IT Hardware Industry

Clear path to higher earnings; Raising PO for STX and WDC

Price Objective Change

Scenario analysis shows meaningful upside to estimates

Hard disk drive supply remains tight as manufacturers are not adding unit capacity and we see this as a structural change. As such, we continue to see demand exceeding supply, and see continued scope for OEMs to raise prices. In this note, we run a scenario analysis to judge the earnings power for Seagate (STX) and Western Digital (WDC), individually, under various scenarios of nearline dollars per Terabyte ($/TB) growth. In Figures 1 and 2, for STX and WDC, respectively, we analyze how EPS for F28 can change as we vary the 3-year CAGR for nearline $/TB (CY25-CY28) against various outcomes for operating margin, while keeping nearline exabytes (EB) fixed for F28. We also apply a 20x multiple to each EPS to see what that would imply for stock price. Reiterate Buy on WDC and STX.

STX – $45 EPS in C28 possible (not modeled), PO to $700

As shown in Fig 1, our C25 $/TB est for STX is $13 and we est C28 nearline shipments of 1.1 ZB (1130 EB). We also est C28 other HDD (non-nearline) rev of $4.3bn. We analyze what EPS for C28 would be at various combinations of 3-year nearline $/TB growth CAGR (C25-C28) and OM. We est that the current stock price of around $587 factors in a C28 EPS of $29 (derived using nearline $/TB CAGR of 4% and C28 OM of 47%) and assuming a 20x multiple (which we see appropriate for the growth and margin profile of STX). But, in a bull case, we see the potential for EPS of $45 ($/TB reaching $20 in C28 with a 3-year $/TB CAGR of 16% and OM of 55%). We raise our PO to $700 (from $605) on 29x (prior 25x) C27 EPS of $23.92. We leave our ests unchanged, but incorporate the potential upside by using a higher multiple. Our new PO of $700 factors in a nearline $/TB 3-year CAGR of 8%, OM of 51%.

WDC – $33 EPS in C28 possible (not modeled), PO to $495

As shown in Fig2, our C25 $/TB est. for WDC is $14 and we currently est C28 nearline shipments of 1.4 ZB (1396 EB). We also est C28 other HDD (non-nearline) rev of $2.0bn. We then analyze what EPS for C28 would be at various combinations of 3-year nearline $/TB growth CAGR (C25-C28) and OM. We est that the current stock price of around $400 factors in a C28 EPS of about $20 (derived using nearline $/TB CAGR of 0% (no growth) and C28 OM of 45%) and assuming a 20x multiple (which we see appropriate for the growth and margin profile of WDC). But, in a bull case, we see the potential for EPS of $33 ($/TB reaching $20 in C28 with a 3-year CAGR of 12% and OM of 55%). We raise our PO to $495 (from $415) on 29x (prior 25x) C27 EPS of $16.89. We leave our ests unchanged, but incorporate the potential upside by using a higher multiple. Our new PO of $495 factors in a nearline $/TB 3-year CAGR of 4%, OM of 51%.

Factors benefiting both companies

Visibility is improving for both companies as they institute long-term contracts. HAMR helps drive higher exabyte shipments with the same number of hard drive units. HAMR also helps drive lower cost per TB as more exabytes are stored using the same number of heads and media. The market remains an oligopoly (with three OEMs providing hard disk drives) and we see low threat of new entrants coming into the market.

27 April 2026

Equity
United States
IT Hardware

Wamsi Mohan
Research Analyst
BofAS
+1 646 855 3854
wamsi.mohan@bofa.com

Ruplu Bhattacharya
Research Analyst
BofAS
+1 646 855 0315
ruplu.bhattacharya@bofa.com

Aisling Grueninger
Research Analyst
BofAS
+1 646 855 4273
aisling.grueninger@bofa.com

Ryan Seungin Choi
Research Analyst
BofAS
+1 646 743 0587
ryan.choi2@bofa.com

Ticker	Prior PO	New PO
STX	$605	$700
WDC	$415	$495

Source: BofA Global Research estimates

BofA GLOBAL RESEARCH

Abbreviations:

SBC: Stock-based compensation
TB: Terabytes
EB: Exabytes
HAMR: Heat Assisted Magnetic Recording
OEM: Original Equipment Manufacturer

Refer to important disclosures on page 6 to 9. Analyst Certification on page 4. Price Objective Basis/Risk on page 4.

Scenario analysis

Figure 1: STX – F28 EPS could approach $45 with 3-year nearline $/TB CAGR of 16% and OM of 55%
Revenues in $mn, stock price and EPS in USD

Base Year:	**2025**
End Year:	2028
Growth periods:	3
2025 $/TB	$13
2028 interest/other ($mn)	($200)
2028 tax rate (%)	25%
2028 share count (mn)	245

		Nearline $/TB CAGR CY25-CY28							
	Nearline $/TB growth	**0%**	4%	8%	12%	16%	20%	24%	Increments **4%**
	Nearline $/TB	$13	$15	$16	$18	$20	$22	$25	
	Nearline EB CY28	1,130	1,130	1,130	1,130	1,130	1,130	1,130	
	Nearline Revenue CY28	$14,687	$16,521	$18,502	$20,635	$22,926	$25,380	$28,003	
	Other HDD Revenue CY28	$4,316	$4,316	$4,316	$4,316	$4,316	$4,316	$4,316	
	Revenue STX Total CY28	$19,003	$20,837	$22,818	$24,951	$27,241	$29,696	$32,319	
Op. Margin, ex SBC CY28	Implied stock price C28 EPS (ex SBC)								Multiple **20.0x**
47%	Implied stock price	$535	$587	$644	$706	$772	$842	$918	
	C28 EPS (ex SBC)	$26.73	$29.37	$32.22	$35.29	$38.58	$42.11	$45.89	
49%	Implied stock price	$558	$613	$672	$736	$805	$879	$957	
	C28 EPS (ex SBC)	$27.89	$30.64	$33.61	$36.81	$40.25	$43.93	$47.87	
51%	Implied stock price	$581	$638	$700	$767	$838	$915	$997	
	C28 EPS (ex SBC)	$29.06	$31.92	$35.01	$38.34	$41.92	$45.75	$49.85	
53%	Implied stock price	$604	$664	$728	$797	$872	$951	$1,036	
	C28 EPS (ex SBC)	$30.22	$33.20	$36.41	$39.87	$43.59	$47.57	$51.82	
55%	Implied stock price	$628	$689	$756	$828	$905	$988	$1,076	
	C28 EPS (ex SBC)	$31.38	$34.47	$37.81	$41.40	$45.25	$49.39	$53.80	
57%	Implied stock price	$651	$715	$784	$858	$938	$1,024	$1,116	
	C28 EPS (ex SBC)	$32.55	$35.75	$39.20	$42.92	$46.92	$51.20	$55.78	
59%	Implied stock price	$674	$740	$812	$889	$972	$1,060	$1,155	
	C28 EPS (ex SBC)	$33.71	$37.02	$40.60	$44.45	$48.59	$53.02	$57.76	
61%	Implied stock price	$697	$766	$840	$920	$1,005	$1,097	$1,195	
	C28 EPS (ex SBC)	$34.87	$38.30	$42.00	$45.98	$50.26	$54.84	$59.74	
63%	Implied stock price	$721	$791	$868	$950	$1,038	$1,133	$1,234	
	C28 EPS (ex SBC)	$36.04	$39.57	$43.39	$47.51	$51.92	$56.66	$61.72	

Source: Company reports, BofA Global Research estimates
Each cell in the table shows the potential CY28 EPS (bottom value), and implied stock price at that EPS using a 20x multiple (top-value)

BofA GLOBAL RESEARCH

Figure 2: WDC – F28 EPS could approach $33 with 3-year nearline $/TB CAGR of 12% and OM of 55%

Revenues in $mn, stock price and EPS in USD

Base Year:	**2025**
End Year:	2028
Growth periods:	3
2025 $/TB	$14
2028 interest/other ($mn)	$200
2028 tax rate (%)	25%
2028 share count (mn)	375

Op, Margin, ex SBC CY28		**Nearline $/TB CAGR CY25-CY28**							
	Nearline $/TB growth	**0%**	4%	8%	12%	16%	20%	24%	Increments **4%**
	Nearline $/TB	$14	$16	$18	$20	$22	$24	$27	
	Nearline EB CY28	1,396	1,396	1,396	1,396	1,396	1,396	1,396	
	Nearline Revenue CY28	$19,541	$21,981	$24,616	$27,454	$30,502	$33,767	$37,258	
	Other HDD Revenue CY28	$2,036	$2,036	$2,036	$2,036	$2,036	$2,036	$2,036	
	Revenue WDC Total CY28	$21,577	$24,017	$26,652	$29,490	$32,537	$35,803	$39,293	
	Implied stock price C28 EPS (ex SBC)								Multiple
45%		$396 $19.82	$440 $22.02	$488 $24.39	$539 $26.94	$594 $29.68	$652 $32.62	$715 $35.76	**20.0x**
47%		$414 $20.68	$460 $22.98	$509 $25.45	$562 $28.12	$620 $30.99	$681 $34.05	$747 $37.34	
49%		$431 $21.55	$479 $23.94	$530 $26.52	$586 $29.30	$646 $32.29	$710 $35.49	$778 $38.91	
51%		$448 $22.41	$498 $24.90	$552 $27.58	$610 $30.48	$672 $33.59	$738 $36.92	$810 $40.48	
53%		$465 $23.27	$517 $25.86	$573 $28.65	$633 $31.66	$698 $34.89	$767 $38.35	$841 $42.05	
55%		$483 $24.13	$536 $26.82	$594 $29.72	$657 $32.84	$724 $36.19	$796 $39.78	$872 $43.62	
57%		$500 $25.00	$556 $27.78	$616 $30.78	$680 $34.02	$750 $37.49	$824 $41.22	$904 $45.19	
59%		$517 $25.86	$575 $28.74	$637 $31.85	$704 $35.20	$776 $38.79	$853 $42.65	$935 $46.77	
61%		$534 $26.72	$594 $29.70	$658 $32.92	$728 $36.38	$802 $40.10	$882 $44.08	$967 $48.34	

Source: Company reports, BofA Global Research estimates

Each cell in the table shows the potential CY28 EPS (bottom value), and implied stock price at that EPS using a 20x multiple (top-value)

BofA GLOBAL RESEARCH

Exhibit 1: Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
STX	STX US	Seagate	US$ 586.25	C-1-7
WDC	WDC US	Western Digital	US$ 404	C-1-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis & risk

Seagate Technology (STX)

Our PO of $700 is based on 29x our C2027E EPS estimate of $23.92. This multiple is at the high-end of its historical P/E range of 7x-29x, with median 12x, and is warranted in our view as demand continues to outpace supply, pricing continues to go higher, and peak earnings can be higher than historical peaks. The multiple balances near-term headwinds against the return of a more rational HDD industry and return to revenue and EPS growth.

Downside risks to our price objective are: (1) any slowdown in cloud/data center spending, (2) worse than expected industry pricing, (3) increased usage of NAND flash vs. hard disk drives, (4) share loss to WDC in the enterprise HDD market, (5) further unit declines in desktops and notebooks, and (6) degradation of cash position and potential violation of credit facility covenants. Upside risks are: (1) higher than expected demand for HAMR drives, (2) better mix of high capacity/nearline HDDs, which could drive ASPs and gross margin higher, (3) improved technological advantage and total cost of ownership benefit over NAND flash so as to reduce SSD penetration, (4) consumer PC refresh cycle driving higher hard drive demand, and (5) improved free cash flow generation.

Western Digital Corporation (WDC)

Our PO of $495 is based on 29x C27E EPS of $16.89. This multiple is at the high end of the historical range of 4x-29x, with median 7x and is warranted in our view as demand continues to outpace supply, pricing continues to go higher, and peak earnings can be higher than historical peaks. The multiple balances near-term headwinds against the return of a more rational HDD industry and return to revenue and EPS growth.

Downside risks are: (1) any slowdown in cloud/data center spending, (2) slower qualification and launch of HAMR drivers vs. expectations, (3) worse than expected industry pricing, (4) share loss to STX in the enterprise HDD market, (5) further unit declines in desktops and notebooks, (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 HDDs, (3) faster than expected launch and ramp of HAMR drives, (4) consumer PC refresh cycle driving higher hard drive demand, and (5) improved free cash flow generation and faster debt pay down.

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.

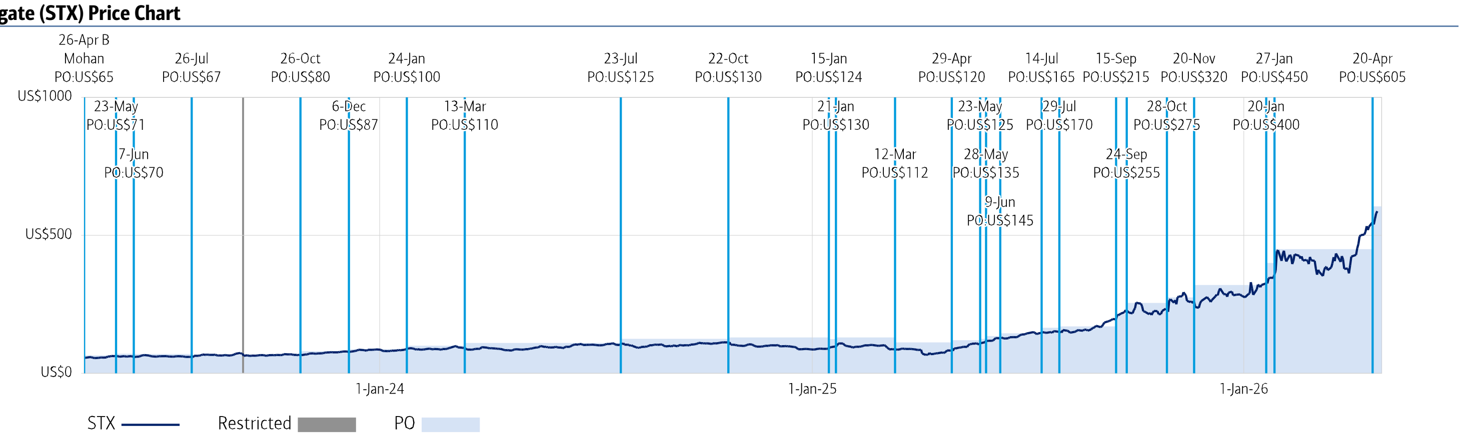
US - IT Hardware and Technology Supply Chain Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Amphenol	APH	APH US	Wamsi Mohan
	Apple Inc.	AAPL	AAPL US	Wamsi Mohan
	Celestica Inc.	CLS	CLS US	Ruplu Bhattacharya
	Celestica Inc.	YCLS	CLS CN	Ruplu Bhattacharya
	Corning Inc.	GLW	GLW US	Wamsi Mohan
	Dell Technologies Inc.	DELL	DELL US	Wamsi Mohan
	DigitalOcean	DOCN	DOCN US	Wamsi Mohan
	Flex Ltd.	FLEX	FLEX US	Ruplu Bhattacharya
	Hewlett-Packard Enterprise	HPE	HPE US	Wamsi Mohan
	Ingram Micro Holding Corporation	INGM	INGM US	Ruplu Bhattacharya
	International Business Machines Corp.	IBM	IBM US	Wamsi Mohan
	Jabil Inc.	JBL	JBL US	Ruplu Bhattacharya
	Nutanix Inc	NTNX	NTNX US	Wamsi Mohan
	Sandisk Corporation	SNDK	SNDK US	Wamsi Mohan
	Seagate Technology	STX	STX US	Wamsi Mohan
	TD Synnex Corp	SNX	SNX US	Ruplu Bhattacharya
	TE Connectivity Plc.	TEL	TEL US	Wamsi Mohan
	Western Digital Corporation	WDC	WDC US	Wamsi Mohan
NEUTRAL				
	CDW Corp	CDW	CDW US	Ruplu Bhattacharya
	Concentrix Corporation	CNXC	CNXC US	Ruplu Bhattacharya
	Enovix Corporation	ENVX	ENVX US	Ruplu Bhattacharya
	Everpure Inc	P	P US	Wamsi Mohan
	NetApp Inc.	NTAP	NTAP US	Wamsi Mohan
	Sanmina Corporation	SANM	SANM US	Ruplu Bhattacharya
	Sensata Technologies Holdings Plc	ST	ST US	Wamsi Mohan
UNDERPERFORM				
	Arrow Electronics Inc.	ARW	ARW US	Ruplu Bhattacharya
	Avnet Inc.	AVT	AVT US	Ruplu Bhattacharya
	HP Inc.	HPQ	HPQ US	Wamsi Mohan
	Super Micro Computer Inc.	SMCI	SMCI US	Ruplu Bhattacharya
	Teradata Corporation	TDC	TDC US	Wamsi Mohan
	Vishay Intertechnology, Inc.	VSH	VSH US	Ruplu Bhattacharya

Disclosures

Important Disclosures

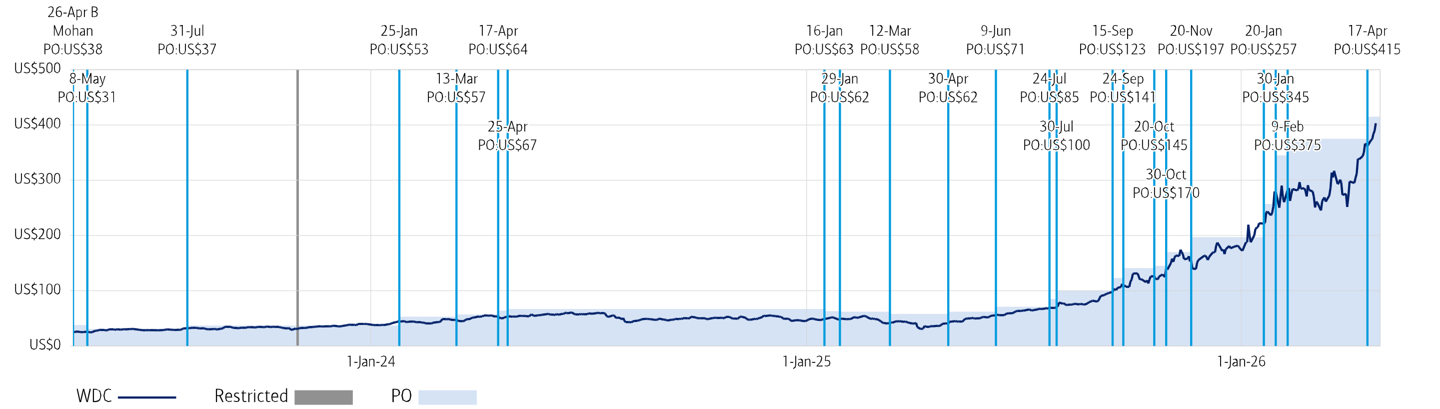
Seagate (STX) Price Chart



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.

Western Digital (WDC) 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: Technology Group (as of 31 Mar 2026)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	234	58.50%	Buy	123	52.56%
Hold	90	22.50%	Hold	43	47.78%
Sell	76	19.00%	Sell	23	30.26%

Equity Investment Rating Distribution: Global Group (as of 31 Mar 2026)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1993	55.76%	Buy	1186	59.51%
Hold	821	22.97%	Hold	509	62.00%
Sell	760	21.26%	Sell	400	52.63%

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.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

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

R2 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.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.
BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Seagate, Western Digital.
The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Seagate Technology, Western Digital Corp.
BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Seagate Technology, Western Digital Corp.
The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Seagate Technology, Western Digital Corp.
BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Seagate Technology.
BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Seagate Technology, Western Digital Corp.
BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: Seagate Technology, Western Digital Corp.
BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Seagate, Western Digital.
The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Seagate Technology.
BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to BofA Global Research policies relating to conflicts of interest.

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by the Financial Sector Conduct Authority; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Zurich): Bank of America Europe Designated Activity Company, Zurich Branch, regulated by the Swiss Financial Market Supervisory Authority FINMA, the ECB and CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

 This document and its content is provided solely for informational purposes and cannot be used for training or developing artificial intelligence (AI) models or as an input in any AI application (collectively, an AI tool). Any attempt to utilize this document or any of its content in connection with an AI tool without explicit written permission from BofA Global Research is strictly prohibited. BofA Global Research utilizes AI, including machine learning and other technologies, to enhance the services we provide to our clients. These technologies assist our analysts in various aspects of their work, including but not limited to data analysis, content extraction, content creation, data aggregation and summarization and identifying relevant information from diverse sources. All AI-driven processes are subject to review by BofA Global Research employees. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to sustainability in this material is limited as discussed herein and is not intended to provide a comprehensive view on any sustainability claim with respect to any issuer or security.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.