

Futu Holdings

4Q miss, forward guidance beat

Reiterate Rating: BUY | PO: 62.80 USD | Price: 56.40 USD

4Q23: headline profit missed, but underlying trends solid

Futu's 4Q GAAP net profit declined 20% QoQ/9% YoY to HKD876mn, miss consensus by 10%. 4Q23 revenue dropped 10% QoQ or rose 4% YoY to HKD2.4bn, miss by 3%. They were mainly dragged by 1) weak trading velocity (annualized at 8.0x only in 4Q, the lowest level in history) against weak HK market and lower turnover of key US tech names (investors probably buy and hold to enjoy the rally without active trading), and 2) decrease in daily average idle cash balance. However, the underlying trends remained solid with new paying clients at 59k in 4Q (vs consensus of 50k) and client assets up 3.7% QoQ to HKD486bn (robust net asset inflows across all regions; vs consensus of HKD477bn). Futu also announced a new USD500mn buyback program. We reiterate Buy on Futu for encouraging developments in overseas markets and new products.

1Q24: strong YTD trend, expect revenue/profit to rebound

According to management guidance, Futu saw strong paying client growth across all markets YTD as US markets posted new highs and HK/China markets rebounded. In the first two months of 1Q24, new paying clients and net asset inflow have already exceeded those in 4Q23. Client quality is improving. SG avg. client assets rose 17% QoQ to >SGD17k (SG achieved breakeven in 4Q23 and UE continued to improve in 1Q24). Other int'l markets (US/AU/JP) also saw improvement in avg client assets. >1/3 of the net asset inflow in 1Q is from int'l markets. Trading velocity rebounded for HK and US markets in 1Q24, probably back to 3Q23 level (9.3x). MFSL rebounded while idle cash as % of total client assets stabilized in 1Q24, thus likely higher sequential interest income. We expect revenue/profit to rebound around 10%/20% to >RMB2.5bn/1bn in 1Q24.

FY24: 350k new paying clients with controlled CAC

Futu guided 350k new paying clients in 2024, beating the most optimistic expectations we've known, with existing markets (HK/SG/US/AU) contributing similar amount as 2023 (~210k) and new markets (JP/CA/MY, mainly JP/MY) the rest. It expected CAC to decline 10-20% YoY in 2024 as JP has a regulatory cap on CAC, while MY can leverage the brand built in SG. Futu will provide Japan stock trading for JP clients in 1Q24 and HK/SG clients in 2Q24. It also intends to provide crypto trading services around mid this year.

Estimates (Dec) (HK\$)	2022A	2023A	2024E	2025E	2026E
Net Income (Adjusted - mn)	2,927	4,279	4,822	5,753	6,216
EPS	20.55	30.98	35.16	41.95	45.32
EPS Change (YoY)	9.8%	50.7%	13.5%	19.3%	8.0%
Dividend / Share	0	0	0	0	0
Book Value / Share	134.74	158.69	189.83	226.99	236.83
Valuation (Dec)					
P/E	21.4x	14.2x	12.5x	10.5x	9.7x
P/B	3.3x	2.8x	2.3x	1.9x	1.9x

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

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 6. Price
Objective Basis/Risk on page 6.

15 March 2024 Equity

Emma Xu >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 8165 emma.xu@bofa.com

Michael Li >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 7381 m.li@bofa.com

Winnie Wu >> Research Analyst Merrill Lynch (Hong Kong) +852 3508 3058 winnie.wu@bofa.com

Stock Data

Price 56.40 USD Price Objective 62.80 USD Date Established 28-Aug-2023 Investment Opinion C-1-9 35.91 USD-67.49 USD 52-Week Range Mrkt Val / Shares Out (mn) 8732 USD / 1548 Average Daily Value (mn) 73.76 USD Free Float 43.2% BofA Ticker / Exchange FUTU/NAS Bloomberg / Reuters FUTU US / FUTU.00 ROE (2024E) 179%

Avg.: average

CAC: Client Acquisition Cost

G&A: General and Administrative

Int'l: international

MFSL: Margin Financing and Securities

Lending

Mkts: Markets

R&D: Research and Development

S&M: Selling & marketing

UE: Unit Economic

WM: Wealth Management

AU: Australia, CA: Canada, HK: Hong Kong,

JP: Japan, MY: Malaysia, SG: Singapore, US:

United States

iQprofile[™]Futu Holdings

Key Income Statement Data (Dec)	2022A	2023A	2024E	2025E	2026E
(HK\$ Millions)					
Net Interest Income	2,922	4,626	4,667	4,836	4,787
Net Fee Income	0	0	0	0	0
Securities Gains / (Losses)	3,678	3,695	4,636	5,528	6,230
Other Income	18.22	151.31	333.78	370.07	357.70
Total Non-Interest Income	3,696	3,847	4,970	5,898	6,588
Total Operating Income	6,618	8,472	9,637	10,734	11,374
Operating Expenses	(3,049)	(3,465)	(4,030)	(4,045)	(4,147)
Pre-Provision Profit	3,569	5,007	5,607	6,689	7,227
Provisions Expense	NA	NA	NA	NA	NA
Operating Profit	3,569	5,007	5,607	6,689	7,227
Non-Operating Income	(210.30)	33.44	0	0	0
Pre-Tax Income	3,359	5,041	5,607	6,689	7,227
Net Income to Comm S/Hold.	2,927	4,279	4,822	5,753	6,216
Adjusted Net Income (Operating)	2,927	4,279	4,822	5,753	6,216
Key Balance Sheet Data					
Total Assets	94,503	97,136	115,917	129,739	132,980
Average Interest Earning Assets	NA	NA	NA	NA	NA
Weighted Risk Assets	NA	NA	NA	NA	NA
Total Gross Customer Loans	26,676	32,528	39,259	44,326	45,499
Total Customer Deposits	NA	NA	NA	NA	NA
Tier 1 Capital	NA	NA	NA	NA	NA
Tangible Equity	20,862	24,569	29,391	35,144	36,668
Common Shareholders' Equity	20,862	24,569	29,391	35,144	36,668
Key Metrics					
Net Interest Margin	NA	NA	NA	NA	NA
Tier 1 Ratio	NA	NA	NA	NA	NA
Effective Tax Rate	12.3%	14.8%	14.0%	14.0%	14.0%
Loan / Assets Ratio	28.2%	33.5%	33.9%	34.2%	34.2%
Loan / Deposit Ratio	NA	NA	NA	NA	NA
Oper Leverage (Inc Growth - Cost Growth)	0.2%	14.4%	-2.6%	11.0%	3.4%
Gearing (Assets / Equity)	4.5x	4.0x	3.9x	3.7x	3.6x
Tangible Common Equity / Assets	22.1%	25.3%	25.4%	27.1%	27.6%
Tangible Common Equity / WRAs	NA	NA	NA	NA	NA
Revenue Growth	12.0%	28.0%	13.7%	11.4%	6.0%
Operating Expense Growth	11.8%	13.6%	16.3%	0.4%	2.5%
Provisions Expense Growth	NA	NA	NA	NA	NA
Operating Revenue / Average Assets	6.8%	8.8%	9.0%	8.7%	8.7%
Operating Expenses / Average Assets	3.1%	3.6%	3.8%	3.3%	3.2%
Pre-Provision ROA	3.6%	5.2%	5.3%	5.4%	5.5%
ROA	3.0%	4.5%	4.5%	4.7%	4.7%
Pre-Provision ROE	17.1%	22.0%	20.8%	20.7%	20.1%
ROE	14.0%	18.8%	17.9%	17.8%	17.3%
RoTE	14.0%	17.4%	16.4%	16.4%	17.0%
RoWRAs	NA	NA	NA	NA	NA
Dividend Payout Ratio	0%	0%	0%	0%	0%
Efficiency Ratio	103.7%	72.5%	80.6%	77.7%	80.6%
Headline Cost/Income Ratio	46.1%	40.9%	41.8%	37.7%	36.5%
Total Non-Interest Inc / Operating Inc	56%	45%	52%	55%	58%
Market-Related Revenue / Total Revenues	55.6%	43.6%	48.1%	51.5%	54.8%
Provisioning Burden as % of PPP	NA	NA	NA	NA	NA
NPLs plus Foreclosed Real Estate / Loans	0%	0%	0%	0%	0%
Loan Loss Reserves / NPLs	NA	NA	NA	NA	NA
Loan Loss Reserves / Total Loans	NA	NA	NA	NA	NA
Provisions Expense / Average Loans	NA	NA	NA	NA	NA
Other Metrics					
Other Metrics Income / Employee	1.28	0	0	0	0
Other Metrics Income / Employee (Operating Expenses) / Employee	1.28 (1.10)	0	0	0	
Income / Employee					0 0 0

Company Sector

Securities Broker/Dealer

Company Description

Futu is a well-rounded online financial services platform, providing trading, wealth management, market data and information, social collaboration and corporate services. It mainly serves mainland China/HK population's investment demand in HK/US, and is expanding globally. It had 20.5mn users, 3.4mn registered clients and 1.6mn paying clients by 2Q23. Mr. Leaf Li, the founder, Chairman and CEO of Futu, is the largest shareholder. Tencent is a strategic partner and the second-largest shareholder.

Investment Rationale

We rate Futu at Buy on trough sentiment and valuation (given stable China client base, historical low trading velocity, strong 2024E profits, and share buyback) as well as encouraging progress in HK and overseas markets.

Stock Data

Price to Book Value 2.3x



4Q23 operational and financial data

Futu's 4Q GAAP net profit declined 20% QoQ/9% YoY to HKD876mn. Its revenue declined 10% QoQ or rose 4% YoY to HKD2,373mn. New paying clients fell 9% QoQ to 59k, with client acquisition slowing down in HK amid sluggish market but sustaining momentum in SG due to heightened interest in Money Market Funds. Client assets rose 3.7% QoQ to HKD486bn thanks to robust net asset inflow across all regions and US stock appreciation. Daily avg. client assets fell 2.1% QoQ to HKD481bn. Annualized trading velocity declined to 8.0x only, the lowest level in history, against weak HK market and lower turnover of key US tech names (investors probably buy and hold to enjoy the rally without active trading). Trading volume dropped 12% QoQ to HKD957mn with US/HK market contributing 74%/25% of total. Commission rate rebounded 0.2bp QoQ to 9.5bp. Interest income fell 11% QoQ and net interest income fell 13% QoQ. MFSL balance rebounded 2.2% QoQ to HKD30.3bn, accounting for 6.8% of total client assets. Client WM assets rose 11% QoQ to HKD57.6bn, accounting for 11.9% of total client assets. Client idle cash as % of total client assets edged down to 9.1% in 4Q. **S&M expenses** fell 14% QoQ on less client acquisition and lower **CAC** (-6% QoQ to HKD3k). R&D cost edged up 1% QoQ, while G&A cost rose 15% QoQ on seasonality. **Gross/net profit margin** fell 2ppt/4ppt QoQ to 82%/37% in 4Q.

Exhibit 1: Futu's quarterly operating metrics and financial metrics $2020\hbox{-}2023$

	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
Key operating metrics															
# of users (k)	14,200	15,500	16,600	17,400	17,400	18,100	18,600	19,200	19,600	19,600	20,000	20,500	21,100	21,600	21,600
# of registered clients (k)	1,957	2,316	2,580	2,751	2,751	2,911	3,022	3,133	3,232	3,232	3,305	3,396	3,490	3,562	3,562
# of paying clients (k)	790	1,001	1,167	1,244	1,244	1,326	1,387	1,445	1,487	1,487	1,528	1,586	1,651	1,710	1,710
Growth (YoY)	+231.0%	+230.2%	+179.2%	+140.8%	+140.8%	+67.9%	+38.6%	+23.8%	+19.5%	+19.5%	+15.2%	+14.3%	+14.2%	+15.0%	+15.0%
Growth (QoQ)	+52.8%	+26.7%	+16.6%	+6.6%		+6.6%	+4.6%	+4.2%	+2.9%		+2.8%	+6.7%	+8.0%	+7.8%	
# of new paying clients (k)	273	211	166	77		82	61	58	42		41	58	65	59	
Client assets (HKD bn)	462	503	424	408	408	386	434	370	418	418	466	466	468	486	486
Growth (YoY)	+367.8%	+253.4%	+111.0%	+43.0%	+43.0%	-16.5%	-13.8%	-12.8%	+2.4%	+2.4%	+20.6%	+7.5%	+26.7%	+16.3%	+16.3%
Growth (QoQ)	+62.1%	+8.9%	-15.8%	-3.8%		-5.3%	+12.3%	-14.8%	+13.0%		+11.5%	+11.7%	+0.6%	+4.2%	
Avg. assets per paying client (HKD mn)															
Period-end	0.59	0.50	0.36	0.33	0.33	0.29	0.31	0.26	0.28	0.28	0.30	0.29	0.28	0.28	0.28
Quarterly average	0.57	0.54	0.43	0.34	0.44	0.31	0.30	0.28	0.27	0.29	0.29	0.30	0.29	0.28	0.29
Trading volume (HKD bn)	2,247	1,315	1,351	1,226	6,139	1,326	1,347	1,085	1,092	4,850	1,223	960	1,090	957	4,230
Growth (YoY)	+277.5%	+104.3%	+33.1%	+1.3%	+77.2%	-41.0%	+2.4%	-19.7%	-10.9%	-21.0%	-7.8%	-28.7%	+0.5%	-12.4%	-12.8%
Growth (QoQ)	+85.7%	-41.4%	+2.7%	-9.2%		+8.2%	+1.6%	-19.5%	+0.7%		+12.0%	-80.2%	-10.9%	-0.4%	
Trading velocity (quarterly avg)	24.0x	10.9x	11.7x	11.8x	14.7x	13.4x	13.1x	10.8x	11.1x	12.0x	11.1x	8.2x	9.3x	8.0x	9.2x
Commission rate (blended, bp)	5.9	6.1	6.9	7.0	6.4	7.3	7.7	8.8	9.6	8.3	8.8	9.9	9.3	9.5	9.3
MFSL balance (HKD bn)	27.4	33.0	31.7	30.3	30.3	25.5	28.9	29.6	26.6	26.6	34.5	34.0	32.4	33.1	33.1
Growth (YoY)	+470.8%	+340.0%	+151.6%	+55.4%	+55.4%	-6.9%	-12.4%	-6.6%	-12.2%	-12.2%	+35.3%	+17.6%	+9.5%	+24.4%	+24.4%
Growth (QoQ)	+40.5%	+20.4%	-3.9%	-4.4%		-15.8%	+13.3%	+2.4%	-10.1%		+29.7%	+27.8%	-6.1%	-2.6%	
MFSL as % of client assets	5.9%	6.6%	7.5%	7.4%	7.4%	6.6%	6.7%	8.0%	6.4%	6.4%	7.4%	7.3%	6.9%	6.8%	6.8%
Client acquisition cost (HKD k)	1.01	1.79	2.42	4.38	1.91	3.52	3.59	4.07	3.64	3.69	3.44	3.02	3.26	3.08	3.18
Key financial metrics															
Gross margin	79.9%	82.3%	84.6%	86.5%	83.0%	86.1%	88.1%	88.8%	85.0%	86.9%	88.4%	84.9%	83.5%	81.7%	84.7%
Operating margin	72.2%	50.1%	47.8%	40.4%	53.9%	47.0%	53.1%	55.9%	57.8%	53.9%	63.6%	59.6%	59.7%	52.8%	59.1%
Net margin	52.7%	33.9%	35.5%	31.1%	39.5%	34.8%	36.7%	38.8%	42.0%	38.4%	47.7%	45.1%	41.2%	36.9%	42.8%
Effective tax ratio	9.0%	14.5%	13.3%	12.9%	11.8%	11.3%	9.8%	12.1%	14.7%	12.3%	14.4%	15.7%	16.2%	12.5%	14.8%
ROA	5.1%	1.8%	2.1%	1.9%	3.3%	2.2%	2.4%	2.9%	4.0%	3.0%	4.7%	4.2%	4.3%	3.6%	4.5%
ROE	52.3%	14.1%	11.6%	9.4%	19.2%	11.1%	12.9%	15.2%	18.7%	14.0%	22.1%	20.1%	19.0%	14.6%	18.8%
Assets/Equity	11.9x	6.2x	4.9x	4.8x	4.8x	5.2x	5.6x	4.9x	4.5x	4.5x	4.8x	4.7x	4.1x	4.0x	4.0x
Assets/Equity (excl. clients' funds)	4.6x	3.2x	2.1x	2.2x	2.2x	2.3x	2.4x	2.2x	2.1x	2.1x	2.4x	2.3x	2.2x	2.1x	2.1x

Source: Company reports, *gross margin=gross profit/total revenue, operating margin=operating profit/gross profit, net profit=net profit/total revenue

BofA GLOBAL RESEARCH



Exhibit 2: Futu's quarterly financials 2020-2023

P&L, HKD mn	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
Brokerage income	1,325	798	933	857	3,913	967	1,034	958	1,049	4,008	1,079	953	1,009	904	3,945
Interest income	659	610	632	618	2,518	575	620	881	1,138	3,214	1,294	1,406	1,505	1,332	5,536
Other income	221	169	166	128	684	98	93	107	94	392	126	127	137	137	527
Total revenue	2,205	1,577	1,731	1,603	7,115	1,641	1,747	1,946	2,281	7,614	2,500	2,485	2,650	2,373	10,008
Growth (YoY)	+349.3%	+129.3%	+83.0%	+35.1%	+114.9%	-25.6%	+10.8%	+12.4%	+42.3%	+7.0%	+52.3%	+42.3%	+36.2%	+4.1%	+31.4%
Growth (QoQ)	+85.8%	-28.5%	+9.8%	-7.4%		+2.4%	+6.4%	+11.4%	+17.2%		+9.6%	-67.4%	+6.0%	-4.5%	
Brokerage expenses	(214)	(145)	(125)	(88)	(572)	(96)	(87)	(83)	(64)	(330)	(72)	(55)	(63)	(59)	(250)
Interest expenses	(167)	(80)	(74)	(56)	(377)	(39)	(27)	(45)	(182)	(293)	(131)	(220)	(289)	(271)	(911)
Other costs	(62)	(54)	(67)	(74)	(257)	(93)	(94)	(91)	(96)	(374)	(88)	(99)	(86)	(104)	(376)
Total costs	(443)	(279)	(267)	(217)	(1,206)	(228)	(208)	(218)	(342)	(996)	(291)	(375)	(437)	(433)	(1,536)
Growth (YoY)	+275.8%	+81.3%	+46.8%	-10.5%	+73.3%	-48.6%	-25.4%	-18.4%	+57.8%	-17.4%	+27.6%	+80.2%	+100.5%	+26.7%	+54.2%
Growth (QoQ)	+83.0%	-37.1%	-4.2%	-18.8%		+5.1%	-8.8%	+4.9%	+56.9%		-15.0%	-62.4%	+50.4%	+15.7%	
Gross profit	1,761	1,298	1,464	1,386	5,909	1,413	1,539	1,727	1,939	6,618	2,209	2,110	2,213	1,940	8,472
Growth (YoY)	+372.6%	+143.2%	+91.6%	+46.8%	+126.0%	-19.8%	+18.6%	+18.0%	+39.9%	+12.0%	+56.3%	+37.1%	+28.1%	+0.1%	+28.0%
Growth (QoQ)	+86.5%	-26.3%	+12.8%	-5.3%		+2.0%	+8.9%	+12.3%	+12.2%		+14.0%	-68.1%	+0.2%	-8.1%	
R&D expenses	(137)	(173)	(224)	(271)	(805)	(282)	(292)	(313)	(334)	(1,222)	(355)	(363)	(360)	(363)	(1,441)
Selling & marketing expenses	(275)	(377)	(403)	(337)	(1,392)	(288)	(219)	(235)	(153)	(896)	(141)	(175)	(212)	(182)	(710)
G&A expenses	(78)	(97)	(137)	(218)	(529)	(178)	(211)	(212)	(330)	(931)	(308)	(314)	(322)	(370)	(1,313)
Operating expenses	(490)	(647)	(764)	(826)	(2,726)	(748)	(722)	(761)	(818)	(3,049)	(804)	(852)	(893)	(916)	(3,465)
Growth (YoY)	+149.3%	+145.0%	+136.6%	+127.1%	+137.7%	+52.8%	+11.5%	-0.3%	-0.9%	+11.8%	+7.4%	+18.0%	+17.3%	+12.0%	+13.6%
Growth (QoQ)	+34.7%	+32.2%	+18.0%	+8.1%		-9.3%	-3.6%	+5.5%	+7.5%		-1.7%	-72.1%	+11.0%	+7.5%	
Others	6	(26)	10	12	2	(20)	(95)	(103)	9	(210)	(8)	75	(17)	(17)	33
Profit before tax	1,278	625	710	573	3,185	644	722	863	1,130	3,359	1,397	1,333	1,303	1,007	5,041
Income tax	(116)	(91)	(95)	(74)	(375)	(73)	(71)	(104)	(166)	(414)	(202)	(209)	(211)	(126)	(748)
Equity method investments	0	0	0	0	0	0	(9)	(4)	(4)	(18)	(4)	(4)	(1)	(5)	(13)
Net income	1,162	534	615	499	2,810	572	642	755	959	2,927	1,192	1,120	1,091	876.4	4,279
Net profit (GAAP)	1,162	534	615	499	2,810	572	642	755	959	2,927	1,192	1,120	1,091	876.4	4,279
Growth (YoY)	+650.6%	+125.8%	+53.1%	-6.3%	+112.0%	-50.8%	+20.2%	+22.7%	+92.2%	+4.2%	+108.4%	+74.5%	+44.6%	-8.6%	+46.2%
Growth (QoQ)	+118.3%	-54.1%	+15.2%	-18.9%		+14.6%	+12.2%	+17.6%	+27.0%		+24.3%	-61.7%	-8.4%	-21.7%	
Net profit (non-GAAP)	1,179	550	646	533	2,909	622	689	806	1,015	3,131	1,268	1,193	1,158	932	4,552
Growth (YoY)	+634.1%	+126.7%	+58.5%	-3.5%	+114.2%	-47.2%	+25.1%	+24.8%	+90.2%	+7.6%	+103.8%	+73.3%	+43.7%	-8.1%	+45.4%
Growth (QoQ)	+113.3%	-53.3%	+17.4%	-17.4%		+16.6%	+10.7%	+17.1%	+25.9%		+25.0%	-61.9%	-8.7%	-21.9%	
EPS (HKD)	8.2	3.5	4.0	3.3	18.7	3.9	4.5	5.4	6.9	20.6	8.5	8.1	8.0	6.4	31.0
Growth (YoY)	+561.6%	+87.6%	+29.7%	-16.1%	+83.0%	-52.5%	+27.5%	+34.1%	+111.2%	+9.8%	+120.0%	+79.1%	+48.5%	-7.1%	+50.7%
Growth (QoQ)	+110.4%	-56.7%	+13.2%	-18.7%		+19.2%	+16.1%	+19.1%	+28.1%		+24.2%	-60.7%	-6.7%	-20.8%	

Source: Company reports

BofA GLOBAL RESEARCH



Valuation Comp

Exhibit 3: Online brokers/China traditional brokers/China online verticals valuation compFutu's valuation is attractive compared to other online brokers

		Currency		Market cap	P.	/E	P/	В	RO	DE	RC)A
Name	Ticker	of price	Price	(USD mn)	2024E	2025E	2024E	2025E	2024E	2025E	2024E	2025E
Online brokers												_
Charles Schwab	SCHW US	USD	67.1	122,470	19.9x	15.4x	2.6x	2.5x	15.5%	17.5%	1.2%	1.6%
Interactive Brokers	IBKR US	USD	108.5	45,951	17.2x	17.8x	2.8x	2.5x	18.2%	15.8%	0.0%	0.0%
Robinhood	HOOD US	USD	17.2	15,007	72.7x	56.8x	2.2x	2.2x	2.8%	2.7%	0.6%	0.7%
East Money	300059 CH	CNY	13.8	30,379	22.7x	19.5x	2.6x	2.3x	12.3%	12.9%	4.0%	4.2%
Futu	FUTU US	USD	65.4	9,132	14.8x	13.3x	2.7x	2.3x	17.6%	16.6%	4.5%	4.5%
Up FinTech (Tiger)	TIGR US	USD	4.97	849	13.7x	12.0x	1.4x	1.3x	10.8%	11.4%	0.9%	1.1%
Market cap weighted average					23.1x	19.2x	2.6x	2.4x	14.8%	15.5%	1.5%	1.7%
China traditional brokers (H-share)												
CITICS	6030 HK	HKD	14.7	40,599	8.2x	7.4x	0.7x	0.7x	9.4%	9.3%	1.5%	1.5%
CICC	3908 HK	HKD	10.1	16,326	5.8x	4.7x	0.4x	0.4x	7.3%	8.3%	0.9%	1.1%
Huatai Securities	6886 HK	HKD	9.5	16,780	5.7x	5.1x	0.5x	0.4x	8.0%	8.5%	1.5%	1.5%
Market cap weighted average					7.1x	6.3x	0.6x	0.6x	8.6%	8.9%	1.4%	1.4%
China online verticals												
KE Holdings	BEKE US	USD	14.4	17,965	13.3x	12.8x	1.7x	1.6x	9.9%	10.1%	6.1%	6.3%
JD Health	6618 HK	HKD	31.2	12,721	22.8x	18.2x	1.8x	1.7x	6.8%	8.2%	4.3%	5.6%
Alibaba Health	241 HK	HKD	3.5	7,159	35.1x	26.1x	2.6x	2.3x	6.6%	9.0%	5.3%	6.8%
Trip.com Group	TCOM US	USD	44.7	28,864	17.1x	14.6x	1.6x	1.5x	9.1%	9.8%	5.1%	5.5%
Autohome	ATHM US	USD	27.1	3,336	11.9x	11.2x	0.9x	0.9x	7.7%	7.8%	6.2%	6.4%
Weibo	WB US	USD	9.7	2,353	4.6x	4.1x	0.5x	0.5x	11.1%	11.0%	6.5%	6.6%
Market cap weighted average					18.3x	15.4x	1.7x	1.6x	8.6%	9.5%	5.3%	5.9%

Source: Bloomberg, *BofA Global Research estimates for Futu, Bloomberg consensus for others, ^ negative EPS, as of Mar 14, 2024

BofA GLOBAL RESEARCH



Price objective basis & risk

Futu Holdings (FUTU)

Our PO for Futu is USD62.80 per ADR, based on 14x 2024E P/E multiple, lower than global mature online brokers' given the regulation risk, but higher than traditional China brokers'.

Upside risks to our PO are better-than-expected capital market condition, lower-than-expected competition and faster-than-expected client growth. Downside risks to our PO are stricter-than-expected regulations, large US/HK market correction and intensified competition.

Analyst Certification

I, Emma Xu, 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.

Greater China - Financials Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Agricultural Bank of China	ACGBF	1288 HK	Winnie Wu
	Agricultural Bank Of China-A	XACNF	601288 CH	Winnie Wu
	AIA Group Limited	AAIGF	1299 HK	Michael Li
	Bank Of China	BACHF	3988 HK	Winnie Wu
	Bank of Comm	BKFCF	3328 HK	Winnie Wu
	Bank Of Communications Co-A	XNCTF	601328 CH	Winnie Wu
	Bank of Jiangsu	XBJCF	600919 CH	Emma Xu
	Bank of Suzhou	XCZIF	002966 CH	Wenging Han, CFA
	BOC Hong Kong Holdings Ltd	BNKHF	2388 HK	Winnie Wu
	Chailease	XCAHZ	5871 TT	Brooksley Kang
	China CITIC Bk	CHBJF	998 HK	Emma Xu
	China Construction Bank	CICHF	939 HK	Winnie Wu
	China Construction Bank -A	XCTBF	601939 CH	Winnie Wu
	China Galaxy Securities Co Ltd	CGXYF	6881 HK	Michael Li
	China Life Insurance	CILJF	2628 HK	Michael Li
	China MERCH BK	CIHHF	3968 HK	Winnie Wu
	China MERCH BK -A	CIHKF	600036 CH	Winnie Wu
	China Merchants Securities	XMRKF	600999 CH	Susie Liu, CFA
	China Merchants Securities	XCJRF	6099 HK	Susie Liu, CFA
	China Pacific Insurance Group	CHPXF	2601 HK	Michael Li
	Chongqing Rural Commercial Bank	COGQF	3618 HK	Wenqing Han, CFA
	Chongqing Rural Commercial Bank - A	XCRQF	601077 CH	Wenging Han, CFA
	CITIC Limited	CTPCF	267 HK	Ronald Leung, CFA
	CITIC Securities	CIIHF	6030 HK	Michael Li
	CITIC Securities -A	CIISF	600030 CH	Michael Li
	CTBC FHC	CTFHF	2891 TT	Brooksley Kang
	Fubon FHC	FUISF	2881 TT	Brooksley Kang
	Futu Holdings	FUTU	FUTU US	Emma Xu
	GF Securities	GFSEZ	1776 HK	Susie Liu, CFA
	GF Securities	XMPQF	000776 CH	Susie Liu, CFA
	Guolian Securities	XLTYF	601456 CH	Susie Liu, CFA
	Guotai Junan International	GUOTF	1788 HK	Michael Li
	Guotai Junan Securities	XGUOF	2611 HK	Michael Li
	Guotai Junan Securities-A	XOQOF	601211 CH	Michael Li
	HKEX	HKXCF	388 HK	Michael Li
	Huatai Securities	XHTLF	601688 CH	Susie Liu, CFA
	Huatai Securities	HUATF	6886 HK	Susie Liu, CFA
	Ind & Comm BK	IDCBF	1398 HK	Winnie Wu
	Ind & Comm BK -A	XIKNF	601398 CH	Winnie Wu



Greater China - Financials Coverage Cluster

			Bloomberg symbol	Analyst
	Jiangsu Changshu Rural Commercial Bank	XBJTF	601128 CH	Wenqing Han, CFA
	Noah Holdings Limited	NOAH	NOAH US	Emma Xu
	Noah Holdings Limited	XNHLF	6686 HK	Emma Xu
	PICC Group	PINXF	1339 HK	Michael Li
	PICC Property & Casualty	PPCCF	2328 HK	Michael Li
	Ping An Insurance	PIAIF	2318 HK	Michael Li
	Ping An Insurance	XPSPF	601318 CH	Michael Li
	Qifu Technology	OFIN	QFIN US	Emma Xu
	Qifu Technology	XDXRF	3660 HK	Emma Xu
	Sinolink Securities	XERQF	600109 CH	Susie Liu, CFA
	Waterdrop	WDH	WDH US	Michael Li
			601878 CH	
	Zheshang Securities	XDSEF		Susie Liu, CFA
	ZhongAn Online P&C Insurance	ZZHGF	6060 HK	Michael Li
EUTRAL				
	Bank Of China -A	BACZF	601988 CH	Winnie Wu
	Bank of Hangzhou	XBHCF	600926 CH	Emma Xu
	Bank of Nanjing	XBNMF	601009 CH	Wenging Han, CFA
	Bank of Ningbo	XBINF	001003 CH 002142 CH	Emma Xu
	Cathay FHC	XCIFF	2882 TT	Brooksley Kang
	China Securities Corp	XCUEF	6066 HK	Susie Liu, CFA
	•	ESUFF		,
	E.Sun FHC		2884 TT	Brooksley Kang
	Hang Seng Bk	HSNGF	11 HK	Winnie Wu
	Hang Seng Bk - A	HSNGY	HSNGY US	Winnie Wu
	Lufax Holding	LU	LUUS	Emma Xu
	New China Life	NWWCF	1336 HK	Michael Li
	Postal Savings Bank of China	PSBKF	1658 HK	Winnie Wu
	Postal Savings Bank of China - A	XPSSF	601658 CH	Winnie Wu
INDERPERFORM				
	Bank of Chengdu	XBCQF	601838 CH	Emma Xu
	Bank of E Asia	BKEAF	23 HK	Winnie Wu
	Bank of E Asia-A	BKEAY	BKEAY US	Winnie Wu
	BOC International (China)	XLFTF	601696 CH	Susie Liu, CFA
	China Cinda Asset Management	CCGDF	1359 HK	Michael Li
	China CITIC Bk -A	CHCKF	601998 CH	Emma Xu
	China Everbright Bank	CEBCF	6818 HK	Emma Xu
	China Everbright Bank	XCBLF	601818 CH	Emma Xu
	China Galaxy Securities Co Ltd	XCXYF	601881 CH	Michael Li
	China Industrial Bank Co. Ltd.	INBLF	601166 CH	Emma Xu
	China International Capital Corporation	CNICF	3908 HK	Susie Liu, CFA
	China Life Insurance	XCNNF	601628 CH	Michael Li
	China Minsheng Banking Corp Ltd	CGMBF	1988 HK	Emma Xu
	China Minsheng Banking Corp Ltd -A	CMAKF	600016 CH	Emma Xu
	China Pacific Insurance Group	XCJNF	601601 CH	Michael Li
	China Securities Corp	XCSIF	601066 CH	Susie Liu, CFA
	Haitong Securities	HTNGF	6837 HK	Michael Li
	Haitong Securities -A	XHTSF	600837 CH	Michael Li
	Mega FHC	MGFNF	2886 TT	Brooksley Kang
	New China Life	XNWCF	601336 CH	Michael Li
	Orient Securities	XOBNF	600958 CH	
				Susia Liu, CFA
	Orient Securities	XONQF	3958 HK	Susie Liu, CFA
	PICC Group	XPIDF	601319 CH	Michael Li
	Ping An Bank	XPABY	000001 CH	Emma Xu
	Shanghai Pudong Dev Bank	SHVPF SKFHF	600000 CH	Emma Xu
	Shin Kong FHC		2888 TT	Brooksley Kang



*IQ*method[™] Measures Definitions

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

EV / EBITDA Enterprise Value Basic EBIT + Depreciation + Amortization

Menethod 3*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.

Redatabase 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^{≤M}, **IQ**method^{≤M} are service marks of Bank of America Corporation. **IQ**database® is a registered service mark of Bank of America Corporation.

Disclosures

Important Disclosures

Futu (FUTU) 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: Financial Services Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	156	53.79%	Buy	94	60.26%
Hold	72	24.83%	Hold	48	66.67%
Sell	62	21.38%	Sell	35	56.45%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships R1	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

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

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

Investment rating Total return expectation (within 12-month period of date of initial rating) Ratings dispersion guidelines for coverage cluster^{R2}

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

R2Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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: Futu.

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

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: Futu. 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: Futu.

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. Futu.

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.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 (Hong Kong): Merrill (Hong Kong): Merr (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Canada): Merrill Lynch (Mexico): Merrill Mexico): Merrill Mexico (Mexico): Merrill Mexico): Merrill Mexico (Mexico): Merrill Mexico): Merri 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): Merrill Lynch (Israel): Merrill Lynch (Israel) (Israel): Merrill Lynch (Israel): Merr Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information in Germany and is regulated by Merrill Lynch (DIFC) is done so in accor

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 in any securities referred to herein.

Copyright and General Information:

Copyright 2024 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.

