

# Global Equity Volatility Insights

## Torn between the tails

### Bi-modal risks leave stocks in limbo, torn between tails

Persistent uncertainty around the Iran conflict has finally driven the S&P to five straight down weeks and pushed the VIX to close above 30. With left (escalation) and right (resolution) tail risks rising as days pass, in our view the asymmetry of options is an effective solution to manage this growing bi-modal risk.

The grind lower playbook we have discussed in recent weeks would have continued to work, and interestingly, owning long-dated vol would have carried well. In this context and given the risk that conflict resolution may *require* a more chaotic market move, we find it prudent to own long-dated SPX vega (e.g., 2y OTM delta-hedged puts) as a more convex form of protection to supplement grind-lower hedges. Amongst proxy hedges, CADUSD puts (best within our Cross-Asset Hedging Screen) can offer value given CAD's low vol and muted selloff vs USD so far. Notwithstanding these downside risks, with the AI space getting cheaper as it innovates, despite market turbulence, a resolution in stress creates the risk of a sharp rebound higher as investors pile back into the promise of AI, not dissimilar to 9-Apr-25's historic tariff relief rally or the post-LTCM Nasdaq rally during the 90s tech bubble. For this we like the upside convexity provided by SPX May 1x4 call ratios, which look unusually cheap given the attractive call skew entry point.

### Hedge duration 2-ways for stagflation-recession swings

The US-Iran war has intensified stagflation concerns, reversing earlier expectations for Fed easing and instead pushing markets to contemplate rate hikes as energy-driven inflation rises. Traditional diversifiers have failed to protect portfolios, with gold and duration selling off alongside equities, and bond equity correlations reaching levels last seen in the 1970s–80s. As a result, 60/40 portfolios have suffered their weakest month since the 2022 inflation shock. Against this backdrop, we continue to emphasise the need for defensive overlays that can hedge both equity and duration risks, especially at a time when inflation concerns dominate market sentiment. Looking ahead, should the conflict drag on, growth momentum falter and the market narrative shift from stagflation toward recession, we see compelling value in upside duration hedges, such as TLT calls, which are among the cheapest tail-risk hedges in our cross-asset universe.

### Also in the GEVI

Long CPI gamma via SX5E 10 April EoD straddles if option premiums compress  
Global cross-asset stress rises for 5<sup>th</sup> straight week on higher commodity & equity stress  
BRI: Frothy dynamics retreat as geopolitical stress persists

**Due to market holidays around Easter, the next GEVI will be published on 14-Apr**

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

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

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

**BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.**

**Refer to important disclosures on page 27 to 30. Analyst Certification on page 27.**

30 March 2026

Equity Derivatives  
Global

BofA  
Data  
Analytics



Global Equity Derivatives Rsch  
BofAS

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

**Arjun Goyal**  
Equity-Linked Analyst  
BofAS

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

**Benjamin Bowler**  
Equity-Linked Analyst  
BofAS  
[benjamin.bowler@bofa.com](mailto:benjamin.bowler@bofa.com)

**Nitin Saxena**  
Equity-Linked Analyst  
BofAS

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

**Mერიem 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	24.2 (2.2)	13.0 (0.9)
ESTX50	25.4 (1.5)	17.4 (0.8)
FTSE	19.7 (0.0)	13.6 (0.6)
DAX	26.2 (1.2)	17.9 (0.7)
NKY	32.1 (1.2)	28.4 (1.2)
HSCEI	24.7 (1.7)	21.1 (1.7)
KOSPI	50.7 (3.9)	55.6 (2.0)
EEM US	33.3 (1.8)	24.8 (1.9)
XIN9I	19.4 (-0.6)	12.7 (2.1)

Source: BofA Global Research

BofA GLOBAL RESEARCH

See list of acronyms at the end of the report

# BofA GFSI™ X-Asset Risk Landscape

## Commodities & equities continue to drive GFSI higher

The GFSI moved higher for the fifth consecutive week as it climbed from +0.40 on 20-Mar-26 to +0.49 on 27-Mar-26. The index is now in its 85<sup>th</sup> percentile since 2000 and at its highest level since 16-Apr. Last week's gains in stress were broad-based, spanning all asset classes and regions (Exhibit 4 & Exhibit 5).

Commodities saw the largest increase in stress at the asset-class level as gold implied vol posted the top stress gain (Exhibit 3 & Exhibit 4). Notably, the gain in gold implied vol stress broke a three-week streak of declines during which gold futures prices also fell. Despite this 99<sup>th</sup> percentile stress increase (Exhibit 6), gold implied vol stress is still below its YTD high from the end of January when implied vols rose as spot prices saw historically significant declines (i.e. 30-Jan's 9% decline). In other commodities, crude implied vol stress increased as the conflict in Iran continued and copper implied vol stress declined for the third straight week (Exhibit 3). Commodities remain the GFSI's most stressed asset class (Exhibit 4).

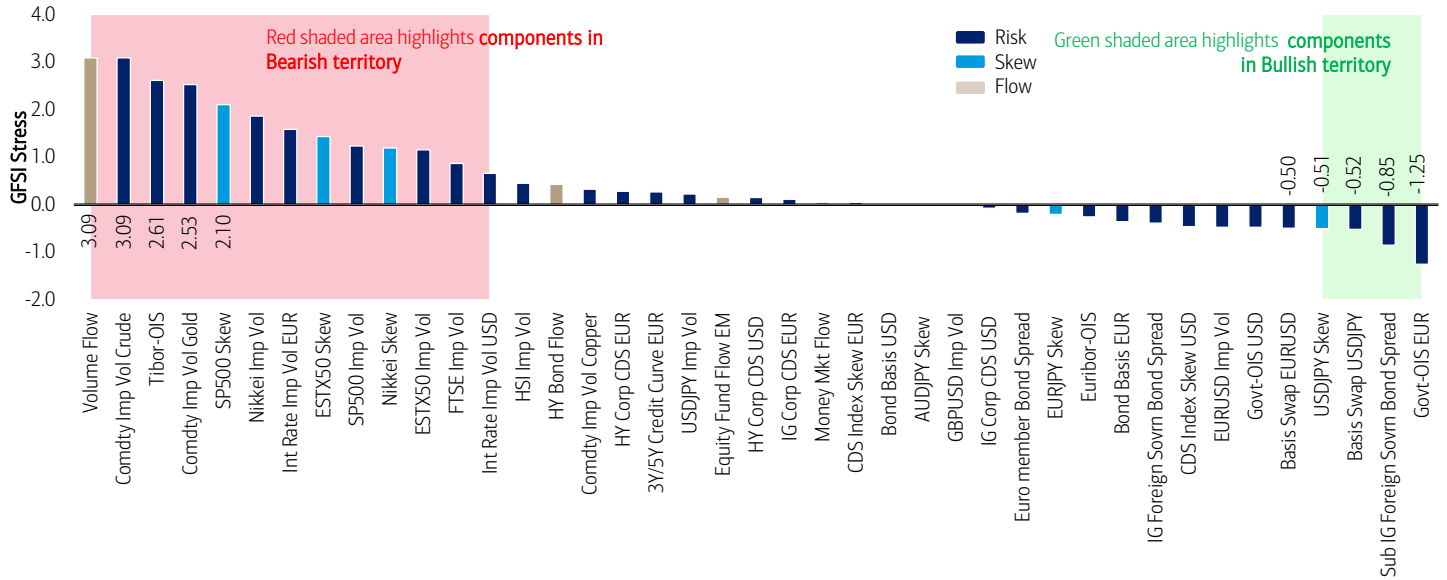
Equities recorded the second largest stress increase and accounted for six of the top eight stress-gainers of the week (Exhibit 3 & Exhibit 4). Volume flow, the subcomponent that measures bullish or bearish US stock volume, was the top equity stress-gainer as the S&P 500 fell 2.1% in its largest weekly decline since October. This puts volume flow as the GFSI's most stressed subcomponent for the first time since 9-May (Exhibit 2). Equity implied vol stress was on the rise globally with S&P 500, ESTX50, Nikkei, and HSI implied vols all among the top eight stress-gainers of the week (Exhibit 3). Equities are still the second most stressed asset class and maintain a wide stress gap to the less stressed asset classes (Exhibit 4).

- **Rates vol stress surpassed equity vol stress last week** (Exhibit 7). This came as interest rate implied vol EUR recorded a 96<sup>th</sup> percentile gain in stress versus its own history (Exhibit 6). Commodity vol is still the most stressed versus all cross-asset vols and spreads.
- **Despite the rise in rates vol stress, cross-asset vol dispersion remains elevated versus history.** We recently noted this divergence in our [17-Mar GEVI](#), and we show a longer-term history in Exhibit 8. The spread between the most and least stressed GFSI cross-asset vols is currently in its 96<sup>th</sup> percentile since 2007.
- **Japan is still the GFSI's most stressed region by a wide margin** (Exhibit 5). However, the US saw the largest increase in stress last week.



### Exhibit 2: Latest\* stress across GFSI sub-components

Volume flow is the most stressed while Govt-OIS EUR is the least stressed

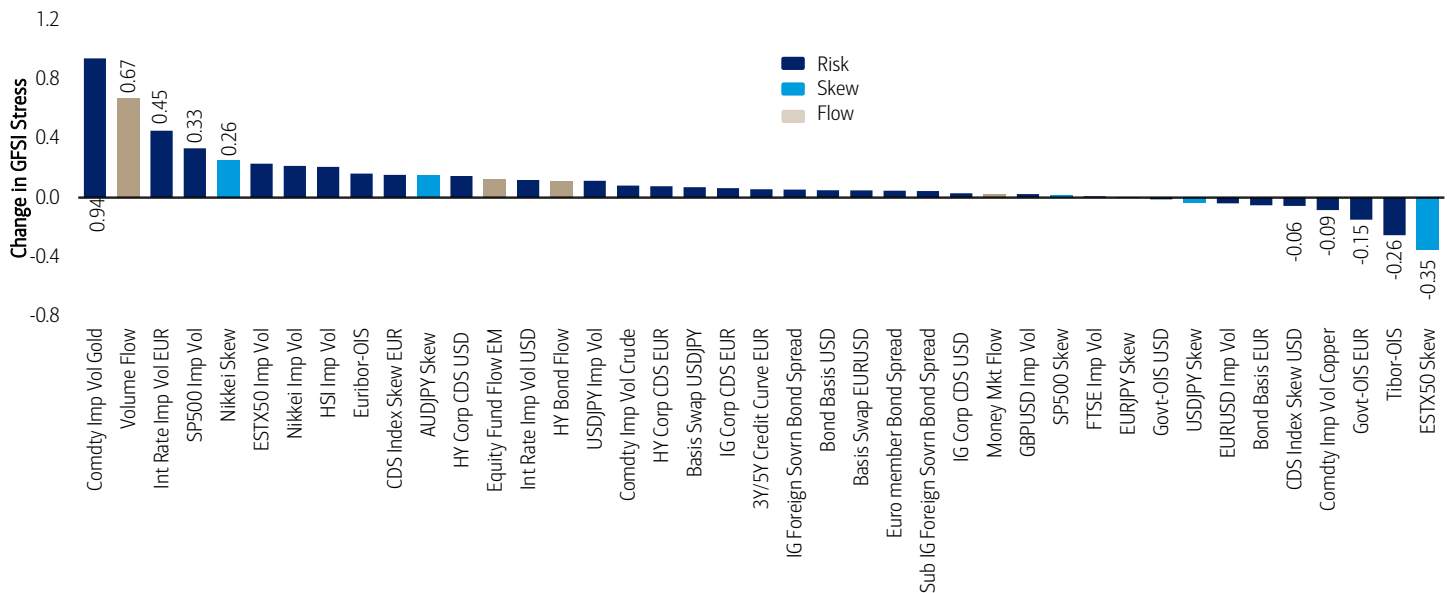


Source: BofA Global Research. \*Latest as of 27-Mar-26. Disclaimer: The indicator identified above as BofA GFSI is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third 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

Gold implied vol was the largest stress riser over the last week while ESTX50 skew stress fell the most



Source: BofA Global Research. \*\*Latest as of 27-Mar-26. Change from 20-Mar-26 to 27-Mar-26.

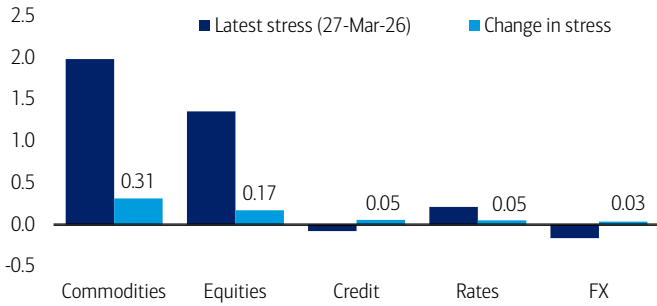
BofA GLOBAL RESEARCH

The GFSI Risk Allocator (using Bull, Bear & Neutral weights of 2, 0, 1) suggested a 22.0% underweight position as of 27-Mar-26 (vs a 12.2% underweight position as of 20-Mar-26). The percentages of Bullish, Bearish, and Neutral GFSI components (as used in the Risk Allocator) as of 27-Mar-26 were 9.8%, 31.7%, and 58.5%, respectively.



**Exhibit 4: Commodity stress increased the most last week**

Meanwhile, FX stress increased the least

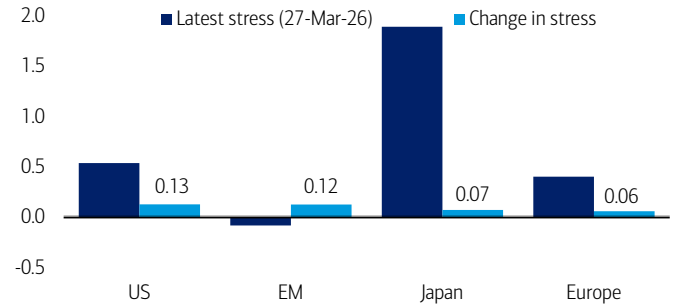


Source: BofA Global Research. Change from 20-Mar-26 to 27-Mar-26.

BofA GLOBAL RESEARCH

**Exhibit 5: The US led regional stress higher last week**

Meanwhile, Europe posted the smallest stress increase

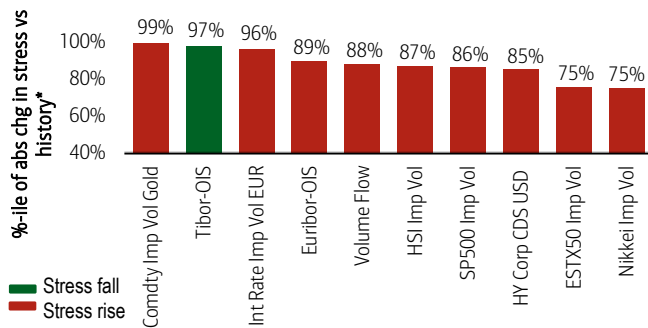


Source: BofA Global Research. Change from 20-Mar-26 to 27-Mar-26.

BofA GLOBAL RESEARCH

**Exhibit 6: Top 10 biggest stress movers (vs history)**

Gold implied vol saw a historically large stress increase

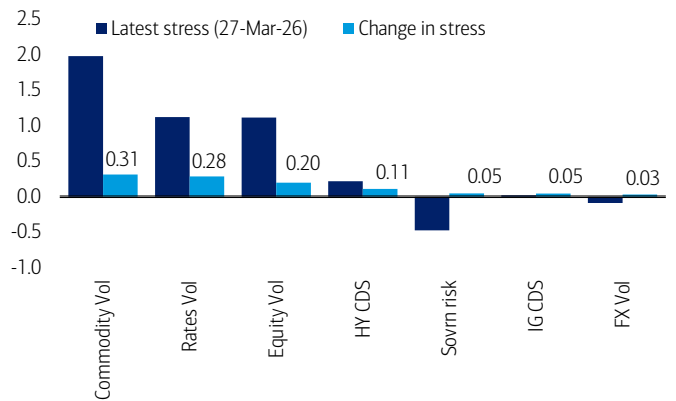


Source: BofA Global Research. \* %-ile of 5-day moves in stress vs all historical 5-day moves (earliest 3-Jan-00). Bar colors represent rise (red) or fall (green) in stress. 5-day change (20-Mar-26 to 27-Mar-26).

BofA GLOBAL RESEARCH

**Exhibit 7: Biggest stress movers in cross-asset vols and spreads**

Commodity vol experienced the largest increase in stress last week

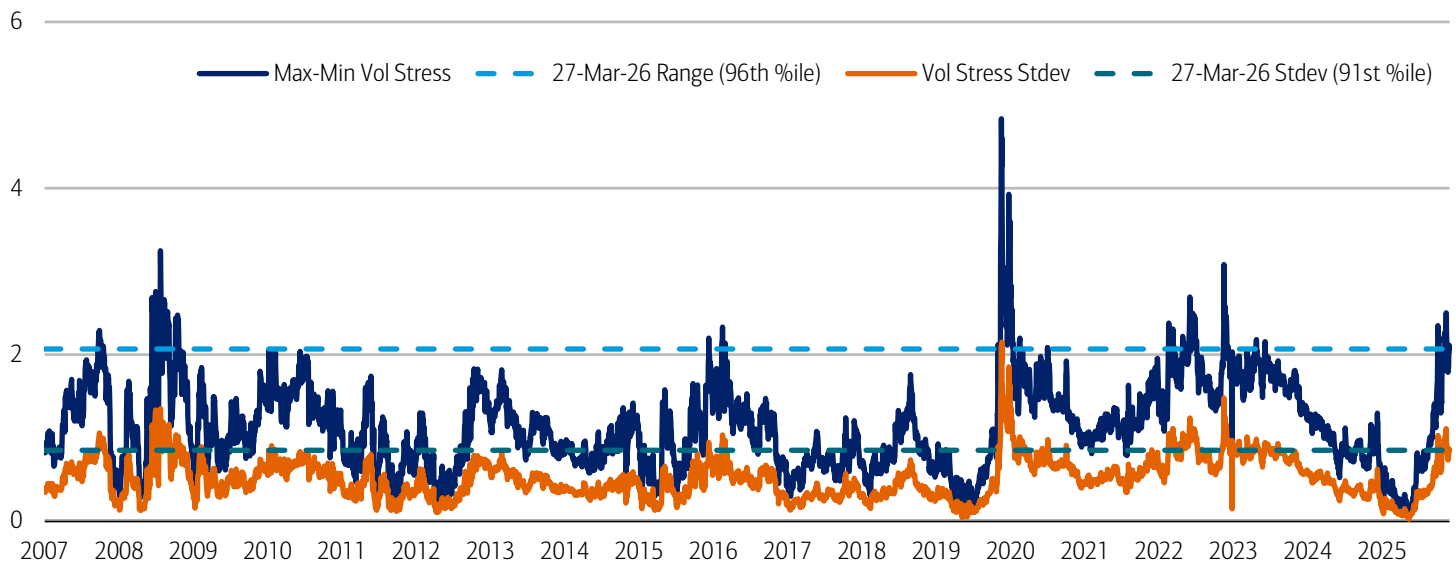


Source: BofA Global Research. Change from 20-Mar-26 to 27-Mar-26.

BofA GLOBAL RESEARCH

**Exhibit 8: Dispersion of GFSI cross-asset vol stress**

Cross-asset vol divergences remains historically wide



Source: BofA Global Research. Change from 1-May-07 to 27-Mar-26. Timeseries calculated using GFSI commodity, equity, FX, and rates vol stress levels.

BofA GLOBAL RESEARCH



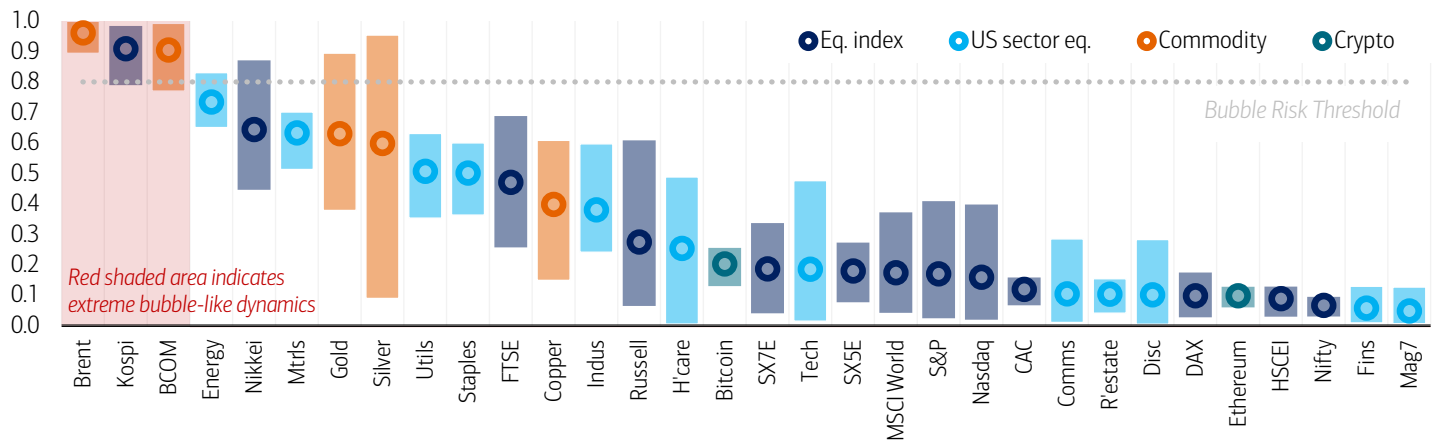
# BofA Bubble Risk Indicator Landscape

## Frothy dynamics retreat as geopolitical stress persists

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 distills 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 9: Geopolitical stress continues to drive bubble-like price action in energy markets (as would be expected), with frothy dynamics in other assets like precious metals retreating

BofA Bubble Risk indicator (as of 27-Mar-26) across global equity indices, US equity sectors, commodities and crypto (bars: range of short- to long-term sub-indicators)

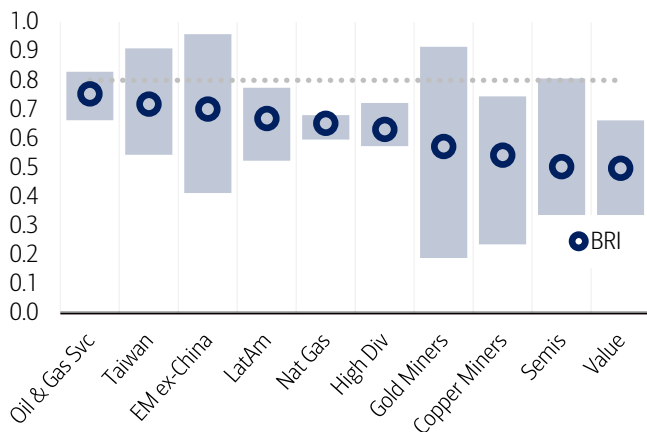


**Source:** BofA Global Research. Data as of 27-Mar-26. Underlying tickers: SPX, NDX, RTY, SX5E, SX7E, CAC, DAX, UKX, NKY, HSCEI, KOSPI2, NIFTY, MXWD, IXB, IXCP, IXE, IXM, IXI, IXT, IXR, IXRE, IXU, IXV, IXZ, BM7P, BCOM, CO1, XAU, XAG, HG1, XBTUSD, XETUSD. **Disclaimer:** The indicator identified as the 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 10: Oil & Gas, Taiwanese and EM stocks are showing relatively high bubble-like dynamics among popular equity themes

Highest BRI readings across popular equity themes (as of 27-Mar-26)

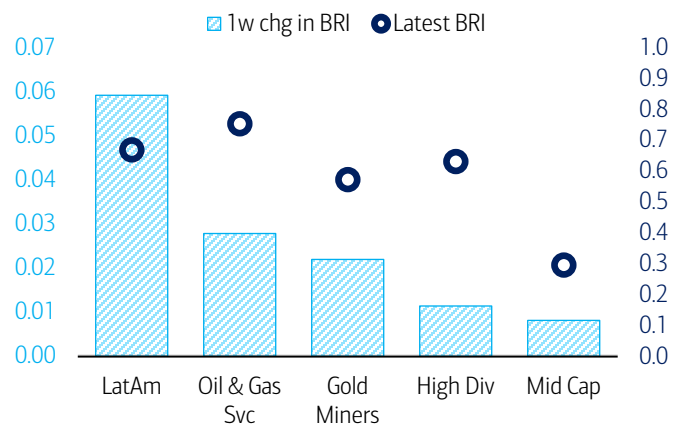


**Source:** BofA Global Research. Data as of 27-Mar-26. Underlying tickers: DJSOEPT, FTTWN, M1CXBRV, SPLACNW, FUMTR, DJUSDIVT, SOLGMCFT, SOLGLOCO, ICESEMIT, M2USEV. See Disclaimer in Exhibit 9.

BofA GLOBAL RESEARCH

### Exhibit 11: LatAm 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 27-Mar-26)



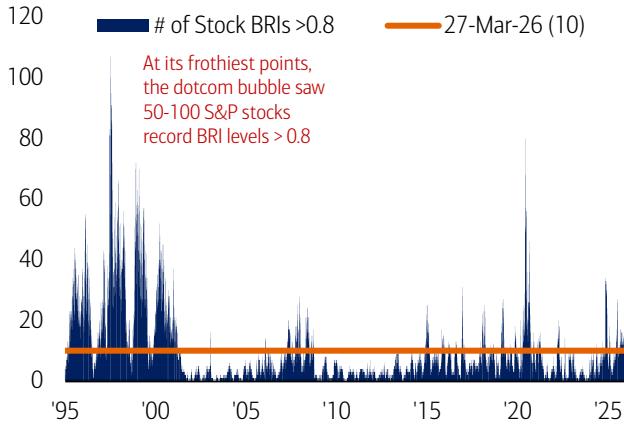
**Source:** BofA Global Research. Data as of 27-Mar-26. Underlying tickers: SPLACNW, DJSOEPT, SOLGMCFT, DJUSDIVT, SPTRMDCP. See Disclaimer in Exhibit 9.

BofA GLOBAL RESEARCH



**Exhibit 12: Compared with the late 90s dotcom bubble, froth in SPX stocks remains localized, both in terms of number of stocks ...**

# of SPX stocks with BRIs above 0.8

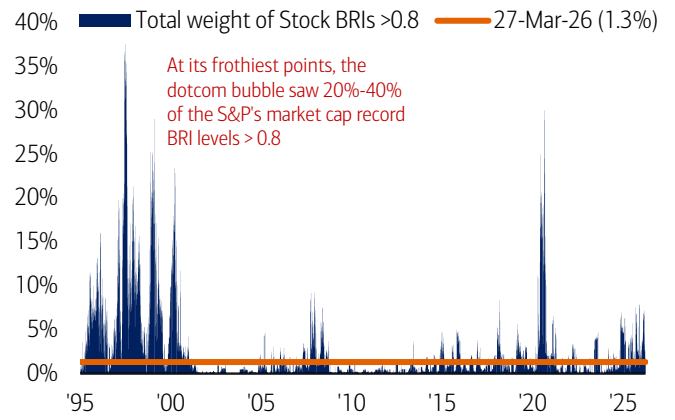


Source: BofA Global Research. Data from 1-Jan-95 to 27-Mar-26. Stocks' BRI computed using data since SPX inclusion. See Disclaimer in Exhibit 9.

BofA GLOBAL RESEARCH

**Exhibit 13: ... and when measured by total index weight**

Total weight of SPX stocks with BRIs above 0.8

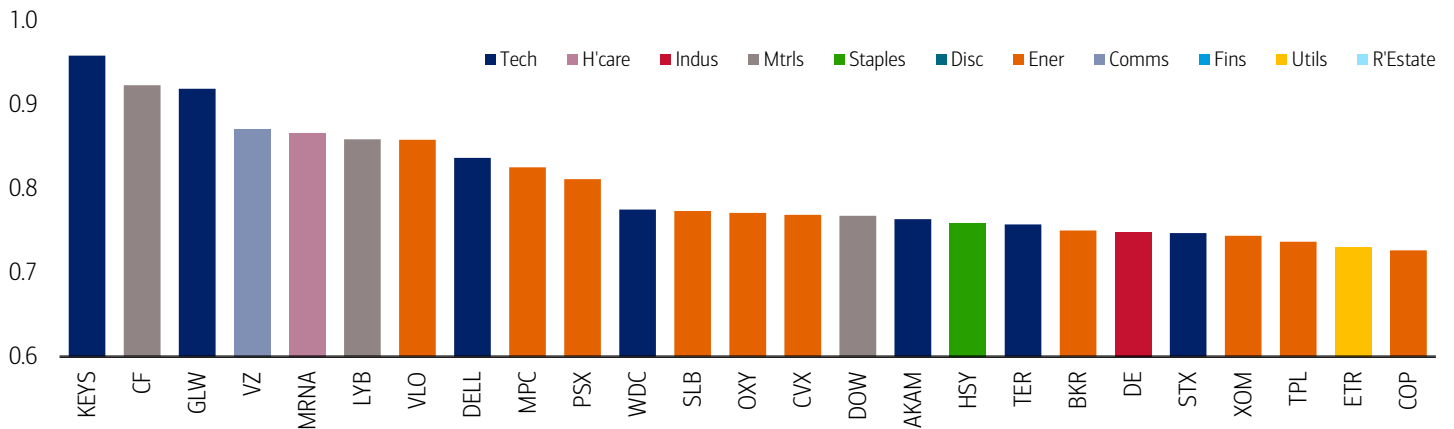


Source: BofA Global Research. Data from 1-Jan-95 to 27-Mar-26. Stocks' BRI computed using data since SPX inclusion. See Disclaimer in Exhibit 9.

BofA GLOBAL RESEARCH

**Exhibit 14: KEYS, GLW (tech) and CF (materials) 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 27-Mar-26)



Source: BofA Global Research. Data as of 27-Mar-26. Note: Stocks' BRI computed using data since S&P 500 inclusion. See Disclaimer in Exhibit 9. 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



**Bi-modal risks leave stocks in limbo, torn between tails**

Persistent geopolitical concerns drove the S&P to its 5<sup>th</sup> consecutive down week and pushed the VIX to close above 30 last Friday (27-Mar), despite the announcement of another delay in further US strikes. Uncertainty in the trajectory of the conflict and concerns over a scorched earth strategy have kept the market’s stance risk averse, with previously frothy pockets (as measured by our Bubble Risk Indicator) being the hardest hit.

**While gamma remains challenging to own, vega has shined**

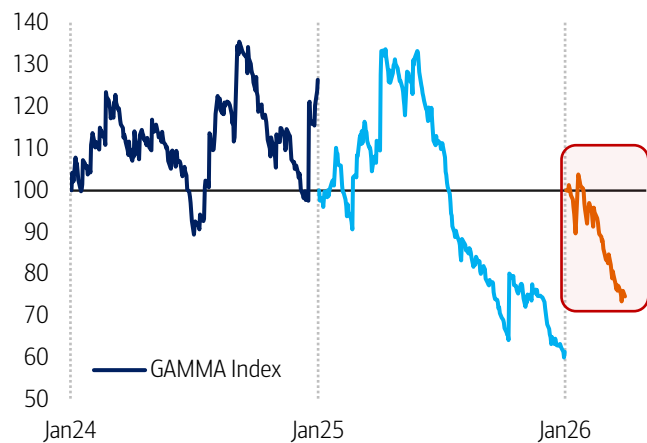
Despite the continued turmoil, equity realized vol continues to be muted vs implied, with S&P gamma being extremely challenging to own (Exhibit 15) given the historically wide vol risk premia.<sup>1</sup>

What has worked in this environment? In addition to grind lower and long vol structures, our two preferred types of downside hedges, owning long-dated S&P vega has carried well, with SPX 2y 25d put vol having steadily risen over the past month and now sitting above its Liberation Day peak (Exhibit 16). While we continue to like grind lower hedges for downside protection in this environment, we think it’s prudent to add more convex protection in case a more chaotic market move is required for resolution. In this context, we like owning longer-dated vol, which does not require vol *outperformance* to hedge stress and is likely to continue pricing in the long-term fallout of today’s geopolitical stress and the upcoming midterm election uncertainty.

**Trade (SPX 2y DH put):** Buy long-dated OTM SPX puts (e.g., 2y 25-delta), delta-hedged. *Risk involves gamma-weighted realized vol lower than current implied vol and/or a reset lower in longer-dated implied vol.*

**Exhibit 15: Despite persistent geopolitical stress, owning S&P gamma has been challenging in 2026YTD (unlike 1H25) as muted close-to-close realized vol diverges from elevated implied vol**

CBOE GAMMA Index performance\* since '24 (indexed to 100 every year)



Source: BofA Global Research, CBOE, Bloomberg. Data from 1-Jan-24 to 27-Mar-26. \*Performance of a delta hedged portfolio of five shortest dated SPX straddles (entered daily, held to maturity).

BofA GLOBAL RESEARCH

**Exhibit 16: In contrast to gamma, SPX vega has carried well amidst the geopolitical turmoil, with SPX 2y put vol now sitting above the peak of the Liberation Day shock**

SPX 2y 25-delta put vol



Source: BofA Global Research. Data from 1-Jan-24 to 27-Mar-26.

BofA GLOBAL RESEARCH

<sup>1</sup> While unconditionally owning gamma has been challenging, signal-based reversal strategies that own gamma have performed well in recent weeks. See [24-Mar-26 GEVI](#) for more details.



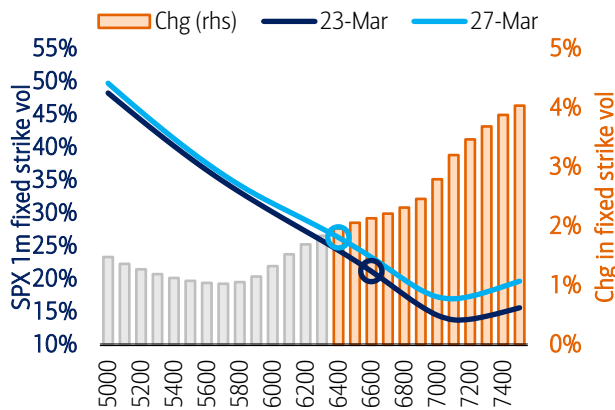
**De-escalation hopes supporting call vols but upside convexity still attractive**

While heightened uncertainty has weighed heavily on risk sentiment, hopes for de-escalation after last week’s delay in strikes from the US noticeably pushed up call side equity vols (Exhibit 17). Indeed, the prospects of a 9-Apr-25 style rip higher on the back of conflict resolution has been a risk many have been conscious of, and motivates convex upside structures. Despite last week’s bid to call vols, S&P call skew remains far from inverted and still offers a good entry point for structures like call ratios that sell NTM calls to buy multiple further OTM calls (Exhibit 18). For example, SPX May 6700/7000 1x4 call ratios offer convex upside (especially on a mark-to-market basis) in the scenario of resolution driving a sharp rebound (Exhibit 19). Note that while a 1x6 call ratio can be achieved for zero cost, we prefer a theta-neutral 1x4 ratio to improve carry costs.

**Trade (SPX 1m call ratio):** SPX May26 6700/7000 1x4 call ratio (-1x / +4x) for \$23.2 credit indicatively (ref. 6343.72). Risk is \$300 loss on a hold-to-expiry basis (i.e., SPX at 7000 at expiry).

**Exhibit 17: Despite the equity selloff, optimism around conflict de-escalation towards the end of last week was followed by a notable increase in front-end, call-side SPX fixed-strike vols**

SPX 1m fixed strike vol change from 23-Mar-26 to 27-Mar-26

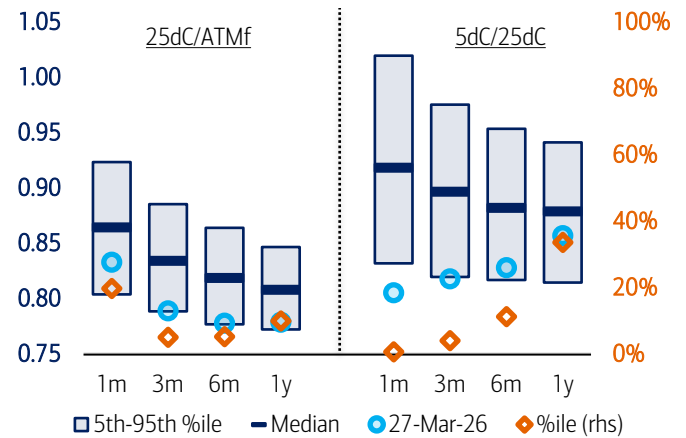


Source: BofA Global Research. Data from 23-Mar-26 to 27-Mar-26.

BofA GLOBAL RESEARCH

**Exhibit 18: However, SPX call skew remains far from inverted and continues to offer attractive entry points for convex upside structures like call ratios that sell NTM calls to buy multiple further OTM calls**

SPX 25d/ATMf and 5d/25d call skew



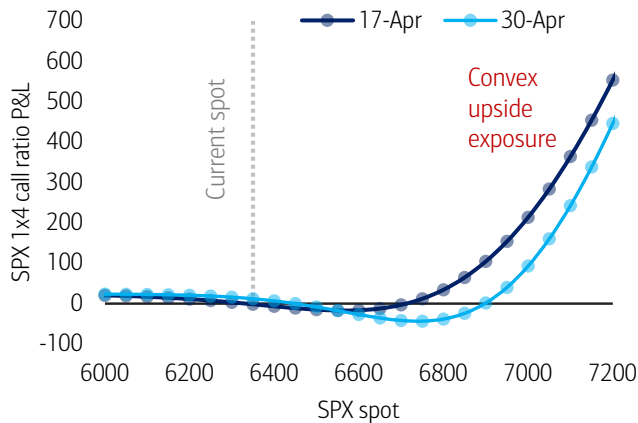
Source: BofA Global Research. Data from 1-Jan-10 to 27-Mar-26.

BofA GLOBAL RESEARCH



**Exhibit 19: SPX call ratios can offer convex upside exposure in case of a conflict resolution driven rip higher (similar to 9-Apr-25)**

Hypothetical mark-to-market profile of SPX May 6700/7000 1x4 call ratios



Source: BofA Global Research. Assumes no change in parameters (vol, rates, etc.) over time.  
BofA GLOBAL RESEARCH

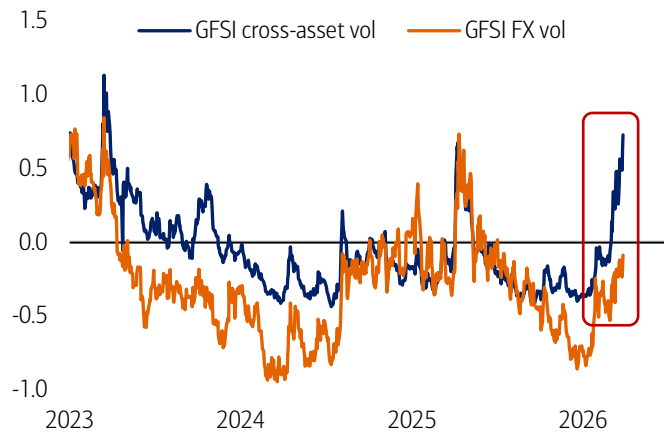
**CAD puts can offer value as proxy tail hedge**

While cross-asset vols have risen in response to geopolitical stress, FX vol has notably lagged (Exhibit 20), suggesting potential value in FX-based proxy hedges. More specifically, CADUSD vol remains low vs history (unlike most of its G10 peers; Exhibit 21). With CAD having remained relatively resilient so far and still having room to weaken vs USD in a risk-off, we find that CADUSD puts can offer value as a proxy tail hedge. Indeed, CADUSD puts appear towards the top of our Cross-Asset Hedging screen (Exhibit 26), and our FX strategists also like the trade (see [30-Mar-26 FX Alpha](#)).

**Trade (CADUSD puts):** Buy 3m CADUSD 30-delta puts. *Risks involves the upfront premium paid.*

**Exhibit 20: The rise in FX vol has been relatively muted vs wider cross-asset vol (especially commodity & equity), suggesting potential value in FX-based proxy hedges**

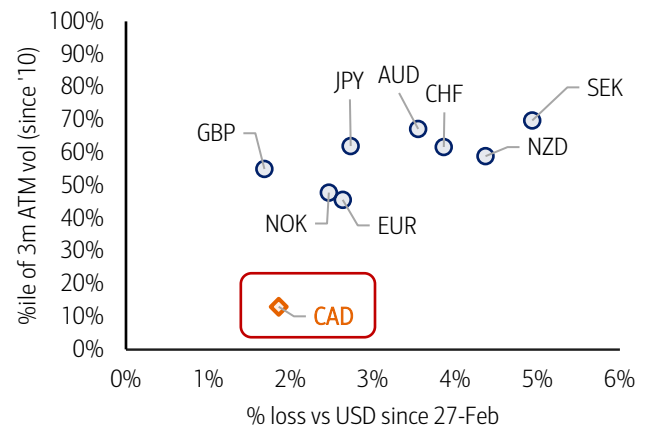
GFSI cross-asset vol vs FX vol



Source: BofA Global Research. Data from 1-Jan-23 to 27-Mar-26. Cross-asset vol = average of equity, rates, FX, commodity, IG & HY CDS GFSI components.  
BofA GLOBAL RESEARCH

**Exhibit 21: Given CAD's relative resilience vs USD so far and its low implied vol vs history, buying CADUSD puts can offer value as a proxy tail hedge**

G10 FX loss vs USD since 27-Feb vs 3m ATM vol current %ile (since 2010)



Source: BofA Global Research, Bloomberg. Data from 1-Jan-10 to 27-Mar-26.  
BofA GLOBAL RESEARCH



**Record multi-asset pain underscores continued need for defensive alternatives**

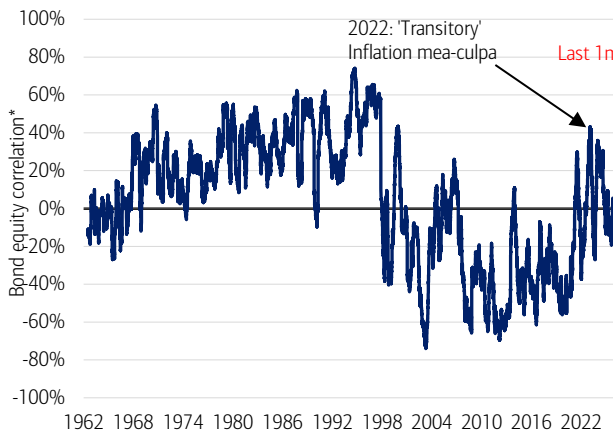
In our 2026 YA outlook, [The Bubble era](#), we motivated the need for hedging both equity and duration risk in multi-asset portfolios, if for some reason, inflation proved sticky and the Fed was unable to ease as was expected at the time. With the war in Iran weighing on risk assets but squeezing energy prices higher worldwide, stagflation concerns have overturned Fed easing expectations, with rate hikes being contemplated. We note:

- **Traditional diversification fail...** Both gold & duration have struggled in March with the Iran war. Bond-equity correlation has been 70% this month, rivalling levels it used from the 70s and 80s (Exhibit 22). Moreover, duration's reliability of hedging equity downside YTD has been a third lower than its pre-2022 average (Exhibit 23).
- **... has led to historic multi-asset pain:** 60-40 equity bond portfolios have experienced their worst month since the Fed's jumbo hiking spree on the back of the inflation shock in 2022 (Exhibit 24). Indeed, Exhibit 25 shows that duration has provided the least cushion for the equity decline MTD in over 60 years.

**Plan-B:** We reiterate our view that defensive overlays using liquid alternatives (see for instance our equity [grind-lower](#) and rates [grind-higher](#) strategies) can offer investors protection against both equity weakness and if traditional diversifiers (plan A) fail.

**Exhibit 22: When diversification fails: Bonds have had nearly +70% correlation with equities since the start of the Iran war...**

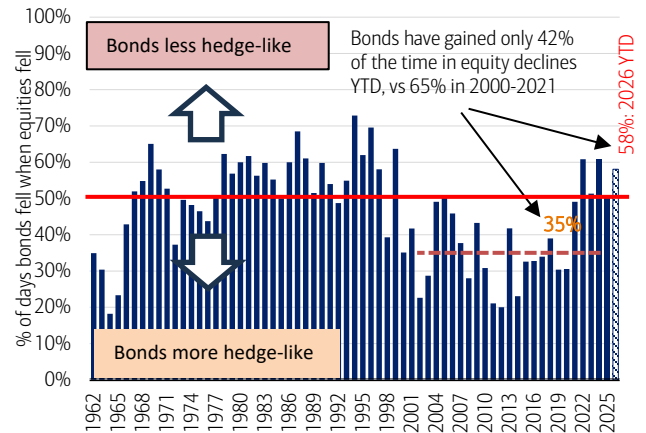
6m correl of 7-10y UST & S&P daily total returns (red dot is last 1m correl)



Source: BofA Global Research. Data: 2-Jan-1962 to 27-Mar-2026. \*Using 7-10y UST (G402 index) since inception and prior to that, simulating returns using change in 10y UST yield x duration. BofA GLOBAL RESEARCH

**Exhibit 23: ... with the result that duration's hedging credentials are 2/3rd as strong (42%/65%) as prior to the 2022 inflation shock.**

Fraction of S&P down days per year that 7-10y UST TR is negative

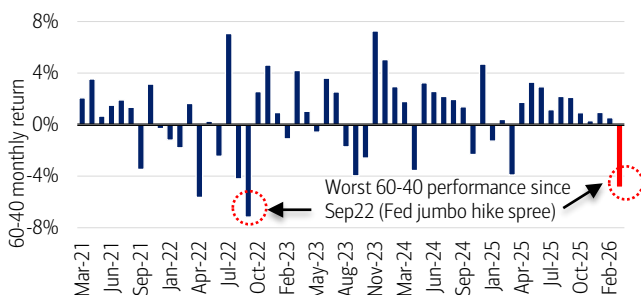


Source: BofA Global Research. Data: 2-Jan-1962 to 27-Mar-2026.

BofA GLOBAL RESEARCH

**Exhibit 24: Consequently, 60-40 equity-bond portfolios have experienced their worst month since the Fed's '22 jumbo hiking spree.**

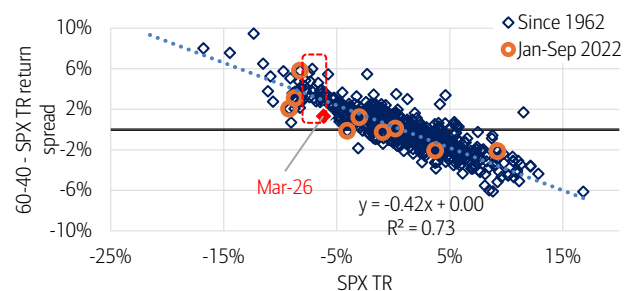
Monthly return of a portfolio that's 60% SPX and 40% 7-10y UST



Source: BofA Global Research. 28-Feb-21 to 27-Mar-26. 60-40 portfolio is rebalanced monthly. BofA GLOBAL RESEARCH

**Exhibit 25: Consequently, duration is providing the least cushion given the equity decline this month in over 60 years.**

Monthly return difference of 60-40 portfolio\* & SPX



Source: BofA Global Research. Data: 2-Jan-1962 to 27-Mar-26.

BofA GLOBAL RESEARCH



## Duration calls as the cheapest tail hedge if stagflation risks flip to recession

**Trade:** Buy TLT (20+Yr Treasury Bond ETF) Jun26 90 calls for 0.97\$ (~30D strike, ref. 86.665).

**Risks:** Losses would involve the upfront premium paid.

So far, markets have largely focused on the inflation shock from higher oil prices, which has rapidly shifted rate expectations over the past month since the onset of the war in Iran, from roughly 2.5 cuts priced in for this year, to a current expectation of the Fed being on hold now. This repricing has driven yields higher and equities lower, creating a challenging backdrop for bond-equity portfolios and contributing to their weak performance over the past month, as discussed in the previous section (see *Record multi-asset pain underscores continued need for defensive alternatives*). In this environment, the ability to hedge both equity and duration risks remains crucial, with inflation still dominating market attention.

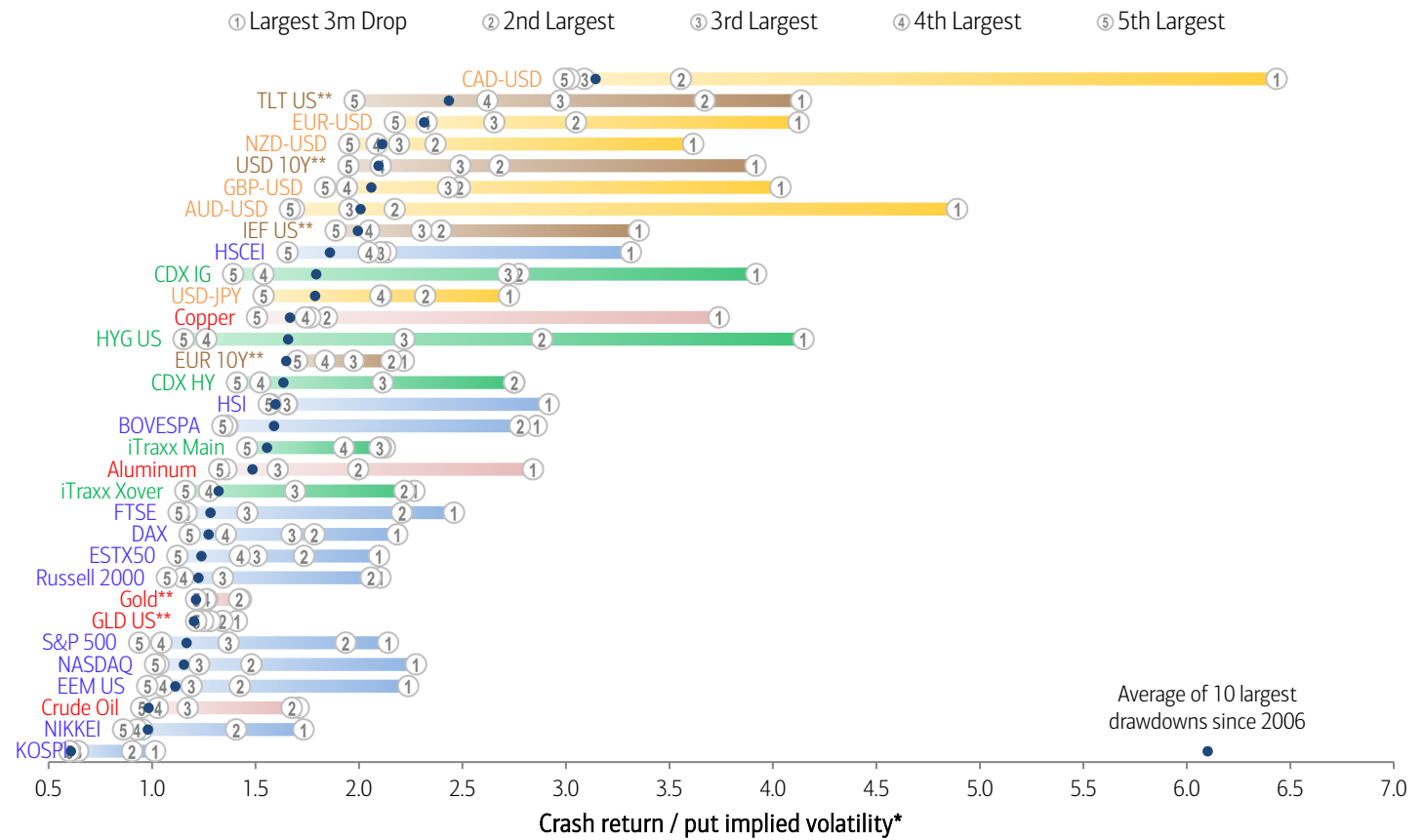
However, in our view (in-line with our Rates strategists, see [Oil in it together](#)) what remains largely underpriced at this stage is the downside growth risk that a prolonged and more disruptive conflict could trigger: namely, the possibility that markets shift from a stagflation narrative to a *recession* one. Several signs point to this underpricing. First, our latest Cross Asset Hedging report (see the report: [FX puts, duration calls cheapest tail hedges](#)) shows that TLT calls are among the cheapest tail risk hedges in our universe, suggesting markets may be underpricing the risk of a sharp *risk-off* move where yields fall and bond prices rise (Exhibit 26). Indeed, TLT call vol is subdued (i.e., around the 20<sup>th</sup> %-ile over the past 5 years and below its post-2008 median), in stark contrast to crude oil call vol, which is currently near record highs (Exhibit 27). Second, TLT call vol is significantly cheaper than put vol, suggesting that markets do not expect the conflict to last long enough to cause meaningful economic damage or drive a substantial rally in duration. Indeed, the skew (proxied by put vol divided by call vol) has risen in step with the sharp pricing-out of Fed cut expectations over the past month (Exhibit 28).

Should the war extend longer than expected and prompt markets to move from pricing stagflation to pricing recession, we see value in locking in still-low TLT implied vol and expressing upside duration exposure through TLT calls. Our rates strategists also highlight that the Fed has historically responded asymmetrically to oil moves, typically refraining from hiking during oil-driven inflation spikes but cutting more quickly when oil declines (typically occurring with elevated growth concerns); this pattern further reinforces the case for upside duration hedges.



**Exhibit 26: Cross-asset tail hedging screen: CADUSD puts and TLT calls are currently most underpricing historical tail risk**

For an explanation of how to interpret this Exhibit see our latest [Cross Asset Hedging](#).

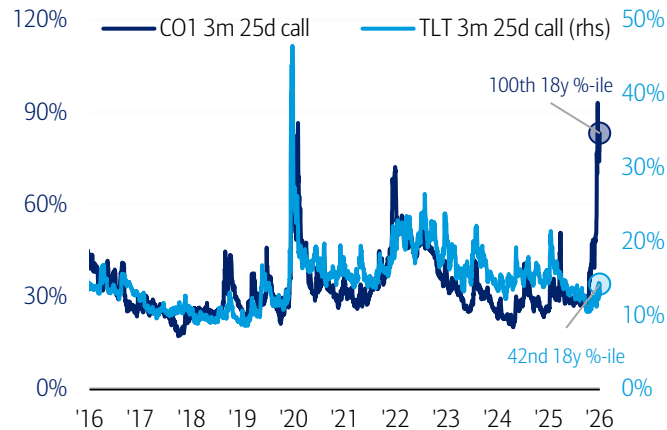


**Source:** BofA Global Research. Data: 27-Mar-26. \*3m 25% delta put volatility for each asset, see our latest [Cross Asset Hedging](#); the framework for more details on the methodology behind this diagram. \*\*3m 25% delta call volatility (receiver premia) for TLT US, Gold and GLD US (USD & EUR 10y rates). Note: This screen is not a recommended list either individually or as a group of stocks. Investors should consider the fundamentals of the companies and their own individual circumstances/objectives before making any investment decisions.

BofA GLOBAL RESEARCH

**Exhibit 27: TLT call vol is historically subdued and in stark contrast to crude oil call vol, which is currently near record highs**

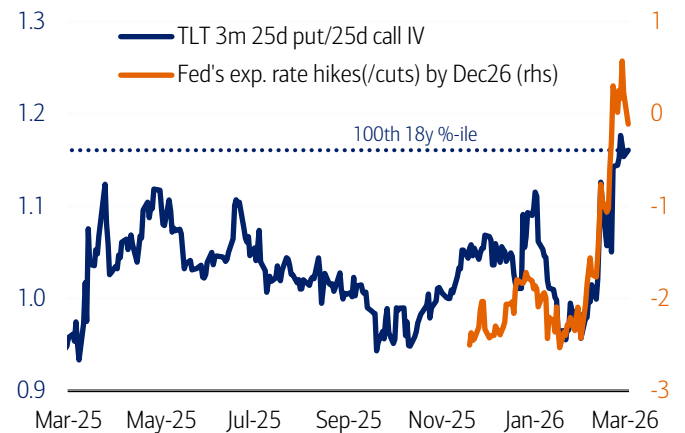
CO1 and TLT 3m 25d call implied volatility.



**Source:** BofA Global Research, Bloomberg. Data from 27-Mar-16 to 27-Mar-26. BofA GLOBAL RESEARCH

**Exhibit 28: TLT skew has risen in step with the sharp pricing-out of Fed cut expectations over the past month**

TLT 3m skew (25d put / 25d call IV), along with the expected number of Fed's rate hikes/(cuts) by their Dec26 meeting.



**Source:** BofA Global Research, Bloomberg. Data from 28-Mar-25 to 30-Mar-26. TLT ref intraday: 86.665.

BofA GLOBAL RESEARCH



### SX5E ODTE gaining traction with geopolitical and inflation risks

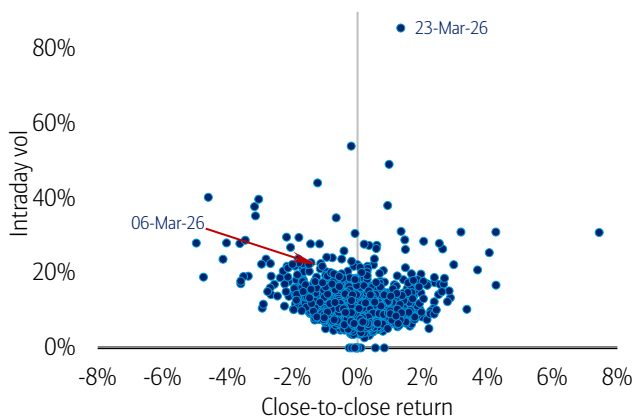
European equities have recently experienced larger intraday moves amid heightened geopolitical tensions, driven by a rapid news cycle and corresponding market reactions. This has led to elevated SX5E intraday volatility, even as close-to-close returns have often remained relatively muted (Exhibit 29).

SX5E ODTE option usage also increased in the early days of the conflict. Traded volumes in SX5E daily expiries spiked on days with pronounced intraday swings. On Friday, 6 March, daily expiries accounted for roughly 12% of total SX5E option volume (versus an average of around 3% over the past year; see Exhibit 30–31), highlighting the appeal of daily options in an environment where directional uncertainty and mixed sentiment dominate the session.

With soaring energy prices raising concerns around their inflationary impact, the upcoming US inflation release is likely to be closely watched for the guidance it may offer on monetary policy expectations. As noted previously (see: [Find your way: Europe's intraday highway](#)) US macro data releases at 14:30 CET have historically had a material impact on European intra-day vol (4x more than the US equity cash open at 15:30 CET). Indeed, Exhibit 32 shows that the maximum intraday move on SX5E on the day of the Mar26 CPI release was around 1% versus 0.7% close to close. In this context, SX5E 10<sup>th</sup> of April (daily) options offer a targeted way to capture potential intraday moves following the CPI release. We recommend considering entering if the straddle prices decline to below ~1% in the lead-up to the event.

#### Exhibit 29: Geopolitical risk has resulted in significant intraday SX5E vol despite close-to-close moves rarely exceeding 2%

SX5E Intraday vol versus close-to-close return

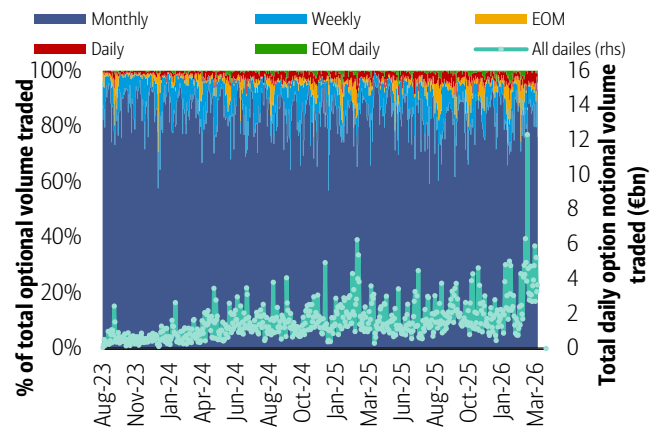


Source: BofA Global Research, LSEG. Data from 26-Mar-21 to 27-Mar-26. Intra-day vol is of 15min SX5E futures returns using 6min TWAPS centred around 0, 15, 30 and 45min past each hour of the trading day (EU: 0900-1730 CET). Futures are rolled 5 trading days before expiry. Close-to-close returns: using VEGA Index close price.

BofA GLOBAL RESEARCH

#### Exhibit 30: SX5E daily option volume recently spiked to a maximum of ~12% of total volumes, while the 1y average mix has been dominated by monthly expiries (84%), EoM (3%), weeklies (9%), dailies (3%) and EoM dailies (1%)

The proportion of traded option volume on SX5E by contract tenor type (Monthly, Weekly, EoM, Daily, and EoM daily) per day since the introduction of Daily expiries. Also shown volume on all dailies\* contracts (rhs).



Source: BofA Global Research, Bloomberg. Data from 28-Aug-23 to 27-Mar-26. Monthly: standard 3<sup>rd</sup> Friday expiry. Weekly: non-monthly expiry, EoM: end of month expiry. Daily: End of day options, EoM daily: Daily month-end expiry. \*All dailies represent listed daily plus EoM daily options.

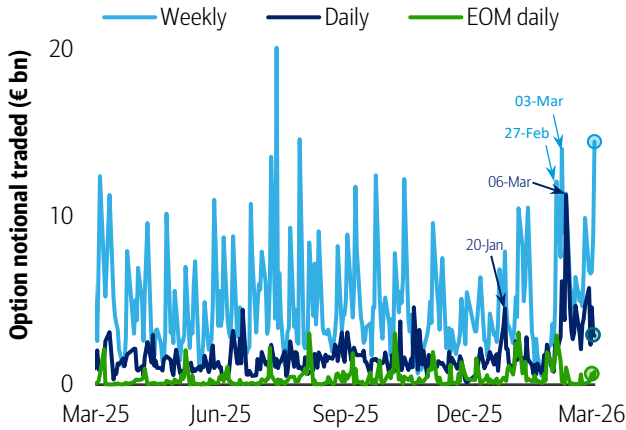
BofA GLOBAL RESEARCH

BofA GLOBAL RESEARCH



**Exhibit 31: SX5E daily option trading has recently picked up and has seen more frequent volume spikes, with the largest spike since launch (on March 6<sup>th</sup>) rivalling weekly option volumes that day**

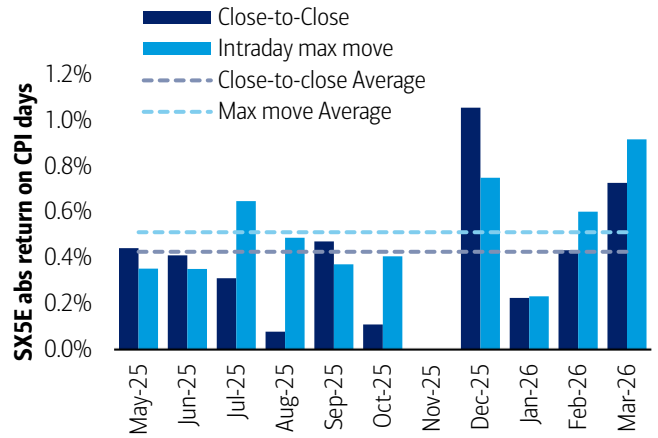
Traded option volumes on SX5E by contract tenor type (Weekly, Daily, and EoM daily) per day.



Source: BofA Global Research, Bloomberg. Data from 26-Mar-25 to 27-Mar-26.  
BofA GLOBAL RESEARCH

**Exhibit 32: SX5E has recorded a max intraday move of ~1% versus ~0.7% close-to-close, on the Mar26 CPI release day**

SX5E Close-to-Close abs return & intraday max move\* on CPI release days.



Source: BofA Global Research, Bloomberg, LSEG. Data from 13-Mar-25 to 11-Mar-26. \*Max move is defined as the maximum absolute move post CPI release normalized by the 10-minute pre-release price using VG futures.

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.*

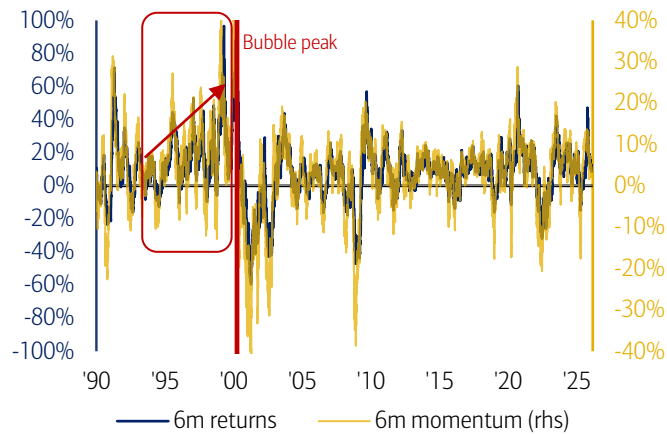
### 1. How does the BRI quantify ‘bubble risk’?

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<sup>2</sup>, and (iv) fragility/convexity.<sup>3</sup>

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 33 & Exhibit 34).

**Exhibit 33: Both price returns and price momentum of the Nasdaq rose as the dotcom bubble inflated**

NDX 6m price returns and 6m price momentum

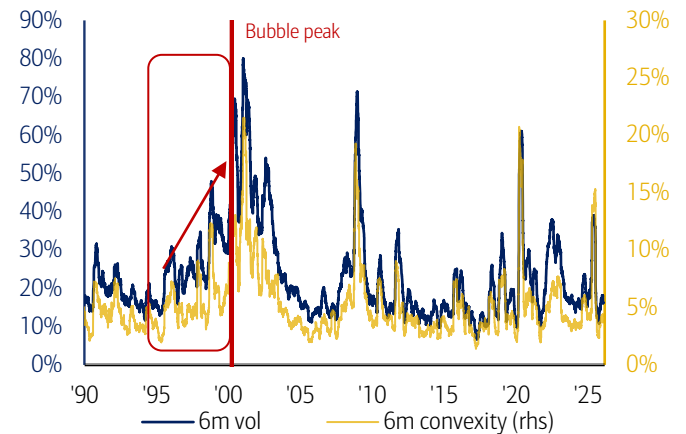


Source: BofA Global Research. Data from 1-Jan-90 to 16-Jan-26.

BofA GLOBAL RESEARCH

**Exhibit 34: 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.

<sup>2</sup> X-month price momentum = % distance of the current price from the X-month moving average price

<sup>3</sup> X-month fragility/convexity = X-month realized vol – X-month realized mean absolute deviation

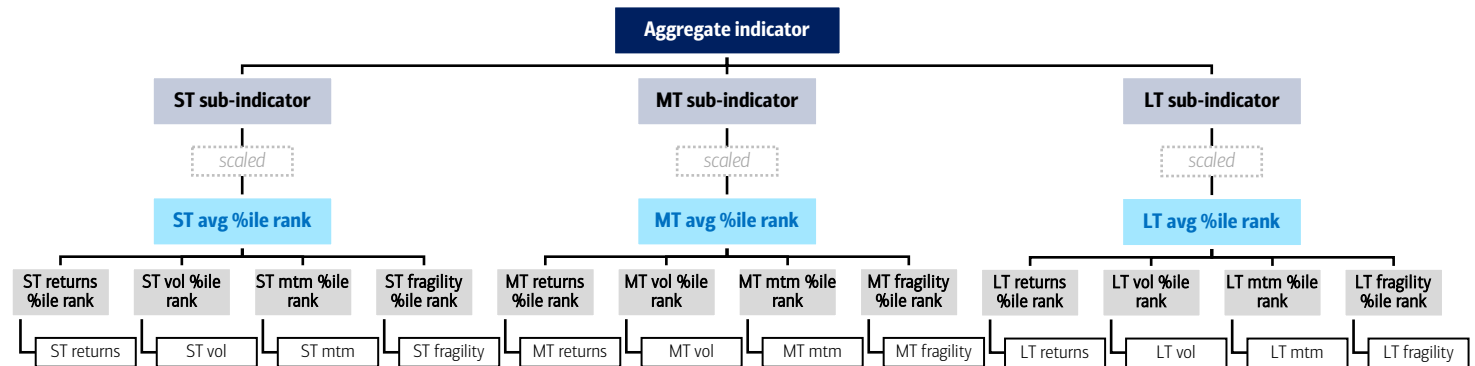


Each sub-indicator aims to capture how stretched an asset’s four moments (returns, vol, momentum, and fragility) are relative to the asset’s own history, and is computed as the average of each of these four moments’ percentile ranks vs history.<sup>4</sup> However, given detection of bubble-like behaviour 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.<sup>5</sup>

Exhibit 35 summarizes the construction of the aggregate indicator and its microstructure.

**Exhibit 35: 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.

**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 36 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.

<sup>4</sup> 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.

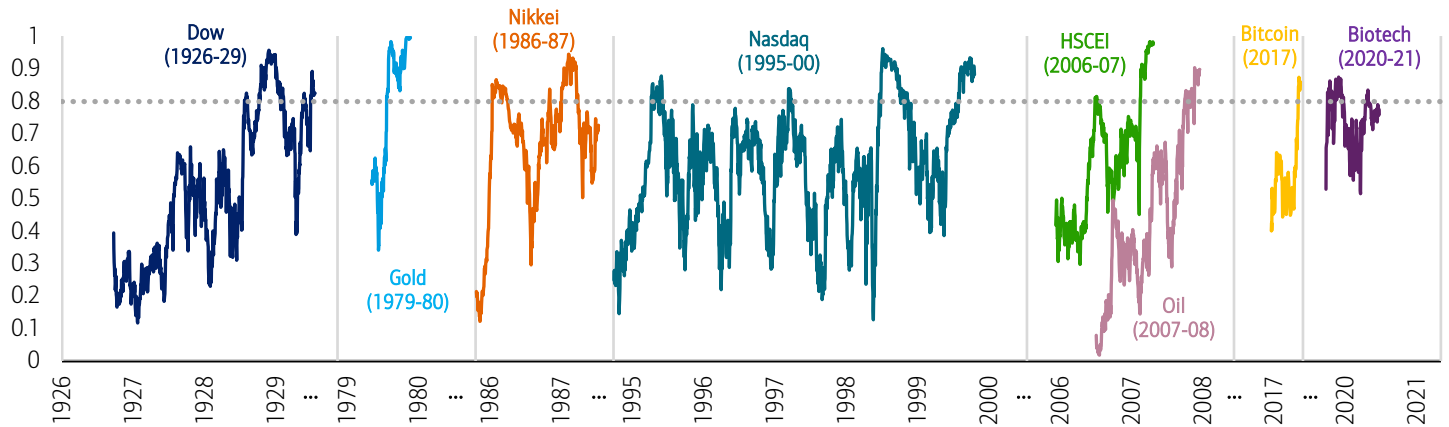
<sup>5</sup> Scaling factor ranges between 0 & 1. It is computed using a logistic function transformation of the trailing return (tenor based on sub-indicator). Highly positive returns give a factor of ~1 and highly negative returns give a factor of ~0.



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 37), with broadly similar upside potential (Exhibit 38).

**Exhibit 36: 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

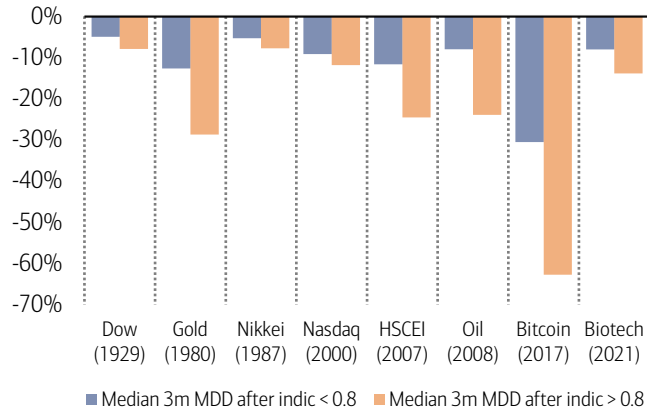


Source: BofA Global Research. Data from Jan-1926 to Feb-2021. Underlying Bloomberg tickers: INDU for Dow (Oct-1926 to Sep-1929), XAU for Gold (Jul-1979 to Jan-1980), NKY for Nikkei (Jan-1986 to Oct-1987), NDX for Nasdaq (Jan-1995 to Mar-2000), HSCEI for HSCEI (Jun-2006 to Oct-2007), CO1 for Oil (Jan-2007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

BofA GLOBAL RESEARCH

**Exhibit 37: 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

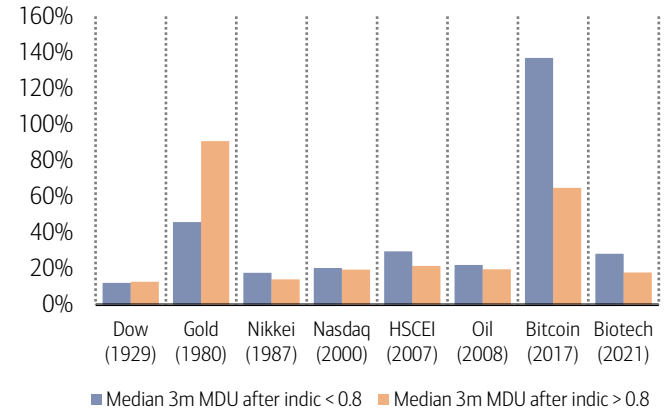


Source: BofA Global Research. Underlying tickers / date ranges: INDU for Dow (Oct-1926 to Sep-1929), XAU for Gold (Jul-1979 to Jan-1980), NKY for Nikkei (Jan-1986 to Oct-1987), NDX for Nasdaq (Jan-1995 to Mar-2000), HSCEI for HSCEI (Jun-2006 to Oct-2007), CO1 for Oil (Jan-2007 to Jul-2008), XBTUSD for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

BofA GLOBAL RESEARCH

**Exhibit 38: 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 (30-Mar-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 30-Mar-26**

Summary of open trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
Replicate ESTX50 Dec24-Dec25 3900 FVA with a static option portfolio implying an FVA level of 16.2v (vs OTC level of 19.3v)	22-Nov-22	19.3v	Dec-25	Backwardation in vol term structure makes fwd starting vol lower; Expensive fwd var argues for vol replication, for a 3+ vol pt cheapening vs OTC, a level at ~2/3rd of YTD realised vol (and 13v lower than fwd var). Shift to participation products may steepen vol term structure
Long SX7E Dec24/Dec25 fwd-starting var replication: Long Dec25 60%-120% corridor var replication* & short Dec24 60% upvar replication for 22.4v (-6v disc. with replication; SX7E spot ref: 113.70)	21-Nov-23	22.4v	Dec-25	Alpha from still-stressed variance premia for long or short volatility
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%
Buy Dec25 FTSE div futures as a Dollar (vs Sterling) strength beneficiary	26-Nov-24	299.5	19-Dec-25	FTSE Dec25 dividend futures stand out vs SX5E and SX7E for having a large discount. FTSE dividends should be a beneficiary of USD strength, as ~43% of its dividends are announced by globally-exposed FTSE companies in USD.
Long Dec25 VolSwap dispersion on custom names vs the ESTX50	26-Nov-24	9.5v	19-Dec-25	A highly fragile environment and greater idiosyncratic risk for EU stocks creates a favourable backdrop for vol dispersion strategies
Buy TWSE > KOSPI2 103% 11-Sep-25 outperformance call contingent on KOSPI2 up for 1.52%	3-Feb-25	1.52%	11-Sep-25	66% discounted low-risk way to buy the dip in Taiwan
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%	27-Jun25	Stock replace rallying China Tech names by Worst of calls for 63% discount
Buy DAX Dec-25 85% upvar for 18.3v (fair variance ref of 23.3v)	11-Mar-25	18.3v	Dec25	Cheaply hedge two-way risk of historic German policy push
Consider financing the call ratio ("Trade 1") by selling a NKY 1-month 80% put for 0.99%	7-Apr-25	0.99%	Jun25	Catching a falling knife at lower risk: NKY 2m call ratios funded by 1m 80% put
Buy NKY Dec25/Dec26 31,000 straddle FVAs for 21.27% (indic. Q=2.5%, R=0.5%)	7-Apr-25	21.27%	Dec25	Buy Nikkei Dec25/Dec26 straddle FVAs at 21% - 4% below current 12m ATM vol
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%	Sep25	Limited-risk NKY>SPX outperformance hybrid as JPY longs hit 25yr highs
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
Buy NIFTYM 29-May-25 23,200 25,200 bullish risk reversal for INR 24 (-0.10% of spot, indic. spot ref: 24,329, 37d, vols: 17.2%/12.8%)	28-Apr-25	INR 24	29-May-25	Bullish Nifty riskies: Strongest recovery, trade optimism, low vol/steep skew
(Appearing call spread): Buy XIN91 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%	Sep-25	A US/China deal may not be imminent, but hedge the risk of a Q3 upside rip
(Up & out call): Buy XIN91 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%	Sep-25	A US/China deal may not be imminent, but hedge the risk of a Q3 upside rip
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
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	Aug25	TWSE rallied 9 out of 10 times on TWD up-fragility: Trade PSCs & call calendars
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	Aug25	TWSE rallied 9 out of 10 times on TWD up-fragility: Trade PSCs & call calendars
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	Dec25	Monetize 'crash-fear' via selling still elevated ESTX50 variance convexity
Buy HSCEI delta 1 overlaid 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	15-Aug-25	Reprieve rally: Long HSCEI but add low cost hedges for rare asymmetry
Buy HSCEI 20-Jun-25 1x1.5 8,800 9,200 call ratio for HKD 49 (indic. 0.58% of spot) (Options on futures, Jun fut ref 8,500, +5 delta, Vols: 27.3% / 28.0%)	12-May-25	HKD 49	Jun25	Reprieve rally: Long HSCEI but add low cost hedges for rare asymmetry
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	Jul25	Rangebound on lower vol? Trade iron condors or double no-touch
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%	8-Aug 25	Rangebound on lower vol? Trade iron condors or double no-touch
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%	Jul-25	Kospi calendar riskies: Efficient beta amid FX strength & improving sentiment



**Table 1: Summary of open trades as of 30-Mar-26**

Summary of open trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
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
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	26-Jun-25	Nifty skew collapse offers a near zero premium way to own downside convexity
Buy SX5E Sep25/Mar26 85% Forward Upvar at 16.3v (-6v discount vs vanilla forward var, t & t-1 convention).	2-Jun-25	16.3v	Sep25/Mar26	Still-rich tails & flat term offer ESTX50 85% Fwd Upvar at ~16v
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%	Sep25	Election and geopolitics: Replace longs by Nikkei calls contingent on weaker yen
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%	31-Jul 25	The collapsing put skew still favours 1x3 put ratios
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	Sep25	Kospi zero-cost riskies: Adding hedges onto the world's best performing stocks
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%	Oct-25	Kospi vs TWSE at 25 yr extremes – Trade call switch as call skews dislocate
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%	Oct-25	Fund Q4 NKY upside hedge and sell near-term election & trade talk uncertainty
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%	10-Oct 25	Target Nikkei record highs using call spreads for 9.9x max payout
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%	21-Nov 25	Capture anti-involution reform momentum via HSCEI call ratios for 12.8x payout
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	Mar26	Hedge soaring, well-owned EZ banks in case growth risks materialise
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
Buy 12-Dec 25 NKY>SPX 103% outperf calls for 2.60% (indic.)	18-Aug-25	2.60%	Dec 25	Nikkei Déjà vu? Past break-outs have lasted for 3 months and delivered >25%
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 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%	Dec-25	Ride Kospi spot-up/vol-up but prepare to tilt short vega
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%	Dec-25	How to cheaply prevent US equity gains dwindling due to USD weakness
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%	Dec-25	How to cheaply prevent US equity gains dwindling due to USD weakness
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%	Dec-25	Nikkei upside momentum: Strong earnings drive market higher
Sell SX5E Dec25 ATM Downvar vs buy Var to collect 4.7v (T-convention, var ref: 19v)	29-Sep-25	4.7v	Dec-25	Monetise rich convexity by collecting ~5v to go long upside SX5E variance
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
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%	30-Dec-25	Kospi call vols near Liberation Day spike – Finally time to sell vol & hedge delta?
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	Dec 25	TWSE call calendars: a lower PE grind higher AI trade at low downside risk
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.
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)	3-Nov-25	2.92/2.15%	20-Mar-26	CSI 1000 v ASHR calls: Benefit from repo with less China directional risk
(* = several banks offer CSI tracking baskets; indic. in quanto USD)				
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



**Table 1: Summary of open trades as of 30-Mar-26**

Summary of open trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
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 QQQ Jun26 660-750 call spread for \$18 (~35D/10D strikes, 5x max payout ratio, ref. 605.16)	26-Nov-25	\$18	19-Jun-26	Asymmetrically capture equity upside while hedging a grind higher, which upvar can be vulnerable to
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 Mar26 straddle on liquid EZ banks vs short SX7E straddle for 2.36%	26-Nov-25	2.36%	20-Mar-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 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 Jun26 NKY > 104% & USDJPY < 96% dual digital for 9.7% (+48 corrol offer, 10.3x max payout, ref. 48626, 157).	26-Nov-25	9.7%	12-Jun-26	Moderate Nikkei upside trades can be cheapened by 80% if willing to lean optimistic on the yen. Narrowing US-JP rate differentials could weigh on USD/JPY in '26 but doesn't have to be Nikkei negative.
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%	20-Mar-26	The long/short trade extracts value from the rich repo for Chinese small caps while limiting directional risk. Trading calls vs calls manages the risk of small caps underperforming. Beta-neutral sizing yielded 8% p.a. on gross notional at 8% vol
Buy Jun26 105% DAX call contingent on CAC < 105% at expiry	26-Nov-25	1.24%	19-Jun-26	We like risk-limited trades that fade recent strength in CAC given the French fiscal overhang to fund German equity upside in case optimism returns for German growth.
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	Apr26	Historically dislocated higher silver vol vs gold vol presents asymmetric opportunity to get long gold exposure with a low cost.
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%	Apr26	Lock in Kosp's memory-fuelled rally by leveraging cheapest skew
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	Jun26	French political/fiscal drama is back, but is CAC vol still on holiday?
Long Jun26 105% DAX call, contingent on CAC < 105% at expiry for 1.12% (>50% discount vs vanilla calls)	12-Jan-26	1.12%	Jun26	French political/fiscal drama is back, but is CAC vol still on holiday?
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 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	24-Feb-26	The Indian NIFTY is shaping up to be an attractive limited-risk BTD trade
Buy TWSE 18-Mar 34.5k calls funded by selling 23-Feb 30.5k 28.9k put spreads for TWS65 (spot ref: 32,065)	26-Jan-26	TWS65	18-Mar-26	TWSE grind higher trade: Sell calendar put spread collars near zero cost
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	13-Mar-26	Nikkei vol pricing a +/-4.5% election jump: Fade via 10.8x payout calendar trade
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	Jun26	Don't get caught short Europe pt.2: Cheapen upside with record-low correlations
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	Apr26	Stronger CNY boosting Hong Kong: HSCEI call spread collars for 14x max payout
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	Apr-26	Sell floor in vol to fund equity upside
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 corrol 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%
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	Apr26	Harvest steep SPX skew to hedge equity grind lower
Buy SPX Apr26 97%/85% PDO for 57bps indicatively (50% discount to vanilla put spread; ref. 6881.62).	2-Mar-26	57bps	Apr26	Harvest steep SPX skew to hedge equity grind lower
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	May26	Play for geopolitical normalization and fade oil spike with limited risk and less premium
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 SPX MarQ 6525-5925 put spread for \$50 indicatively, ref 6795.99.	9-Mar-26	\$50.00	Mar-26	Hedge in case of continued geopolitical stress finally cracking equities, cheapened by leveraging steep skew



**Table 1: Summary of open trades as of 30-Mar-26**

Summary of open trades as of 30-Mar-26

<b>Trade Description</b>	<b>Open Date</b>	<b>Open Level</b>	<b>Expected Trade Term</b>	<b>Rationale</b>
Buy IWM MarQ 240-215 put spread for \$2.60 indicatively, ref 253.62.	9-Mar-26	\$2.60	Mar-26	Hedge in case of continued geopolitical stress finally cracking equities, cheapened by leveraging steep skew
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	Jun26	Target the geopolitical pain trade via equity-oil hybrids
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%	May26	Target the geopolitical pain trade via equity-oil hybrids
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	May26	Own equity vol cheaply with VIX call spread collars
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	Apr26	Position for geopolitical relief that results in moderate downside for vol
Buy TLT (20+Yr Treasury Bond ETF) Jun26 90 calls for 0.97\$	30-Mar-26	0.97\$	Jun26	Should the war extend longer than expected and prompt markets to move from pricing stagflation to pricing recession, we see value in locking in still-low TLT implied vol and expressing upside duration exposure through TLT calls.
SPX May26 6700/7000 1x4 call ratio (-1x / +4x) for \$23.2 credit indicatively (ref. 6343.72).	30-Mar-26	\$23.2 credit	May26	Position for convex upside in case of conflict resolution
Buy 3m CADUSD 30-delta puts	30-Mar-26	-0.47% USD	Jun26	Leverage laggard FX vol and low CAD vol for cheap proxy tail hedge

**Source:** Bloomberg, 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



# Summary of Closed Trades (30-Mar-26)

**Table 2: Summary of closed trades as of 30-Mar-26**

Summary of closed trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy LQD Feb25 104-102 put spread for 42c indicatively (4.8x max payout ratio, ~33D/~14D strikes, ref. 105.3).	13-Jan-25	42c	0	21-Feb-25	Trade expired
Buy QQQ 28-Feb-25 530/560 call spread for \$4.41 indicatively (6.8x max payout ratio, ~30D/5D strikes, ref. 512.80).	27-Jan-25	\$4.41	0	28-Feb-25	Trade expired
Buy SPX Mar25 95% put contingent on 10y SOFR > ATMf+15bps	26-Nov-24	0.53%	0	21-Mar-25	Trade expired
Buy SPX over SX5E Mar25 ATM outperf call cont. on EURUSD down	26-Nov-24	2.21%	0	21-Mar-25	Trade expired
Sell VIX Mar 15 put to buy VIX Mar 20/30 call spread for indicatively \$0.44 (22.7x max payout ratio; UXH5 ref. 17.55)	10-Feb-25	\$0.44	1.63	18-Mar-25	Trade expired ITM
Buy Mar 103% worst-of call on [KWEB, SMH] for 1.26% offer (60% disc. vs average vanilla call, refs. 35.63 & 256.22). Risks limited to upfront premium paid	18-Feb-25	1.26%	0	21-Mar-25	Trade expired
Buy 1.5x KOSPI2 13-Mar-25 352.50 call financed by selling 1.0x KOSPI2 12-Jun-25 370 call for near zero (KRW 0.39 or 0.12% of spot)	27-Jan-25	KRW0.39	0	13-Mar-25	Trade expired
Buy HSCEI delta 1 overlaid by a near zero-cost 21-Mar-25 6,800 8,200 risk reversal and receive HKD 8 (indic. 0.11% of spot)	27-Jan-25	HKD8	HKD818	21-Mar-25	Trade expired ITM
Long SX7E Mar25 90% Upvar replication* for 19.8v (spot ref. 140.83)	9-Sep-24	19.8v	21.1v	21-Mar-25	Trade expired ITM
Buy SX5E Mar25 calls vs short SX6P (Utilities) calls for a small credit.	26-Nov-24	8 bps credit	9.7%	21-Mar-25	Trade expired ITM
Buy a SX5E vs SX6P Mar25 ATM outperformance call conditioned on SX6P up at expiry	26-Nov-24	1.3%	9.9%	21-Mar-25	Trade expired ITM
Buy Apr25 SPX 95% put contingent on 10Y SOFR > ATMf+15bp for 70bps offer (52% discount to vanilla S&P puts; +2 correl bid; ref. 5944 & 4.2%).	13-Jan-25	70bps	0	17-Apr-25	Trade expired
Buy 3m 102% worst-of call on SPX/SX5E/FXI for 0.87% (73% and 55% cheaper than avg. and cheapest vanilla call, respectively; 0.58 correl avg.)	21-Jan-25	0.87%	0	17-Apr-25	Trade expired
Buy XAU > 103% & 30y SOFR > ATMf+22bps Apr25 dual digital for 10% indicatively (10x max payout ratio; implied correl offer -17; ref. 2809, 3.93%)	3-Feb-25	10%	0	17-Apr-25	Trade expired
Buy SPX Apr25 5650-5400 put spread for \$42.6 indicatively (~31D/16D strikes; 5.9x max payout ratio; ref. 5826.73).	3-Mar-25	\$42.60	\$250.00	17-Apr-25	Trade expired ITM
Sell 1x SPY Apr25 600-615 call spread to fully fund 1.9x RSP Apr25 183 calls (equiv. to a notional ratio of 1x SPY to 0.6x RSP; ref. 582.17, 177.97).	3-Mar-25	\$0.00	0	17-Apr-25	Trade expired
Buy QQQ 4Apr 500-510 call spreads for \$2.61 (3.8x max payout, ref. 490.44)	24-Mar-25	\$2.61	0	4-Apr-25	Trade expired
Buy SPX Apr25 5500/5200 put spread for \$43.2 indicatively (6.9x max payout ratio; ~30D/10D strikes; ref. 5608.40)	31-Mar-25	\$43.20	\$199.72	17-Apr-25	Trade expired ITM
Buy VIX Apr25 23/33 call spread for \$1 indicatively (10x max payout ratio, ref. UXJ5 = 21)	31-Mar-25	\$1.00	\$8.91	16-Apr-25	Trade expired ITM
Buy GLD Apr25 292/302 call spread for \$2.08 indicatively (4.8x max payout; ~35d/10d strikes; ref. 287.92)	31-Mar-25	\$2.08	\$10.00	17-Apr-25	Trade expired ITM
Buy VIX Apr 28/25 put spread for \$1.03 indic mid levels (2.5x max payout ratio; UXJ5 32.50)	4-Apr-25	\$1.20	0	16-Apr-25	Trade expired
Buy NIFTYM 24-Apr 25 23k/24k call spread for INR 217 (indic. spot ref: 22,509, 30d, vols: 12.5%/11.9%, +1x 23k call / -1x 24k call).	17-Mar-25	217 INR	1,000 INR	24-Apr-25	Trade expired ITM
Buy HSCEI delta 1 overlaid by a near zero-cost 21-Mar-25 6,300 7,800 risk reversal for HKD 12.4 (indic. 0.17% of spot)	13-Jan-25	0.17%	20.5%	Mar25	Trade expired ITM
Systematically trade dynamically sized delta-hedged 3m NKY 1x3* put ratios	26-Nov-24	-77bps	0	14-Feb-25	Trade expired
Buy HYG May 79-77 put spread for \$0.36 (5.5x max payout, ref. 79.585).	3-Mar-25	\$0.36	0	16-May-25	Trade expired
Buy XLI May 125 puts for \$1.53 or 1.15% (ref. 132.72)	17-Mar-25	\$1.53	0	16-May-25	Trade expired
Buy HYG May 78-76 put spreads for \$0.39 (5x max payout, ref. 79.00)	17-Mar-25	\$0.39	0	16-May-25	Trade expired
Sell 1x VIX Jun fut, buy 2.5x VIX Sep fut, hold for at most one month (UXM5 ref. 25.0608, UXU5 ref. 23.4036)	14-Apr-25	\$0.00	-\$0.1141	21-May-25	Trade exited early
Buy SPX 23-May-25 5900 / 6050 1x2 call ratio (buy 1x / sell 2x) for \$29.4 indicatively (spot ref. 5844.19)	12-May-25	\$29.40	0	23-May-25	Trade expired
Buy QQQ 30-May-25 490/515 1x2 call ratio (buy 1x, sell 2x) for \$4.27 indicatively (5.9x max payout ratio; 30D/9D strikes)	28-Apr-25	\$4.27	\$20.89	30-May-25	Trade expired ITM
Buy SPX over RTY 103% Jun25 outperf. call cont. on RTY up	26-Nov-24	0.59%	0	20-Jun-25	Trade expired
Buy SPX Jun 5400/5000/4600 put fly (+1x/-2x/+1x) for \$39.2 (10x max payout ratio; net delta = -8; ref. 5614.56)	10-Mar-25	\$39.20	0	20-Jun-25	Trade expired
Buy SPX < 95% & 10y SOFR < ATMf-30bps Jun25 dual digital for 9.25% indicatively (10.8x max payout ratio; ref. 5650, 3.78%)	10-Mar-25	9.25%	0	20-Jun-25	Trade expired
Buy VIX Jun 25/35 call spread for 89c indicatively (11.2x max payout ratio; UXM5 ref. 20.01)	17-Mar-25	\$0.89	0	18-Jun-25	Trade expired
Buy Jun triple digital SPX < 95%, 10Y SOFR > ATMf+10bps, EURUSD > 102% for 8% offer (12x max payout, ref. 5460, 3.84%, 1.134)	14-Apr-25	8%	0	20-Jun-25	Trade expired
Sell VIX Jun 17 puts (UXM5 ref. 19.5) to buy SPX Jun 5950/6150 call spreads (spot ref. 5844.19).	12-May-25	\$0	\$17.84	20-Jun-25	Trade expired ITM
Buy SPX > 102%, USO < 95% Jun dual digital for 14% indicatively (spot ref. 5850, 68.1)	12-May-25	14%	0	20-Jun-25	Trade expired
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
XUA Jun25 110% 130% call spreads for 2.94% (indic. 22% delta) Partially funded by selling a NKY Jun25 110% call conditional on US 2yr rates lower, for 1.02%	26-Nov-24	2.94%/1.02%	0	13-Jun-25	Trade expired



**Table 2: Summary of closed trades as of 30-Mar-26**

Summary of closed trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy NKY 3-month 102% 106% 1x1.5 call ratio for 0.65% (indic. Spot ref: 39,028, 3.5 delta, -16.4 vega, vols: 18.5/17.9, 6.1x max payout)	21-Jan-25	0.65%	0	Apr-25	Trade expired
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 KOSPI2 3-month 90% 105% 112% call spread collar for 0.39% (indic. spot ref: 353.24, 35d, vols: 21.1%/17.5%/16.9%)	24-mar 25	0.39%	7%	Jun 25	Trade expired ITM
Buy an HSCEI 16-May-25 9,100 9,700 10,300 call fly for HK\$77.5	10-Mar 25	0.9%	0	16-May 25	Trade expired
Buy NKY 2-month 107% 114% 1x1.5 call ratio for 1.29% +1x 107% call / -1.5x 114% call (5.4x may payout ratio)	7-Apr 25	1.29%	2%	Jun 25	Trade expired ITM
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 Jun25/Dec25 floating (110% of spot) FVA call for 1.1% (14v)	19-Aug-24	1.1%	-0.8v	Jun25	Trade expired
Buy a Jun25 ATMF (115% strike) call on return dispersion on a basket of low (vs history) vol stocks that are most positively & negatively geared to USD	26-Nov-24	2%	0%	20-Jun-25	Trade expired
Buy SXAP Jun25 105%-115%-125% appearing call spread (daily obs.) for 1.96% indicatively (10.2x max payout ratio, 32bps/19% premium to vanilla 105%-115% call spread, ref. 567.64)	10-Feb-25	1.96%	0	Jun25	Trade expired
Buy 1.3x SX7E Jun25 30d puts, fully funded by 1x KRE Jun25 30d put (spot refs: 177.78 and 61.71, respectively). Alternatively, consider SX7E Jun25 put spreads.	24-Feb-25	0%	-0.6%	Jun25	Trade expired
Buy SXXP Jun25 103.5% (23-delta) calls for 82bps (ref 550.6) for continued European upside exposure at low cost	18-Mar-25	82bps	0	Jun25	Trade expired
Buy Jun25 105%-115% MDAX call spreads for 2.8% indicatively	11-Mar-25	2.8%	0	Jun25	Trade expired
Long 1.2x SXXP, Short 1x SX6P 35D Jun25 put switches for zero premium (refs 564, 395 respectively)	4-Mar-25	0%	2.1%	Jun25	Trade expired ITM
Buy initially delta-hedged SX5E Jul'25 40-delta calls (implied vol: 15.5v)	12-May-25	15.5v	2.94%	Jun25	Trade expired
As a zero premium call switch alternative, fund SX5E 40-delta calls with SX6P (EU-Utilities) 40-delta calls (refs: 5392.36 and 425.09 respectively)	12-May-25	0	-2.3%	Jun25	Trade expired
Buy SX5E 15-Aug-25 40d/25d (98.5%/94.2%) 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



**Table 2: Summary of closed trades as of 30-Mar-26**

Summary of closed trades as of 30-Mar-26

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
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 12-Jun-25 85%/65% Best of Put spreads on NKY/KOSPI2/ SX5E/SPX for 0.50% (indic. quanto USD, 64% discount to avg vanilla, 40x max payout ratio)	16-Jul-24	0.50%	0	Jun-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
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
Dec25 +DAX vs -SXD 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
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
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

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: 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, Meta Platforms, Microsoft, 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.

BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Axa, DHL Group, Intesa.

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, Axa, Barclays, BlackRock, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Julius Baer, KPN, Meta Platforms, Microsoft Corp, Sandvik, SAP SE, 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, Axa, Barclays, BlackRock, Cargemini, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Julius Baer, Meta Platforms, Microsoft Corp, NVIDIA, Sandvik, SAP SE, 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, Atlas Copco, Axa, Barclays, BlackRock, Cargemini, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Julius Baer, KION Group AG, KPN, Meta Platforms, Microsoft Corp, NVIDIA, Sandvik, SAP SE, 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: Adyen, Air Liquide, Atlas Copco, Axa, Cargemini, DHL Group, E.ON, Enel SpA, Intesa, Julius Baer, KION Group AG, KPN, Sandvik, 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, Axa, Barclays, BlackRock, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Meta Platforms, 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, Axa, Barclays, BlackRock, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Julius Baer, KPN, Meta Platforms, Microsoft Corp, Sandvik, SAP SE, 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: Air Liquide, Atlas Copco, Axa, Barclays, Cargemini, KPN, Meta Platforms, Microsoft Corp, Sandvik.

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, 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.

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, Atlas Copco, DHL Group, Intesa Sanpaolo, 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, Julius Baer, Meta Platforms, Microsoft, 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.

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, Axa, Barclays, BlackRock, Cargemini, DHL Group, E.ON, Enel SpA, Intesa, Invesco, Julius Baer, Meta Platforms, Microsoft Corp, NVIDIA, SAP SE, 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, 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

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.

## 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 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.bofam.com/BofASEdisclaimer](http://www.bofam.com/BofASEdisclaimer); BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (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 (HKSF); 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 HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

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

### General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any



decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

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

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

Futures and options are not appropriate for all investors. Such financial instruments may expire worthless. Before investing in futures or options, clients must receive the appropriate risk disclosure documents. Investment strategies explained in this report may not be appropriate at all times. Costs of such strategies do not include commission or margin expenses.

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

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

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

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

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

ETFs are redeemable only in Creation Unit size through an Authorized Participant and may not be individually redeemed. ETFs also are redeemable on an "in-kind" basis. The mechanism for creation and redemption of ETFs may be disrupted due to market conditions or otherwise.

The public trading price of an ETF may be different from its net asset value, and an ETF could trade at a premium or discount to its net asset value.

Investors in ETFs with international securities assume currency risk.

U.S. exchange-listed, open-end ETFs must be offered under and sold only pursuant to a prospectus. U.S. exchange-listed ETFs may not be marketed or sold in a number of non-U.S. jurisdictions and may not be suitable for all investors. Investors should consider the investment objectives, risks, charges and expenses of the ETF carefully before investing. The prospectus for the ETF contains this and other information about the ETF. Clients may obtain prospectuses for the ETFs mentioned in this report from the ETF distributor or their Merrill Global Wealth Management financial advisor. The prospectuses contain more complete and important information about the ETFs mentioned in this report and should be read carefully before investing.

"Standard & Poor's®", "S&P®", "S&P 500®", "Standard & Poor's 500", "500", "Standard & Poor's Depository Receipts®", "SPDRs®", "Select Sector SPDR" and "Select Sector Standard & Poor's Depository Receipts" are trademarks of The McGraw-Hill Companies, Inc. and have been licensed for use in connection with the listing and trading of Select Sector SPDRs on the AMEX. The stocks included in each Select Sector Index (upon which the Select Sector SPDRs are based) were selected by the index compilation agent in consultation with S&P from the universe of companies represented by the S&P 500 Index. The composition and weightings of the stocks included in each Select Sector Index can be expected to differ from the composition and weighting of stock included in any similar S&P 500 sector index that is published and disseminated by S&P.

For clients in Wealth Management, to the extent that the securities referenced in this report are ETFs or CEFs, investors should note that (1) the views and ratings presented by BofA Global Research personnel may vary from those of other business units of BofA Securities, including the Due Diligence group within the Chief Investment Office of MLPF&S ("CIO Due Diligence"); and (2) the CIO Due Diligence review process is used to determine the availability of an ETF or CEF for purchase through the Wealth Management division of MLPF&S and its affiliates.

#### Copyright and General Information:

Copyright 2026 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. This document and its content is provided solely for informational purposes and cannot be used for training or developing artificial intelligence (AI) models or as an input in any AI application (collectively, an AI tool). Any attempt to utilize this document or any of its content in connection with an AI tool without explicit written permission from BofA Global Research is strictly prohibited. BofA Global Research utilizes AI, including machine learning and other technologies, to enhance the services we provide to our clients. These technologies assist our analysts in various aspects of their work, including but not limited to data analysis, content extraction, content creation, data aggregation and summarization and identifying relevant information from diverse sources. All AI-driven processes are subject to review by BofA Global Research employees. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

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

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

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

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

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA



Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

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

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](mailto:benjamin.bowler@bofa.com)

**Abhinandan Deb >>**

Equity-Linked Analyst  
MLI (UK)  
+44 20 7995 7148  
[abhinandan.deb@bofa.com](mailto:abhinandan.deb@bofa.com)

**Nitin Saksena**

Equity-Linked Analyst  
BofAS  
+1 646 855 5480  
[nitin.saksena@bofa.com](mailto:nitin.saksena@bofa.com)

**Lars Naeckter >>**

Equity-Linked Analyst  
Merrill Lynch (DIFC)  
+971 4425 8218  
[lars.naeckter@bofa.com](mailto:lars.naeckter@bofa.com)

**Chintan Kotecha**

Equity-Linked Analyst  
BofAS  
+1 646 855 5478  
[chintan.kotecha@bofa.com](mailto:chintan.kotecha@bofa.com)

**Riddhi Prasad >>**

Equity-Linked Analyst  
MLI (UK)  
+44 20 7995-7852  
[riddhi.prasad@bofa.com](mailto:riddhi.prasad@bofa.com)

**Michael Youngworth, CFA**

CBs, Pfds & Derivs Strategist  
BofAS  
+1 646 855 6493  
[michael.youngworth@bofa.com](mailto:michael.youngworth@bofa.com)

**Vittoria Volta >>**

Equity-Linked Analyst  
BofASE (France)  
+33 1 8770 0703  
[vittoria.volta@bofa.com](mailto:vittoria.volta@bofa.com)

**Christopher Cho >>**

Research Analyst  
MLI (UK)  
+44 20 7996 5945  
[christopher.cho@bofa.com](mailto:christopher.cho@bofa.com)

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules. Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

