

## CyberArk

## Strong results that defy the challenging macro backdrop

Reiterate Rating: BUY | PO: 187.00 USD | Price: 143.38 USD

## Strong 2Q ARR growth, healthy 2H outlook. Reiterate Buy.

CyberArk remains resilient, despite other areas of security beginning to feel the effects from macro pressures, demonstrating continued strong demand for identity security, especially PAM. 2Q ARR/Rev at \$653mn/\$176mn (+42% YoY/+24% YoY) outperformed Street's \$640mn/\$172mn, with this quarter representing the largest ARR beat in company history. 2Q also marked steady improvement to profitability as operating margin expanded +450bps to -3.3%. FY guidance was raised with ARR +\$8mn to \$748mn (31% YoY), revenue +\$1mn to \$731mn (24% YoY) and operating income up from \$0mn to \$4.5mn. ARR guidance uplift was slightly less than the 2Q beat, however guidance contains a \$10mn headwind from perpetual services. Ex-headwind, ARR growth would be 32% YoY. We reiterate our Buy rating and \$187 PO based on continued strong execution and healthy underlying trends.

## Key metrics trend positive, return to profitability on track

2Q outperformance is supported by multiple positive trends. Record net new ARR of \$49mn was driven by a mix of existing customer expansion and new logo growth. CyberArk added +235 net new logos in 2Q (+15% sequentially) with over half landing with 2+ solutions. Management noted slight recovery in 2Q deal close rates, deal sizes and selling prices versus 1Q, and expects these trends to continue into 2H. Margin improvement was another bright spot, with operating margin expanding 450bps to -3.3% and with a revised guidance that implies breakeven by 3Q versus 4Q previously. FCF still reflects the effects of the transition to subscription through year end, but the company remains on track to hit \$200mn FCF by 2025.

## Many opportunities for future growth

We believe there is still significant opportunity for CyberArk. The PAM market (\$10bn) is still largely greenfield and legacy replacement opportunities, as demonstrated by the multiple large wins that were highlighted this quarter, and CyberArk penetration is still under 10%. Additionally, the company continues to see strong growth in areas outside of traditional PAM such as SM, EPM, AM and Cloud Security, which have a combined TAM of \$40bn, representing a significant potential upside opportunity.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	0.33	(0.44)	0.44	1.46	3.33
GAAP EPS	(2.12)	(3.21)	(2.19)	(1.21)	0.43
EPS Change (YoY)	-83.9%	NM	NM	231.8%	128.1%
Consensus EPS (Bloomberg)			0.28	1.25	3.01
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	434.5x	NM	325.9x	98.2x	43.1x
GAAP P/E	NM	NM	NM	NM	333.4x
Dividend Yield	0%	0%	0%	0%	0%
EV / EBITDA*	128.3x	NM	245.5x	66.6x	30.4x
Free Cash Flow Yield*	1.1%	0.6%	0.7%	2.8%	4.0%

\* For full definitions of *IQmethod*<sup>SM</sup> measures, see page 8.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 9 to 11. Analyst Certification on page 7. Price Objective Basis/Risk on page 7.

12592143

Timestamp: 10 August 2023 01:51PM EDT

10 August 2023

## Equity

**Tal Liani**  
Research Analyst  
BofAS  
+1 646 855 5107  
tal.liani@bofa.com

**Madeline Brooks**  
Research Analyst  
BofAS  
+1 646 855 1971  
madeline.brooks@bofa.com

**Jonathan Eisenson**  
Research Analyst  
BofAS  
+1 646 743 0186  
jonathan.eisenson@bofa.com

**Tomer Zilberman**  
Research Analyst  
BofAS  
+1 646 855 3203  
tomer.zilberman@bofa.com

## Stock Data

Price	143.38 USD
Price Objective	187.00 USD
Date Established	24-May-2023
Investment Opinion	C-1-9
52-Week Range	113.19 USD - 169.34 USD
Mrkt Val (mn) / Shares Out (mn)	5,965 USD / 41.6
Average Daily Value (mn)	48.48 USD
BofA Ticker / Exchange	CYBR / NAS
Bloomberg / Reuters	CYBR US / CYBR.OQ
ROE (2023E)	2.7%
Net Dbt to Eqty (Dec-2022A)	-95.6%
ESGMeter™	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"](#).

AM = Access Management

EPM = Endpoint Privilege Management

PAM = Privilege Access Management

SM = Secrets Manager

TAM = Total Addressable Market

# iQprofile<sup>SM</sup> CyberArk

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

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Return on Capital Employed	1.9%	-0.3%	2.1%	4.3%	8.9%
Return on Equity	1.9%	-2.5%	2.7%	8.3%	16.4%
Operating Margin	4.8%	-3.8%	0.8%	7.7%	15.2%
Free Cash Flow	66	37	40	165	238

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

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash Realization Ratio	5.6x	NM	2.8x	2.8x	1.7x
Asset Replacement Ratio	0.4x	0.6x	0.7x	0.8x	0.8x
Tax Rate	8.1%	4.9%	12.1%	22.0%	22.0%
Net Debt-to-Equity Ratio	-76.6%	-95.6%	-97.7%	-107.4%	-112.7%
Interest Cover	NA	NA	NA	NA	NA

## Income Statement Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Sales	503	592	734	913	1,153
% Change	8.3%	17.7%	24.1%	24.3%	26.3%
Gross Profit	426	487	605	761	965
% Change	6.6%	14.4%	24.3%	25.8%	26.8%
EBITDA	46	(2)	24	88	193
% Change	-58.5%	NM	NM	268.5%	119.2%
Net Interest & Other Income	5	18	28	10	10
<b>Net Income (Adjusted)</b>	<b>13</b>	<b>(18)</b>	<b>19</b>	<b>64</b>	<b>148</b>
<b>% Change</b>	<b>-83.5%</b>	<b>NM</b>	<b>NM</b>	<b>241.6%</b>	<b>130.4%</b>

## Free Cash Flow Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Income from Cont Operations (GAAP)	(86)	(130)	(93)	(53)	19
Depreciation & Amortization	22	20	18	18	18
Change in Working Capital	(57)	(41)	(44)	(39)	(92)
Deferred Taxation Charge	(12)	(16)	(8)	0	0
Other Adjustments, Net	208	215	180	253	307
Capital Expenditure	(9)	(13)	(13)	(14)	(15)
<b>Free Cash Flow</b>	<b>66</b>	<b>37</b>	<b>40</b>	<b>165</b>	<b>238</b>
<b>% Change</b>	<b>-33.9%</b>	<b>-43.5%</b>	<b>7.6%</b>	<b>312.3%</b>	<b>44.2%</b>

## Balance Sheet Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash & Equivalents	557	648	710	875	1,113
Trade Receivables	NA	NA	NA	NA	NA
Other Current Assets	505	449	418	459	552
Property, Plant & Equipment	20	23	26	31	37
Other Non-Current Assets	611	698	765	756	747
<b>Total Assets</b>	<b>1,693</b>	<b>1,819</b>	<b>1,918</b>	<b>2,120</b>	<b>2,448</b>
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	340	452	497	592	724
Long-Term Debt	0	0	0	0	0
Other Non-Current Liabilities	627	689	695	713	737
<b>Total Liabilities</b>	<b>967</b>	<b>1,141</b>	<b>1,191</b>	<b>1,306</b>	<b>1,461</b>
<b>Total Equity</b>	<b>727</b>	<b>678</b>	<b>727</b>	<b>815</b>	<b>987</b>
<b>Total Equity &amp; Liabilities</b>	<b>1,693</b>	<b>1,819</b>	<b>1,918</b>	<b>2,120</b>	<b>2,448</b>

\* For full definitions of iQmethod<sup>SM</sup> measures, see page 8.

## Company Sector

CyberSecurity

## Company Description

CyberArk is a pioneer of a new layer of IT security solutions that protect orgs. from cyber-attackers that have evaded the network perimeter. CyberArk's solutions secure organizations' critical assets dubbed privileged accounts, which are the keys to databases, industrial control systems, servers and applications, all which house sensitive data. CyberArk's software is focused on protecting these accounts, which are highly targeted in cyber-attacks to disrupt networks and/or steal sensitive info.

## Investment Rationale

We have a positive view for CyberArk as we see revenue growth reacceleration and resilient market tailwinds. Strong margins and relatively high growth also make the valuation attractive, even when considering the execution risks and perpetual licensing model.

## Stock Data

Average Daily Volume 338,118

## Quarterly Earnings Estimates

	2022	2023
Q1	-0.30A	-0.17A
Q2	-0.27A	0.03A
Q3	-0.06A	0.19E
Q4	0.17A	0.38E

# Financial highlights

## Exhibit 1: Actual versus Estimated Results

2Q results were solid across the board

### CyberArk Actual vs Estimated

A vs. E	Q2	Q3	Q4	Q1	Q2	Q2E			
	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Jun-23	delta	QoQ	YoY
License revenue	77,037	88,039	103,030	96,602	111,257	107,177	4,080	15.2%	44.4%
y/y	41.7%	50.9%	19.5%	54.5%	44.4%	39.1%			
Maintenance & services	65,290	64,631	66,121	65,103	64,586	65,741	-1,155	-0.8%	-1.1%
y/y	0.4%	-1.0%	2.3%	-1.5%	-0.8%	1.0%			
<b>Total Revenues</b>	<b>142,327</b>	<b>152,670</b>	<b>169,151</b>	<b>161,705</b>	<b>175,843</b>	<b>172,918</b>	<b>2,925</b>	<b>9%</b>	<b>24%</b>
y/y	21.4%	25.5%	11.8%	26.8%	23.5%	21.5%			
License Gross Profit (Non-GAAP)	65,576	75,122	88,355	80,445	93,305	89,600	3,705	16%	42%
Service Gross Profit (Non-GAAP)	51,284	50,840	51,853	51,048	49,958	51,672	-1,714	-2%	-3%
<b>Total Gross Profit (Non-GAAP)</b>	<b>116,860</b>	<b>125,962</b>	<b>140,208</b>	<b>131,493</b>	<b>143,263</b>	<b>141,272</b>	<b>1,991</b>	<b>9%</b>	<b>23%</b>
R&D	40,210	41,454	44,162	45,518	46,472	47,111	-639	2%	16%
S&M	74,292	76,490	76,900	84,696	87,360	88,507	-1,147	3%	18%
G&A	13,039	12,010	15,047	13,865	15,311	14,142	1,169	10%	17%
Total opex (Non-GAAP)	127,541	129,954	136,109	144,079	149,143	149,761	-618	4%	17%
<b>Operating income (Non-GAAP)</b>	<b>-10,681</b>	<b>-3,992</b>	<b>4,099</b>	<b>-12,586</b>	<b>-5,880</b>	<b>-8,488</b>	<b>2,608</b>	<b>-53%</b>	<b>-45%</b>
y/y	<b>-635.7%</b>	<b>-3170.8%</b>	<b>-74.9%</b>	<b>6.6%</b>	<b>-44.9%</b>	<b>-20.5%</b>			
Financial income (expense), net	2,316	4,053	9,909	10,354	12,630	2,400	10,230	22%	445%
Income (loss) before taxes on income	-8,365	61	14,008	-2,232	6,750	-6,088	12,838	-402%	-181%
Non-GAAP Net income (loss)	-10,747	-2,344	7,150	-6,946	1,280	-5,784	7,064	-118%	-112%
Diluted sharecount	40,518	40,835	40,924	41,168	41,599	41,540	60	1%	3%
<b>Diluted EPS (Non-GAAP)</b>	<b>-\$0.27</b>	<b>-\$0.06</b>	<b>\$0.17</b>	<b>-\$0.17</b>	<b>\$0.03</b>	<b>-\$0.14</b>	<b>\$0.17</b>	<b>-118%</b>	<b>-112%</b>
y/y	<b>-4392.3%</b>	<b>-5.9%</b>	<b>-38.2%</b>	<b>-44.5%</b>	<b>-111.6%</b>	<b>-47.5%</b>			
<b>Margin Analysis</b>								<b>bps</b>	<b>bps</b>
License Gross Profit (Non-GAAP)	85.1%	85.3%	85.8%	83.3%	83.6%	83.6%	0 bps	33 bps	-152 bps
Service Gross Profit (Non-GAAP)	78.5%	78.7%	78.4%	78.4%	78.6%	78.6%	0 bps	19 bps	5 bps
Gross Margin (Non-GAAP)	82.1%	82.5%	82.9%	81.3%	81.5%	81.7%	-23 bps	16 bps	-63 bps
<b>Operating Margin (Non-GAAP)</b>	<b>-7.5%</b>	<b>-2.6%</b>	<b>2.4%</b>	<b>-7.8%</b>	<b>-3.3%</b>	<b>-4.9%</b>	<b>156 bps</b>	<b>444 bps</b>	<b>416 bps</b>
<b>Tax rate (Non-GAAP)</b>	<b>-28.5%</b>	<b>-33.0%</b>	<b>40.0%</b>	<b>40.0%</b>	<b>5.0%</b>	<b>5.0%</b>	0 bps	-3500 bps	3348 bps
<b>Net Margin (Non-GAAP)</b>	<b>-7.6%</b>	<b>-1.5%</b>	<b>4.2%</b>	<b>-4.3%</b>	<b>0.7%</b>	<b>-3.3%</b>	<b>407 bps</b>	<b>502 bps</b>	<b>828 bps</b>
<b>Billings (Implied)</b>	<b>149,217</b>	<b>176,661</b>	<b>201,504</b>	<b>169,088</b>	<b>178,672</b>	<b>189,551</b>	<b>-10,879</b>	<b>9584 bps</b>	<b>20%</b>

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH



**Exhibit 2: Summary of Model Changes**

We update our estimates to reflect changes to guidance

	Old	Sales New	Delta	Old	EPS New	Delta	Old	GAAP EPS New	Delta
<b>FY21</b>									
Q1A	112,762	112,762	0.0	\$0.09	\$0.09	0.00	-\$0.39	-\$0.39	0.00
Q2A	117,234	117,234	0.0	\$0.01	\$0.01	0.00	-\$0.58	-\$0.58	0.00
Q3A	121,601	121,601	0.0	-\$0.06	-\$0.06	0.00	-\$0.73	-\$0.73	0.00
Q4A	151,320	151,320	0.0	\$0.28	\$0.28	0.00	-\$0.42	-\$0.42	0.00
<b>Total</b>	<b>502,917</b>	<b>502,917</b>	<b>0.0</b>	<b>\$0.33</b>	<b>\$0.33</b>	<b>0.00</b>	<b>-\$2.12</b>	<b>-\$2.12</b>	<b>0.00</b>
<b>FY22</b>									
Q1A	127,562	127,562	0.0	-\$0.30	-\$0.30	0.00	-\$0.94	-\$0.94	0.00
Q2A	142,327	142,327	0.0	-\$0.27	-\$0.27	0.00	-\$0.93	-\$0.93	0.00
Q3A	152,670	152,670	0.0	-\$0.06	-\$0.06	0.00	-\$0.80	-\$0.80	0.00
Q4E	169,151	169,151	0.0	\$0.17	\$0.17	0.00	-\$0.54	-\$0.54	0.00
<b>Total</b>	<b>591,710</b>	<b>591,710</b>	<b>0.0</b>	<b>-\$0.44</b>	<b>-\$0.44</b>	<b>0.00</b>	<b>-\$3.21</b>	<b>-\$3.21</b>	<b>0.00</b>
<b>FY23</b>									
Q1E	161,705	161,705	0.0	-\$0.17	-\$0.17	0.00	-\$0.85	-\$0.85	0.00
Q2E	172,918	175,843	2,925.0	-\$0.14	\$0.03	0.17	-\$0.75	-\$0.62	0.13
Q3E	186,688	186,338	(349.6)	\$0.11	\$0.19	0.07	-\$0.53	-\$0.47	0.06
Q4E	209,546	210,237	690.7	\$0.44	\$0.38	(0.06)	-\$0.20	-\$0.26	(0.06)
<b>Total</b>	<b>730,857</b>	<b>734,124</b>	<b>3,266.1</b>	<b>\$0.27</b>	<b>\$0.44</b>	<b>0.18</b>	<b>-\$2.32</b>	<b>-\$2.19</b>	<b>0.13</b>
<b>FY24</b>									
Q1E	206,876	207,742	865.5	\$0.32	\$0.26	(0.06)	-\$0.33	-\$0.39	(0.06)
Q2E	217,534	217,349	(185.0)	\$0.37	\$0.29	(0.08)	-\$0.29	-\$0.37	(0.08)
Q3E	227,315	227,324	9.4	\$0.38	\$0.30	(0.08)	-\$0.29	-\$0.37	(0.08)
Q4E	258,900	260,141	1,240.7	\$0.68	\$0.61	(0.07)	-\$0.01	-\$0.08	(0.07)
<b>Total</b>	<b>910,625</b>	<b>912,555</b>	<b>1,930.5</b>	<b>\$1.76</b>	<b>\$1.46</b>	<b>(0.30)</b>	<b>-\$0.92</b>	<b>-\$1.21</b>	<b>(0.30)</b>

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

### Exhibit 3: Income Statement

Updated summary of key financials



	Q1	Q2	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E			
	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25	FY2023E	FY2024E	FY2025E
(in \$Ks except EPS)															
License revenue	96,602	111,257	122,939	145,068	140,716	151,973	160,332	191,917	186,160	198,260	221,655	264,877	475,866	644,938	870,952
Maintenance and professional services	65,103	64,586	63,399	65,169	67,026	65,375	66,992	68,224	70,163	68,273	70,607	72,575	258,258	267,617	281,618
Total Revenues	161,705	175,843	186,338	210,237	207,742	217,349	227,324	260,141	256,323	266,533	292,262	337,452	734,124	912,555	1,152,570
YoY Growth	26.8%	23.5%	22.1%	24.3%	28.5%	23.6%	22.0%	23.7%	23.4%	22.6%	28.6%	29.7%	24.1%	24.3%	26.3%
Cost of sales (Non-GAAP)	30,212	32,580	31,580	34,481	35,156	36,809	37,398	41,920	42,219	44,096	47,905	53,097	128,853	151,284	187,316
Gross Profits (Non-GAAP)	131,493	143,263	154,758	175,756	172,586	180,539	189,926	218,221	214,104	222,437	244,357	284,356	605,271	761,272	965,254
Gross Margins (Non-GAAP)	81.3%	81.5%	83.1%	83.6%	83.1%	83.1%	83.5%	83.9%	83.5%	83.5%	83.6%	84.3%	82.4%	83.4%	83.7%
R&D	45,518	46,472	46,937	51,161	53,207	55,868	59,779	62,768	61,512	63,973	68,451	70,504	190,088	231,621	264,440
S&M	84,696	87,360	86,486	90,811	91,719	94,470	99,194	106,137	105,076	109,279	112,558	120,437	349,353	391,521	447,349
G&A	13,865	15,311	15,005	15,605	16,073	16,716	16,883	18,065	18,246	19,158	20,116	20,719	59,786	67,737	78,239
Total opex (Non-GAAP)	144,079	149,143	148,428	157,577	160,999	167,054	175,856	186,970	184,834	192,410	201,124	211,660	599,227	690,879	790,028
Operating income (Non-GAAP)	-12,586	-5,880	6,331	18,180	11,586	13,485	14,070	31,250	29,270	30,027	43,233	72,696	6,044	70,392	175,226
Operating margin (Non-GAAP)	-7.8%	-3.3%	3.4%	8.6%	5.6%	6.2%	6.2%	12.0%	11.4%	11.3%	14.8%	21.5%	0.8%	7.7%	15.2%
Financial income (expense), net	10,354	12,630	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	27,984	10,000	10,000
Taxes (Non-GAAP)	4,714	5,470	883	4,136	2,817	3,197	3,314	6,750	6,354	6,505	9,147	15,039	15,203	16,078	37,045
Net Income (Non-GAAP)	-6,946	1,280	7,948	16,544	11,269	12,788	13,256	27,000	25,416	26,022	36,586	60,157	18,825	64,314	148,181
EPS (Non-GAAP)	-\$0.17	\$0.03	\$0.19	\$0.38	\$0.26	\$0.29	\$0.30	\$0.61	\$0.57	\$0.58	\$0.82	\$1.34	\$0.44	\$1.46	\$3.33
EPS (GAAP)	-\$0.85	-\$0.62	-\$0.47	-\$0.26	-\$0.39	-\$0.37	-\$0.37	-\$0.08	-\$0.13	-\$0.13	\$0.09	\$0.59	-\$2.19	-\$1.21	\$0.43
Diluted sharecount	41,168	41,599	42,847	43,704	43,835	43,967	44,099	44,231	44,364	44,497	44,630	44,764	42,330	44,033	44,564
Operating Cash Flow	5,821	-10,868	16,781	40,820	80,899	21,746	23,266	52,576	114,496	35,211	39,402	63,283	52,554	178,488	252,392
OCF Margin	3.6%	-6.2%	9.0%	19.4%	38.9%	10.0%	10.2%	20.2%	44.7%	13.2%	13.5%	18.8%	7.2%	19.6%	21.9%
Free Cash Flow	4,046	-12,615	11,794	36,782	78,982	19,860	17,880	48,215	112,426	33,173	33,584	58,573	40,007	164,936	237,756
FCF margin	2.5%	-7.2%	6.3%	17.5%	38.0%	9.1%	7.9%	18.5%	43.9%	12.4%	11.5%	17.4%	5.4%	18.1%	20.6%
Cash and cash equivalent	913,752	905,134	916,928	953,710	1,032,691	1,052,551	1,070,431	1,118,646	1,231,072	1,264,245	1,297,829	1,356,402	953,710	1,118,646	1,356,402
<b>Margin Analysis:</b>															
Gross Margin (Non-GAAP)	81.3%	81.5%	83.1%	83.6%	83.1%	83.1%	83.5%	83.9%	83.5%	83.5%	83.6%	84.3%	82.4%	83.4%	83.7%
R&D	28.1%	26.4%	25.2%	24.3%	25.6%	25.7%	26.3%	24.1%	24.0%	24.0%	23.4%	20.9%	25.9%	25.4%	22.9%
S&M	52.4%	49.7%	46.4%	43.2%	44.2%	43.5%	43.6%	40.8%	41.0%	41.0%	38.5%	35.7%	47.6%	42.9%	38.8%
G&A	8.6%	8.7%	8.1%	7.4%	7.7%	7.7%	7.4%	6.9%	7.1%	7.2%	6.9%	6.1%	8.1%	7.4%	6.8%
OPEX (Non-GAAP)	89.1%	84.8%	79.7%	75.0%	77.5%	76.9%	77.4%	71.9%	72.1%	72.2%	68.8%	62.7%	81.6%	75.7%	68.5%
Operating Margin (Non-GAAP)	-7.8%	-3.3%	3.4%	8.6%	5.6%	6.2%	6.2%	12.0%	11.4%	11.3%	14.8%	21.5%	0.8%	7.7%	15.2%
Tax rate (Non-GAAP)	40.0%	5.0%	10.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	44.7%	20.0%	20.0%
Net Margin (Non-GAAP)	-4.3%	0.7%	4.3%	7.9%	5.4%	5.9%	5.8%	10.4%	9.9%	9.8%	12.5%	17.8%	2.6%	7.0%	12.9%
<b>YoY%Chg</b>															
License revenue	54.5%	44.4%	39.6%	40.8%	45.7%	36.6%	30.4%	32.3%	32.3%	30.5%	38.2%	38.0%	43.9%	35.5%	35.0%
Maintenance and professional services	0.1%	-1.1%	-1.9%	-1.4%	3.0%	1.2%	5.7%	4.7%	4.7%	4.4%	5.4%	6.4%	-1.1%	3.6%	5.2%
Total revenues	26.8%	23.5%	22.1%	24.3%	28.5%	23.6%	22.0%	23.7%	23.4%	22.6%	28.6%	29.7%	24.1%	24.3%	26.3%
OPEX	24.3%	16.9%	14.2%	15.8%	11.7%	12.0%	18.5%	18.7%	14.8%	15.2%	14.4%	13.2%	17.6%	15.3%	14.4%
Operating Income	6.6%	-44.9%	-258.6%	343.5%	-192.1%	-329.3%	122.3%	71.9%	152.6%	122.7%	207.3%	132.6%	-127.0%	1064.6%	148.9%
EPS (Non-GAAP)	-44.5%	-111.6%	-423.1%	116.7%	-252.4%	845.3%	62.1%	61.3%	122.9%	101.1%	172.7%	120.1%	-200.6%	228.4%	127.7%
<b>QoQ%Chg</b>															
License revenue	-6.2%	15.2%	10.5%	18.0%	-3.0%	8.0%	5.5%	19.7%	-3.0%	6.5%	11.8%	19.5%			
Maintenance and professional services	-1.5%	-0.8%	-1.8%	2.8%	2.8%	-2.5%	2.5%	1.8%	2.8%	-2.7%	3.4%	2.8%			
Total revenues	-4.4%	8.7%	6.0%	12.8%	-1.2%	4.6%	4.6%	14.4%	-1.5%	4.0%	9.7%	15.5%			
OPEX (Non-GAAP)	5.9%	3.5%	-0.5%	6.2%	2.2%	3.8%	5.3%	6.3%	-1.1%	4.1%	4.5%	5.2%			
Operating Income (Non-GAAP)	-407.1%	-53.3%	-207.7%	187.2%	-36.3%	16.4%	4.3%	122.1%	-6.3%	2.6%	44.0%	68.2%			
EPS (Non-GAAP)	-196.6%	-118.2%	502.8%	104.1%	-32.1%	13.1%	3.4%	103.1%	-6.1%	2.1%	40.2%	63.9%			

Source: BofA Global Research estimates, company report

BofA GLOBAL RESEARCH

BofA GLOBAL RESEARCH



## Price objective basis & risk

### CyberArk (CYBR)

Our PO of \$187 is based on roughly 8x 2024E EV/Sales. This is near the middle of SaaS security peers at 5-15x. CyberArk's transition to SaaS is gaining additional momentum, which should support the multiple.

Upside risks to our price objective are difficulties in sizing the market given its newness and low market awareness, stronger conversion of qualified customers that are currently in the pipeline, and higher average deal sizes from rising license attach rates.

Downside risks are FX risk exposure (40% international exposure), difficulties sizing the market, and competition from large, well-established operators.

## Analyst Certification

I, Tal Liani, 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 - Telecom and Data Networking Equipment Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	Amdocs	DOX	DOX US	Tal Liani
	Arista Networks	ANET	ANET US	Tal Liani
	Check Point Software Technologies	CHKP	CHKP US	Tal Liani
	Ciena	CIEN	CIEN US	Tal Liani
	CommScope	COMM	COMM US	Tal Liani
	CrowdStrike Holdings Inc.	CRWD	CRWD US	Tal Liani
	CyberArk	CYBR	CYBR US	Tal Liani
	Fastly	FSLY	FSLY US	Tal Liani
	Fortinet	FTNT	FTNT US	Tal Liani
	InterDigital, Inc.	IDCC	IDCC US	Tal Liani
	Palo Alto Networks	PANW	PANW US	Tal Liani
	Qualcomm	QCOM	QCOM US	Tal Liani
	Zscaler	ZS	ZS US	Tal Liani
<b>NEUTRAL</b>				
	Cellebrite	CLBT	CLBT US	Tal Liani
	Cisco Systems	CSCO	CSCO US	Tal Liani
	F5 Inc	FFIV	FFIV US	Tal Liani
	SentinelOne, Inc.	S	S US	Tal Liani
<b>UNDERPERFORM</b>				
	AudioCodes	AUDC	AUDC US	Tal Liani
	Juniper Networks	JNPR	JNPR US	Tal Liani
	Okta Inc	OKTA	OKTA US	Madeline Brooks
	SecureWorks	SCWX	SCWX US	Tal Liani



## **IQmethod<sup>SM</sup> 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

*IQmethod<sup>SM</sup>* 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 *IQmethod* are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

*IQdatabase<sup>®</sup>* is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash flow statements for companies covered by BofA Global Research.

*IQprofile<sup>SM</sup>*, *IQmethod<sup>SM</sup>* are service marks of Bank of America Corporation. *IQdatabase<sup>®</sup>* is a registered service mark of Bank of America Corporation.



# Disclosures

## Important Disclosures

### CyberArk Software (CYBR) 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: Telecommunications Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	57	55.88%	Buy	39	68.42%
Hold	21	20.59%	Hold	13	61.90%
Sell	24	23.53%	Sell	15	62.50%

### Equity Investment Rating Distribution: Global Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1877	53.28%	Buy	1040	55.41%
Hold	815	23.13%	Hold	464	56.93%
Sell	831	23.59%	Sell	385	46.33%

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

**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 <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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

**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: CyberArk Software.

BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: CyberArk Software.

The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one of its affiliates: CyberArk Software.

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: CyberArk Software.

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 Service Board; 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.bofam.com/BofASEdisclaimer](http://www.bofam.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 (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 (HKSCF); 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 Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional 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 HKSCF; 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.

#### **BofA ESGMeter Methodology:**

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at [BofA ESGMeter methodology](#). ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating.

ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

#### **Copyright and General Information:**

Copyright 2023 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. 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 or 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 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.