BofA SECURITIES

Global Equity Volatility Insights

Risks rising as NDX nears bubble-levels

NDX approaching BRI bubble-levels as it defies macro risk

While last week's hawkish FOMC meeting triggered a re-pricing of Fed policy and pushed front-end rates higher, the AI trade remained undeterred, continuing to trend higher despite macro headwinds (typical of bubbles building). In fact, the Nasdaq's tech concentration (particularly its overweight to high-BRI semis like MU, INTC & AMD) has driven stark outperformance vs the S&P in both returns and vol, pushing the NDX's Bubble Risk Indicator (BRI) closer to the key 0.8 level (beyond which we typically see elevated near-term risks in both tails). While we expect the AI bubble could take years to fully form, history shows the BRI can be helpful in identifying interim pullbacks. This divergence also reinforces our preference for owning NDX over SPX to trade an AI bubble (see How to own the AI race), via options given the two-tailed risks. While higher NDX vol has made outright long optionality more expensive, structures like call spreads or NDX-rates / NDX-FX hybrids offer attractive entry points for more cheaply renting a rally, in our view.

Own the AI race but mind the left tail & auto-callification

The NDX has nearly doubled the SPX's performance since March, highlighting the strength of the AI/tech narrative in risk assets lately. In our view, both the performance and the vol spread (NDX vs SPX) have room to extend further if we get a bigger AI bubble and the NDX becomes even more AI-concentrated (see our March report How to own the AI race). However, the pace and ferocity of NDX gains has likely left investors concerned about sharp pullbacks (particularly as the NDX BRI nears 0.8). For protection, we caution against very long-dated NDX puts given the potential for dealer hedging of fast-growing NDX-linked structured products dampening put vol. Dec26 is a sweet spot as it covers the midterm catalyst period and isn't too long-dated to be strongly impacted by 'autocallification'. In particular, we recommend QQQ vs SPY Dec26 put switches for 1%, saving ~50% vs outright QQQ puts and offering >4:1 risk/reward historically.

EZ banks upside for post-war relief and rotation tailwinds

We believe Eurozone banks remain a compelling asset to position for the next phase of Europe's cyclical recovery as the region looks beyond geopolitics. The sharp SX7E rally since the US-Iran MoU has been a reminder of how rapidly flows can re-emerge once war concerns fade. Meanwhile, with valuations still cheap and positioning light, there may be further upside potential. Moreover, any rotation in a bid to diversify AI/Tech longs could favour banks given their cyclical gearing to the European economy. Against the backdrop of a repricing in US rates weighing on the EURUSD, we see value in owning SX7E upside cheapened via: (a) dual-digital and contingent call structures that position for SX7E strength even as EURUSD weakness prevails, and (b) SX7E upside contingent on capped SX5E performance, as the former is likely to outperform in a cyclical European rally.

23 June 2026

Equity Derivatives
Global

BofA
Data
Analytics

Global Equity Derivatives Rsch
BofAS

Riddhi Prasad >>
Equity-Linked Analyst
MLI (UK)

Arjun Goyal
Equity-Linked Analyst
BofAS

Vittoria Volta >>
Equity-Linked Analyst
BofASE (France)

Nitin Saksena
Equity-Linked Analyst
BofAS

Benjamin Bowler
Equity-Linked Analyst
BofAS
benjamin.bowler@bofa.com

Abhinandan Deb >>
Equity-Linked Analyst
MLI (UK)

Meriem Hafid >>
Research Analyst
BofASE (France)

Nicholas Dunne
Equity-Linked Analyst
BofAS

Lars Naeckter >>
Equity-Linked Analyst
Merrill Lynch (DIFC)

See Team Page for List of Analysts

Exhibit 1: 3M volatility (weekly chg)
Level & changes (in parentheses) in vol pts

	Implied	Realized
S&P500	15.4 (-0.8)	15.8 (0.3)
ESTX50	15.7 (-0.9)	19.8 (-0.8)
FTSE	12.4 (-0.4)	15.0 (-0.1)
DAX	15.9 (-1.3)	19.9 (-0.9)
NKY	29.6 (-1.6)	33.4 (1.4)
HSCEI	20.4 (-0.1)	20.1 (0.6)
KOSPI	69.7 (-1.4)	60.9 (0.1)
EEM US	31.8 (-2.3)	33.2 (0.5)
XIN9I	21.8 (1.9)	14.9 (-1.1)

Source: BofA Global Research
BofA GLOBAL RESEARCH

See list of acronyms at the end of the report

BofA GFSI™ X-Asset Risk Landscape

Stress declines resume as commodities and equities ease

The GFSI snapped a two-week streak of increases by declining from -0.23 on 12-Jun-26 to -0.27 on 19-Jun-26. This brings the index into its 16th percentile since 2000. Global cross-asset stress has now been below median levels, as indicated by a negative GFSI, since 5-May.

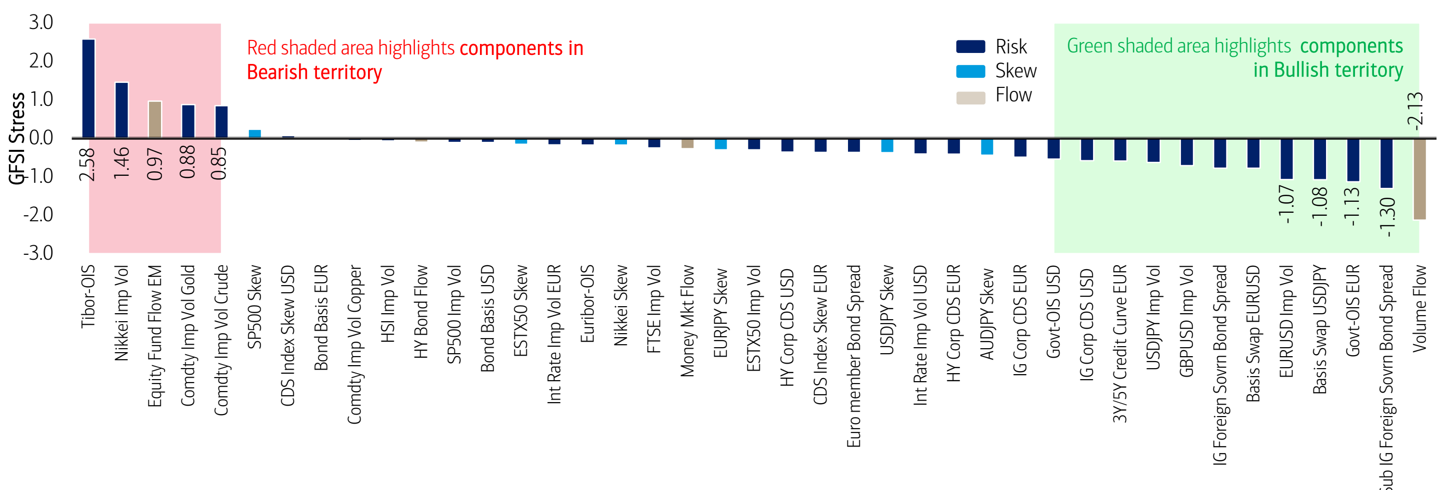
Commodities and equities, the two most stressed asset classes, led declines in stress over the last week (Exhibit 4). In fact, the top six stress-decliners were commodity or equity subcomponents. Gold implied vol recorded the largest decrease in stress after leading stress gains the prior week. Crude implied vol followed as the second-largest stress-decliner with stress easing as oil futures fell on the memorandum of understanding signed by the US and Iran (Exhibit 3; see Global Energy Weekly: 17-Jun-26 for more on the MOU). Despite the recent declines in stress, gold and crude implied vols are still in bearish territory with stress over half a standard deviation above median levels (Exhibit 2).

The next four largest stress-decliners were equity subcomponents, led by volume flow, the subcomponent that measures bullish and bearish U.S. stock volume. Nikkei skew and implied vol were also among the top six stress-decliners as the index gained 7.9% in its best weekly return since Aug-2024 (Exhibit 3). This led Japan to post the largest regional decline in stress last week, but the country remains the GFSI's most stressed region (Exhibit 5). As seen in Exhibit 8, we continue to flag that the Nikkei is exhibiting bubble-like dynamics with our Bubble Risk Indicator above 0.8.

- **FX was the only asset class to record a meaningful gain in stress** (Exhibit 4). This was the third consecutive week of FX stress gains, but it is still the least stressed asset class.
- **Rates stress marginally declined last week** (Exhibit 4). A 96th percentile gain in Tibor-OIS stress was offset by a 95th percentile decline in Euribor-OIS stress and falling interest rate implied vol EUR stress (Exhibit 3 & Exhibit 6).

Exhibit 2: Latest* stress across GFSI sub-components

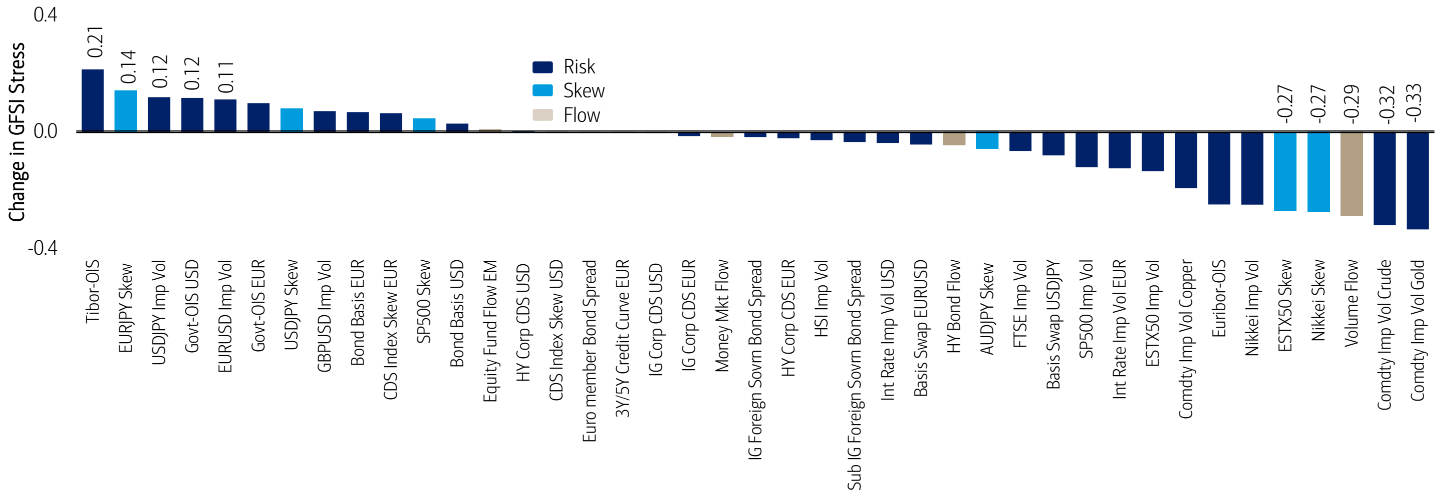
Tibor-OIS is the most stressed while volume flow is the least stressed



Source: BofA Global Research. *Latest as of 19-Jun-26. Disclaimer: The indicator identified above as BofA GFSI is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark.

BofA GLOBAL RESEARCH

Exhibit 3: Change in stress across GFSI sub-components**
Tibor-OIS was the largest stress riser over the last week while gold implied vol stress fell the most

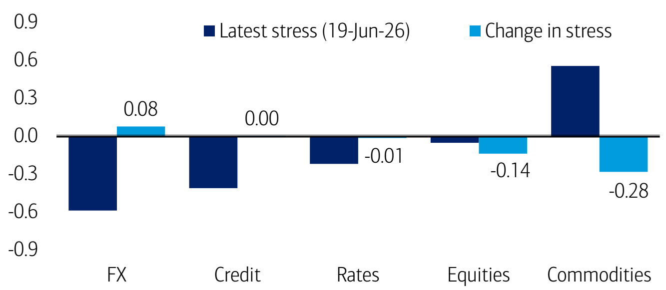


Source: BofA Global Research. **Latest as of 19-Jun-26. Change from 12-Jun-26 to 19-Jun-26.

BofA GLOBAL RESEARCH

The GFSI Risk Allocator (using Bull, Bear & Neutral weights of 2, 0, 1) suggested a 17.1% overweight position as of 19-Jun-26 (unchanged vs 12-Jun-26). The percentages of Bullish, Bearish, and Neutral GFSI components (as used in the Risk Allocator) as of 19-Jun-26 were 29.3%, 12.2%, and 58.5%, respectively.

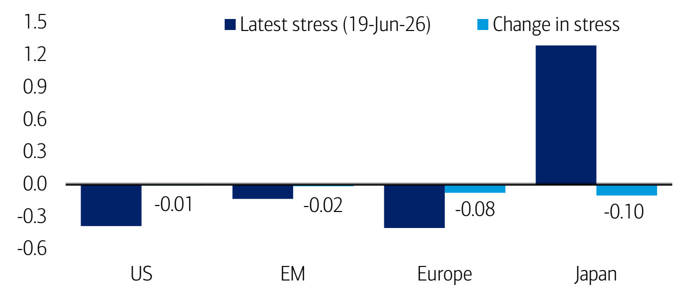
Exhibit 4: Commodity stress decreased the most in the last week
In contrast, FX stress increased



Source: BofA Global Research. Change from 12-Jun-26 to 19-Jun-26.

BofA GLOBAL RESEARCH

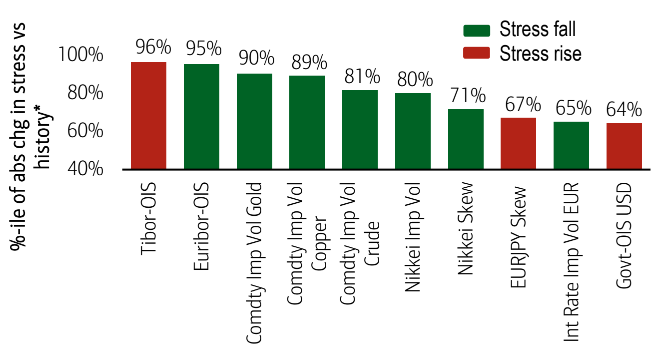
Exhibit 5: Japan led regional stress lower over the last week
Meanwhile, the US posted the smallest stress decline



Source: BofA Global Research. Change from 12-Jun-26 to 19-Jun-26.

BofA GLOBAL RESEARCH

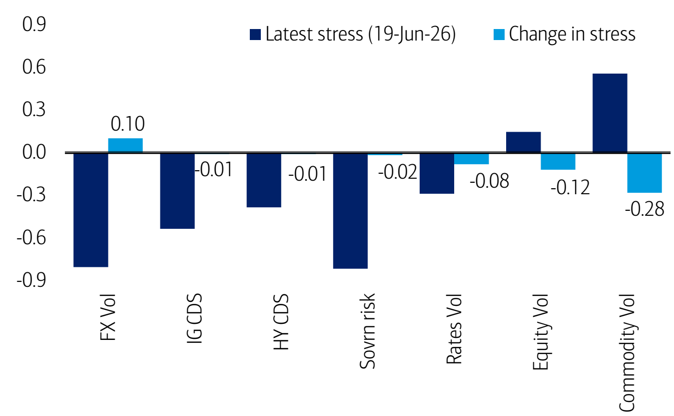
Exhibit 6: Top 10 biggest stress movers (vs history)
Euribor-OIS saw a historically large stress decrease



Source: BofA Global Research. * %-ile of 5-day moves in stress vs all historical 5-day moves (earliest 3-Jan-00). Bar colors represent rise (red) or fall (green) in stress. 5-day change (12-Jun-26 to 19-Jun-26).

BofA GLOBAL RESEARCH

Exhibit 7: Biggest stress movers in cross-asset vols and spreads
Commodity vol experienced the largest decrease in stress over the last week



Source: BofA Global Research. Change from 12-Jun-26 to 19-Jun-26.

BofA GLOBAL RESEARCH

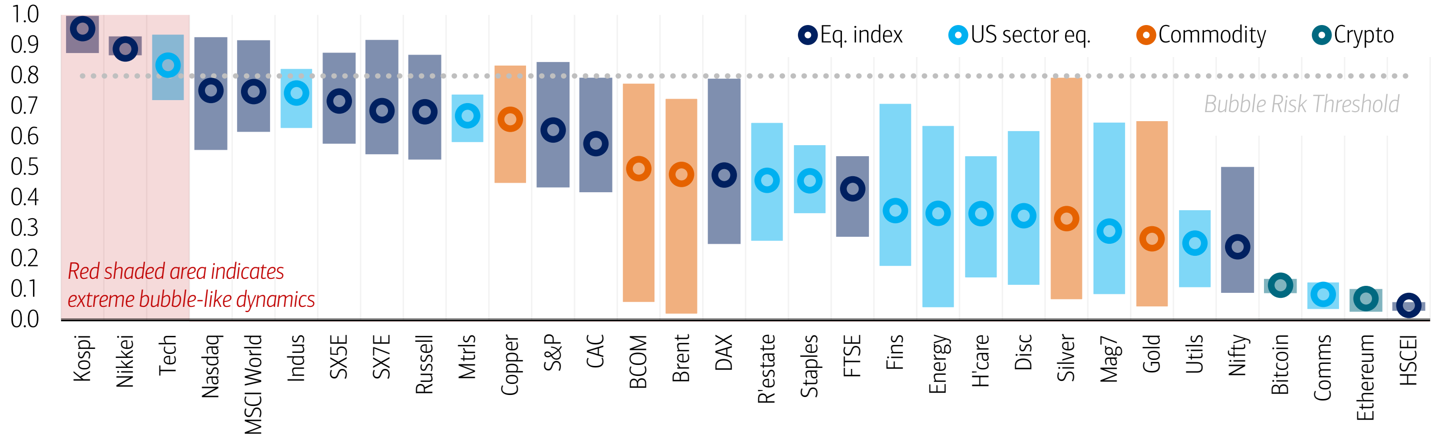
BofA Bubble Risk Indicator Landscape

Froth in US semis drives NDX BRI closer to key 0.8 level

The **BofA Bubble Risk Indicator (BRI)** is a price-based measure designed to detect bubble-like asset dynamics. Inspired by the way the first four moments describe a statistical distribution, the BRI distils an asset's returns, volatility, momentum, and fragility into a single bubble-risk reading on a 0 to 1 scale; 1 represents extreme bubble-like price action while 0 represents none. Historic asset bubbles have exhibited high BRI levels as they formed and peaked (see our 2026 Year Ahead for more details).

Exhibit 8: Frothy instability continues to rise in the Nasdaq (BRI now just under 0.8 threshold) driven by extreme bubble-like dynamics in US tech & semis; the Kospi and Nikkei continue to show extreme BRI readings & bubble-like instability

BofA Bubble Risk indicator (as of 19-Jun-26) across global equity indices, US equity sectors, commodities and crypto (bars: range of short- to long-term sub-indicators)

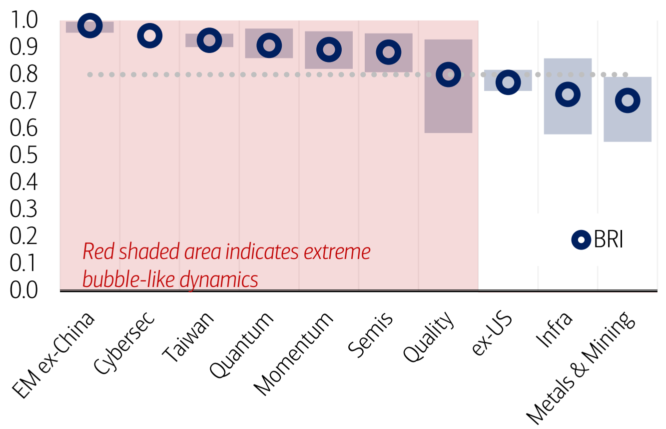


Source: BofA Global Research. Data as of 19-Jun-26. Underlying tickers: SPX, NDX, RTY, SX5E, SX7E, CAC, DAX, UKX, NKY, HSCEI, KOSPI2, NIFTY, MXWD, IXB, IXCPR, IXE, IXM, IXI, IXT, IXR, IXRE, IXU, IXV, IXY, BM7P, BCOM, CO1, XAU, XAG, HG1, XBTUSD, XETUSD. Disclaimer: The indicator identified as the BofA Bubble Risk Indicator is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark.

BofA GLOBAL RESEARCH

Exhibit 9: EM (ex-China) & cybersecurity stocks are showing relatively extreme bubble-like dynamics among popular equity themes

Highest BRI readings across popular equity themes (as of 19-Jun-26)

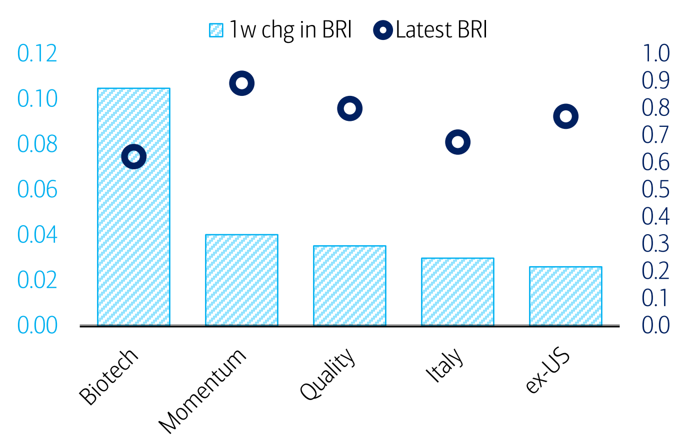


Source: BofA Global Research. Data as of 19-Jun-26. Underlying tickers: M1CXBRV, HXRXL, FTTWN, BQTUMTR, SP500MUT, MVSMHTR, SPXQUT, STEMWUUN, IPAVE, M1WDS1PI. See Disclaimer in Exhibit 8.

BofA GLOBAL RESEARCH

Exhibit 10: Biotech stocks have seen the biggest jump in their Bubble Risk Indicator over the past week among popular equity themes

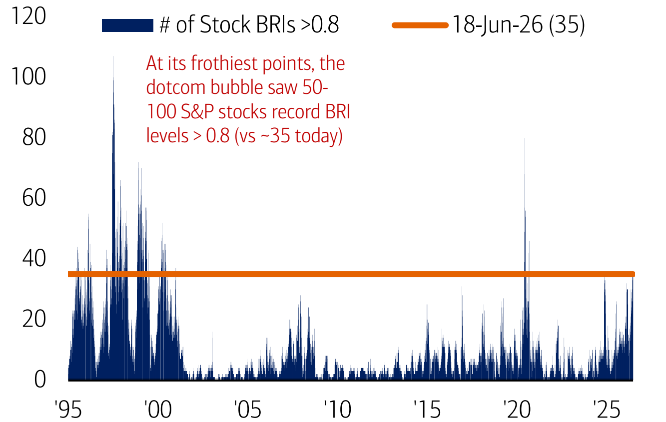
Largest 1w changes in BRI across popular equity themes (as of 19-Jun-26)



Source: BofA Global Research. Data as of 19-Jun-26. Underlying tickers: SPSIBITR, SP500MUT, SPXQUT, M1IT2550, STEMWUUN. See Disclaimer in Exhibit 8.

BofA GLOBAL RESEARCH

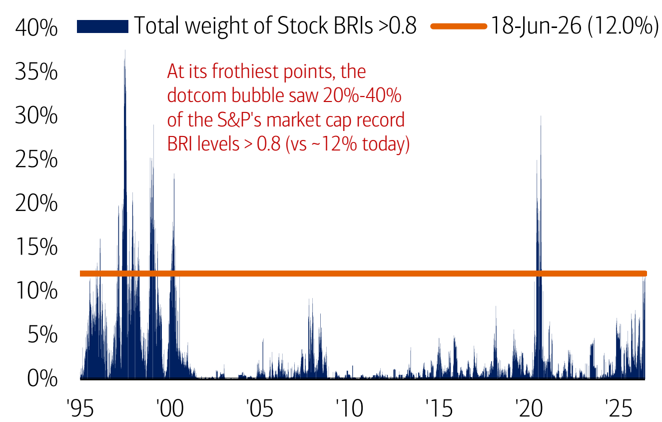
Exhibit 11: S&P stocks are showing increasingly frothy price action, both in terms of the number of stocks…
# of SPX stocks with BRIs above 0.8



Source: BofA Global Research. Data from 1-Jan-95 to 18-Jun-26. Stocks' BRI computed using data since SPX inclusion. See Disclaimer in Exhibit 8.

BofA GLOBAL RESEARCH

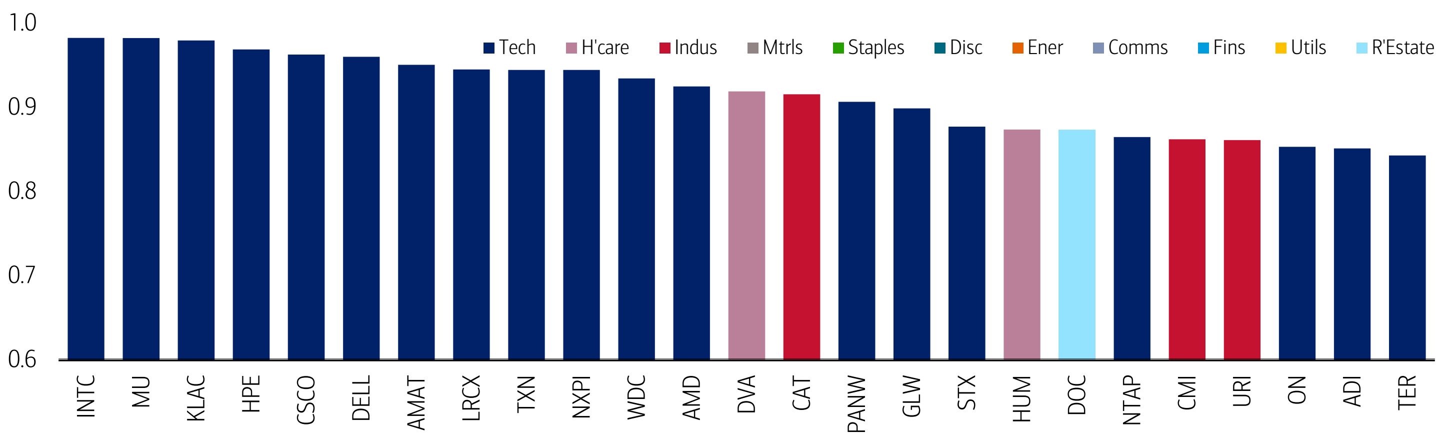
Exhibit 12: … and when measured by total index weight
Total weight of SPX stocks with BRIs above 0.8



Source: BofA Global Research. Data from 1-Jan-95 to 18-Jun-26. Stocks' BRI computed using data since SPX inclusion. See Disclaimer in Exhibit 8.

BofA GLOBAL RESEARCH

Exhibit 13: Tech stocks, specifically semiconductor stocks like INTC, MU and KLAC, rank highest in terms of their Bubble Risk Indicators amongst S&P 500 members
S&P 500 member stocks with highest BRI reading (as of 18-Jun-26)



Source: BofA Global Research. Data as of 18-Jun-26. Note: Stocks' BRI computed using data since S&P 500 inclusion. See Disclaimer in Exhibit 8. Note that the BRI is a purely price-based metric intended to quantify the degree of bubble-like price action. It is not a fundamental view on the stock and should be used only as a complement to fundamental and positioning-based metrics.

BofA GLOBAL RESEARCH

Exhibit 14: US TMT momentum, EU semis & memory, and Japanese management transformation are amongst the global themes showing bubble-like price action as per their high BRIs

Bubble Risk Indicator on selected BofA Custom Baskets* (as of 19-Jun-26)

Basket	Ticker	BRI	Basket	Ticker	BRI	Basket	Ticker	BRI	Basket	Ticker	BRI
AMRS			US Building Products	MLUBUILD	0.49	EU AI Power Surge	MLESURGE	0.84	APAC Smart Glasses	MLAPSMGL	0.91
US TMT Momentum Factor	MLUPTMMO	0.98	US High Default Risk	MLUHDFLX	0.48	EU HALO Basket	MLEUHALO	0.82	JPY Winners Depreciation	MLHKJPFX	0.90
US Exporters	MLUXPORT	0.95	US Boosters (Cyclicals)	MLBOOSTR	0.48	EU stocks China expo	MLD1CHEX	0.81	Korea Corporate Reform	MLHKKRPB	0.90
US TMT Memory Basket	MLUMEMOR	0.95	US Soft Landing	MLSLAND	0.47	EU Consensus Longs	MLD1LSEU	0.79	APAC 5G	MLHKAP5G	0.90
US 800v DC Transition	MLU800V	0.91	US High Quality Yield	MLHQYLD	0.47	EU High USD Exposure	MLEUAMER	0.79	Taiwan AI basket	MLHKTWAI	0.87
US AI Compute	MLUCOMPU	0.91	US Value Factor	MLUPVALU	0.47	EU Cyclicals	MLEUCYCL	0.73	China OpenClaw	MLAPCLAW	0.81
US TMT Supply Shortage	MLUTMTSP	0.90	US AI Adopters	MLUADOPT	0.46	EU Copper Miners	MLEUCOPP	0.72	China Tariff	MLHKRPW2	0.81
US Cyclicals Ex Commods	MLCYCLX	0.89	US Commercial Biotech	MLUSCBIO	0.46	EU Exposed to US Consumer	MLEUSCON	0.71	China Robotics & AI	MLAPCHAI	0.78
US Data Center Builders	MLDATACB	0.89	US Weak Balance Sheets	MLWEAK	0.45	EU AI Adopters	MLEADOPT	0.70	Japan High EM Exposure	MLHKHICH	0.78
US Industrials Momentum Factor	MLUPINMO	0.89	US Health Care Momentum Factor	MLUPHCMO	0.44	EU Steel	MLESTEEL	0.69	Japan Fiscal Impact	MLAPGEJP	0.77
US AI Beneficiaries	MLUSAI	0.89	US Defense Technology	MLUDEFTC	0.41	EU Ukraine Recovery	MLERBUKR	0.69	China Little Giants	MLHKCHLG	0.75
US Hardware	MLUSHRDW	0.89	US Bond Proxy	MLEBOND	0.41	Italian Banks	MLEUITBK	0.68	Korea Tourism	MLHKKRTM	0.71
US SMID Cap Semis	MLSEMISM	0.88	US Consumer China Tariff Exposed	MLCTARIF	0.40	UK Banks	MLD1UKBK	0.67	Japan Inflation	MLHKJPIF	0.69
US Electric Grid Enablers	MLUGRID	0.86	US EU Exposed	MLUSEURO	0.40	EU Max Momo Top	MLEMOMOL	0.66	Korea Battery	MLKRBATT	0.69
US AI Infrastructure	MLAIINFR	0.85	US Drone Ecosystem	MLUDRONE	0.38	EU Short Cycle Industrial	MLEINSCY	0.65	China AI Supply Chain	MLAPAISC	0.65
US Momentum Factor	MLUPMOMO	0.84	US Regulated Utilities	MLUREGU	0.37	EU Travel Basket	MLD1TRAV	0.65	Japan Cyclicals	MLHKJPCY	0.62
US Managed Care	MLDIMNGC	0.83	US Consumer Goods	MLGOODS	0.37	Industrial Manufacturing	MLEINMAN	0.63	Japan Corp Reform	MLHKJPRE	0.61
US Hard Assets, Low Obsolece (HALO)	MLUHALO	0.82	US Utility Growth Basket	MLUSGUTE	0.36	EU Stagflation	MLEUSTAG	0.63	Japan Domestic Upcycle	MLAPJDUB	0.61
US National Champions	MLUCHAMP	0.81	US Consensus Value Shorts	MLDIMSVL	0.35	EU Security DEIS	MLEUDEIS	0.61	Greater China Robotic	MLAPHUMA	0.57
US Beta Factor	MLUPBETA	0.81	US Middle Income Spend	MLUMIDCG	0.34	German Infrastructure	MLEGEINF	0.61	Japan Industrials	MLAPJPIN	0.56
US China Importers	MLCHIMPT	0.80	US Software	MLUSSOFT	0.34	EU Cyclical Chems	MLECCHEM	0.59	APAC World Cup	MLAPWCUP	0.54
US PMI Sensitive Industrials	MLUINDUS	0.80	US Domestic Revenue	MLDOMSTC	0.34	EU New Energy Order	MLEUNEOE	0.58	APAC Airline	MLHKFLYA	0.53
US Financials Momentum Factor	MLUPFINM	0.78	US Golden Dome Basket	MLUGDOME	0.34	EU HY Debt	MLEUDEBT	0.58	APAC Nuclear	MLHKNUCL	0.49
US Transports	MLUTRANS	0.76	US Nuclear Energy Exposed	MLUSNUCL	0.33	EU Capital Goods	MLD1CAPG	0.57	Australian Mining	MLHKAUMN	0.49
US Reshoring Basket	MLRSHORE	0.76	US AI Orchestra Basket	MLUAIORC	0.33	Oil & Gas ex-Renewables	MLD1OILX	0.56	Japan Exporter to the US	MLAPJPEP	0.47
US Copper Exposed Basket	MLUSCOPP	0.76	US Low Income Spend	MLSPREE	0.33	EU Most Gas Exp	MLD1GASX	0.56	Japan Sanaenomics	MLAPJPSA	0.46
US Cyber Security Basket	MLCYBRS	0.75	US Old Economy	MLOLDEC	0.32	French Domestics	MLD1FRAN	0.52	Korea Defense	MLHKKRDF	0.45
US Space Race	MLUSPACE	0.73	US High End Consumer	MLDIHEC	0.32	EU Consumer Discretionary	MLEUCONS	0.51	APAC Petrochem	MLAPCHEM	0.43
US Cyclical Industrials ex AI	MLUICXAI	0.73	US Higher Oil Price 'At-Risk'	MLOILRSK	0.32	EU Tariff Exposed	MLETARIF	0.47	APAC AI Infrastructure	MLAPAIIF	0.43
US Consensus High Beta Shorts	MLDIHBHS	0.72	US Pharma Hyperscalers Basket	MLURXHYP	0.32	EU M&A	MLEUMNAC	0.47	APAC EV	MLHKAPRN	0.41
US Renewables	MLUSRNEW	0.72	US Medicaid	MLELECHC	0.31	EU Consensus Shorts	MLD1MSEU	0.45	Japan Engagement	MLAPJPAT	0.35
Canada Infrastructure & Defense	MLCAINFR	0.71	US Commodities Complex	MLCOMMOD	0.31	EU Luxury	MLEULUXG	0.45	China Property	MLCNPROP	0.33
US Leisure Travel	MLDILEIS	0.71	US Consumer Services	MLSERVE	0.31	UK Doms ex-Homebuilders	MLUKDOMX	0.43	APAC Coal	MLAPCOAL	0.27
US Defense, Energy, Infra & Security	MLUDEIS	0.71	US Defense Electronics	MLUDELEC	0.30	EU Renewable Utilities	MLEURNEW	0.43	Japan NISA	MLHKNISA	0.24
US Efficient Growth	MLUEGROW	0.71	US SMID Cap Utilities	MLUSUTES	0.30	EU Sovereign Priority	MLEUSOVR	0.41	APAC Oil exposed	MLAPOIL	0.23
US Battery Ecosystem	MLUSBATT	0.70	US Strong Balance Sheets	MLSTRNG	0.28	EU Max Momo Bottom	MLEMOMOS	0.38	China SOEs	MLHKZSOE	0.20
US Staples Momentum Factor	MLUPSTMO	0.69	US Generation Z Basket	MLUGENZ	0.28	EU European Domestics	MLEUDOMS	0.37	Japan Defense	MLAPJDEF	0.16
US TMT Profitable Growth	MLUTMTPG	0.68	US LNG	MLUELNG	0.27	EU Russia Exposed	MLEURUSS	0.35	APAC Shipping	MLAPSHIP	0.11
US Consensus Growth Shorts	MLDIMSGR	0.68	US Energy Momentum Factor	MLUPENMO	0.27	Gold Miners	MLD1GLDM	0.35	HK Dual listed H-shares	MLHKPREM	0.10
US TMT Durable Compounders	MLUTMTDC	0.67	US Consensus Large Cap Shorts	MLDISSRT	0.25	UK M&A Candidates	MLUKMNAC	0.35	Japan Defensives	MLHKJPDF	0.10
US Boomers Spend	MLUBOOM	0.67	US Defense Contractors	MLDEFCON	0.24	EU Cyclical Exp to US	MLECYCUS	0.35	Japan Electric Power	MLJPTPEL	0.09
US No Landing	MLNLAND	0.67	US Stagflation	MLSTGFL8	0.24	UK Domestic Names	MLUKDOMS	0.34	China High Dividend Yield	MLAPCHDV	0.09
US Retail Signal	MLRETAIL	0.66	US Utility Defensive Yield	MLUSRUTE	0.22	Germany Domestic	MLEGEDOM	0.32	China Anti Involution Basket	MLAPANTI	0.08
US Discretionary Momentum Factor	MLUPCDMO	0.65	US Wellness Basket	MLUWELL	0.20	EU Defense	MLD1DEFE	0.31	Japan Retail	MLAPJRE	0.07
US NeoCloud Basket	MLUNEOCL	0.65	Brazil Election Basket	MLBZELEC	0.20	EU Defense Electronics	MLEDEFEL	0.29	Korea Export ex Auto/Tech	MLKRREXP	0.05
US Consensus Small Cap Shorts	MLDIRSRT	0.64	US Private Equity Funds	MLDIPTPE	0.19	EU Defensives	MLEUDEFS	0.28	China Internet	MLHKCHIH	0.04
US Low Int Coverage	MLLINTC	0.64	US True Defensives	MLTRUDEF	0.18	UK Consumer	MLD1UKCS	0.24	China Consumption Stimulus	MLAPCHST	0.03
US Foreign Revenue	MLFORER	0.62	US Water Ecosystem	MLUH2O	0.17	EU Software	MLESOFTW	0.16	Japan Wage Growth	MLHKJPWG	0.03
US Power Supercycle	MLUSPOWR	0.61	US Independent Power Producers (IPPs)	MLUIPPS	0.16	UK Housebuilders	MLUKHOME	0.14	China National Brand	MLHKCBVM	0.03
US Quantum Computing	MLUQUANT	0.59	US Alternative Managers	MLUALTS	0.16	EU Autos	MLEUAUTO	0.13	APAC Gold	MLAPGOLD	0.02
US Quality Factor	MLUPQUAL	0.59	US Defensive Industrials	MLUDINDU	0.15	EU Defence Exposed	MLEINDEF	0.10	China Consumer New	MLAPHKCN	0.02
US Residual Volatility Factor	MLUPVOLA	0.57	US Growth Factor	MLUPGROW	0.10	**APAC**			China Consumer Old	MLHKCHCO	0.01
US Hard Landing	MLHLAND	0.57	US Private Credit Proxy	MLPRCRED	0.07	Japan Mgmt Transformation	MLAPJACA	0.98	Macau Gaming	MLHKMCGM	0.01
US Materials Momentum Factor	MLUPMAMO	0.56	US GLP-1 Disruption Risk	MLXGLP1	0.04	Japan Tariff Exposed	MLAPJPTR	0.98			
US Refinance Risk	MLREFIN	0.53	US TMT Defensives	MLUTMTDF	0.01	AxJ Inflation	MLHKAXIF	0.95			
US Crypto Exposed	MLDICRYP	0.51	**EMEA**			JPY Winners Appreciation	MLHKJPYA	0.95			
US Long Term Debt Maturities	MLLTMATS	0.51	EU Semis & Semicaps	MLD1EUSM	0.94	China Technology Localization	MLHKCTLC	0.94			
US Small Cap Earners	MLSMEARN	0.50	EU Memory	MLEUBYTE	0.85	Korea Holdco	MLAPKRHO	0.93			
US New Construction	MLNCONST	0.50	EU Power Grids	MLEUGRID	0.84	Japan GPIF	MLHKGPIF	0.91			
Domestic Tax Policy	MLUTAXD	0.49	European Reflation	MLD1REFL	0.84	APAC AI Beneficiaries	MLHKAPAI	0.91			

Source: BofA Global Research. Data as of 19-Jun-26. *Disclaimer: These BofA baskets are proprietary baskets structured and maintained by the BofA Securities trading desk. For more details on these baskets, please contact the team. See BRI disclaimer in Exhibit 8.

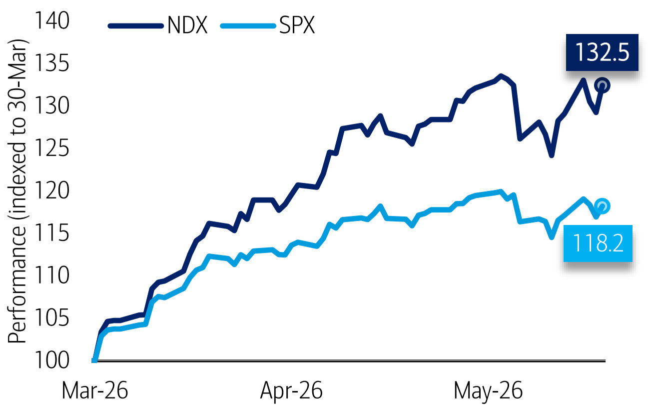
BofA GLOBAL RESEARCH

NDX approaching BRI bubble-levels as it defies macro risk

Despite the notably hawkish tone from last week's FOMC meeting, the Nasdaq continued its broad trend higher, and the AI bubble continues to expand, overcoming macro headwinds and geopolitical uncertainty. The breakneck rally has also pushed the Nasdaq's BRI closer to the top quintile (Exhibit 8), beyond which we typically see rising near-term risks in both tails.

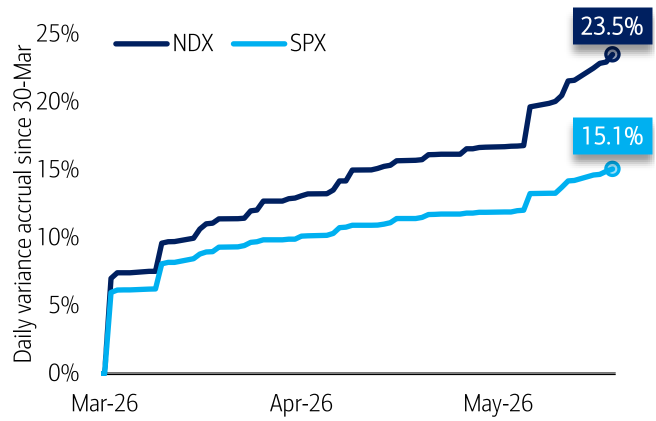
While the S&P has also been resilient in its rally, the Nasdaq remains at the centre of the AI trade, having outperformed in both return (Exhibit 15) and vol (Exhibit 16) since the March lows. This divergence is in line with our previously expressed preference to own Nasdaq over S&P to trade an AI bubble (both in delta & vol; see How to own the AI race for more details), a preference we continue to maintain.

Exhibit 15: Since the March lows, the Nasdaq has outperformed the S&P handily, in both returns (32.5% vs 18.2%) ...
NDX vs SPX performance from 30-Mar-26 to 18-Jun-26



Source: BofA Global Research, Bloomberg. Data from 30-Mar-26 to 18-Jun-26.
BofA GLOBAL RESEARCH

Exhibit 16:... and in realized vol (23.5% vs 15.1% annualized vol)
NDX vs SPX variance accrual from 30-Mar-26 to 18-Jun-26

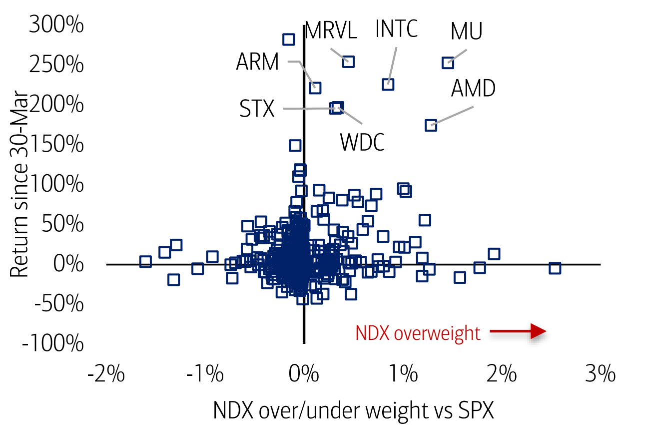


Source: BofA Global Research, Bloomberg. Data from 30-Mar-26 to 18-Jun-26.
BofA GLOBAL RESEARCH

What has driven NDX outperformance on both metrics? Under the hood, semis stocks like MU, AMD & INTC, which are notably overweight in NDX vs SPX, have been striking outperformers in the US large cap universe, both in terms of returns (Exhibit 17) and realized vol (Exhibit 18).

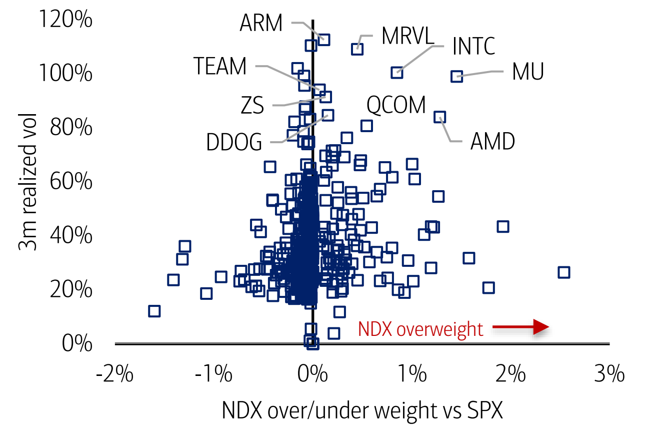
Note that while ultra-low correlation has been a key suppressor of SPX realized vol, NDX stock correlation has also reached historically low levels, hence the NDX vs SPX index vol divergence looks to be primarily driven by higher NDX single stock vol.

Exhibit 17: Under the hood, semis stocks like MU, AMD & INTC have been the key drivers of NDX outperformance given their overweight in NDX vs SPX
Stock return since 30-Mar vs NDX-SPX index weight differential



Source: BofA Global Research. Data from 30-Mar-26 to 18-Jun-26. Weighting as of 30-Mar-26.
BofA GLOBAL RESEARCH

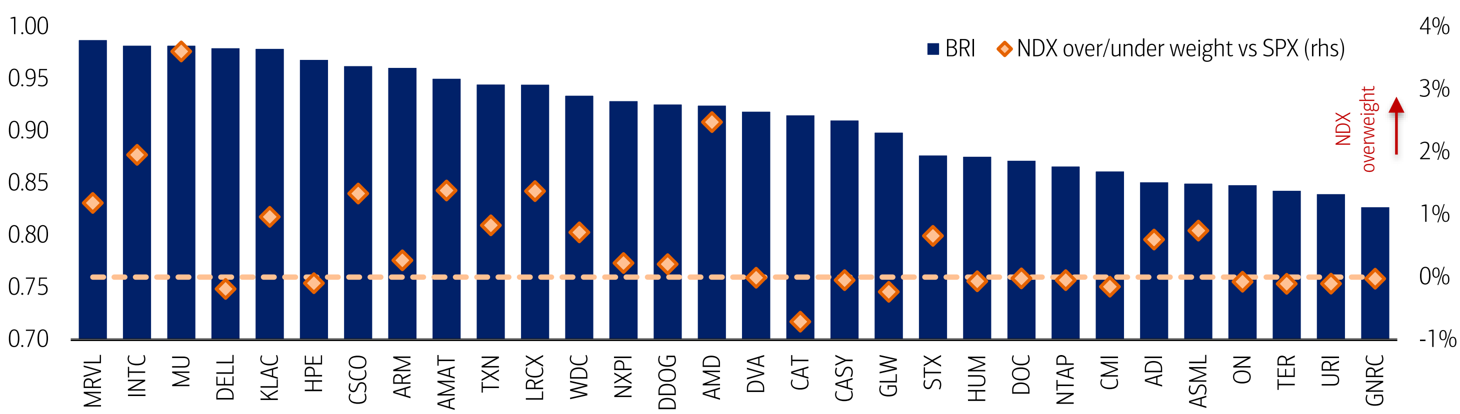
Exhibit 18: Concurrently, semis stocks that are overweight in NDX have also contributed to rising NDX vol vs SPX vol, with many of these large stocks realizing >80v over the last 3m (like MU, AMD & INTC)
3m realized vol vs NDX-SPX index weight differential



Source: BofA Global Research. Data from 26-Mar-26 to 18-Jun-26. Weighting as of 30-Mar-26.
BofA GLOBAL RESEARCH

More broadly, many of the large cap US stocks with the highest Bubble Risk Indicator readings are overweight in NDX vs SPX (8 out of the top 10; Exhibit 19), and are hence driving NDX's spot & vol outperformance vs SPX and the overall rise in bubble-like dynamics in the NDX relative to SPX.

Exhibit 19: A large proportion of the US large cap stocks with the highest Bubble Risk Indicators (8 out of the top 10) are overweighted in the Nasdaq vs the S&P, driving more bubble-like dynamics in NDX (vs SPX)
Top BRI stocks in NDX & SPX vs NDX-SPX index weight differential



Source: BofA Global Research. Data as of 18-Jun-26. Weighting as of 18-Jun-26.
BofA GLOBAL RESEARCH

In our view, today's reflexive markets continue to create upside risk in US tech as investors chase momentum and want to avoid missing out on owning an AI-enabled future. However, with sharp pullbacks being a key feature of bubble builds, we see options & vol-based structures as well-positioned to navigate this environment with less risk.

In this context, we like:

- **Long QQQ call spreads**, which offer asymmetric upside exposure with limited risk while being cheaper than outright calls (whose premiums can be unpalatable today given the sharp rise in vol) and benefiting from relatively flat call skew.

- **NDX higher, rates higher and/or NDX higher, EURUSD lower hybrids**, which exploit attractive implied correlation entry points to provide ~60% cheapening vs vanilla calls (see 16-Jun-26 GEVI and 22-Jun-26 FX Alpha).

- **QQQ expanding put spreads**, which can mitigate strike risk and reset protection levels higher as the market rallies (see 12-May-26 GEVI). For those looking to cheapen such resettable strike options further, we like adding an up & in contingency to the structure (which can offer ~50% discounts).

- **Owning gamma in high BRI stocks**, which continues to perform well and positions for the elevated realized vol that typically follows such bubble-like instability (see 16-Jun-26 GEVI).

Own the AI race but mind the left tail as bubble risks build

> **Trade**: Hedge AI downside risk via long QQQ Dec26 $600 (~14d) put vs short SPY $600 (9d) put for 1.0%: QQQ IV: 32.9v; SPY IV: 26.9v; IV spread: 6.0v; latest 3m RV spread: 8.3v; Spot refs: QQQ: 737.6; SPY: 744.7.
>
> **Risk**: A risk asset selloff that sees SPX fall more than NDX (e.g. if financials led)

The Nasdaq-100 (NDX) has surged ~32% since end of March (nearly 2x the SPX's ~18%). We see scope for further outperformance should the AI trade continue to drive the narrative for risk assets, as we outlined in our March report How to own the AI race. Moreover, Nasdaq's new index methodology with fast-entry for megacap IPOs (which was ruled out for the SPX) likely gives the NDX an edge over the SPX in gearing it even further to the fortunes of the AI trade, especially given an AI-heavy IPO pipeline in the coming months.

At the same time, the pace/ferocity of the NDX rally is starting to unsettle some investors, and understandably so, as sharp drawdowns and quick snapbacks are typical features of how bubbles form and extend (see our Year Ahead 2026: The Bubble era). For those looking to remain long the AI theme while managing downside risk, we add a Dec26 QQQ–SPY relative value put switch to the list of trades in this domain (for a full list, see the back of this report).

Now, the QQQ vs SPY 6m ATMf vol spread sits above the recent (last 3m) realized vol spread (Exhibit 20), but better value emerges when looking at put options. Indeed, for OTM puts, the implied vol spread is tighter, both relative to ATMf and to calls (Exhibit 21). Exhibit 22 shows that at current levels, the hypothetical backtest of a QQQ vs SPY Dec26 equivalent put switch would have delivered positive P&L during the Dotcom bubble (2000) era as well as the 2022 drawdown, for a ~4.3x reward-to-risk ratio.

Why Dec26? Higher gamma to midterm risks & less autocallification impact

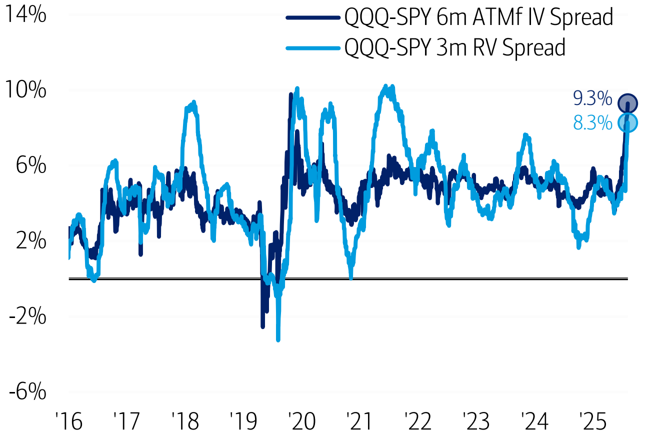
NDX-linked income issuance has grown materially in recent years, exceeding $2.5bn per quarter and now accounting for ~10% of total index-linked income issuance (Exhibit 23). At the same time, NDX-linked autocalls are also entering the mainstream via the ETF route, with growth outpacing other autocall ETFs, which themselves are among the fastest-growing segments of the ETF industry (Exhibit 24).

This matters for choosing option tenors for fixed strike NDX protection. The rise in structured product activity has increased the impact of dealer hedging flows on long-dated NDX vol. We note that while peak vanna in NDX is only around half of that in SPX, it still represents a meaningful share (~12%) of total listed vega traded across NDX and QQQ options (for 6m+ tenors), making these flows an important driver of long-dated volatility (Exhibit 25; for reference, SPX share is ~4%).

In practice, this hedging tends to dampen OTM put vol as spot declines toward peak vanna (currently only ~6% below spot), contributing to flatter long-dated put skew. Both effects have been visible recently: on 5 June, when NDX fell ~5% (its largest drawdown since Liberation Day), longer-dated fixed-strike vols declined (Exhibit 26), with the result that long-dated put vols have become positively correlated with spot (Exhibit 27). Relative to SPX, these *autocallification* effects appear more pronounced in NDX, with a more positive spot–vol correlation and flatter put skew (Exhibit 28).

Against this backdrop, choosing Dec26 allows for greater gamma exposure to nearer-term catalysts (such as midterm elections), while reducing exposure to autocall-driven vol dampening effects that can hurt fixed strike long put trades further out the curve.

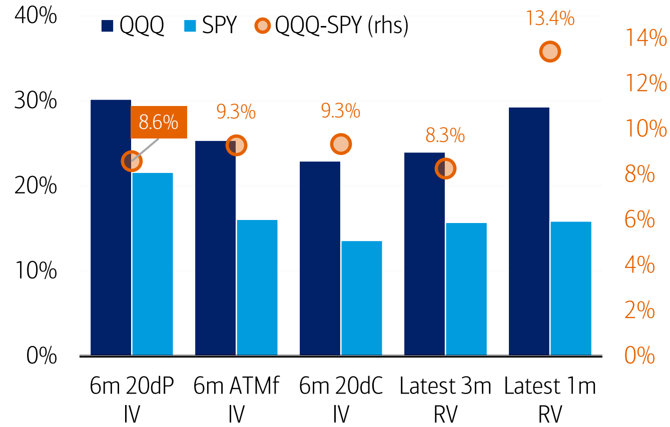
Exhibit 20: The QQQ vs SPY ATMf vol spread sits only slightly above the latest realized vol spread
QQQ-SPY 6m ATMf implied vol spread vs 3m realized vol spread.



Source: BofA Global Research, Bloomberg. Daat from 19-Jun-15 to

BofA GLOBAL RESEARCH

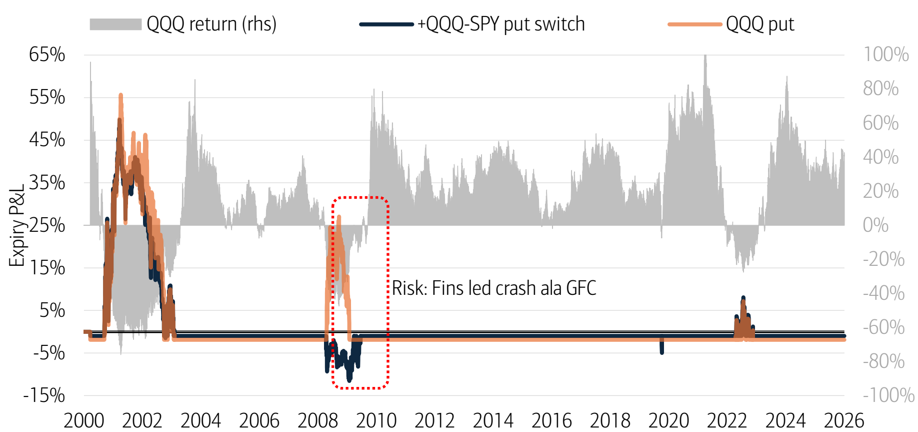
Exhibit 21: Better value can be found in OTM puts, where the implied vol spread is tighter than at ATMf and vs calls
Current QQQ-SPY 6m implied vol spreads vs the latest 3m/1m realized vol spreads



Source: BofA Global Research, Bloomberg. Data as of 18-Jun-26.

BofA GLOBAL RESEARCH

Exhibit 22: Setting aside the risk of (say) a financials led selloff, a Dec26 QQQ-SPY put switch saves ~50% in initial cost while offering >4x in reward to risk, based on history
Hypothetical backcast (using current option prices) of long Dec26 QQQ 14d (81.3%) put and short Dec26 SPY 9d (80.6%) put, held to expiry, compared to the long QQQ put outright and rolling QQQ returns (rhs)

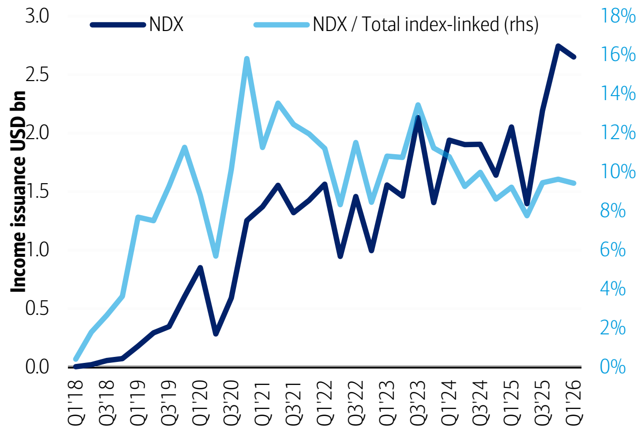


Source: BofA Global Research. Data: Mar-99 to Jun-26. This performance is backtested & does not represent the actual performance of any account or fund. Back-tested performance depicts the theoretical (not actual) performance of a strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein.

BofA GLOBAL RESEARCH

Exhibit 23: NDX income issuance has grown significantly in recent years, exceeding $2.5bn/quarter and now accounts for ~10% of total index-linked income issuance

Quarterly issuance of income structured products linked to the NDX, and NDX's share of total index-linked income issuance.

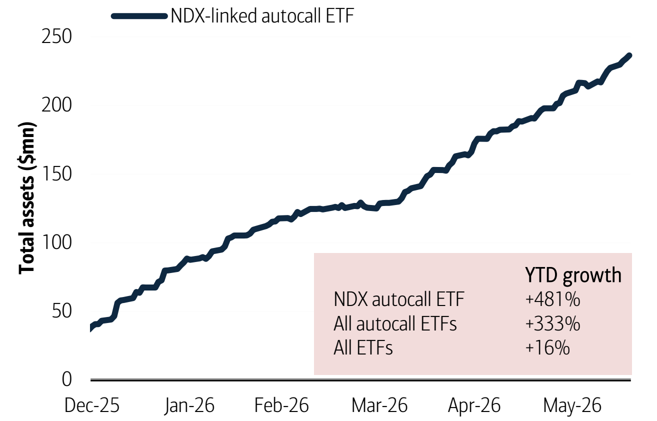


Source: BofA Global Research, Bloomberg. Data from 1-Jan-18 to 31-Mar-26. For multi-underlying structures, we allocate notional equally across all constituents by dividing the total notional by the number of underlyings and assigning the resulting amount to each underlying. Structured products reported here exclude open-ended products and warrants.

BofA GLOBAL RESEARCH

Exhibit 24: NDX-linked autocalls are also entering the mainstream via the ETF route, with growth outpacing other autocall ETFs which themselves are among the fastest growing segments of the ETF industry

Total assets ($mn) of NDX-linked autocall ETFs since the start of 2026

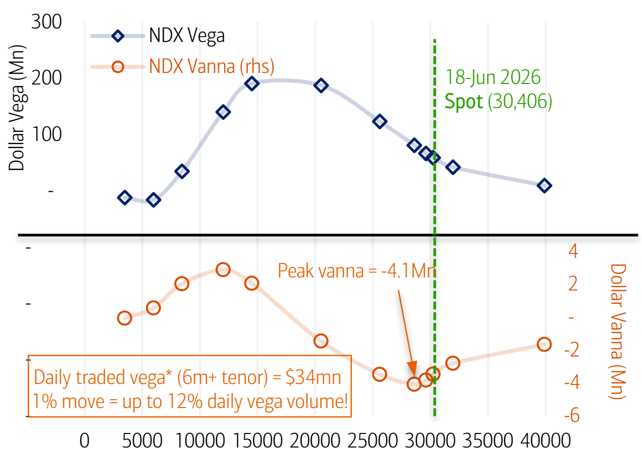


Source: BofA Global Research, Bloomberg. Data: 30-Dec-25 to 18-Jun-26

BofA GLOBAL RESEARCH

Exhibit 25: Peak vanna in NDX sits ~6% below current spot, and represents roughly ~12% of the daily (listed) vega traded

Vega/Vanna profile of live NDX-linked structured products

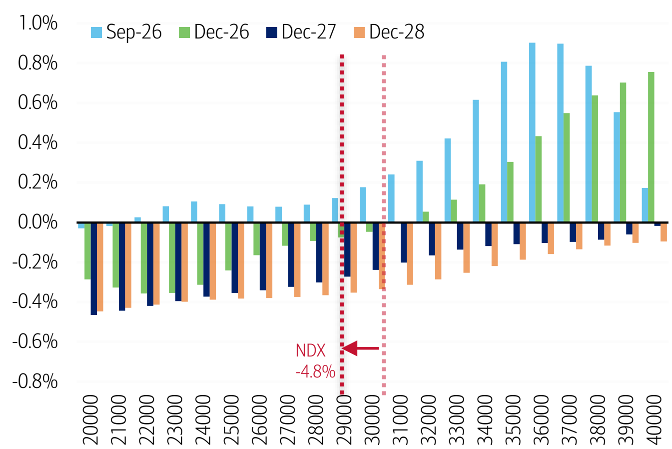


Source: BofA Global Research, SPi, part of WSD, Bloomberg. Vega derived from the universe of products live as of 14-May-26. Vanna calc using adjacent vega values. *Daily traded vega = 1m avg, aggregated across NDX and QQQ US.

BofA GLOBAL RESEARCH

Exhibit 26: Autocallification appears visible in NDX fixed-strike vols; during the recent ~5% pullback (the sharpest since 'Liberation Day'), long-dated vols broadly declined, particularly for OTM puts.

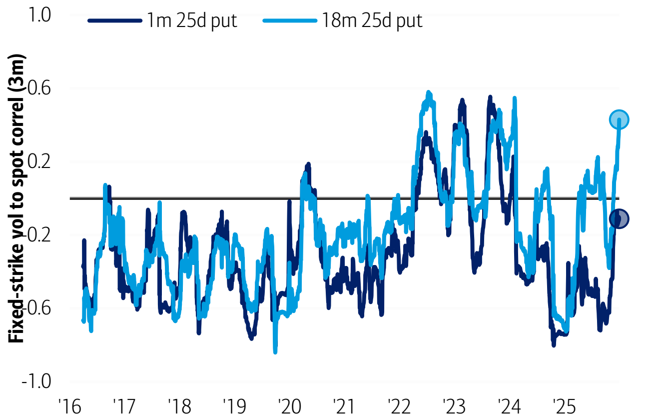
NDX 1-day change in fixed-strike vols, from 4-Jun to 5-Jun.



Source: BofA Global Research, Bloomberg. Data from 4-Jun-26 to 5-Jun-26.

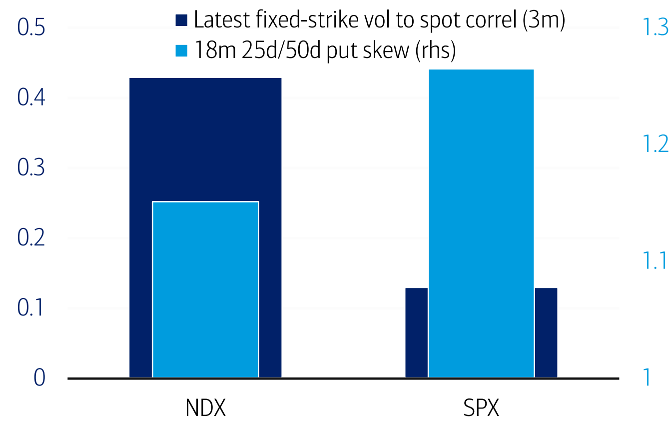
BofA GLOBAL RESEARCH

Exhibit 27: NDX long-dated fixed-strike vols have recently turned positively correlated with spot
3m rolling realized correlation between changes in1m/18m 25d fixed-strike vols and NDX spot returns.



Source: BofA Global Research, Bloomberg. Data from 20-Jun-16 to 18-Jun-26.
BofA GLOBAL RESEARCH

Exhibit 28: Signs of autocallification appear more pronounced in NDX than in SPX: spot–vol correlation is more positive and put tail skew is flatter.
NDX vs SPX. LHS: 3m rolling realized correlation between changes in 18m 25d fixed-strike vols and spot returns. RHS: put tail skew measured as 18m 25d/50d put vol ratio.



Source: BofA Global Research, Bloomberg. Data from 20-Mar-26 to 18-Jun-26.
BofA GLOBAL RESEARCH

EZ Banks upside: More post-war cyclical relief with potential rotation tailwinds

What: For cheapened exposure to a continued EZ-Banks (SX7E) rally, buy: (i) Sep-26 SX7E>106%, EURUSD < 1.14 dual-digital for 10.5% (offering a 9.5:1 payout); (ii) SX7E Sep26 106% call, contingent on EURUSD <1.14 at maturity for 1.01% (58% discount vs vanilla) & (iii) SX7E Sep26 107% call contingent on SX5E<=104% at maturity for 1% (54% discount vs vanilla calls). *Trade refs: 295, 1.1451, 6294 respectively*

Why: Upside potential for Eurozone banks (SX7E) remains compelling given still-cheap valuations, light positioning and leverage to a cyclical recovery, particularly if flows begin to rotate at the margin away from crowded AI/Tech exposure into European cyclicals. However, with SX7E implied volatility still elevated outright, we recommend cheapening upside exposure via structures that harvest Equity-FX correlations that aren't yet pricing in the possibility of strength in both risk assets and the USD, while retaining convexity.

Risks: Losses would involve the premium paid

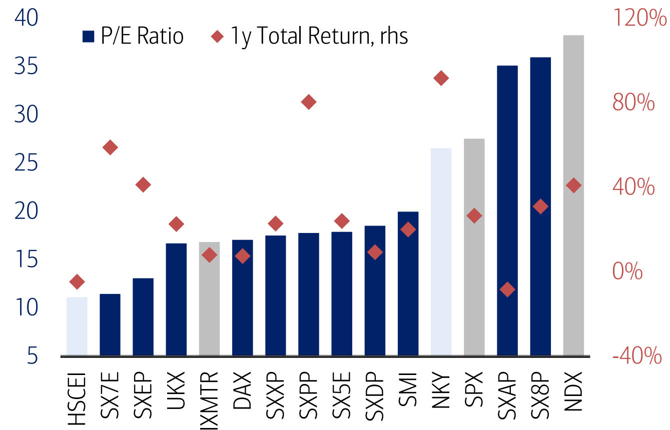
Eurozone banks (SX7E) have rallied sharply since news of the Memorandum of Understanding between the US and Iran (+11.9% in 7 days, vs 2.9% for the STOXX 600) as investors re-engage with cyclical European equities with the apparent removal of a key geopolitical overhang. Despite this strong post-Iran war performance and the ~60% trailing 1-year total return, European Banks still appear cheaply valued vs global peers (Exhibit 29). Our Banks strategists remain constructive on the sector given the normalised profitability regime, stronger balance sheets and earnings resilience (see Bull and Bear debate, Jun'26). At the same time, Eurex futures data suggests positioning in the sector fell sharply during the Middle East conflict. While this has partially recovered, positioning remains low both versus history and versus global or tech-tilted sections of the market (Exhibit 30, Exhibit 31). This combination of improving sentiment but cheap valuations and underweight positioning leaves scope for further upside if confidence around a cyclical recovery in Europe persists. Indeed, cyclical European equities (including Banks) may also find themselves a beneficiary of any move away from AI/Tech longs diversifying their position by rotating into Europe.

Meanwhile, a more hawkish Fed trajectory (our US economists now expect 75bps of hikes this year, see Federal Reserve Watch) and an upward repricing of US rates relative to Europe could bias EURUSD lower. This is relevant given the historical and current implied correlation between EURUSD and SX7E. While the two assets have recently shown a positive gearing, they can diverge in a scenario where rates policy differentials pressure the currency pair lower, while a cyclical recovery benefits the SX7E.

While SX7E upside remains compelling, implied volatility is still elevated enough to make outright option trades relatively expensive. The positive correlation between SX7E and EURUSD can offer cheapening benefits via structures such as dual-digitals and contingent call options that position for a stronger SX7E, coincident with a weaker EURUSD (Exhibit 32, Exhibit 33).

Also, the positive correlation between SX7E and SX5E offers an opportunity to set up SX7E calls contingent on SX5E's performance remaining capped, a risk-limited way of positioning for a rotation away from the Tech heavy SX5E to more cyclical Banks. While the implied vol spread between SX7E and SX5E (which also drives the pricing of contingent calls) isn't low, it has recently tightened from the wartime wides and is lower than the recent 1m realised vol spread (Exhibit 34).

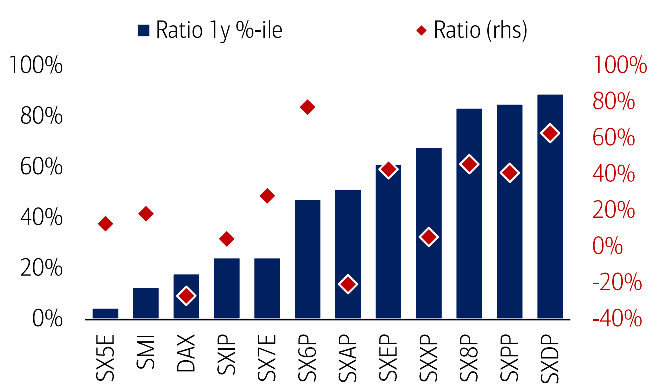
Exhibit 29: EZ Banks (SX7E) remains one of the most cheaply valued benchmarks globally, despite a ~60% total return in the last year
Global equity indices' P/E ratios and trailing 1y total return



Source: BofA Global Research, Bloomberg. Bar colors vary by region (dark blue = Europe, light blue = Asia, grey = USA)

BofA GLOBAL RESEARCH

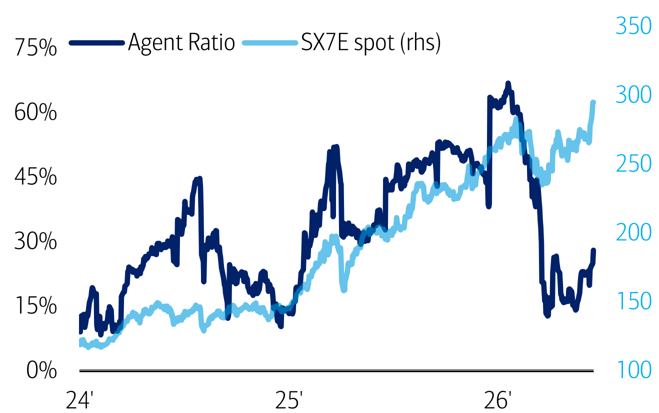
Exhibit 30: Net agent futures positioning shows SX7E longs are not historically stretched vs basic resources (SXPP) or tech (SX8P)...
Eurex A-accounts open interest as % of total open interest and its 1y percentile



Source: Bloomberg, Deutsche Boerse. Data from 18-Jun-25 to 18-Jun-26. EUREX defines participant types as: Agent – trading on behalf of customers, Market Maker providing liquidity, and Proprietary – trading for own account.

BofA GLOBAL RESEARCH

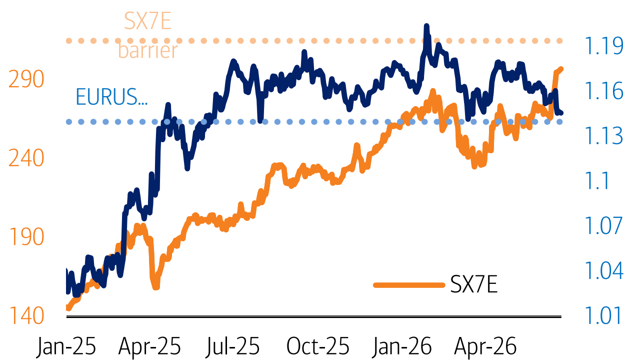
Exhibit 31: ... Indeed, history of the SX7E Net agent futures open interest ratio suggests positioning has room to build.
SX7E Eurex A-accounts open interest as % of total open interest versus spot



Source: Bloomberg, Deutsche Boerse. Data from 02-Jan-24 to 18-Jun-26. EUREX defines participant types as: Agent – trading on behalf of customers, Market Maker providing liquidity, and Proprietary – trading for own account.

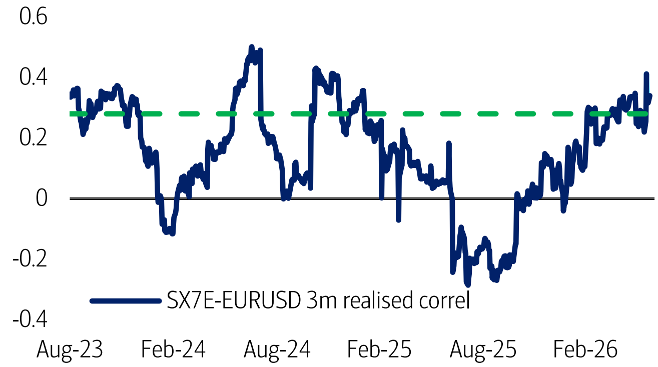
BofA GLOBAL RESEARCH

Exhibit 32: EURUSD has room to fall against the backdrop of a more hawkish Fed, while SX7E could continue its upward march...
SX7E and EURUSD spot and the suggested trade barrier levels



Source: BofA Global Research, Bloomberg. Data from 22-Jun-25 to 22-Jun-26.
BofA GLOBAL RESEARCH

Exhibit 33: ... which would coincide with a lowering of the realised correlation between the two (currently positive & at its 95th 3y %-ile)
SX7E-EURUSD 3m rolling realised and current implied levels



Source: BofA Global Research, Bloomberg. Data from 22-Jun-24 to 22-Jun-26.
BofA GLOBAL RESEARCH

Exhibit 34: The SX7E-SX5E 3m 40d call IV spread has tightened from wartime wides to being lower than the recent realised spread
Spread between the SX7E and the SX5E 3m 40d call implied vols and the latest 1m realised vols

Source: BofA Global Research, Bloomberg. Data from 01-Jan-25 to 22-Jun-26.
BofA GLOBAL RESEARCH

Frequently asked questions about the BofA Bubble Risk Indicator (BRI)

In our 2026 Year Ahead report, we introduced the BofA Bubble Risk Indicator (BRI), a price-based measure designed to detect bubble-like instability across financial assets. Given strong client interest, we are now adding a weekly one-page BRI update to the GEVI (see earlier pages). This update will track BRI levels across major markets and asset classes, highlight pockets of equities exhibiting the most froth, and call out recent increases in bubble-like price action. Below, we address some of the most frequently asked questions about the BRI.

The BofA Bubble Risk Indicator is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purpose, without the prior written consent of BofA Global Research. The BRI was not created to act as a benchmark.

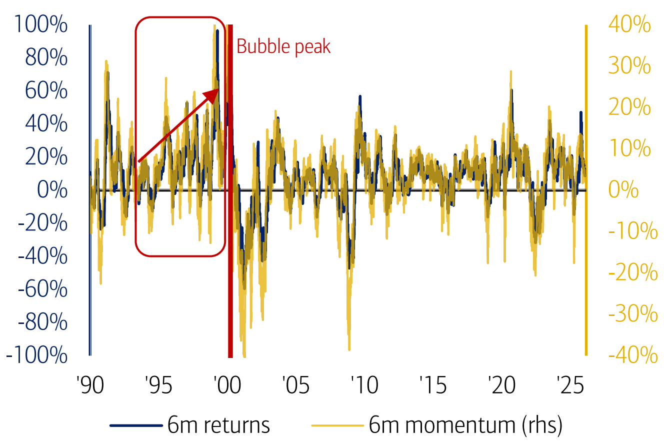
1. How does the BRI quantify 'bubble risk'?

A defining feature of historical asset bubbles is that volatility tends to rise alongside prices. Building on this observation and drawing inspiration from how the four statistical moments characterize a distribution, the BRI quantifies bubble risk using the first four moments of an asset's price action: (i) returns, (ii) realized volatility, (iii) price momentum[1], and (iv) fragility/convexity.[2]

These four moments typically become elevated during the frothiest phases of asset bubbles, reflecting the influence of exuberant sentiment, one-sided positioning and imbalanced supply-demand dynamics on price action. The late 90s dotcom bubble in the Nasdaq provides a clear and pertinent illustration of these dynamics (Exhibit 35 & Exhibit 36).

Exhibit 35: Both price returns and price momentum of the Nasdaq rose as the dotcom bubble inflated

NDX 6m price returns and 6m price momentum

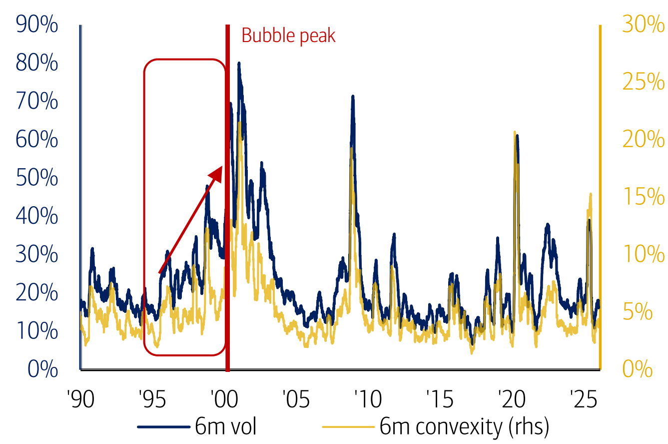


Source: BofA Global Research. Data from 1-Jan-90 to 16-Jan-26.

BofA GLOBAL RESEARCH

Exhibit 36: Nasdaq's vol and fragility also rose into the peak of the dotcom bubble as tech stock price rose

NDX 6m realized vol and 6m realized convexity



Source: BofA Global Research. Data from 1-Jan-90 to 16-Jan-26.

BofA GLOBAL RESEARCH

2. How is the BRI constructed?

The BRI is constructed as an average of three sub-indicators: a short-term, medium-term, and long-term measure. Each sub-indicator ranges from 0 to 1. Using multiple time horizons allows the indicator to capture bubble-risk dynamics that can develop at different speeds.

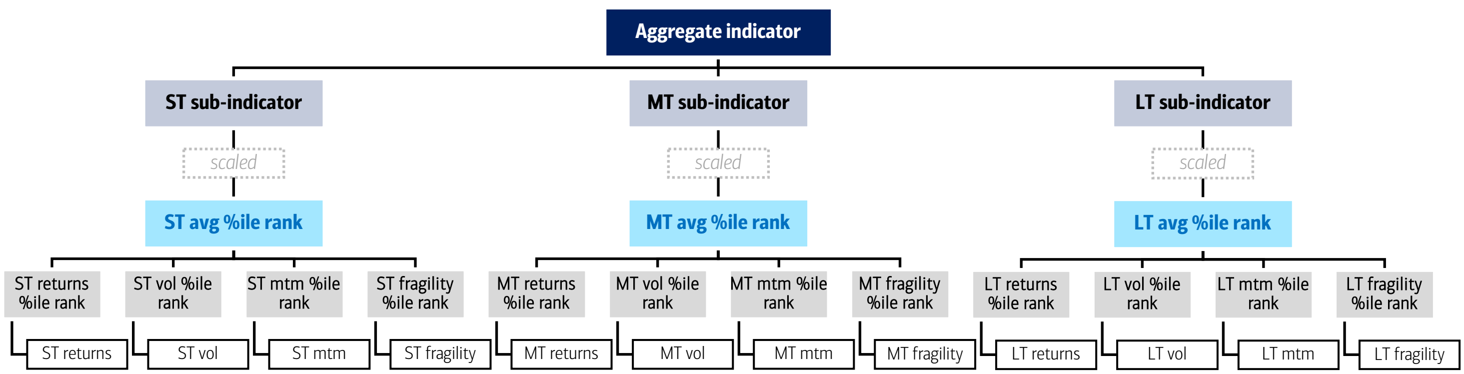
[1] X-month price momentum = % distance of the current price from the X-month moving average price

[2] X-month fragility/convexity = X-month realized vol – X-month realized mean absolute deviation

Each sub-indicator aims to capture how stretched an asset's four moments (returns, vol, momentum, and fragility) are relative to the asset's own history, and is computed as the average of each of these four moments' percentile ranks vs history.[3] However, given detection of bubble-like behaviour is the primary aim of the indicator, we condition this average percentile rank on periods when the asset is rallying by scaling it up or down depending on how positive or negative returns are.[4]

Exhibit 37 summarizes the construction of the aggregate indicator and its microstructure.

Exhibit 37: The aggregate indicator is an average of 3 sub-indicators that capture short-, medium- and long-term price dynamics. Each sub-indicator is computed as a scaled average percentile rank of the four metrics (returns, vol, momentum & fragility)
Construction summary of BofA Bubble Risk Indicator



Source: BofA Global Research. ST, MT & LT refer to short-, medium- & long-term; 'mtm' refers to momentum component; '%-ile rank' refers to percentile rank.

BofA GLOBAL RESEARCH

3. What is a 'high' BRI reading and what are its implications?

Since the BRI is defined on a 0 to 1 scale, assets with readings approaching 1 are exhibiting increasingly bubble-like price action. How close to 1? While it is difficult to specify a universal threshold given the plethora of asset-specific dynamics that can present in markets, we find that BRI levels above 0.8 (i.e., top quintile) provide a useful rule of thumb beyond which bubble risks are likely elevated.

Tactically, high BRI readings tend to signal asymmetric downside risk in the near-term (higher risk of the bubble 'popping'), which we demonstrate empirically later in this section. However, rather than treating the BRI as an explicit sell signal ("get out"), which can risk major underperformance in a bubble, we find the BRI best positioned as a cautionary tool to add asymmetric protection/equity replacement ("watch out").

4. What assets can the BRI be computed on?

Given the BRI relies only on price-based inputs, it can be computed on any asset with a sufficient history of daily price data. Indeed, by inferring sentiment and positioning from price action, the BRI can be applied to assets without explicit fundamental valuation methodologies (e.g., commodities) or those with opaque positioning visibility.

5. What has the BRI looked like in past asset bubbles?

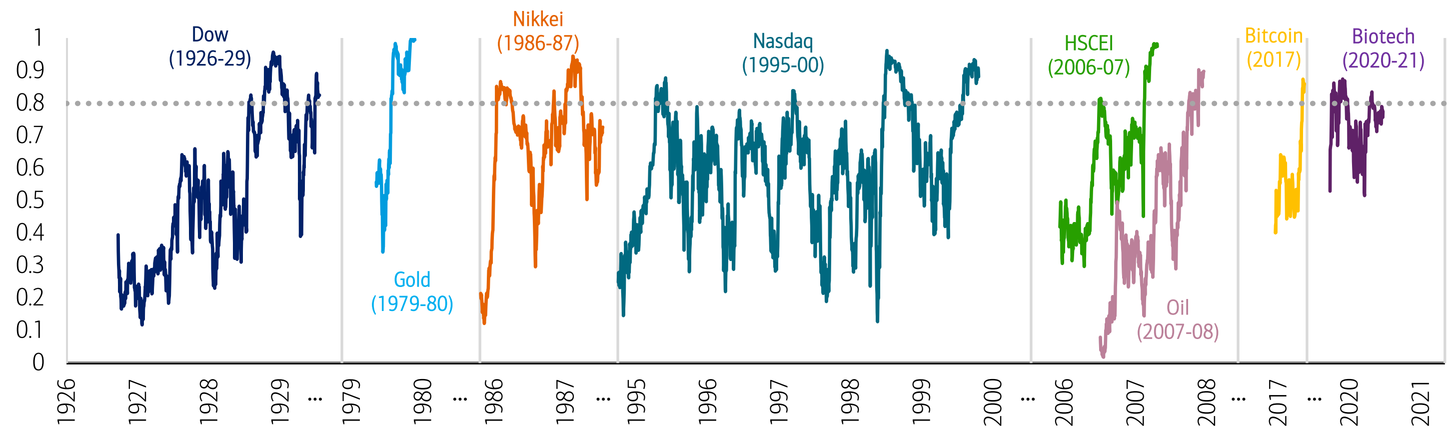
Exhibit 38 demonstrates what the BRI framework would have looked like when applied to eight historically well-recognized asset bubbles. As these bubbles formed, increasingly stretched returns, vol, momentum, and fragility pushed BRI readings towards 1. Indeed, seven of the eight bubbles saw their peaks concurrent to a BRI reading above 0.8.

[3] Sub-indicator parameters in this report: (i) short-term = 3m moments vs 1y %ile rank lookback, (ii) medium-term = 6m moments vs 3y %ile rank lookback, (iii) long-term = 1y moments vs 5y %ile rank lookback. These parameters are for illustrative purposes and may differ in their efficacy depending on the dynamics of the asset being analyzed.

[4] Scaling factor ranges between 0 & 1. It is computed using a logistic function transformation of the trailing return (tenor based on sub-indicator). Highly positive returns give a factor of ~1 and highly negative returns give a factor of ~0.

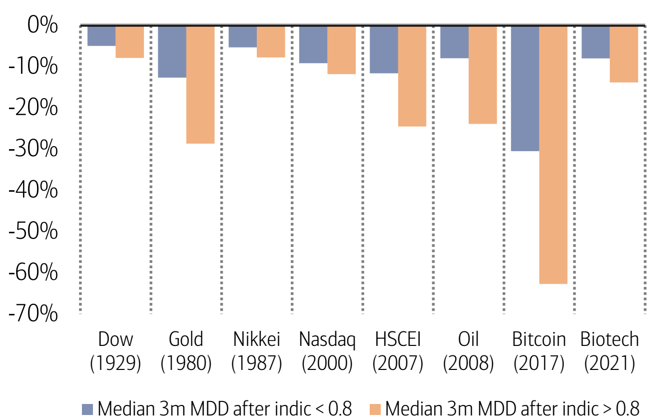
The forward distribution of returns during these bubbles conditional on the BRI would have shown higher near-term downside risk after the BRI breached 0.8 (Exhibit 39), with broadly similar upside potential (Exhibit 40).

Exhibit 38: Looking at eight historical asset bubbles from a distributional lens using the BRI methodology reveals increasingly elevated returns, vol, momentum and fragility in the asset bubble formation process, as seen by rising levels of the indicator towards 1
BofA Bubble Risk Indicator during historical asset bubbles



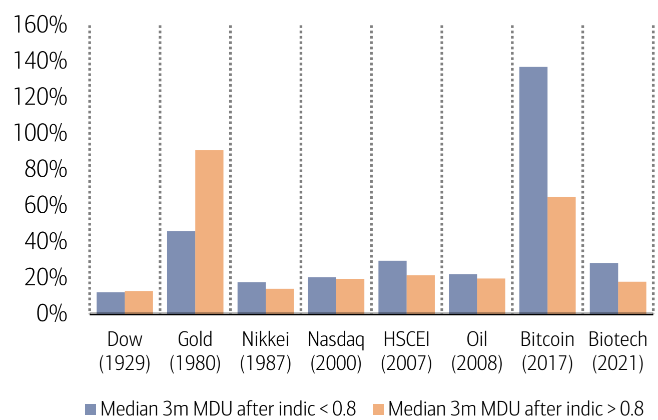
Source: BofA Global Research. Data from Jan-1926 to Feb-2021. Underlying Bloomberg tickers: INDU for Dow (Oct-1926 to Sep-1929), XAU for Gold (Jul-1979 to Jan-1980), NKY for Nikkei (Jan-1986 to Oct-1987), NDX for Nasdaq (Jan-1995 to Mar-2000), HSCEI for HSCEI (Jun-2006 to Oct-2007), CO1 for Oil (Jan-2007 to Jul-2008), XBTUSD for Bitcoin (Jul-2017 to Dec-2017), SPSIBI for Biotech (May-2020 to Feb-2021).
BofA GLOBAL RESEARCH

Exhibit 39: The median 3m max draw-down following indicator readings above 0.8 would have been more adverse than when below 0.8 during historical asset bubbles
Median 3m max draw-down during historical asset bubbles (i) after indicator < 0.8, (ii) after indicator >= 0.8



Source: BofA Global Research. Underlying tickers / date ranges: INDU for Dow (Oct-1926 to Sep-1929), XAU for Gold (Jul-1979 to Jan-1980), NKY for Nikkei (Jan-1986 to Oct-1987), NDX for Nasdaq (Jan-1995 to Mar-2000), HSCEI for HSCEI (Jun-2006 to Oct-2007), CO1 for Oil (Jan-2007 to Jul-2008), XBTUSD for Bitcoin (Jul-2017 to Dec-2017), SPSIBI for Biotech (May-2020 to Feb-2021).
BofA GLOBAL RESEARCH

Exhibit 40: The median 3m max draw-up would have been similar at both high and low indicator readings, suggesting that de-risking completely following high indicator levels can risk underperformance
Median 3m max draw-up during historical asset bubbles (i) after indicator < 0.8, (ii) after indicator >= 0.8



Source: BofA Global Research. Underlying tickers / date ranges: INDU for Dow (Oct-1926 to Sep-1929), XAU for Gold (Jul-1979 to Jan-1980), NKY for Nikkei (Jan-1986 to Oct-1987), NDX for Nasdaq (Jan-1995 to Mar-2000), HSCEI for HSCEI (Jun-2006 to Oct-2007), CO1 for Oil (Jan-2007 to Jul-2008), XBTUSD for Bitcoin (Jul-2017 to Dec-2017), SPSIBI for Biotech (May-2020 to Feb-2021).
BofA GLOBAL RESEARCH

6. Can an asset with a high BRI reading not be in a bubble?

Yes. One of the risks stemming from the BRI's exclusive use of price data is instances of 'false positives' when the indicator appears stressed, but the asset doesn't appear to be in a bubble based on other metrics. For example, semiconductor stocks exhibited frothy behaviour in the immediate aftermath of ChatGPT's release in Nov-22 but also saw a fundamental shift and expansion of their business model in the AI era.

Another scenario of a high BRI level that may not point to a bubble is in the immediate aftermath of an exogenous shock (e.g., COVID), where vol/fragility remain high and prices are retracing their drawdown. In such cases, the interpretation of a high BRI level requires additional context.

7. Can an asset in a bubble have a low BRI reading?

Yes. A related limitation of the BRI's reliance on price data is the implicit assumption that the asset bubble in question would result in historically elevated instability. While the typical evolution of a bubble sees this happen as stretched positioning and exuberance translate into volatile & fragile rallies with high momentum into the peak, outlier cases where the bubble peak sees the bull run end in a whimper can occur and are a challenge for the BRI (e.g., the Nikkei bubble in the 1980s, which saw its most unstable rally earlier rather than later).

8. How can one use the short-term to long-term sub-indicators of the BRI?

As discussed above, the BRI aggregates short-term, medium-term, and long-term sub-indicators to capture asset price dynamics across multiple horizons. In addition to examining the sub-indicators to understand shorter vs longer-term trends, we also find the range across sub-indicators provides a confidence level on the BRI reading, with tighter ranges providing higher confidence. For example, a 0.7 BRI reading is likely more informative when the sub-indicators span 0.6 to 0.8 than when they range from 0.4 to 1.0, where disagreement across horizons suggests greater uncertainty.

9. What other indicators can help confirm elevated bubble risk?

At its core, the BRI is simply a parsimonious transformation of prices, avoiding a "kitchen-sink" approach that incorporates explicit positioning, leverage, or PB data. This keeps the framework robust to overfitting and makes it applicable across assets, regions, and historical periods where such data are often unavailable or unreliable.

Despite the appeal of such an approach, we find the BRI most effective when used in conjunction with complementary tools that can help assess whether frothy price action is supported by fundamentals – for example, more traditional valuation (e.g., PV of cash flows, valuation multiples, etc.) and/or positioning metrics (e.g., leverage, inflows, retail trading volumes etc.) where available.

10. What universe of assets will be covered in the BofA BRI Landscape?

We plan to include BRI levels on a broad set of assets covering global equity indices, large cap US equity sector indices (including the "Magnificent 7"), major commodities (including the BCOM Index), and major cryptocurrencies (Bitcoin and Ethereum). In addition to this core cross-asset universe, we plan to apply the BRI framework to popular equity themes that have experienced significant inflows over the prior week. This thematic lens is designed to spot emerging pockets of froth that may not yet be visible at the broader index or sector level.

Summary of Open Trades (22-Jun-26)

Price data for open level reflects the price on open date and does not necessarily reflect the price at which the trade could be executed at the date of this report. Our trades are structured to be executed on the open date and are not necessarily appropriate to execute as formulated beyond that date.

Table 1: Summary of open trades as of 22-Jun-26

Summary of open trades as of 22-Jun-26

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
Buy an SX5E Dec26 5000 call (for 9% indic., spot ref 4895, 45delta, 62bps vega), initially delta-hedged	5-Mar-24	9%	Dec-26	Don't miss a generational opportunity to lock in record low long-dated EU vol
Buy an SX5E Dec26 5000 call (for 9% indic., spot ref 4895, 45delta, 62bps vega), initially delta-hedged	05-Mar-24	9%	Dec-26	Attractive opportunity to lock in record low long-dated EU vol
Replicate a NKY Dec25-Dec26 36.5K FVA straddle with a static strip of options at an implied FVA level of 18.6. To trade US$100k vega	9-Sep-24	18.6v	Dec26	Long discounted Nikkei vol: Fixed strike Dec-25/Dec-26 FVA straddles at 18.6%
Trade (SPX upvar): Buy SPX Dec26 80% upvar for 18.45v indicatively (t & t-1 convention; var ref. 24.55v; fwd ref. 5551).	28-Apr-25	18.45v	Dec26	Position for spot up, vol up which leverage elevated tail skew and inverted term structure
Trade (SPX fwd upvar): Buy SPX Dec25/Dec26 80% fwd upvar for 17v indicatively (t & t-1 convention; fwd var ref. 23.6v; fwd ref. 5551).	28-Apr-25	17v	Dec26	Position for spot up, vol up which leverage elevated tail skew and inverted term structure
Long SPX 2028 annual dividend futures/short SPX 2026 annual dividend futures for $1.15 net indicatively	6-May-25	$1.15	Dec26	Position for the normalization of the dividend futures curve as time moves towards maturity and dividend growth is priced back in
Long SX5E Dec26 dividends, vs short SPX Dec26 dividends.	6-May-25	$0.00	Dec26	Dec26 dividends are more heavily discounted for SX5E than for SPX, despite what we view as higher earnings risk in SPX companies, relative to SX5E
Buy SPX Dec26 110% upvar for 11.25v indic. (t & t-1 convention; var ref. 23v; fwd ref. 5915)	2-Jun-25	11.25v	Dec26	Hedge upside pain with long delta, long vol positions that leverage elevated long-dated tail skew
Buy SPX Dec25Dec26 110% fwd upvar for 11.36v indic. (t & t-1 convention; fwd var ref. 23.3v; fwd ref. 5915).	2-Jun-25	11.36v	Dec26	Hedge upside pain with long delta, long vol positions that leverage elevated long-dated tail skew
Buy SPX Dec26 ATM upvar for 12.2v indicatively (t & t-1 convention; var ref. 22.5v)	11-Aug-25	12.2v	Dec26	Leverage record steep tail skew to enter into long vol positions via upvar
Sell SPX Dec26 var, buy SPX Dec26 60% upvar, to collect 3.5v indicatively (t & t-1 convention; var ref. 22.5v)	11-Aug-25	3.5v	Dec26	Leverage record steep tail to enter into carry trade via upvar vs var
Sell SX5E Dec26 var, buy SX5E Dec26 60% upvar, to collect 3.1v indicatively (t & t-1 convention; var ref. 21v).	18-Aug-25	3.1v	Dec 26	Vol-focused? Collect >3v on SX5E Upvar vs Var
Buy 1-year 105% 130% call spreads on a CSI 1000 tracking basket* for 3.52% (18d, 29v both legs). Consider fully financing the trade by selling 1-year 73.5% puts (37d, 29v calls vs 29.5v put)	13-Sep-25	3.52%	Oct-26	The low-cost/low risk way to buy China – deeply discounted call spreads
Buy SPX Dec26 ATM upvar for 13.95v indicatively (10v disc to vanilla; t & t-1 convention; Dec26 var ref. 24v).	3-Nov-25	13.95v	Dec26	Own spot-up, vol-up exposure as AI bubble continues to inflate.
Sell NKY 9-Jan-26 55,000 calls for a JPY589 credit (~1.12% of spot, or 6.7% annualised, 23d 23.1 vol)	10-Nov-25	JPY589	9-Jan-26	Sell 99th percentile Nikkei calls as the Japan catch-up rally may take a breather
Buy Dec26 80% put on basket of HYG (38%), SPX (29%), XLF (29%) & EEM (4%) for 1.46% (27% cheaper vs avg of individual legs)	26-Nov-25	1.46%	18-Dec-26	The convergence of private and public market risk creates opportunities for hedging private risk with liquid, public market hedges. Crucially, stress in public assets closely linked to private markets may ultimately impact private valuations, while potential hedge gains will give investors the flexibility to add risk at better terms.
Buy a basket of Dec26 90-70 put spreads on individual underlyings: SPX (53%), XLF (32%), TLT (9%) & EEM (6%) for 2.66% (weighted max payout ratio of put spreads is 7.7x)	26-Nov-25	2.66%	18-Dec-26	Given the higher volatility of the PE hedge constituents and significant decorrelation potential, we prefer buying put spreads on individual constituents rather than on the basket
Buy NDX Dec26 ATM upvar, currently 19.1v but target an entry level closer to 17v (t & t-1 convention, var ref. 29.9v)	26-Nov-25	19.1v / target 17v	18-Dec-26	Trade long-delta, long vol via upvar to capture the spot-up, vol-up typically seen in asset bubbles, with a deep discount to vanilla var
Buy 6-month 105% 125% call spreads on a CSI 1000 tracking basket for 2.53% (indic. 20d, 27.1v/28.7v, quanto USD)	26-Nov-25	2.53%	15-May-26	The "artificially" cheap CSI 1000 forward corresponds to an 8 vol discount. Investors can buy the most exciting part of the Chinese stock market, including AI innovation, at unusually low & limited risk
Buy long-dated OTM puts on NVDA, delta-hedged (e.g., NVDA 2y 10-delta puts)	26-Nov-25	$8.30 / 49v	21-Jan-28	Tail hedge the AI trade with long-dated NVDA vol, which historically would have shown >35x payout vs carry cost.
Sell SX5E Jun26 var (22.8v) & buy 1.7x Jun27 var (23.7v)	26-Nov-25	22.8v/23.7v	19-Jun-26	Long fwd var is most attractive for SX5E vs global peers. Resize legs to cut carry cost by 4v (45% better vs regular sizing) while preserving risk/reward
Buy 110% Dec26 SPX calls qEUR for 4.33% (17 bps over vanilla)	26-Nov-25	4.33%	18-Dec-26	Foreign investors with unhedged FX risk in their equity investments can be subject to large swings on USD volatility, which quanto options can protect against.
Buy 90% Dec26 SPX puts qAUD for 3.66% (16bps less than vanilla)	26-Nov-25	3.66%	18-Dec-26	Foreign investors with unhedged FX risk in their equity investments can be subject to large swings on USD volatility, which quanto options can protect against.
Buy Dec26 ATMf call on return dispersion on bank names for 3.50% and strike of 17.28% (SX7E spot ref: 234.93).	26-Nov-25	3.50%	18-Dec-26	EU banks' broad thematic tilt supports ongoing return dispersion. Trade gains 50% of time (including recently) and offers a 2.3x reward/risk.
Buy NKY 6-month 95% put with vol knock out at 28% for 1.59% (indic., spot ref: 52,991, -11d, 69% discount to vanilla)	20-Jan-26	1.59%	Jul26	JGB selloff and election risk – Use VKOs to cheapen Nikkei puts by 69%
Buy an 18-Sep-26 105% worst-of call on KOSPI2 / TSM US / GLD US for 3.28% (indic. qUSD, 50% disc to cheapest call, on GLD)	17-Feb-26	3.28%	18-Sep-26	Gain cheap exposure to upside in KOSPI, TSM, GLD if bubble like price action continues
Buy 1.00x 18-Jun-2026 106% call on a CSI 1000 tracking basket* for 3.58% (+31d, 29v). Sell 1.05x ASHR US 18-Jun-2026 36 calls for $0.74 (~2.20% of spot; the 36.00 strike is ~106% of spot, ref 33.82)	17-Feb-26	1.38%	18-Jun-26	The long/short trade extracts value from the rich repo for Chinese small caps while limiting directional risk
Buy Sep26 NKY>104% & USDJPY<98% dual digital for 16% (+32 correl offer, ref: 56,942, 153.6) 6.25x max payout	17-Feb-26	16%	Sep26	Nikkei upside trades can be cheapened if willing to lean optimistic on the yen. Indeed, the yen rallied 3.0% in the week after the 8-Feb lower house election and the Nikkei was up 5.0%
Long SPX 2028 annual dividend futures outright for $80.80 indicatively.	2-Mar-26	$80.80	Dec28	Flat SPX div term structure cheapens long dated futures that could converge to bottom up div estimates as uncertainty risks decay
Buy US 6m5y receivers ATM-25bps contingent on SPX < 100% for 34c indicatively (ref. 3.63%, 6650)	2-Apr-26	34c	2-Oct-26	Hedge slowdown expectations cheaply using equity-rates correlation at historic entry point

Table 1: Summary of open trades as of 22-Jun-26

Summary of open trades as of 22-Jun-26

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
Buy 5y SOFR < ATM-25bp & SPX < 92.5% 6m dual digitals for 10% indicatively (ref. 3.63%, 6650)	2-Apr-26	10%	2-Oct-26	Hedge slowdown expectations cheaply using equity-rates correlation at historic entry point
Long Dec27 NDX vs SPX variance swap switch for 5.25v indicatively	20-Apr-26	5.25v	Dec27	Position for asymmetric AI & tech IPO exposure as potential AI bubble inflates
Sell SOXX Jun26 485-540 1x2 call ratios (-1x / +2x), delta-hedged (~40d/20d strikes; ~41v/43v; ref. 455.410)	27-Apr-26	41v/43v	Jun26	Own upside convexity and gamma in semis, which are showing bubble-like instability
SPX > 109% / USDJPY > 100% Sep '26 dual digitals for 10% indic (10x max payout; target=90c; stop=10c, ref. 7360/156.73, -6 correl)	8-May-26	10%	Sep26	Cheaply keep up with equity rally using limited risk SPX-USDJPY hybrids
Buy QQQ Dec26 90% max lookback put (daily obs.), sell QQQ Dec26 80% vanilla put, for 3.57% indic. (+1x, -1x, ref. 713.29)	11-May-26	3.57%	Dec26	Mitigate strike & timing risk in strong momentum environment with expanding put spreads
SX7E Jul26 102% calls contingent on SX7P remaining at or below 102% for 0.77% qEUR (78% discount vs SX7E vanilla calls; 90% implied correl).	18-May-26	0.77%	Jul26	Position for continued UK political uncertainty
SX5E > 105%, EURGBP > 0.88 Jul26 dual digital for 7.69% (implied correlation offer -22%, refs: 5800 & 0.87 respectively, 13x max payout)	18-May-26	7.69%	Jul26	Position for continued UK political uncertainty
NDX Sep26 107% calls contingent on GBPUSD <1.32 for 1.06% (60% discount vs vanilla, refs: 29125 and 1.335 respectively)	18-May-26	1.06%	Sep26	Position for continued UK political uncertainty
Buy SXPP 2m (~Jul26) 1x2 40d-24d (105%-112%) call ratios for zero premium (spot ref: 841.03%) with a max payout of ~7%, to position for moderate further upside potential.	26-May-26	0	Jul26	Position for AI linked electrification via 2m SXPP 1x2 costless call ratio structure
Sell SOXX Jul 550/500 1x2 put ratio (-1x / +2x) for ~$0 indicatively (40d / 20d strikes; ref. 570.34).	26-May-26	$0	Jul26	Hedge semis unwind with convex, low premium SOXX put ratios
Long NDX Dec27 corridor Var replication (100%-160%) at ~20v	08-Jun-26	20v	Dec27	Strong pipeline of AI/tech IPOs that could qualify for NDX fast-entry in full view, our conviction in owning NDX vol remains strong
Buy NDX Dec27 90% upvar, sell SPX Dec27 80% upvar for 4.9v (t & t-1 convention on both legs).	08-Jun-26	4.9v	Dec27	Cheapen NDX vs SPX var switch for further AI bubble expansion
Buy QQQ Jul 750-800 call spread for $7.62 (6.5x max payout ratio; 28d-5d strikes; ref. 716.07)	08-Jun-26	$7.62	Jul26	Safely keep up with tech rally amidst fragile & uncertain markets
Buy NDX Sep26 105% calls contingent on ATMf < 10y SOFR < ATMf+25bps for 1.35% indicatively (57% discount to vanilla; ref. 30900, 4.09%)	15-Jun-26	1.35%	Sep26	Keep up with tech rally at 60% discount with equity-rates hybrids
Sep-26 SX7E>106%, EURUSD < 1.14 dual-digital for 10.49% (offering 9.5:1 leverage)	22-Jun-26	10.49%	Sep-26	EZ Banks upside: More post-war cyclical relief with potential rotation tailwinds
SX7E Sep26 106% call, contingent on EURUSD <1.14 at maturity for 1.01% (58% discount vs vanilla calls)	22-Jun-26	1.01%	Sep26	EZ Banks upside: More post-war cyclical relief with potential rotation tailwinds
SX7E Sep26 107% call, contingent on SX5E <= 104% at maturity for 1% (54% discount vs vanilla calls). Trade refs: 295, 1.1451, 6294 respectively	22-Jun-26	1%	Sep26	EZ Banks upside: More post-war cyclical relief with potential rotation tailwinds
NDX Dec26 110% call contingent on EURUSD < 100.75% for 1.55% (60% discount to vanilla)	22-Jun-26	1.55%	Dec26	Cheapen tech upside with equity-FX correlation amidst hawkish Fed shift

Summary of Closed Trades (22-Jun-26)

Table 2: Summary of closed trades as of 22-Jun-26

Summary of closed trades as of 22-Jun-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy SPX > RTY Jul25 ATM outperf call for 2.86% indicatively (+85 correl bid; ref. 5747, 2095)	24-Mar-25	2.86%	2.65%	18-Jul-25	Trade expired ITM
Buy SPX > RTY Jul25 ATM outperf call conditional on SPX < 100% for 1.42% indicatively (50% discount to unconditional; +85 correl bid; ref. 5747, 2095)	24-Mar-25	1.42%	0	18-Jul-25	Trade expired
Buy SPX Jul 95% put contingent on 30y SOFR > ATMf + 25bps at expiry for 0.36% indicatively (67% discount to vanilla put; +9 correl bid; ref. 5980, 4.06%)	19-May-25	0.36%	0	18-Jul-25	Trade expired
Sell VIX Jul 17 puts (UXN5 ref. 20.62) to buy SPX Jul 6050/6200 call spreads (spot ref. 5913.44). Sizing for zero cost ~1 SPX call spread for every 100 VIX puts sold	27-May-25	$0	$124	18-Jul-25	Trade expired ITM
Buy SPX Jul 5850/5250 put spread for $39.4 (15.2x max payout ratio; ~25D/5D strikes; ref. 6036.78)	16-Jun-25	$39	0	18-Jul-25	Trade expired
Buy USO Jul 82 / 92 call spread for $1.63 indicatively (6.1x max payout, ~35D/15D strikes, ref. 77.39).	23-Jun-25	$1.36	0	18-Jul-25	Trade expired
Buy KRE Jul 61/66 call spread for $0.74 indicatively (6.8x max payout ratio; ~40D/6D strikes; ref. 59.54).	30-Jun-25	$0.74	$2.27	18-Jul-25	Trade expired ITM
Sell VIX Aug 16.5 puts (UXQ5 ref. 20.1) to buy SPX Aug 6300/6500 call spreads (spot ref. 6188.83). Sizing for zero cost is ~0.65 SPX call spreads for every 100 VIX puts sold.	30-Jun-25	$0	$11.9715	20-Aug-25	Trade expired ITM
Buy XIN9I 27-Jun 2025 105% 115% call spread for 2.20% (indic. Spot ref: 13,450, 19% delta, vols: 24.0/25.3, 4.5x max payout).	18-Feb-25	2.2%	0	27-Jun-25	Trade expired
Buy SPX 8-Aug 6400 straddles delta-hedged at 10.7% implied vol (spot ref. 6379) paired with long VIX Aug 16.5/15 put spreads for 60c	29-Jul-25	10.7v (1.7%) / 60c	14v / $1.09	20-Aug-25	Trade expired ITM
Long HSCEI 15-Aug-25 9,100 9,800 call spreads for HKD 89	30-Jun-25	HKD89	0	15-Aug-25	Trade expired
Buy NIFTYM 28-Aug-25 25,500 calls for $239 (indic. ~0.95 %, ref: 25,091, +38% delta, 10.9% vol)	22-Jul-25	0.95%	0	Aug-25	Trade expired
Buy SPX Sep 6000 calls cont. on EURUSD < 100% at expiry for 1.17% (60% disc. to vanilla calls; +17 correl bid, ref. 5810f, 1.08 spot)	24-Mar-25	1%	0	19-Sep-25	Trade expired
Buy VIX Sep 30/45 call spread for $1.50 indic mid levels(10x max payout ratio; UXU5 23.75)	4-Apr-25	$1.50	0	17-Sep-25	Trade expired
Buy VIX Sep 30/50 call spread for $2 indicatively (10x max payout ratio; UXU5 ref 23.50)	7-Apr-25	$2.00	0	17-Sep-25	Trade expired
Buy SPX Sep 95%/75% put down & out for 1.03% indicatively (continuous obs.; 58% discount to put spread; ref. 5534.08)	28-Apr-25	1.03%	0	19-Sep-25	Trade expired
Buy SPX Sep 95%/85% put down & out for 26bps indicatively (continuous obs.; 79% discount to put spread; ref. 5912.12)	27-May-25	0.26%	0	19-Sep-25	Trade expired
Buy SPX < 95% / USO > 107% Sep25 dual digital for 8% indicatively (12.5x max payout ratio, correl bid +0, ref. 6073, 80.22)	16-Jun-25	8%	0	19-Sep-25	Trade expired
Buy VIX Sep 18/17/16 put ladder (+1x / -1x/ -1x) for 12c indicatively (8.3x max payout; UXU5 ref. 21.86).	23-Jun-25	12c	86c	17-Sep-25	Trade expired ITM
Buy EEM Sep25 51/55 call spreads for 47c (~35d/5d strikes; ref. 49.1350).	29-Jul-25	47c	$2.01	19-Sep-25	Trade expired ITM
Sell VIX Sep 16.5 puts (UXU5 ref. 20.05) to buy SPX Sep 6250/5900 put spreads (spot ref. 6318.62). Sizing for zero cost is ~0.75 SPX put spreads for every 100 VIX puts sold.	4-Aug-25	$0.00	-$0.64	19-Sep-25	Trade expired
Buy SPX 30-Sep 6350-6100 put spread for $37.2 indicatively (6.7x max payout ratio; ~35d/15d strikes; ref. 6415.54).	2-Sep-25	$37.20	0	30-Sep-25	Trade expired
Buy SX5E 15-Aug-25 40d/25d (98.5%f/94.2%f) put spread for 1% indicatively (60% discount vs naked 40d put, 4x max payout ratio; spot ref. 5326).	27-May-25	1%	0	15-Aug-25	Trade expired
Buy an Aug-25 SX5E up, EURUSD up dual digital qEUR (30-delta strikes on both assets are 5550 and 1.17 respectively) for 12.5% indicatively (refs: 5345 & 1.14)	2-Jun-25	12.5%	0	Aug-25	Trade expired
Long Aug-25 SX7E<95%, Brent futures (COV5) > 85 dual digital for 8.65% indicatives (Correlation bid -18%, refs: SX7E 196.85 and COV5 74.4)	23-Jun-25	8.65%	0	Aug25	Trade expired
Long FTSE Aug25 97.6% (30-delta) puts for 1.06% (ref: 8758.04)	23-Jun-25	1.06%	0	Aug25	Trade expired
Aug25 20D (+1.4x 103%, -1x 96%) zero premium risk reversals on SX5E (ref: 5371)	15-Jul-25	0%	0	Aug-25	Trade expired
Buy +1x QQQ Oct 605-625 call spread (~30D/10D strikes), sell -1x QQQ Oct 545 put (~10D strike) for $1.87 indicatively (ref. 590.97)	15-Sep-25	$1.87	0	17-Oct-25	Trade expired
Long SX5E 12-Sep ATM straddle for 2.4% indic. (Ref: 5291) and look to enter long V2X Oct, short Nov futures at -0.6v or better.	2-Sep-25	2.5%/-0.6v	0/-2.05v	Nov-25	Trade expired
Trade 1 (protection): Zero cost XIN9I 3-month 96% 90% 1x3 put ratios for 0.05% credit, rolled 1-2 months into the trade (indic. spot ref 14,962, delta -6.1%, vols: 18.5/17.4)): +3x 90% puts -1x 96% put	26-Aug-25	0%	0	Nov 25	Trade expired
Trade 2 (participation): XIN9I call spreads for investors wanting to add upside. Buy XIN9I 3m 105% 115% call spread for 1.38% (indic. spot ref: 14,962, 20% delta, vols: 20.1/23.0, 7.2x max payout)	26-Aug-25	1.38%	0	Nov 25	Trade expired
XIN9I 3-month 95% 85% put spreads for 1.7% (indic. spot ref 14,825, delta -22%, vols: 20/21v, 5.9x max payout)	9-Sep-25	1.7%	0	Nov 25	Trade expired
Buy long VIX Nov 18 puts vs short VIX Apr 18 puts for $0.10 indicatively	22-Sep-25	$0.10	$23.9	Nov-25	Trade expired
Buy NDX Dec25 ATM upvar for 17v indicatively (t & t-1 convention, Dec25 var ref. 25.1v)	26-Nov-24	17v	15.77v	19-Dec-25	Trade expired
Buy NDX Dec25 80% upvar for 20.15v indicatively (t & t-1 convention, Dec25 var ref. 25.1v)	26-Nov-24	20.15v	23.36v	19-Dec-25	Trade expired ITM
Buy NDX Dec25 ATM upvar for 16.8v indicatively (t & t-1 convention)	27-Jan-25	16.8v	15.12v	19-Dec-25	Trade expired
Buy NDX Dec25 ATM upvar for 18.15v indicatively (t & t-1 convention)	24-Mar-25	18.15v	14.98v	19-Dec-25	Trade expired
Buy 31-Dec-25 SPX 6250/5750/5250 put ladder (+1x / -1x / -1x) for $40.1 indicatively (12.4x max payout ratio; spot ref. 6373.45)	11-Aug-25	$40.10	0	31-Dec-25	Trade expired
Long SPX Dec 6300/5800 put spreads for ~$75 indicatively or 1.16% of spot (6.6x max payout ratio; ref. 6449.23), outright or paired with long VIX Nov 18/15 put spreads for $1.13 indicatively (2.6x max payout ratio, UXX5 ref. 20.70)	18-Aug-25	$75 / $1.13	0 / 1.99	19-Dec-25	Trade expired
Buy SPX 31-Dec-25 95% / 85% down-and-out put for 0.31% indic (cont. obs., 32x max payout ratio, 68% discount to vanilla put spread; ref. 6654).	13-Sep-25	31bps	0	31-Dec-25	Trade expired
Buy SPX 31-Dec-25 95% / 85% down-and-out put for 0.28% indic (cont. obs., 35x max payout ratio, 65% discount to vanilla put spread; ref. 6735.13).	20-Oct-25	28bps	0	31-Dec-25	Trade expired
Sell VIX Dec 16.5 puts (UXZ5 ref. 19.93) to buy SPX Dec 7000/7250 call spreads (spot ref. 6852.43). Sizing for zero cost is ~0.7 SPX call spreads per ~100 VIX puts sold.	3-Nov-25	$0.00	-$0.49	19-Dec-25	Trade expired
Buy 19-Dec-25 85%/65% Best of Put spreads on NKY/KOSPI2/ SPX for 0.90% (indic. quanto USD, 56% discount to avg vanilla)	26-Nov-24	0.90%	0	19-Dec-25	Trade expired

Table 2: Summary of closed trades as of 22-Jun-26
Summary of closed trades as of 22-Jun-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy Sep25 NKY > 104% / USDJPY > 104% dual digital at maturity for 15.8% (+37 correl offer, ref. 37,760, 150.0) 6.3x max payout	3-Mar-25	15.8%	0	Sep-25	Trade expired
Buy VIX Feb26 15.5/20/25 call spread collar for $0.11 indicatively (UXG6 ref. 17.92)	12-Jan-26	$0.11	0	18-Feb-26	Trade expired
Buy NKY Dec25/Dec26 31,000 straddle FVAs for 21.27% (indic. Q=2.5%, R=0.5%)	7-Apr-25	21.27%	9.39%	Dec25	Trade expired ITM
Dec25 +DAX vs -SXDP zero-premium call switch (20-delta strikes, refs: 24160 and 1036 respectively)	15-Jul-25	0%	-2%	Dec-25	Trade expired
Long SX7E Dec25 Appearing Put Spread (€205-€185-€160) for 2.65% (ref: 216.89)	4-Aug-25	2.65%	0	Dec25	Trade expired
Long Dec25 DAX vs SX5E 102.5% outperformance, conditioned on EURUSD > 1.2 at expiry for 0.84%	11-Aug-25	0.84%	0	Dec25	Trade expired
Buy DAX Dec25 call spread collar (+24800 call-25500 call-22400 put) for 0 cost	18-Aug 25	0	0	Dec 25	Trade expired
Buy DAX Dec25 105% call contingent on EURUSD > 1.20 for 0.77%	18-Aug 25	0.77%	0	Dec 25	Trade expired
Buy SX5E Dec25 put ladder +5350/-5125/-4875 for 10bps premium indicatively	18-Aug 25	10bps	0	Dec 25	Trade expired
Replace FTSE longs with Dec25 103% (~28D) calls for 80bps (ref: 9299.84)	29-Sep-25	80bps	3.21%	Dec-25	Trade expired
Long Dec25 35d-15d (97.2%-92.3%) CAC put spreads for 0.98% indic (max payout ratio of 5.7x)	27-Oct-25	0.98%	0	Dec 25	Trade expired
DAX Dec25 102.5% calls, contingent on the CAC <102.5% at expiry for 39bps (~69% discount vs vanilla calls)	27-Oct-25	39bps	0	Dec 25	Trade expired
Long Dec25 VolSwap dispersion on custom names vs the ESTX50	26-Nov-24	9.5v	12.0v	19-Dec-25	Trade expired +2.5%
Buy DAX Dec-25 85% upvar for 18.3v (fair variance ref of 23.3v)	11-Mar-25	18.3v	17v	19-Dec-25	Trade expired
Long SX5E Dec25 Volswap, short SX5E Dec25 Varswap for a credit of 2.9v indicatively (var ref: 23.75). For a more defensive alternative, short 0.95x Varswap vs the Volswap for 1.7v, indicatively.	6-May-25	2.9 credit	-4.3v	19-Dec-25	Trade expired
Long SX7E-SX5E Mar26 60-110% Corridor Var Spread for 7.7v (vanilla var refs. 9.9v, 31.5v & 21.6 respectively, T&T-1 convention)	4-Aug-25	7.7v	10.2v	20-Mar-26	Trade expired ITM
S&P calls quantoed into EUR (for only 3 bps more than vanilla Dec25 102.5% calls that cost 1.86%).	22-Sep-25	1.89%	0%	19-Dec-25	Trade expired
Cheapening S&P calls by conditioning on EUR higher, also quantoed into EUR for 1.23%, a 35% cheapening vs Dec25 SPX 102.5% calls qEUR).	22-Sep-25	1.23%	0%	19-Dec-25	Trade expired
Sell SX5E Dec25 ATM Downvar vs buy Var to collect 4.7v (T-convention, var ref: 19v)	29-Sep-25	4.7v	4.7v collected	19-Dec-25	Trade expired ITM
Buy Dec25 FTSE div futures as a Dollar (vs Sterling) strength beneficiary	26-Nov-24	299.5	3.9 GBP	19-Dec-25	Trade expired
Buy TWSE > KOSPI2 103% 11-Sep-25 outperformance call contingent on KOSPI2 up for 1.52%	3-Feb-25	1.52%	0	11-Sep-25	Trade expired
Buy a 27-Jun-25 110% Worst of Call on 700 HK / 9988 HK / 1211 HK for 2.5% (63% discount to average vanilla call cost)	18-Feb-25	2.5%	0	27-Jun-25	Trade expired
Buy 12 Sep 25 NKY>SPX 3% outperformance call contingent on USDJPY > 3%, 2.8% offer (indic. contingency gives 38% discount)	14-Apr-25	2.8%	0	Sep25	Trade expired
(Appearing call spread): Buy XIN9I Sep25 105%-115%-125% appearing call spread (continuous obs.) for 1.82% (10.9x max payout ratio, vs 1.75% vanilla 105%-115% call spread, ref. 13,200)	28-Apr-25	1.82%	0	Sep-25	Trade expired
(Up & out call): Buy XIN9I 29-Sep-25 105% calls with 27-Jun-25 window knock out at 115% for 1.83% (indic. 26% discount to vanilla call, ref. 13,200)	28-Apr-25	1.83%	8.13%	Sep-25	Trade expired ITM
Sell TWSE 18.5k/19.5k/21.5k Put Spread Collars (PSC) and collect TWD 34 (~0.17% of spot, indic. spot ref: 20,500, 37d, vols: 28.6%/25.8%/21.4%)	6-May-25	TWD 34	-2800.48 TWD	Aug-25	Trade expired
Buy a TWSE 1m/3m 22k call calendar for TWD 132 (0.64% of spot, indic. spot ref: 20,522, 7d, +15.1 vega, vols: 20.9%/20.8%)	6-May-25	TWD 132	2156.74 (8.8%)	Aug-25	Trade expired ITM
Buy HSCEI delta 1 overlayed by a near zero-cost 15-Aug-25 7,700 9,400 risk reversal for HKD 11 credit (indic. 0.13% of spot)	12-May-25	HKD 11	468.86 HKD	15-Aug-25	Trade expired ITM
Sell NKY 2m +1x/-1x/-1x/+1x 32,500 35,000 40,000 42,500 "iron condor" for JPY 515 (~1.4%, equivalent to 8.2% yield per annum)	19-May-25	JPY515	JPY 515	Jul25	Trade expired
Buy NKY 8-Aug 2025 double-no-touch on 36,000 and 40,000 for 11%, spot ref:37,499 (indic. 9x max payout, continuous observation)	19-May-25	11%	0	8-Aug 25	Trade expired
Buy KOSPI2 2m 105% calls (0.98%) financed by selling KOSPI2 1m 95% put (0.57%) for 0.41% of spot	27-May-25	0.41%	17.31%	Jul-25	Trade expired ITM
Trade NIFTYM 26-Jun-25 24,200 23,500 1x3 put ratios for INR 12 (~0.05% of spot, indic. spot ref: 24,717, -6,5d, vols: 16.84%/15.35%)	2-Jun-25	INR 12	0	26-Jun-25	Trade expired
NIFTYM 31-Jul-25 24,400 23,500 1x3 put ratios for USD 36 (~0.14% of spot, indic. spot ref: 24,946, -8.8d, vols: 14.58%/16.23%) -1x 24,400 put (-29d) & +3x 23,500 puts (-12d)	16-Jun-25	0.14%	0	31-Jul 25	Trade expired
Buy KOSPI2 3-month 360 440 risk reversals for a KRW 0.7 credit (indic. 0.17% of spot) instead of taking profits on longs in Korea	23-Jun-25	KRW 0.7	32.74 KRW	Sep25	Trade expired ITM
Buy TWSE 3m 110% calls & sell KOSPI2 3m 110% calls and collect 0.33% (spot ref 22,615 & 430.78, for TWSE and KOSPI2, respectively; 17.7/19.1% vols, 12.5/17.6 deltas)	15-Jul-25	0.33%	9.68%	Oct-25	Trade expired ITM
Sell NKY 1m 105% calls and buy 3m 105% calls for 0.98% (indic. Spot ref: 39,460, vols: 17.2/17.7)	15-Jul-25	0.98%	9.61%	Oct-25	Trade expired ITM
Buy Nikkei 10-Oct 2025 105%-115% call spread for 1.01% (indic. Spot ref: 40,998, 21% delta, vols: 17.3/18.1, 9.9x max payout).	29-Jul-25	1.01%	8.99%	10-Oct 25	Trade expired ITM
Long HSCEI 21-Nov-25 1x1.5 105% 110% call ratios for 0.39% (indic., options on futs, spot ref: 8,893,12.8x may payout)	4-Aug-25	0.39%	0	21-Nov 25	Trade expired
Buy 12-Dec 25 NKY>SPX 103% outperf calls for 2.60% (indic.)	18-Aug-25	2.60%	1.27%	Dec 25	Trade expired ITM
Buy KOSPI2 3-month 105-115% call spreads for 1.62% (indic. spot ref: 478, 24d, vols: 19.2%/19.4%)	22-Sep-25	1.62%	8.38%	Dec-25	Trade expired ITM
Buy NKY 3-month 105% 115% call spreads for 1.62% (indic. Spot ref: 45,043, 24.6 delta, vols: 19.2/18.8, 6.2x max payout)	29-Sep-25	1.62%	3.29%	Dec-25	Trade expired ITM
Buy a TWSE 1m/2m 30k call calendar for TWD 183 (0.65% of spot, indic. spot ref: 27,994, 9d, +17.3 vega, vols: 18.3%/18.2%)	27-Oct-25	TWD 183	0	Dec-25	Trade expired
Buy NIFTYM 24-Feb-26 25.5k/26.5k call spread for USD 189 (indic. 0.75% of spot, spot ref: 25,048, vols: 11.9%/11.4%, delta 29.3%).	26-Jan-26	$189	0	24-Feb-26	Trade expired
Buy TWSE 18-Mar 34.5k calls funded by selling 23-Feb 30.5k 28.9k put spreads for TW$65 (spot ref: 32,065)	26-Jan-26	TW$65	0	18-Mar-26	Trade expired
Sell NKY 13-Feb 57k calls to fund 13-Mar 57k/60k call spreads for JPY 277: 10.8x max payout (indic. 0.52% of spot, ref: 53,806, 31.9v 28.6v 28.3v, delta -2%)	2-Feb-26	JPY 277	0	13-Mar-26	Trade expired
Buy QQQ Mar26 660-720 call spread for $8.92 indicatively (6.7x max payout ratio; ~27d/7d strikes; ref. 599.44).	29-Sep-25	$8.92	0	Mar26	Trade expired
Buy SPX Mar26 105% call contingent on XAU > 102% at expiry for 1.31% indicatively	29-Sep-25	1.31%	0	Mar26	Trade expired
Buy QQQ Mar26 675-735 call spread for $8.25 (7.3x max payout ratio; ~25d/7d strikes; ref. 611.56).	20-Oct-25	$8.25	0	Mar26	Trade expired
Buy TLT Mar26 88 puts for $1.31 (~30D strike, 4.1% OTM, ref. 91.78)	27-Oct-25	$1.31	$2.17	Mar26	Trade expired ITM

Table 2: Summary of closed trades as of 22-Jun-26

Summary of closed trades as of 22-Jun-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy TLT (20+Yr Treasury Bond ETF) Mar26 86 puts for $1.03 (~25D strike, ref. 90.01)	26-Nov-25	$1.03	$0.17	Mar26	Trade expired ITM
Buy 30y SOFR > ATMf + 20bps / XAU > 106% Mar26 dual digitals for 7.95% (12.5x max payout ratio, -18 correl offer, ref. 3.955%, 4078.70)	26-Nov-25	7.95%	0	Mar26	Trade expired
Buy GLD Mar26 490-550 call spread for $9.9 indicatively (6x max payout; ~36d (5% OTM) / 11d (18% OTM) strikes; ref. 464.7)	26-Jan-26	$9.9	0	Mar26	Trade expired
Buy 1x EWZ Mar26 40 call, sell 1x Jul26 48 call for 14c indicatively (28d/14d strikes, ref. 37.585)	17-Feb-26	$0.14	-0.18	Mar26	Trade expired
Buy Mar26 straddle on liquid EZ banks vs short SX7E straddle for 2.36%	26-Nov-25	2.36%	1.2%	20-Mar-26	Trade expired ITM
Buy SPX MarQ 6525-5925 put spread for $50 indicatively, ref 6795.99.	9-Mar-26	$50.00	$0	31-Mar-26	Trade expired
Buy IWM MarQ 240-215 put spread for $2.60 indicatively, ref 253.62.	9-Mar-26	$2.60	$0	31-Mar-26	Trade expired
Buy GLD Apr26 450 calls (~106% / 35d strike), sell SLV Apr26 120 calls (~155% / 17d strike) notional-matched for zero cost indicatively (ref. 423.26, 77.34).	12-Jan-26	$0	$0	17-Apr-26	Trade expired
Buy SPX Apr26 6800/6300/5800 put ladder (+1x/-1x/-1x) for $63.8 indicatively (7.8x max payout; ~40d/15d/5d strikes; ref. 6881.62).	2-Mar-26	$63.8	$0	17-Apr-26	Trade expired
Buy SPX Apr26 97%/85% PDO for 57bps indicatively (50% discount to vanilla put spread; ref. 6881.62).	2-Mar-26	57bps	0%	17-Apr-26	Trade expired
Buy VIX Apr 20-18 put spread for $0.50 mid indicatively (4x max payout ratio; UXJ6 ref. 24.30)	23-Mar-26	$0.5 mid	$2	15-Apr-26	Trade expired ITM
Long SX5E Apr26 6175 (~30d) call (1.2%, ref 5992.4), short V2X Apr26 18 put (ref 20.6) in a ~1:8 contract ratio for almost 0 cost (10bps credit of eq. notional)	17-Feb-26	10bps	0	Apr-26	Trade expired
Buy SXEP<95%, USO US > 110% May26 dual digital for qUSD 8.9% indicatively (11.2x max payout; ref. 517.66, 117.06)	16-Mar-26	8.9%	0	May26	Trade expired
Buy USO May26 80/70/60 put fly (+1x/-2x/1x) for $1.9 mid indicatively (5.2x max payout ratio; ~30d/15d/5d strikes; ref. 87.19).	2-Mar-26	$1.9 mid	0	May26	Trade expired
Buy VIX May26 18/25/40 call spread collar for $1.03 indicatively on mids + bid-offer TBD at time of trade (14.5x max payout ratio; UXK6 ref. 22.95).	16-Mar-26	$1.03 mid	0	May26	Trade expired
Buy VIX May 25-35 call spread for $0.82 indicatively (12.2x max payout; UXK6 ref. 21.05).	13-Apr-26	$0.82	0	May26	Trade expired
Buy VIX May 24-40 call spread for $0.93 indicatively (~35d/10d strikes, 17.2x max payout, UXK6 ref. 20.81)	20-Apr-26	$0.93	0	May26	Trade expired
Buy QQQ 29-May-26 635 call for $9 indicatively (1.46% of spot; ~103% / 35d strike; 16.8v; ref. 617.507).	13-Apr-26	$9	$103.31	29-May-26	Trade expired ITM
Buy QQQ 29-May-26 665-700 call spread for $7.5 indicatively (~35d/10d strikes, 4.7x payout, ref. 646.85)	20-Apr-26	$7.5	$35	29-May-26	Trade expired ITM
NIFTYM 31-Jul-25 24,400 23,500 1x3 put ratios for USD 36 (~0.14% of spot, indic. spot ref: 24,946, -8.8d, vols: 14.58%/16.23%) -1x 24,400 put (-29d) & +3x 23,500 puts (-12d)	16-Jun-25	0.75%	0	Sep25	Trade expired
Sell initially delta-hedged KOSPI2 30-Dec-25 110% calls and collect 1.12% (indic. spot ref 535.28, 23.7% vol, 20d). Consider hedging the risk of a global tech rally into year-end by buying QQQ 31-Dec-25 110% calls against the KOSPI2 calls for 0.56% (17.8% vols, 14d)	20-Oct-25	1.12/0.56%	0	30-Dec-25	Trade expired
Buy 1x 20-Mar-2026 106% call on a CSI 1000 tracking basket* for 2.92% (+29d, 27.4v). Sell 1x ASHR US 20-Mar-2026 35 call for $0.71 (~2.15% of spot; the 35.00 strike is 106% of spot, ref 33.00) (*= several banks offer CSI tracking baskets; indic. in quanto USD)	3-Nov-25	2.92/2.15%	0	20-Mar-26	Trade expired
Buy 1x 20-Mar-2026 106% call on a CSI 1000 tracking basket* for 2.32% (+27d, 26v). Sell 1.05x ASHR US 20-Mar-2026 34 calls for $0.55 (~1.73% of spot; the 34.00 strike is ~107% of spot, ref 31.76)	26-Nov-25	2.32%/~1.73%	0.88%	20-Mar-26	Trade expired ITM
Buy KOSPI2 3-month put vs. short call spread for a 0.39% of spot, +1x 88% put / -1x 110% call / +1x 120% call	12-Jan-26	0.39%	0	Apr26	Trade expired
Buy HSCEI 17-Apr-26 9,500 10,500 call spreads financed by selling 8,500 puts for $73 (indic. OOF, Apr fut ref 9,222, 47d)	9-Feb-26	$73	0	Apr26	Trade expired
Buy Jun26 NKY > 104% & USDJPY < 96% dual digital for 9.7% (+48 correl offer, 10.3x max payout, ref. 48626, 157).	26-Nov-25	9.7%	0	12-Jun-26	Trade expired
Buy SPX Jun 6900 / 7600 risk reversal (-1x / +1x), delta-hedged (~95% / 105% strikes; 19.15v/11.96v; spot ref. 7268.50).	5-May-26	~19.2v/12v	~$10.90	Jun26	Trade expired
Buy VIX Jun 25-40 call spread for $1 indic (15x max payout; UXM6 ref. 20.95)	11-May-26	$1	$0	Jun26	Trade expired
Buy TLT Jun 82-78 put spread for 51c indicatively (7.8x max payout ratio; 30d-8d strikes; ref. 83.65)	18-May-26	$0.51	$0	Jun26	Trade expired
Buy SPX Jun26 95% put contingent on Brent > 130 for 84bps indicatively (68% discount to vanilla; ref. 6643.11, 101.84)	16-Mar-26	84bps	$0	Jun26	Trade expired
Buy QQQ Jun26 660-750 call spread for $18 (~35D/10D strikes, 5x max payout ratio, ref. 605.16)	26-Nov-25	$18.00	$80.66	18-Jun-26	Trade expired ITM
Buy Jun26 105% DAX call contingent on CAC < 105% at expiry	26-Nov-25	1.24%	0.2%	19-Jun-26	Trade expired ITM
Long CAC Mar26-Jun26 zero-cost put calendars, e.g. a Jun26 30D put fully funds ~1.6x Mar26 30D puts (spot ref: 8336.72)	12-Jan-26	0	5%	Jun26	Trade expired ITM
Long Jun26 105% DAX call, contingent on CAC < 105% at expiry for 1.12% (>50% discount vs vanilla calls)	12-Jan-26	1.12%	0	Jun26	Trade expired
Buy Jun26 110% Worst-of Call on SXPP, SXEP, SX7E for 76bps offer (~50% discount vs the cheapest vanilla, spot refs: SXPP 737.05, SXEP 435.90, SX7E 275.44).	2-Feb-26	76bps	0	Jun26	Trade expired
SXEP Jun26 500 (~30D) puts initially delta-hedged	20-Apr-26	2.3% (put)	0	Jun26	Trade expired
Buy Jun26 1x2 +19-17 V2X put ratios for 0.475 (fut ref: 21.95)	11-May-26	0.475	1.26	Jun26	Trade expired

Source: BofA Global Research. Prices reflective of most recently available data which may be delayed in some cases. "Trade Value" represents current valuation of trades initiated on the "Open Date"

BofA GLOBAL RESEARCH

Acronyms

BTD: Buy-the-dip

FOMC = Federal Open Market Committee

NFP = Non-Farm Payrolls

SPY = SPDR S&P 500 ETF Trust (ETF)

QQQ = Invesco QQQ Trust (ETF)

CPI = Consumer Price Index

XLF = Financial Select Sector SPDR Fund (ETF)

ATM = At-The-Money

Options Risk Statement

Potential Risk at Expiry & Options Limited Duration Risk

Unlike owning or shorting a stock, employing any listed options strategy is by definition governed by a finite duration. The most severe risks associated with general options trading are total loss of capital invested and delivery/assignment risk, all of which can occur in a short period.

Investor suitability

The use of standardized options and other related derivatives instruments are considered unsuitable for many investors. Investors considering such strategies are encouraged to become familiar with the "Characteristics and Risks of Standardized Options" (an OCC authored white paper on options risks). U.S. investors should consult with a FINRA Registered Options Principal. For detailed information regarding the risks involved with investing in listed options, see the Options Clearing Corporation's Characteristics and Risks of Standardized Options website.

Analyst Certification

I, Benjamin Bowler, 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.

Disclosures

Important Disclosures

One or more analysts contributing to this report owns stock of the covered issuer: Meta Platforms, Microsoft Corp, NVIDIA, Taiwan Semi Mfg Co
BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: ASML, Invesco QQQ ETF, Invesco S&P EW ETF, iShare Silver, iShares CH LrgCp ETF, iShares iBoxx $ HYC, iShares Long UST, iShares MSCI EM ETF, iShares Russell ETF, iShares Semicond ETF, Meta Platforms, Microsoft, Nokia, NVIDIA, Oil&Gas Exp ETF, SPDR Energy ETF, SPDR Financ ETF, SPDR Gold Shares, SPDR Material ETF, SPDR S&P 500 ETF, SPDR S&P Homebuilder, SPDR S&P Met&Min, Taiwan Semi Mfg Co, United States Oil, Xtrackers CSI ETF.
BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Axa, DHL Group, Infineon.
The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Adyen, Air Liquide, ASML, Axa, Barclays, BlackRock, Deutsche Bank, DHL Group, E.ON, Hermes, Infineon, Invesco, Julius Baer, KPN, LVMH, Meta Platforms, Microsoft Corp, Nokia, Prysmian, Sandvik, SEMCO, State Street, Taiwan Semi Mfg Co.
BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Adyen, Air Liquide, ASML, Axa, Barclays, BlackRock, Capgemini, Deutsche Bank, DHL Group, E.ON, Hermes, Infineon, Invesco, Julius Baer, LVMH, Meta Platforms, Microsoft Corp, Nokia, NVIDIA, Prysmian, Sandvik, SEMCO, State Street, Swiss Life, Taiwan Semi Mfg Co.
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: Adyen, Air Liquide, ASML, Atlas Copco, Axa, Barclays, BlackRock, Capgemini, Deutsche Bank, DHL Group, E.ON, Hermes, Infineon, Invesco, Julius Baer, KION Group AG, KPN, LVMH, Meta Platforms, Microsoft Corp, Nokia, NVIDIA, Prysmian, Sandvik, SEMCO, State Street, Swiss Life, Taiwan Semi Mfg Co.
In the US, retail sales and/or distribution of this report may be made only in states where these securities are exempt from registration or have been qualified for sale: Advantest, Adyen, Air Liquide, Atlas Copco, Axa, Capgemini, DHL Group, E.ON, Geberit, Hermes, Infineon, Julius Baer, KION Group AG, KPN, LVMH, Prysmian, Sandvik, SEMCO, Swiss Life, Tokyo Electron.
BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Air Liquide, ASML, Axa, Barclays, BlackRock, Deutsche Bank, DHL Group, E.ON, Infineon, Invesco, LVMH, Meta Platforms, Nokia, SEMCO, State Street.
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: Adyen, Air Liquide, ASML, Axa, Barclays, BlackRock, Deutsche Bank, DHL Group, E.ON, Hermes, Infineon, Invesco, Julius Baer, KPN, LVMH, Meta Platforms, Microsoft Corp, Nokia, Prysmian, Sandvik, SEMCO, State Street, Taiwan Semi Mfg Co.
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: Axa, Barclays, Infineon, KION Group AG, KPN, Meta Platforms, Microsoft Corp, NVIDIA, SEMCO.
BofAS together with its affiliates beneficially owns one percent or more of the shares of this fund. 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 the month reflect the ownership position at the end of the second month preceding the date of the report: Invesco QQQ ETF, Invesco S&P EW ETF, iShare Silver, iShares CH LrgCp ETF, iShares iBoxx $ HYC, iShares Long UST, iShares MSCI EM ETF, iShares Russell ETF, iShares Semicond ETF, Oil&Gas Exp ETF, SPDR Energy ETF, SPDR Financ ETF, SPDR Gold Shares, SPDR Material ETF, SPDR S&P 500 ETF, SPDR S&P Homebuilder, SPDR S&P Met&Min, United States Oil, Xtrackers CSI ETF.
The country in which this issuer is organized has certain laws or regulations that limit or restrict ownership of the issuer's shares by nationals of other countries: Taiwan Semi Mfg Co.
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: Adyen, ASML, Atlas Copco, DHL Group, Hermès, Infineon, Invesco QQQ ETF, Invesco S&P EW ETF, iShare Silver, iShares CH LrgCp ETF, iShares iBoxx $ HYC, iShares Long UST, iShares MSCI EM ETF, iShares Russell ETF, iShares Semicond ETF, Julius Baer, LVMH, Meta Platforms, Microsoft, Nokia, NVIDIA, Oil&Gas Exp ETF, Sandvik, SPDR Energy ETF, SPDR Financ ETF, SPDR Gold Shares, SPDR Material ETF, SPDR S&P 500 ETF, SPDR S&P Homebuilder, SPDR S&P Met&Min, Taiwan Semi Mfg Co, United States Oil, Xtrackers CSI ETF.
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: Adyen, Air Liquide, ASML, Axa, Barclays, BlackRock, Capgemini, Deutsche Bank, DHL Group, E.ON, Hermes, Infineon, Invesco, Julius Baer, LVMH, Meta Platforms, Microsoft Corp, Nokia, NVIDIA, Prysmian, SEMCO, State Street, Swiss Life, Taiwan Semi Mfg Co.

Due to the nature of the market for derivative securities, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.
Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.
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.
BofAS and/or its affiliates participate in the creation and redemption of these ETFs and are an authorized participant for such ETFs: Invesco QQQ ETF, Invesco S&P EW ETF, iShare Silver, iShares CH LrgCp ETF, iShares iBoxx $ HYC, iShares Long UST, iShares MSCI EM ETF, iShares Russell ETF, iShares Semicond ETF, Oil&Gas Exp ETF, SPDR Energy ETF, SPDR Financ ETF, SPDR Gold Shares, SPDR Material ETF, SPDR S&P 500 ETF, SPDR S&P Homebuilder, SPDR S&P Met&Min, United States Oil, Xtrackers CSI ETF
One of the analysts contributing to this report is a former employee of the manager of the issuer and, in that capacity, received compensation from the manager of the issuer within the past 12 months: Blackrock.
One or more analysts responsible for covering the funds in this report own(s) a position in a company that constitutes a significant portion of the assets of the subject funds: SPDR Financ ETF.
The lead analyst covering the following issuers has accepted an offer of employment at an insurance company in the same coverage cluster: Axa, Swiss Life

Other Important Disclosures

The covered issuer and/or one or more of its affiliates holds 5% or more of the total issued share capital of Bank of America Corporation: BlackRock.
Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.
The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.
Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
Refer to BofA Global Research policies relating to conflicts of interest.
"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.
Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:
BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by the Financial Sector Conduct Authority; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Zurich): Bank of America Europe Designated Activity Company, Zurich Branch, regulated by the Swiss Financial Market Supervisory Authority FINMA, the ECB and CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.
This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.
This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.
General Investment Related Disclosures:
Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

issuer or security.
Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.
The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.
All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.
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.

Research Analysts

Benjamin Bowler
Equity-Linked Analyst
BofAS
+1 415 676 3595
benjamin.bowler@bofa.com

Abhinandan Deb >>
Equity-Linked Analyst
MLI (UK)
+44 20 7995 7148
abhinandan.deb@bofa.com

Nitin Saksena
Equity-Linked Analyst
BofAS
+1 646 855 5480
nitin.saksena@bofa.com

Lars Naeckter >>
Equity-Linked Analyst
Merrill Lynch (DIFC)
+971 4425 8218
lars.naeckter@bofa.com

Chintan Kotecha
Equity-Linked Analyst
BofAS
+1 646 855 5478
chintan.kotecha@bofa.com

Riddhi Prasad >>
Equity-Linked Analyst
MLI (UK)
+44 20 7995-7852
riddhi.prasad@bofa.com

Michael Youngworth, CFA
CBs, Pfds & Derivs Strategist
BofAS
+1 646 855 6493
michael.youngworth@bofa.com

Vittoria Volta >>
Equity-Linked Analyst
BofASE (France)
+33 1 8770 0703
vittoria.volta@bofa.com

Nicholas Dunne
Equity-Linked Analyst
BofAS
+1 646 855 2631
nicholas.dunne@bofa.com

Arjun Goyal
Equity-Linked Analyst
BofAS
+1 646 743 4273
arjun.goyal@bofa.com

Meriem Hafid >>
Research Analyst
BofASE (France)
+33 1 5365 5664
meriem.hafid@bofa.com