESEARCH

# Maintain PO unchanged at \$225

We are rolling our valuation to reflect 2025 multiples. Our PO of \$225 is based on the 2026e FCF of \$13/share and relative discount to the S&P500 of 0.9x (vs. prior 0.8x). Our relative valuation is about one standard deviation above historical average (vs. prior half) as 2025e relative multiples imply lower upside risks to Boeing's FCF from current levels. In our view, a multiple roughly in line with the historical average fairly reflects the looming aerospace recovery, strong demand for commercial jets, defense opportunities, and the lack of dividend.



# Price objective basis & risk

#### Boeing (BA)

Our PO of \$225 is based on the 2026e FCF of \$13/share and relative discount to the S&P500 of 0.9x (about one standard deviation above historical average). In our view, a multiple roughly in line with the historical average fairly reflects the looming aerospace recovery, strong demand for commercial jets, defense opportunities, and the lack of dividend.

Upside risks to our PO are the possible involvement of an activist shareholder, better-than-expected cash margins at 787 and/or MAX programs, the company's ability to sustain 777 delivery rates through the bridge to 777X, lower-than-expected 777X, future single-aisle and middle-of-the-market aircraft development costs.

Downside risks to our PO are as follows: Tight competition for engineering talent in the current labor market could make new product development more challenging. Execution risk on new programs and production ramp-ups (737MAX, 777X, KC-46) could result in cost overruns and margin contractions. Changes in trade policy that end in a trade war. A sharp and prolonged surge in oil prices to above \$100/bbl would be negative to aircraft demand. A downturn in commercial aviation, due to an exogenous factor, could adversely affect financial results. As aircraft are priced in USD, an unexpected rapid revaluation in the dollar could significantly affect order activity. Also, a strong dollar could improve Airbus' competitive advantage. 787 fixes could take longer than expected.

# **Analyst Certification**

I, Ronald J. Epstein, 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.

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Cadre Holdings Inc       CDRE       CDRE US       Ronald J. Epstein         Crane Co.       CR       CR US       Ronald J. Epstein         Embraer       ERJ       ERJ US       Ronald J. Epstein         General Dynamics       GD       GD US       Ronald J. Epstein         HEIC Corporation       HEI       HEI US       Ronald J. Epstein         Howmet Aerospace Inc.       HWM       HWM US       Ronald J. Epstein         KBR       KBR US       Mariana Perez Mora         Leidos Holdings       LDOS       LDOS US       Mariana Perez Mora         Leonardo DRS, Inc.       DRS       DRS US       Ronald J. Epstein         Northrop Grumman       NOC       NOC US       Ronald J. Epstein         Northrop Grumman       NOC       NOC US       Ronald J. Epstein         Parsons Corporation       PSN       PSN US       Mariana Perez Mora         RBC Bearings Inc       RBC       RBC US       Ronald J. Epstein         Teledyne Technologies Inc       TDY       TDY US       Ronald J. Epstein         Triumph Group Inc.       TG       TG US       Ronald J. Epstein         Triumph Group Inc.       TG US       Ronald J. Epstein         Triumph Group Inc.       TG US       Ron		BWX Technologies, Inc.	BWXT	BWXT US	Ronald J. Epstein
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Garmin GRMN GRMN US Ronald J. Epstein		•	BA	BA US	
, ,		•	GRMN	GRMN US	- 1
		Hexcel Corporation	HXL	HXL US	



#### **US - Aerospace and Defense Coverage Cluster**

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	L3Harris	LHX	LHX US	Ronald J. Epstein
	Lockheed Martin	LMT	LMT US	Ronald J. Epstein
	RTX Corp	RTX	RTX US	Ronald J. Epstein
	Textron	TXT	TXT US	Ronald J. Epstein
UNDERPERFORM				
	Bombardier	BDRBF	BDRBF US	Ronald J. Epstein
	Bombardier Inc.	YBBD B	BBD/B CN	Ronald J. Epstein
	CAE Inc.	YCAE	CAE CN	Ronald J. Epstein
	CAE Inc.	CAE	CAE US	Ronald J. Epstein
	Huntington Ingalls Industries	HII	HII US	Ronald J. Epstein
	Mercury Systems	MRCY	MRCY US	Ronald J. Epstein
	Spirit AeroSys-A	SPR	SPR US	Ronald J. Epstein
RSTR				
	Rocket Lab	RKLB	RKLB US	Ronald J. Epstein

# **IQ**method<sup>™</sup> Measures Definitions

<b>Business Performance</b>	Numerator	Denominator
Return On Capital Employed	NOPAT = (EBIT + Interest Income) $\times$ (1 $-$ Tax Rate) + Goodwill Amortization	Total Assets — Current Liabilities + ST Debt + Accumulated Goodwill Amortization
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5 Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations — Total Capex	N/A
Quality of Earnings	Numerator	Denominator
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt — Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit	Numerator	Denominator
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations — Total Capex	Market Cap = Current Share Price × Current Basic Shares
Enterprise Value / Sales	EV = Current Share Price × Current Shares + Minority Equity + Net Debt +	Sales
	Other LT Liabilities	
EV / EBITDA	Enterprise Value	Basic EBIT + Depreciation + Amortization

\*\*Qmethod3\*\*is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of igmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

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# **Disclosures**

# **Important Disclosures**

#### **Boeing (BA) 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: Aerospace/Defense Electronics Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	31	62.00%	Buy	23	74.19%
Hold	11	22.00%	Hold	9	81.82%
Sell	8	16.00%	Sell	6	75.00%

#### 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<sup>R2</sup>

Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Inderperform	N/A	≥ 20%

R2Ratings 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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