

Etsy, Inc.

1Q23 largely inline; 2Q GMS midpoint slightly below; Maintain Neutral

Reiterate Rating: NEUTRAL | PO: 123.00 USD | Price: 98.97 USD

Revenue and EBTIDA above ests., GMS line with Street

Etsy reported 1Q23 earnings largely in line with Street expectations and our estimates, driven by intra-quarter GMS improvement and better a than forecast take rate. Etsy reported 1Q GMS/revenues/EBTIDA of \$3.10bn/\$641mn/\$170mn vs. our estimates of \$3.15bn/\$629mn/\$168mn and the Street's \$3.07bn/\$621mn/\$166mn. Consolidated GMS was down -4.6% y/y, with FX headwinds accounted for a -2% headwind on GMS in the quarter. Though active buyers were flat in 1Q, Etsy highlighted 7mn new buyers; Habitual buyers (defined as a buyer with 6+ purchases per year) were down y/y but stable sequentially, with the company noting stronger trends overseas than in the US.

GMS Guide slightly below BofA/Street at the midpoint

2Q GMS guidance of \$2.98 at the midpoint was slightly below the Street as was revenue guide of \$615mn at the midpoint but likely better than buy side investor expectations given shares are down 24% since 1Q earnings (vs. +2% for S&P 500). 2Q23 EBTIDA margin guidance of ~26% compares to consensus of 26.5% (guide implies \$160mn vs. Street at \$159mn). ETSY noted improvement in March and a strong 2Q so far and if momentum continues GMS could be at the high-end of guidance. The biggest question for Etsy in 2023 is its path to reaccelerated GMS growth (2Q guidance of \$2.85-\$3.15bn implies -1% Y/Y at midpoint vs. -3% in 1Q (ex-FX). We forecast GMS growth of 4% in 2H23. Comparisons get easier in 2H, buyer trends have improved, and improvements continue in search and product discoverability. However, we think lower consumer confidence and an uncertain macro could be restraint on growth above our estimates.

2Q off to a decent start but trends remain volatile

We lower 2Q GMS slightly to \$3.03bn (was \$3.09) but raise revenue 1% to \$626mn on higher take rates. We now project EBITDA of \$161mn vs. \$159mn prior. For 2023, we raise revenue by 1.3% to \$2.76bn (8% Y/Y) and EBITDA by 1.2% to \$767mn. For 2024, we raise revenue to \$3.01bn (9% Y/Y) and EBITDA by 0.3% to \$866mn.

Strong model but valuation still limited by growth; Neutral

We are encouraged by Etsy's progress amid weak macro but projected growth is below historic levels and this is likely to limit multiple expansion, in our view. Our PO remains \$123 based on 19x our 2024E EV/EBITDA; Neutral.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E			
EPS	4.56	4.08	4.30	4.85	5.56			
GAAP EPS	3.36	(4.94)	2.59	3.11	3.72			
EPS Change (YoY)	44.3%	-10.5%	5.4%	12.8%	14.6%			
Consensus EPS (Bloomberg)			3.79	4.40	4.89			
DPS	0	0	0	0	0			
Valuation (Dec)								
P/E	21.7x	24.3x	23.0x	20.4x	17.8x			
GAAP P/E	29.5x	NM	38.2x	31.8x	26.6x			
Dividend Yield	0%	0%	0%	0%	0%			
EV/EBITDA*	19.2x	19.2x	18.0x	15.9x	14.0x			
Free Cash Flow Yield*	5.2%	5.5%	6.0%	6.8%	7.5%			
* For full definitions of <i>IQ</i> method SM measures, see page 6.								

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 8 to 10. Analyst Certification on page 5. Price Objective Basis/Risk on page 5. 12554193

Timestamp: 04 May 2023 07:08AM EDT

04 May 2023

Equity

Key Changes		
(US\$)	Previous	Current
2023E Rev (m)	2,729.9	2,765.0
2024E Rev (m)	2,980.7	3,006.8
2025E Rev (m)	3,280.7	3,311.0
2023E EPS	3.94	4.30
2024E EPS	4.58	4.85
2025E EPS	5.26	5.56

Curtis Nagle, CFA

Research Analyst BofAS +1 646 855 2939

c.nagle@bofa.com David Malinowski

Research Analyst +1 646 743 6331

david.malinowski@bofa.com

Stock Data

Price	98.97 USD
Price Objective	123.00 USD
Date Established	1-May-2023
Investment Opinion	C-2-9
52-Week Range	67.01 USD - 149.91 USD
Mrkt Val (mn) / Shares Out	12,205 USD / 123.3
(mn)	
Average Daily Value (mn)	280.19 USD
BofA Ticker / Exchange	ETSY / NAS
Bloomberg / Reuters	ETSY US / ETSY.OQ
ROE (2023E)	NA
Net Dbt to Eqty (Dec-2022A)	NA
FSGMeter™	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

GMS = Gross Merchandise Sales

Take rate = revenue divided by GMS

iQprofile[™] Etsy, Inc.

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Return on Capital Employed	16.4%	-22.7%	17.6%	19.0%	20.1%
Return on Equity	97.5%	1,412.5%	NM	NM	6,701.0%
Operating Margin	20.0%	-25.7%	14.2%	15.9%	17.4%
Free Cash Flow	640	673	727	830	921
iQmethod [™] – Quality of Earnings*					
(US\$ Millions)	2021A	2022A	2023E	2024E	2025
Cash Realization Ratio	1.0x	1.2x	1.2x	1.2x	1.2>
Asset Replacement Ratio	0.2x	0.1x	0.1x	0.1x	0.1>
Tax Rate	NM	NM	11.7%	13.0%	14.0%
Net Debt-to-Equity Ratio	237.9%	NM	NM	NM	372.3%
Interest Cover	NA	NM	NA	NA	NΔ
Income Statement Data (Dec)					
(US\$ Millions)	2021A	2022A	2023E	2024E	2025
Sales	2,329	2,566	2,765	3,007	3,311
% Change	35.0%	10.2%	7.8%	8.7%	10.1%
Gross Profit	1,688	1,845	1,991	2,177	2,404
% Change	33.0%	9.3%	7.9%	9.3%	10.4%
EBITDA	717	717	767	866	987
% Change	30.5%	0%	7.0%	12.8%	14.0%
Net Interest & Other Income	6	(3)	22	25	25
Net Income (Adjusted)	668	574	610	682	773
% Change	55.2%	-14.0%	6.3%	11.7%	13.4%
70 Change	33.2 /0	/	212 /2		,
	33.2 %	1 110 70			131170
Free Cash Flow Data (Dec)	2021A	2022A	2023E	2024E	
Free Cash Flow Data (Dec)					2025
Free Cash Flow Data (Dec) (US\$ Millions)	2021A	2022A	2023E	2024E	2025 517
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP)	2021A 494	2022A (694)	2023E 368	2024E 437	2025 517 111
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization	2021A 494 74 24 NA	2022A (694) 97	2023E 368 100	2024E 437 105	2025 517 111 41
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital	2021A 494 74 24	2022A (694) 97 40	2023E 368 100 25	2024E 437 105 51	2025 517 111 41 NA
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge	2021A 494 74 24 NA	2022A (694) 97 40 NA	2023E 368 100 25 NA	2024E 437 105 51 NA	2025 i 517 111 41 NA 269
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net	2021A 494 74 24 NA 60	2022A (694) 97 40 NA 1,241	2023E 368 100 25 NA 248	2024E 437 105 51 NA 252	2025 517 111 41 NA 269 (17)
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure	2021A 494 74 24 NA 60 (11)	2022A (694) 97 40 NA 1,241 (10)	2023E 368 100 25 NA 248 (13)	2024E 437 105 51 NA 252 (15)	2025 517 111 41 NA 269 (17)
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow	2021A 494 74 24 NA 60 (11) 640	2022A (694) 97 40 NA 1,241 (10) 673	2023E 368 100 25 NA 248 (13) 727	2024E 437 105 51 NA 252 (15) 830	2025i 517 111 41 NA 269 (17) 921 10.9%
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions)	2021A 494 74 24 NA 60 (11) 640 -5.5%	2022A (694) 97 40 NA 1,241 (10) 673 5.2%	2023E 368 100 25 NA 248 (13) 727 7.9%	2024E 437 105 51 NA 252 (15) 830 14.3%	2025i 517 111 41 NA 269 (17) 921 10.9%
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents	2021A 494 74 24 NA 60 (11) 640 -5.5%	2022A (694) 97 40 NA 1,241 (10) 673 5.2%	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986	2024E 437 105 51 NA 252 (15) 830 14.3%	2025I 517 111 41 NA 269 (17)
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33	2025i 517 111 41 NA 269 (17) 921 10.9%
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641	2025i 517 111 41 NA 269 (17) 921 10.9%
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224	2025i 517 111 41 NA 269 (17) 921 10.9% 2025i 1,653 40 680 207
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861	2025i 517 111 41 NA 269 (17) 921 10.9% 2025i 1,653 40 680 207 841
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224	2025i 517 111 41 NA 269 (17) 921 10.9% 2025i 1,653 40 680 207 841
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0	2025i 517 111 41 NA 269 (17) 921 10.9% 2025i 1,653 40 680 207 841 3,420
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Total Assets Short-Term Debt Other Current Liabilities	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0 616	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0 632	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0 581	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0 629	2025i 517 111 41 NA 269 (17) 921 10.9% 2025i 1,653 40 680 207 841 3,420
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Liabilities Long-Term Debt	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0 616 2,275	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0 632 2,280	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0 581 2,281	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0 629 2,281	2025 517 111 41 NA 269 (17) 921 10.9% 2025 1,653 40 680 207 841 3,420 (690 2,281
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Liabilities Long-Term Debt Other Non-Current Liabilities	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0 616 2,275 312	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0 632 2,280 271	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0 581 2,281 277	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0 629 2,281 276	2025 517 111 41 NA 269 (17) 921 10.9% 2025 1,653 40 680 207 841 3,420 690 2,281 281
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Debt Other Non-Current Liabilities Long-Term Debt Other Non-Current Liabilities Total Liabilities	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0 616 2,275 312 3,203	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0 632 2,280 271 3,182	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0 581 2,281 277 3,138	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0 629 2,281 276 3,186	2025 517 111 41 NA 265 (17) 921 10.9% 2025 4(0 680 207 3,420 (690 2,281 281 3,252
Free Cash Flow Data (Dec) (US\$ Millions) Net Income from Cont Operations (GAAP) Depreciation & Amortization Change in Working Capital Deferred Taxation Charge Other Adjustments, Net Capital Expenditure Free Cash Flow % Change Balance Sheet Data (Dec) (US\$ Millions) Cash & Equivalents Trade Receivables Other Current Assets Property, Plant & Equipment Other Non-Current Assets Short-Term Debt Other Current Liabilities Long-Term Debt Other Non-Current Liabilities	2021A 494 74 24 NA 60 (11) 640 -5.5% 2021A 780 27 534 275 2,215 3,832 0 616 2,275 312	2022A (694) 97 40 NA 1,241 (10) 673 5.2% 2022A 921 28 565 250 871 2,635 0 632 2,280 271	2023E 368 100 25 NA 248 (13) 727 7.9% 2023E 986 30 628 241 880 2,766 0 581 2,281 277	2024E 437 105 51 NA 252 (15) 830 14.3% 2024E 1,282 33 641 224 861 3,040 0 629 2,281 276	2025I 517 111 41 NA 269 (17) 921 10.9%

Company Sector

Internet/e-Commerce

Company Description

Etsy, Inc. is a US-based ecommerce company that operates online marketplaces connecting nearly 100mn buyers and 9mn sellers globally. It specializes in handmade and/or vintage items, art, and craft supplies. As of 2021 Etsy generated \$13.5bn in gross merchandise sales and \$2.3bn in total revenues. Revenue is primarily generated from listing and transaction fees, seller services such as advertising, and shipping labels.

Investment Rationale

Etsy has built a high margin and differentiated marketplace that in our view has strong competitive barriers given that is does not directly compete with larger retailers and marketplaces. We believe that Etsy can return to high-single-digit revenue growth in mid-2023 as compares ease and relative market share remains low. However in the near-to-medium term we are cautious on revenues reaccelerating due to reopening and high macro risk which could impair demand for Etsy's discretionary products

Sto	-1-	n -	•-
١TO	CK	IJZ	та

Average Daily Volume 2,831,214

Quarterly Earnings Estimates

	2022	2023
Q1	0.93A	0.96A
Q2	0.95A	0.87E
Q3	1.07A	1.04E
04	1.14A	1.43E



Actuals vs. Estimates

Exhibit 1: 1Q23 Actual results vs. estimates

1Q23 GMS came in at \$3.10bn vs. our estimate of \$3.15bn and consensus estimates of \$3.08bn

		1Q23A As o	of 3/31/22	
Etsy, Inc.	Actual	Estimate	Consensus	Difference
Key Metrics				
Active Buyers	95,526	95,578	94,607	(52)
% YoY Growth	0%	1%		-0.1%
Active Sellers	7,942.00	7,577.46	7,649.30	364.5
% YoY Growth	4%	-1%		4.8%
Gross merchandise sales (GMS)	3,101,358	3,145,058	3,078,588	(43,700)
Income Statement				
Net Revenue (\$ M)	640,877	629,012	621,477	11,865
% Sales Growth YoY	11%	9%		2.0%
% QoQ	-21%	-22%		1.5%
Total COGS	188,328	179,268	175,536	9,060
Gross Profit	452,549	449,743	445,942	2,806
Gross Margin	70.6%	71.5%	71.8%	-0.9%
Operating Expenses				
Research and Development	77,210	81,772	76,306.5	(4,562)
% of Revenue	12%	13%	12%	-1.0%
Sales and Marketing	165,146	165,430	161,320	-284
% of Revenue	26%	26%	26%	-0.5%
General and Administrative	63,311	62,901	65,418	410
% of Revenue	10%	10%	11%	-0.1%
Stock-based Compensation % of Revenue	68,683 11%	62,901 10%	60,750 10%	5,782 0.7%
Total Operating Expenses	374,350	373,004	363,794	1,346
% of Revenue	58%	59%	59%	-0.9%
Operating Income	78,199	76,739	82,148	1,460
% Margin	12%	12%	13%	0.0%
Interest expense (income), net	5,689	(2,865)		8,554
Earnings Before Tax	81,271	76,374		4,897
Income Tax Expense (Benefit)	6,734	9,547		-2,813
Effective Tax Rate (GAAP)	8%	13%		-4.2%
Net Income (GAAP)	74,537	66,828	69,229	7,709
% Margin	12%	11%	11%	1.0%
Diluted GAAP EPS	\$0.52	\$0.46	0.48	\$0.06
Adjusted EBITDA	170,344	167,641	166,194.5	2,703
% Margin	27%	27%	27%	-0.1%
Non-GAAP Net Income	137,529	121,866	127,035.0	15,663
% Margin	21.5%	19.4%	20%	2.1%
Diluted EPS Non-GAAP	\$0.96	\$0.85	\$0.88	\$0.12
Cash Flow	47.405	4.416	00.260.7	E1 0 41
Free Cash Flow	47,425	-4,416	80,360.7	51,841

 $\textbf{Source:} \ \ \mathsf{BofA} \ \mathsf{Global} \ \mathsf{Research} \ \mathsf{Estimates, Company} \ \ \mathsf{Materials, Visible} \ \mathsf{Alpha}$

BofA GLOBAL RESEARCH



Estimate Changes

Exhibit 2: ETSY estimate Changes We raise estimates slightly

	2Q23E			2023E			2024E		
	New	Old	Difference	New	Old	Difference	New	Old	Difference
Key Metrics	05.051	05.051		05.070	25.272	0	100.766	100 766	•
Active Buyers	96,061	96,061	0	96,978	96,978	0	103,766	103,766	0
% YoY Growth	2%	2%	0.0%	2%	2%	0.0%	7%	7%	0.0%
Active Sellers	7,847	7,625	222	7,769	7,769	0	8,157	8,157	0
% YoY Growth	6%	3%	3.0%	4%	4%	0.0%	5%	5%	0.0%
Gross merchandise sales (GMS)	3,029,777	3,090,373	-2.0%	13,448,816	13,553,112	-0.8%	14,465,026	14,575,579	-0.8%
Income Statement	625.640	621.165	4.40.4	2.705.042	2.720.000	25 122	2 006 771	2,000,706	26.065
Net Revenue (\$ M)	625,649	621,165	4,484	2,765,042	2,729,909	35,132	3,006,771	2,980,706	26,065
% Sales Growth YoY	7%	6%	0.8%	8%	6%	1.4%	9%	9%	-0.4%
% QoQ	-2%	-1%	-1.1%	0%	0%	0.0%	0%	0%	0.0%
Total COGS	174,556	173,305	1,251	773,931	758,424	15,507	829,869	822,675	7,194
Gross Profit	451,093	447,860	3,233	1,991,110	1,971,485	19,625	2,176,902	2,158,031	18,871
Gross Margin	72.1%	72.1%	0.0%	72.0%	72.2%	-0.2%	72.4%	72.4%	0.0%
Operating Expenses									
Research and Development	80,083	81,683	(1,600)	321,993	327,855	(5,862)	344,511	342,781	1,730
% of Revenue	13%	13%	-0.4%	12%	12%	-0.4%	11%	12%	0.0%
Sales and Marketing	172,679	170,820	1,859	745,712	739,259	6,454	808,256	795,848	12.407
% of Revenue	28%	28%	0.1%	27%	27%	-0.1%	27%	27%	0.2%
General and Administrative	63,816	62,738	1,079	255,314	253,059	2,255	265,264	265,283	-18
% of Revenue	10%	10%	0.1%	233,314	233,039	0.0%	205,204	203,203	-0.1%
Stock-based Compensation	68,821	62,116	6,705	274,151	248,846	25,305	281,013	265,283	15,731
% of Revenue	11%	10%	1.0%	10%	240,040	0.8%	281,013	203,203	0.4%
Total Operating Expenses	385,400	377,358	8,042	1,597,170	1,569,019	28,151	1,699,045	1,669,195	29,849
% of Revenue	62%	61%	0,042	58%	57%	0.3%	57%	1,009,193	0.5%
Operating Income	65,693	70,502	- 4.809	393,940	402,466	-8,526	477,857	488,836	-10,979
% Margin	11%	11%	-0.9%	14%	15%	-0.5%	16%	16%	-0.5%
Interest expense (income), net	5,689	(2,865)	8,554	22,756	(11,460)	34,216	22,756	(11,460)	34,216
Earnings Before Tax	72,632	68,887	3,745	416,329	395,756	20,573	502,613	479,376	23,237
Income Tax Expense (Benefit)	9,079	8,611	468	48,616	49,469	(853)	65,340	62,319	3,021
Effective Tax Rate (GAAP)	13%	13%	0.0%	12%	13%	-0.8%	13%	13%	0.0%
Net Income (GAAP)	63,553	60,276	3,277	367,713	346,286	21,427	437,273	417,057	20,216
% Margin	10%	10%	0.5%	13%	13%	0.6%	15%	14%	0.6%
Diluted GAAP EPS	\$0.45	\$0.42	\$0.03	\$2.59	\$2.42	\$0.17	\$3.11	\$2.95	\$0.17
Adjusted EBITDA	161,265	159,369	1,896	767,396	758,062	9,334	865,543	863,119	2,424
% Margin	26%	26%	0.1%	28%	28%	0.0%	29%	29%	-0.2%
Non-GAAP Net Income	123,772	114,628	9,144	610,489	564,027	46,462	681,755	647,853	33,902
% Margin	19.8%	18.5%	1.3%	22.1%	20.7%	1.4%	22.7%	21.7%	0.9%
Diluted EPS Non-GAAP	\$0.87	\$0.80	\$0.07	\$4.30	\$3.94	\$0.35	\$4.85	\$4.58	\$0.27
Dilutta El 3 NOTFORAT	٧٥.٥/	00.00	٧٠.٥/	0.⊷د	ب ۵.54	رد.ںډ	رن.+ر	J -1 .J0	٧٤.٧

Source: BofA Global Research

BofA GLOBAL RESEARCH



Price objective basis & risk

Etsy, Inc. (ETSY)

Our \$123 price objective is based on 19x 2024E EV/EBITDA. This is a discount to Etsy's 5-year average of 25x (ranging from 10x to 50x). We believe a discount is warranted given lower gross merchandise sales and total revenue growth relative to Etsy's historic average and less potential upside for EBITDA margins. We believe that Etsy should trade at a premium valuation to overall eCommerce and marketplaces due to significantly higher gross and EBITDA margins and high competitive barriers.

Upside risks to our PO are: higher than expected order frequency and average order value due to improvements in search functionality, greater than expected shares gains across underpenetrated customer demographics, regions, and products and increase take-rates from new services and higher fees.

Downside risks to our PO are: weakness in discretionary spending or a recession would likely have an outsized impact on the discretionary products sold on Etsy's marketplaces, continued pressure on GMS growth from lapping tough-COVID related comparisons over the next several quarters and softer than anticipated performance from non-Etsy marketplaces.

Analyst Certification

I, Curtis Nagle, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Internet Coverage Cluster

nvestment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
UY				
	ACV Auctions	ACVA	ACVA US	Nat Schindler
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	Arhaus, Inc	ARHS	ARHS US	Curtis Nagle, CFA
	Bumble, Inc.	BMBL	BMBL US	Nat Schindler
	Chewy Inc	CHWY	CHWY US	Nat Schindler
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	Duolingo	DUOL	DUOL US	Nat Schindler
	Expedia	EXPE	EXPE US	Justin Post
	Fiverr	FVRR	FVRR US	Nat Schindler
	Intact Financial	YIFC	IFC CN	Grace Carter, CFA
	LendingTree	TREE	TREE US	Nat Schindler
	Match Group	MTCH	MTCH US	Nat Schindler
	Meta Platforms Inc	META	META US	Justin Post
	NerdWallet Inc	NRDS	NRDS US	Nat Schindler
	Peloton	PTON	PTON US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Shutterstock	SSTK	SSTK US	Nat Schindler
	Squarespace Inc	SQSP	SQSP US	Nat Schindler
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Tempur Sealy International Inc.	TPX	TPX US	Curtis Nagle, CFA
	TripAdvisor	TRIP	TRIP US	Nat Schindler
	Uber	UBER	UBER US	Justin Post
	Udemy Inc	UDMY	UDMY US	Nat Schindler
	Wayfair	W	W US	Curtis Nagle, CFA
	Wix.com	WIX	WIX US	Nat Schindler
	Xometry	XMTR	XMTR US	Nat Schindler



US - Internet Coverage Cluster

Investment rating	Company	Bof A Ticker	Bloomberg symbol	Analyst
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA
NEUTRAL				
	1stDibs.com	DIBS	DIBS US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	Beachbody	BODY	BODY US	Joanna Zhao
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	Carvana Co	CVNA	CVNA US	Nat Schindler
	eBay	EBAY	EBAY US	Curtis Nagle, CFA
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	LegalZoom	LZ	LZ US	Nat Schindler
	Overstock.com Inc	OSTK	OSTK US	Curtis Nagle, CFA
	Pinterest	PINS	PINS US	Justin Post
	Snap	SNAP	SNAP US	Justin Post
	Upwork Inc	UPWK	UPWK US	Nat Schindler
	Viant	DSP	DSP US	Nat Schindler
UNDERPERFORM				
	AdTheorent	ADTH	ADTH US	Nat Schindler
	Cardlytics	CDLX	CDLX US	Nat Schindler
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	PLAYSTUDIOS, Inc. Class A	MYPS	MYPS US	Omar Dessouky, CFA
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Purple Innovation	PRPL	PRPL US	Curtis Nagle, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
	SciPlay	SCPL	SCPL US	Omar Dessouky, CFA
	System1	SST	SST US	Nat Schindler
	The RealReal	REAL	REAL US	Michael McGovern
	Trivago NV	TRVG	TRVG US	Nat Schindler
	Upstart	UPST	UPST US	Nat Schindler
	Wish	WISH	WISH US	Michael McGovern

p_{method} ™ Measures Definitions

Busi	iness l	Perl	ormance	N	lumera	tor

Return On Capital Employed NOPAT = (EBIT + Interest Income) \times (1 – Tax Rate) + Goodwill Amortization

Return On Equity Net Income
Operating Margin Operating Profit

Earnings Growth Expected 5 Year CAGR From Latest Actual Free Cash Flow Cash Flow From Operations – Total Capex

Quality of Earnings Numerator

Cash Realization Ratio Cash Flow From Operations
Asset Replacement Ratio Capex
Tax Rate Tax Charge

Net Debt-To-Equity Ratio Net Debt = Total Debt - Cash & Equivalents

Interest Cover

Valuation ToolkitNumeratorPrice / Earnings RatioCurrent Share Price

Price / Book Value Current Share Price
Dividend Yield Annualised Declared Cash Dividend
Free Cash Flow Yield Cash Flow From Operations — Total Capex

Enterprise Value / Sales EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

EV / EBITDA 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



Valuation Toolkit Numerator Denominator

Method SM 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.

Matabase* 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.

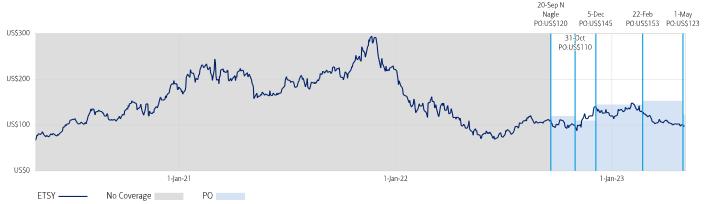
IQprofile[™], IQmethod [™] are service marks of Bank of America Corporation. IQdatabase ® is a registered service mark of Bank of America Corporation.



Disclosures

Important Disclosures

Etsy, Inc. (ETSY) 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 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	229	53.88%	Buy	107	46.72%
Hold	105	24.71%	Hold	50	47.62%
Sell	91	21.41%	Sell	29	31.87%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1869	53.01%	Buy	1030	55.11%
Hold	827	23.45%	Hold	476	57.56%
Sell	830	23.54%	Sell	389	46.87%

Issuers that were investment banking dients 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). There are three investment ratings: 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. 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%

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: Etsy, Inc.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Etsy Inc.

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: Étsy Inc.

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: Etsy Inc. 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. Etsy Inc.

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: Etsy, Inc.

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: Etsy Inc.

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 Prudential 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 (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 (Forgalized (Australia): Merrill Lynch (Hong Kong): Merrill (H (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 (Mexico): 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 S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários; Merrillos e Valores Mobiliários; Merrillos e Valores Mobil 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 Iniqual distributed in Iniqual

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 inform

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 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.

