

Western Digital Corporation

Cyclical improvements underway; Raising PO to \$70

Reiterate Rating: BUY | PO: 70.00 USD | Price: 60.33 USD

Beat F2Q24 Revenue and EPS guidance

WDC reported its F2Q24 results with revenue of \$3.03bn (+10% q/q) vs company guidance of \$2.95bn at the midpoint and our/Street estimates of \$2.96bn/\$2.99bn. F2Q24 EPS came in at \$(0.69) vs company guidance of \$(1.20) at the midpoint and our/Street estimates of \$(1.05)/\$(1.14). Mgmt. guided F3Q24 rev/EPS to be \$3.30bn/\$0.05 at the midpoint. As cyclical tailwinds are starting to kick in on both HDD (Cloud recovery) and NAND (careful management of capacity should drive sustained pricing upside), we view room for significant positive estimate revisions. We reiterate our Buy rating on WDC on being close to the bottom of the cycle and potential strategic options. Company remains on track to split the HDD and NAND business in 2H24.

Flash: GM +18.2% q/q in F2Q

Flash revenue of \$1.7bn in F2Q was up +7% q/q (+0% y/y). ASPs increased +10% on a blended basis (up +7% on a like-for-like basis). Flash bit shipments declined -2% q/q (+21% y/y). Flash GM came in at 7.9% in F2Q (+18.2% q/q, -6.6% y/y). The underutilization charges of \$107mn created a 6.4% headwind to Flash GM. We do not see incremental underutilization charges in Flash and expect continued strong margin recovery.

HDD: GM +190bps q/q in F2Q

In F2Q HDD rev of \$1.4bn and grew +14% q/q (-6% y/y). HDD exabyte shipments grew +14% q/q and average price per HDD grew +9% q/q to \$122. HDD GM increased +190bps q/q to 24.8% despite underutilization charges of \$49mn which created a 3.6% headwind. We model GM growing +50bps q/q in F3Q. Recovery in nearline demand (including China Hyperscale) is driving improvement in exabyte shipments and in like for like pricing, which we see as sustainable over the next few qtrs. Company expects to introduce HAMR late 2025 or early 2026 when it can produce 4TB+/platter, at which point the company expects superior TCO relative to current generation products.

Adjusting estimates; PO moves to \$70

Our F24 revenue/EPS move to \$12.6bn/\$(1.10) from \$12.1bn/\$(1.79). We raise our PO to \$70 from \$49 on 9x C25 EPS of \$8.16 (prior 14x C24 EPS of \$3.51). We lower the multiple as we roll forward to C25 based valuation as WDC is in the early stages of a deep cyclical recovery.

Estimates (Jun) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	8.22	(3.58)	(1.10)	6.88	9.21
GAAP EPS	4.74	(5.42)	(2.20)	5.59	7.77
EPS Change (YoY)	81.1%	NM	69.3%	NM	33.9%
Consensus EPS (Bloomberg)			(2.92)	4.77	5.28
DPS	0	0	0	0	0
Valuation (Jun)					
P/E	7.3x	NM	NM	8.8x	6.6x
GAAP P/E	12.7x	NM	NM	10.8x	7.8x
EV / EBITDA*	6.2x	109.5x	22.5x	6.0x	5.1x
Free Cash Flow Yield*	3.5%	-6.1%	2.7%	8.7%	15.1%

* For full definitions of *IQmethod*SM measures, see page 5.

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Timestamp: 25 January 2024 09:06PM EST

25 January 2024

Equity

Key Changes

(US\$)	Previous	Current
Price Obj.	49.00	70.00
2024E Rev (m)	12,130.1	12,594.2
2025E Rev (m)	14,597.4	15,529.5
2026E Rev (m)	17,036.3	18,058.6
2024E EPS	-1.79	-1.10
2025E EPS	5.78	6.88
2026E EPS	8.24	9.21

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Stock Data

Price	60.33 USD
Price Objective	70.00 USD
Date Established	25-Jan-2024
Investment Opinion	C-1-9
52-Week Range	31.97 USD - 60.55 USD
Mkt Val (mn) / Shares Out	19,562 USD / 324.2 (mn)
Free Float	99.4%
Average Daily Value (mn)	340.82 USD
BofA Ticker / Exchange	WDC / NAS
Bloomberg / Reuters	WDC US / WDC.QQ
ROE (2024E)	-3.1%
Net Dbt to Eqty (Jun-2023A)	43.1%
ESGMeter TM	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".

GM: Gross Margin, HDD: Hard Disk Drive
FCF: Free Cash Flow

iQprofileSM Western Digital Corporation

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	13.1%	-2.6%	0.9%	12.6%	15.0%
Return on Equity	22.7%	-9.5%	-3.1%	18.8%	20.7%
Operating Margin	17.0%	-4.8%	1.6%	20.3%	22.4%
Free Cash Flow	682	(1,201)	524	1,703	2,954

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	0.7x	NM	NM	1.1x	1.2x
Asset Replacement Ratio	1.3x	1.0x	0.2x	0.7x	0.7x
Tax Rate	11.0%	NM	NM	15.3%	15.2%
Net Debt-to-Equity Ratio	38.4%	43.1%	41.5%	22.0%	1.5%
Interest Cover	12.0x	-2.1x	0.5x	9.1x	12.8x

Income Statement Data (Jun)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	18,793	12,318	12,594	15,529	18,059
% Change	11.1%	-34.5%	2.2%	23.3%	16.3%
Gross Profit	6,188	1,938	2,532	5,728	6,980
% Change	28.1%	-68.7%	30.7%	126.2%	21.9%
EBITDA	4,115	234	1,140	4,281	5,028
% Change	32.0%	-94.3%	387.0%	275.6%	17.5%
Net Interest & Other Income	(265)	(288)	(366)	(348)	(315)
Net Income (Adjusted)	2,600	(1,143)	(360)	2,324	3,112
% Change	85.0%	NM	68.5%	NM	33.9%

Free Cash Flow Data (Jun)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	2,599	(1,143)	(360)	2,325	3,113
Depreciation & Amortization	929	828	943	1,127	981
Change in Working Capital	(1,075)	90	379	(699)	(193)
Deferred Taxation Charge	114	(34)	(46)	0	0
Other Adjustments, Net	(687)	(149)	(201)	(273)	(281)
Capital Expenditure	(1,198)	(793)	(191)	(776)	(665)
Free Cash Flow	682	-1,201	524	1,703	2,954
% Change	-39.4%	NM	NM	224.8%	73.4%
Share / Issue Repurchase	32	894	(15)	0	0
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	(1,727)	0	857	(1,000)	(1,000)

Balance Sheet Data (Jun)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	2,327	2,023	3,225	3,929	5,645
Trade Receivables	2,804	1,598	1,757	2,006	2,341
Other Current Assets	4,322	4,265	3,092	3,847	4,195
Property, Plant & Equipment	3,670	3,620	2,806	2,412	2,273
Other Non-Current Assets	13,136	12,923	13,248	13,444	13,668
Total Assets	26,259	24,429	24,129	25,637	28,123
Short-Term Debt	0	1,213	1,042	1,042	1,042
Other Current Liabilities	4,557	4,221	3,600	3,852	4,284
Long-Term Debt	7,022	5,857	6,851	5,851	4,851
Other Non-Current Liabilities	2,459	1,415	1,397	1,397	1,397
Total Liabilities	14,038	12,706	12,890	12,142	11,574
Total Equity	12,221	11,723	11,239	13,496	16,549
Total Equity & Liabilities	26,259	24,429	24,129	25,637	28,123

* For full definitions of iQmethodSM measures, see page 5.

Company Sector

IT Hardware

Company Description

Western Digital Corporation (WDC) designs, manufactures and markets hard disk drives for use in enterprise storage, servers, desktop and laptop computers, and consumer electronic devices. It also has a growing solid state drive and storage systems portfolio, and is currently the third largest enterprise SSD manufacturer. The company sells its products directly to OEMs, as well as distributors and retailers and its production capabilities are vertically integrated.

Investment Rationale

WDC should benefit from share gains in the Enterprise Capacity/Nearline HDD market and from more stability in the NAND market. We see the stock as inexpensive at current levels. Buy.

Stock Data

Average Daily Volume 5,649,282

Quarterly Earnings Estimates

	2023	2024
Q1	0.20A	-1.76A
Q2	-0.42A	-0.69A
Q3	-1.37A	0.14E
Q4	-1.98A	1.14E

Model

Exhibit 1: WDC Income Statement

We model F24 rev/EPS of \$12.6bn/\$(1.10)

	F2024E				F2025E								
(\$ Millions Except Per Share Data)	9/23	12/23	3/24E	6/24E	9/24E	12/24E	3/25E	6/25E	F2022	F2023	F2024E	F2025E	F2026E
Income Statement													
Total Revenue	\$2,750.1	\$3,031.6	\$3,314.9	\$3,497.6	\$3,698.2	\$4,011.6	\$3,827.0	\$3,992.7	\$18,792.8	\$12,318.1	\$12,594.2	\$15,529.5	\$18,058.6
HDD Revenue	1194.0	1366.9	1623.5	1734.8	1858.2	1989.4	1896.6	1944.8	9040.2	6254.9	5919.3	7689.0	8638.9
Total Other Revenue (Flash)	1556.0	1664.7	1691.4	1762.8	1840.0	2022.2	1930.4	2047.9	9753.4	6063.2	6674.9	7840.5	9419.7
Other Revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WDC Enterprise SSD Revenue	127.4	137.8	133.1	107.2	140.2	151.6	146.4	117.9	1080.2	531.4	505.6	556.1	611.7
SanDisk NAND/SSD Product Revenue	1346.6	1444.9	1476.3	1573.6	1617.8	1788.5	1702.0	1848.0	8345.2	5203.8	5841.3	6956.4	8479.9
SanDisk Licensing Revenue	82.0	82.0	82.0	82.0	82.0	82.0	82.0	82.0	328.0	328.0	328.0	328.0	328.0
Cost of Goods Sold	2638.0	2562.0	2534.7	2327.0	2419.7	2550.3	2388.7	2442.4	12605.0	10380.0	10061.7	9801.1	11078.5
Gross Profit	112.1	469.6	780.2	1170.6	1278.4	1461.3	1438.3	1550.3	6187.8	1938.1	2532.5	5728.3	6980.0
Total Operating Expense	555.0	561.0	613.9	605.9	638.2	655.9	638.6	641.3	3002.3	2532.0	2335.8	2574.0	2932.4
WDC R&D	143.0	151.0	193.2	184.2	199.8	214.1	204.3	206.3	1295.0	919.8	671.5	824.5	925.1
WDC SG&A	5.9	1.2	7.0	7.4	8.0	8.6	6.1	6.2	145.3	31.9	21.4	28.9	226.7
SanDisk Opex	481.1	483.8	488.6	489.3	505.4	508.2	503.1	503.9	1861.7	1880.3	1942.9	2020.7	2080.7
Cost Synergies	(75.0)	(75.0)	(75.0)	(75.0)	(75.0)	(75.0)	(75.0)	(75.0)	(299.7)	(300.0)	(300.0)	(300.0)	(300.0)
Operating Income (Pre Stock-based Comp Expense)	(442.9)	(91.4)	166.3	564.7	640.2	805.4	799.7	909.0	3185.5	(593.9)	196.7	3154.3	4047.7
Operating Income (Post Stock-based Comp Expense)	(519.9)	(163.4)	87.6	481.6	552.4	710.1	708.8	814.2	2859.5	(911.9)	(114.1)	2785.5	3618.8
Total Interest and Other Income/(Expenses)	(86.0)	(94.0)	(94.2)	(92.2)	(90.1)	(88.1)	(86.0)	(83.9)	(265.0)	(288.0)	(366.4)	(348.1)	(315.1)
Pretax Income	(528.9)	(185.4)	72.0	472.5	550.1	717.4	713.7	825.1	2920.5	(881.9)	(169.7)	2806.2	3732.6
Provision for Income Taxes (Credit)	25.0	25.0	10.8	70.9	82.5	107.6	107.1	123.8	322.0	237.0	131.7	420.9	559.9
Net Income (Pre Stock-based Comp Expense)	(568.9)	(224.4)	46.2	386.7	452.6	594.8	591.6	686.3	2598.5	(1142.9)	(360.4)	2325.3	3112.7
Stock-based Comp Expense (net of tax)	80.6	81.7	66.9	70.6	74.7	81.0	77.3	80.6	290.0	252.5	299.9	313.5	364.6
Net Income (Post Stock-based Comp Expense)	(649.6)	(306.1)	(20.7)	316.0	377.9	513.8	514.4	605.7	2308.5	(1395.4)	(660.3)	2011.8	2748.1
Diluted EPS (Pre Stock-based Comp Expense)	-\$1.76	-\$0.69	\$0.14	\$1.14	\$1.34	\$1.76	\$1.75	\$2.03	\$8.22	-\$3.58	-\$1.10	\$6.88	\$9.21
Diluted EPS (Post Stock-based Comp Expense)	-52.01	-50.94	-50.06	50.94	51.12	51.52	51.52	51.79	57.30	-54.37	-52.01	55.95	58.13
Diluted Weighted Average Shares	323.0	325.0	325.0	337.8	337.8	337.8	337.8	337.8	316.3	319.3	327.7	337.8	337.8
Income Statement (Cont'd)													
% of Revenues													
Gross Profit (35-40% goal)	4.1%	15.5%	23.5%	33.5%	34.6%	36.4%	37.6%	38.8%	32.9%	15.7%	20.1%	36.9%	38.7%
Opex (14-16% goal)	20.2%	18.5%	18.5%	17.3%	17.3%	16.4%	16.7%	16.1%	16.0%	20.6%	18.5%	16.6%	16.2%
WDC R&D (as % legacy revs)	10.8%	10.0%	11.0%	10.0%	10.0%	10.0%	10.0%	10.0%	6.9%	7.5%	5.3%	5.3%	5.1%
WDC SG&A (as % legacy revs)	0.4%	0.1%	0.4%	0.4%	0.4%	0.4%	0.3%	0.3%	0.8%	0.3%	0.2%	0.2%	1.3%
SanDisk Opex (as % legacy SNDK product revs)	35.7%	33.5%	33.1%	31.1%	31.2%	28.4%	29.6%	27.3%	0.0%	0.0%	0.0%	0.0%	0.0%
EBIT (Pre-Stock-based Comp) (20-25% goal)	-16.1%	-3.0%	5.0%	16.1%	17.3%	20.1%	20.9%	22.8%	17.0%	-4.8%	1.6%	20.3%	22.4%
Stock-based Comp Expense	2.8%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	1.7%	2.6%	2.5%	2.4%	2.4%
EBIT (Post-Stock-based Comp)	-18.9%	-5.4%	2.6%	13.8%	14.9%	17.7%	18.5%	20.4%	15.2%	-7.4%	-0.9%	17.9%	20.0%
Pretax Income	-19.2%	-6.1%	2.2%	13.5%	14.9%	17.9%	18.6%	20.7%	15.5%	-7.2%	-1.3%	18.1%	20.7%
Tax Rate (10% goal)	-4.7%	-13.5%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	11.0%	-26.9%	-77.6%	15.0%	15.0%
Net Income (Operating, pre-Stock-based Comp)	-23.6%	-10.1%	-0.6%	9.0%	10.2%	12.8%	13.4%	15.2%	12.3%	-11.3%	-5.2%	13.0%	15.2%
Net Income (Operating, post-Stock-based Comp)	-20.7%	-7.4%	1.4%	11.1%	12.2%	14.8%	15.5%	17.2%	13.8%	-9.3%	-2.9%	15.0%	17.2%
% Growth Rates													
Revenues (Y/Y)	(26%)	(2%)	18%	31%	34%	32%	15%	14%	11%	(34%)	2%	23%	16%
Opex (Y/Y)	(19%)	(15%)	2%	4%	15%	17%	4%	6%	3%	(16%)	(8%)	10%	14%
R&D (Y/Y)	(50%)	(42%)	(5%)	8%	40%	42%	6%	12%	3%	(29%)	(27%)	23%	12%
SG&A (Y/Y)	1618%	(44%)	(16%)	(65%)	36%	635%	(13%)	(16%)	(12%)	(78%)	(33%)	35%	685%
Op. Income (Y/Y)	(244%)	(23%)	(155%)	(218%)	(245%)	(981%)	381%	61%	67%	(119%)	(133%)	1504%	28%
Pretax Income (Y/Y)	(328%)	1%	(120%)	(184%)	(204%)	(487%)	891%	75%	80%	(130%)	(81%)	(1753%)	33%
Net Income (Y/Y)	(990%)	67%	(111%)	(161%)	(180%)	(365%)	1180%	77%	85%	(144%)	(68%)	(745%)	34%
Op. EPS (Y/Y)	(979%)	63%	(110%)	(158%)	(176%)	(355%)	1131%	77%	81%	(144%)	(69%)	(726%)	34%
Op. EPS Option adj (Y/Y)	(1695%)	51%	(96%)	(142%)	(156%)	(261%)	(2493%)	92%	99%	(160%)	(54%)	(396%)	37%
Diluted Shares (Y/Y)	1%	2%	2%	5%	5%	4%	4%	0%	2%	1%	3%	3%	0%
Revenues (Q/Q)	3%	10%	9%	6%	6%	8%	(5%)	4%					
Gross Profit (Q/Q)	8%	319%	66%	50%	9%	14%	(2%)	8%					
Opex (Q/Q)	(5%)	1%	9%	(1%)	5%	3%	(3%)	0%					
R&D (Q/Q)	(16%)	6%	28%	(5%)	8%	7%	(5%)	1%					
SG&A (Q/Q)	(72%)	(80%)	503%	5%	8%	7%	(28%)	1%					
Op. Income (Q/Q)	(7%)	(79%)	(282%)	240%	13%	26%	(1%)	14%					

Source: Company reports, BofA Global Research estimates

BofA GLOBAL RESEARCH



Price objective basis & risk

Western Digital Corporation (WDC)

Our PO of \$70 is based on 9x C25E EPS of \$8.16. This multiple is inline with the HDD/SSD historical average of 9x, which we view as justified as it balances near-term sluggish end markets offset by longer-term improving trajectory of the business both in HDDs and in NAND. WD is a cyclical company. Near-term estimates are lower given lower demand from weaker macro.

Downside risks are: (1) unit declines in desktops and notebooks (2) worse than expected high-capacity HDD industry, (3) faster declines in NAND Flash pricing, (4) higher NAND manufacturing cost from either stronger Yen, or manufacturing yield issues, (5) lower royalty revenue from NAND licensing, (6) degradation of cash position and lower free cash flow and (7) failure of strategic actions to drive incremental value

Upside risks are: (1) significant pickup in high capacity/nearline HDDs, which could drive ASPs and gross margin higher, (2) share gains in enterprise NAND flash SSDs, (3) consumer PC refresh cycle, (4) improved free cash flow generation and faster debt pay down and (5) strategic options that drive the stock higher.

Analyst Certification

I, Wamsi Mohan, 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 - IT Hardware and Technology Supply Chain Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Amphenol	APH	APH US	Wamsi Mohan
	Apple Inc.	AAPL	AAPL US	Wamsi Mohan
	Corning Inc.	GLW	GLW US	Wamsi Mohan
	Dell Technologies Inc.	DELL	DELL US	Wamsi Mohan
	Flex Ltd.	FLEX	FLEX US	Ruplu Bhattacharya
	HP Inc.	HPQ	HPQ US	Wamsi Mohan
	International Business Machines Corp.	IBM	IBM US	Wamsi Mohan
	Jabil Inc.	JBL	JBL US	Ruplu Bhattacharya
	Nutanix Inc	NTNX	NTNX US	Wamsi Mohan
	Roku, Inc.	ROKU	ROKU US	Ruplu Bhattacharya
	Seagate Technology	STX	STX US	Wamsi Mohan
	Sensata Technologies Holdings Plc	ST	ST US	Wamsi Mohan
	TD Synnex Corp	SNX	SNX US	Ruplu Bhattacharya
	TE Connectivity Ltd.	TEL	TEL US	Wamsi Mohan
	Teradata Corporation	TDC	TDC US	Wamsi Mohan
	Western Digital Corporation	WDC	WDC US	Wamsi Mohan
NEUTRAL				
	Arrow Electronics Inc.	ARW	ARW US	Ruplu Bhattacharya
	Avnet Inc.	AVT	AVT US	Ruplu Bhattacharya
	CDW Corp	CDW	CDW US	Ruplu Bhattacharya
	Concentrix Corporation	CNXC	CNXC US	Ruplu Bhattacharya
	Hewlett-Packard Enterprise	HPE	HPE US	Wamsi Mohan
	Pure Storage	PSTG	PSTG US	Wamsi Mohan
UNDERPERFORM				
	DigitalOcean	DOCN	DOCN US	Wamsi Mohan
	NetApp Inc.	NTAP	NTAP US	Wamsi Mohan
	Sanmina Corporation	SANM	SANM US	Ruplu Bhattacharya
	Vishay Intertechnology, Inc.	VSH	VSH US	Ruplu Bhattacharya
	Vizio	VZIO	VZIO US	Wamsi Mohan

US - IT Hardware and Technology Supply Chain Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
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iQmethodSM 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 & 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

Basic EBIT + Depreciation + Amortization

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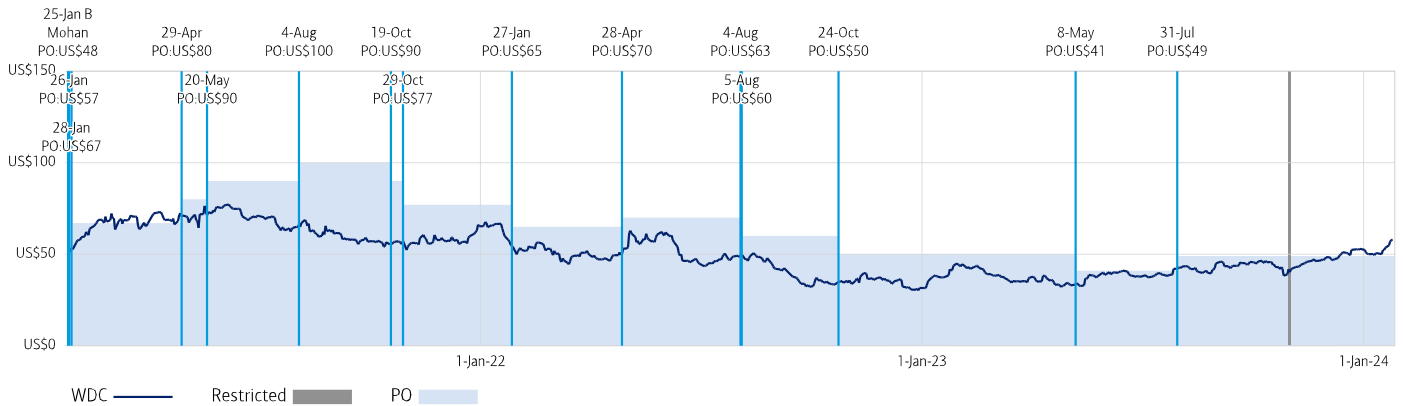
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Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

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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Neutral	≥ 0%	≤ 30%
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