

# Global Equity Volatility Insights

## 2018 playbook looks handy

### Parallels to 2018 S&P grind lower suggest vol playbook

While the S&P's recent grind lower elicits memories of 2022, the analogue to the ~20% selloff in Q4-18 is more striking. Q4-18 also saw an orderly decline following a tech-led high Sharpe year (2017 vs 2023-24). With an inverted vol term structure and a macro backdrop of growth concerns + tariff stress the parallels are many. Given a Powell or Trump put is unlikely to rescue an orderly sell-off (the Trump put is likely struck in fragility and rates; see [11-Mar-25 GEVI](#)), we find it prudent to hedge the risk of a second leg lower – not abnormal even in the midst of a multi-year tech bubble build; see [04-Mar-25 GEVI](#). The memory of the 4-day 8% tumble post the hawkish Dec-18 Fed meeting is also relevant given the Fed this week. Beyond fixed strike grind lower hedges, we like 11x payout VIX Jun call spreads. Owning forward vol has worked so far (as it also did in Q4-18) despite convex hedges struggling, and benefits from the flat/inverted vol term structure. With cyclically exposed Industrials and HY credit showing less weakness YTD than they did in 2018 and appearing vulnerable to a catch-down in a traditional “growth scare”, we like XLI May puts and 5x payout HYG May put spreads.

### Low cost SXXP calls to navigate fiscal versus tariff tussle

Germany's upcoming fiscal stimulus may have the potential to kickstart economic growth in Europe, however headwinds persist given ongoing tariff concerns and European sensitivity to US recessionary concerns. A tighter valuation spread vs US equities and the recent sharp recovery in positioning serve as a reminder to position with caution, via risk-limited structures. SXXP's favourable risk exposure to key industries including Capital Goods, Materials and Banks, coupled with low implied volatility (in absolute terms, and as a spread vs SX5E) make calls on the index an attractive alternative to SX5E calls for European beta-seekers, in our view.

### Trade deal(?) buy signal & rate cuts: 4.6x Nifty call spread

India may fare better than other markets in the near term amid positive indications of a bilateral trade deal with the U.S. As the China rally takes a breather – HSCEI has rallied 49% since Sep-24 while Nifty is down 14% - we note that Nifty valuations have retreated to near 10-year lows, BofA's Risk-Love sentiment indicator is on the cusp of a buy signal and last week's soft Indian CPI print of 3.6% makes an early April rate cut likely. Trading in the low teens, Nifty vol seems like a rarity vs index peers and we like NIFTYM April 23k/24k call spreads as a limited-risk way to position for the India vs China pendulum to favour India in the next 1-2 months.

### Also in the GEVI:

SX5E Gamma ahead of March-25 expiry: Positioning suggests dealers are short.

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18 March 2025

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### Exhibit 1: 3M volatility (weekly chg)

Level and changes (in parentheses) in vol points

	Implied	Realized
S&P500	18.1 (0.3)	16.5 (1.8)
ESTX50	16.4 (-0.6)	15.0 (0.9)
FTSE	12.0 (-0.1)	10.0 (0.5)
DAX	18.4 (-0.8)	18.0 (1.0)
NIKY	20.6 (-0.6)	16.1 (-0.5)
HSCEI	27.2 (-0.4)	26.8 (-0.1)
KOSPI	19.1 (0.2)	18.9 (-0.5)
EEM US	18.0 (0.4)	16.5 (0.4)
XIN9I	21.4 (1.3)	13.7 (0.0)

Source: BofA Global Research

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See list of acronyms at the end of the report

# BofA GFSI™ X-Asset Risk Landscape

## GFSI declines on lower FX vol and skew stress

Last week, the GFSI fell from +0.09 on 7-Mar-25 to +0.06 on 14-Mar-25, moving into its 52<sup>nd</sup> percentile since 2000. This halted the index's three-week streak of increasing since its recent low of -0.12 on 19-Feb-25, the same day as the S&P 500's last new high.

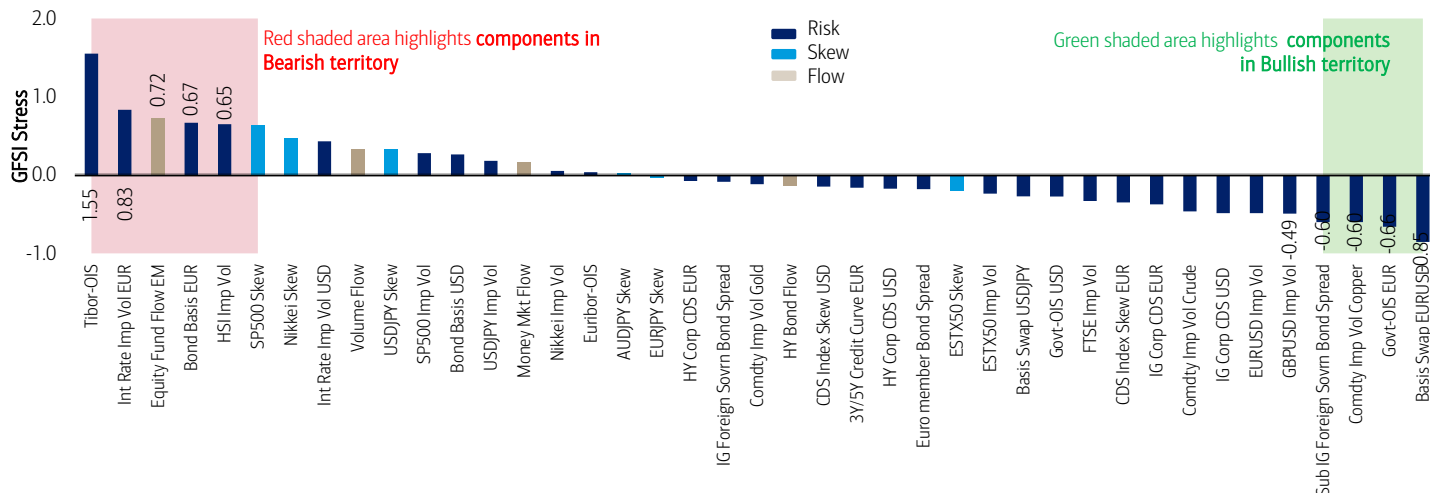
As the US Dollar continued to weaken last week, FX posted the largest decline in stress at the asset class level on lower implied vol and skew stress (Exhibit 4). In fact, four of the top six stress-decliners were FX subcomponents (Exhibit 3). USDJPY implied vol experienced the largest decline in stress among FX subcomponents as it notched a 94<sup>th</sup> percentile decrease in stress relative to its own history. This led FX vol to experience the largest decline in stress versus all cross-asset vols and spreads (Exhibit 7). USDJPY & EURJPY skews and GBPUSD implied vol saw the next largest FX stress declines.

Equities followed with the next largest decline in stress led by S&P 500 skew, the top stress-decliner of the week (Exhibit 3). Equities and FX continue to drive the GFSI's moves as one of the two asset classes have posted the largest absolute stress moves in each of the last 19 weeks. Meanwhile, rates, commodities, and credit stress slightly increased last week.

- **The US was the only region to see stress increase last week** (Exhibit 5). Volume flow, the subcomponent that measures bullish or bearish US stock volume, posted the largest stress increase at the subcomponent level, contributing to the overall rise in US stress as the S&P 500 finished its fourth consecutive week lower (Exhibit 3).
- **Last week's largest one day decline for the GFSI came with Wednesday's softer than expected CPI data.** The GFSI decreased from +0.14 on Tuesday to +0.07 on Wednesday after US prices rose by less than forecast in February. Equities led the way at the asset class level posting the largest one day decrease in stress since November's US election.

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

Tibor-OIS is the most stressed while Basis swap EURUSD is the least stressed

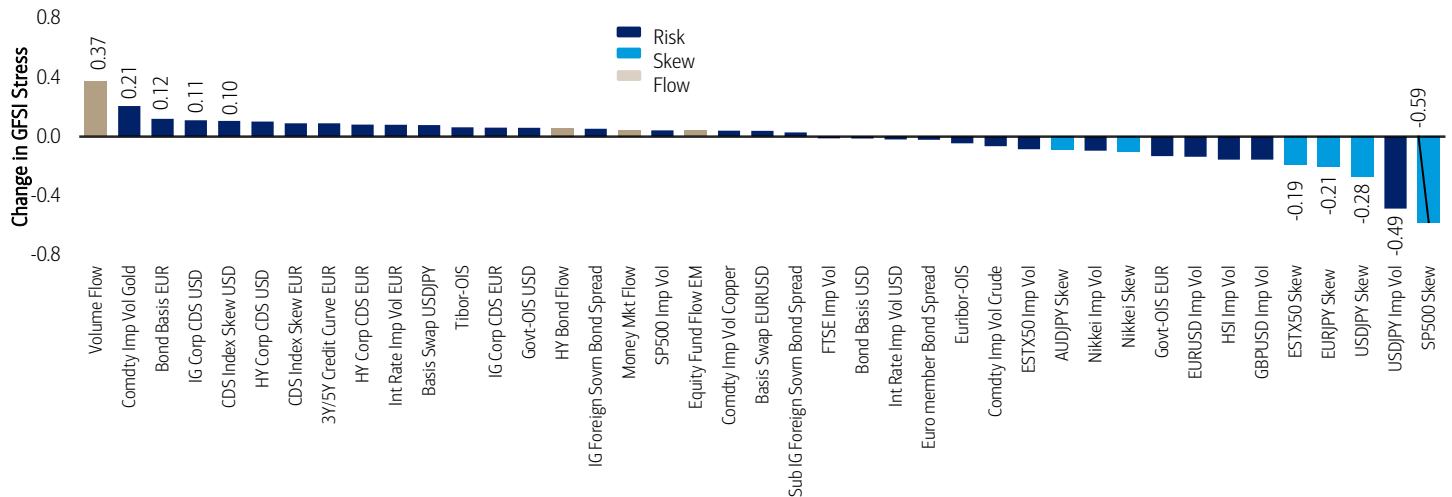


**Source:** BofA Global Research. \*Latest as of 14-Mar-25. Disclaimer: The indicator identified above as BofA GFSI is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon 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.



**Exhibit 3: Change\*\* in stress across GFSI sub-components**

Volume flow was the largest stress riser over the last week while S&P 500 skew stress fell the most



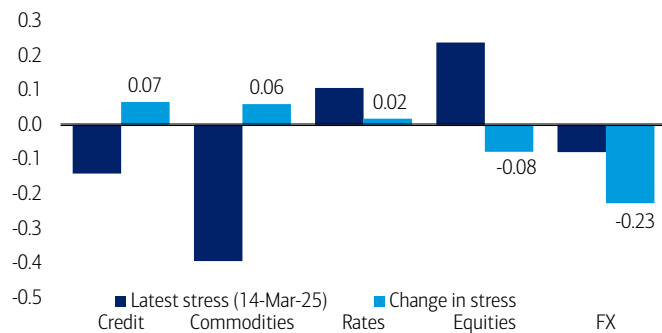
Source: BofA Global Research. \*\*Latest as of 14-Mar-25. Change vs 1 week prior (7-Mar-25).

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The GFSI Risk Allocator (using Bull, Bear & Neutral weights of 2, 0, 1) suggested a 4.9% underweight position as of 14-Mar-25 (vs a 9.8% underweight position as of 7-Mar-25). The percentages of Bullish, Bearish, and Neutral GFSI components (as used in the Risk Allocator) as of 14-Mar-25 were 9.8%, 14.6%, and 75.6% respectively.

**Exhibit 4: FX stress declined the most over the past week**

Meanwhile, credit stress increased the most

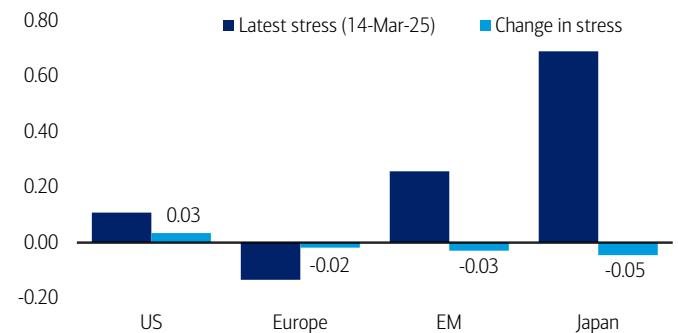


Source: BofA Global Research. 1wk change (7-Mar-25 to 14-Mar-25).

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**Exhibit 5: Japan led regional stress lower last week**

In contrast, US stress rose

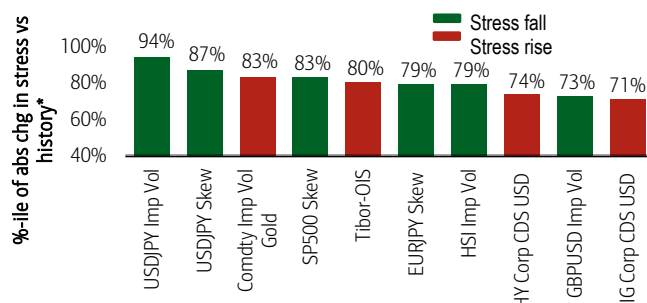


Source: BofA Global Research. 1wk change (7-Mar-25 to 14-Mar-25).

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

USDJPY implied vol saw a historically large stress decline

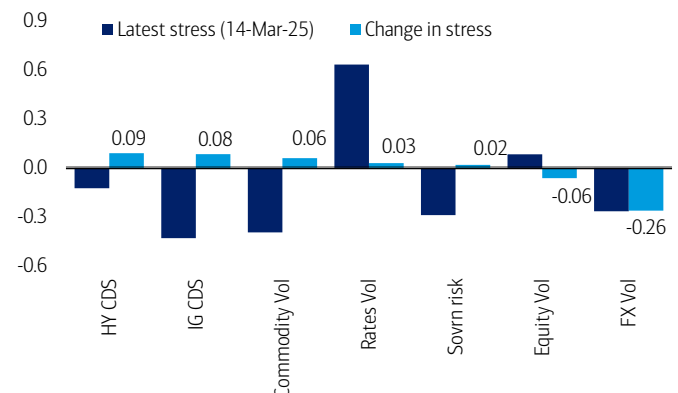


Source: BofA Global Research. \* %-ile of 1 week moves in stress vs all historical 1 week moves (earliest 3-Jan-00). Bar colors represent rise (red) or fall (green) in stress. 1wk change (7-Mar-25 to 14-Mar-25).

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

FX vol experienced the largest decline in stress last week



Source: BofA Global Research. 1wk change (7-Mar-25 to 14-Mar-25).

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## Parallels to 2018 S&P grind lower suggest vol playbook

US equities have now sold off for four consecutive weeks and the S&P sits >7% below all-time highs. Sentiment has been dominated by a confluence of growth slowdown concerns, policy uncertainty (particularly around trade), and fading tech exuberance. As we outlined last week, the selloff so far has shown the signature of a grind lower rather than a shock, with grind lower hedges continuing to work better than convex ones (see [11-Mar-25 GEVI](#)). While such a characterisation brings back memories of 2022, we see many similarities between today's backdrop and that of Q4-18, when the S&P fell nearly 20% between October and the end of the year in (a mostly) orderly fashion.

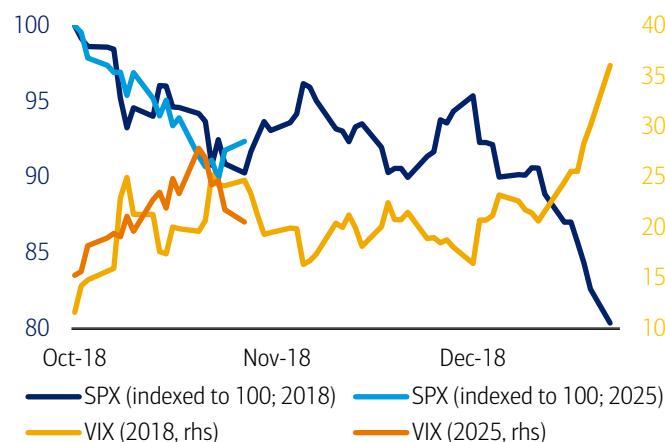
### The Q4-18 analogue

Beyond the uncanny similarities in the path of the S&P and VIX in the recent selloff vs in Q4-18 (Exhibit 8), we find the analogue compelling for a few reasons:

- Correction after high Sharpe period (& preceded by a fragility shock in vol):** Similar to the tech-led high Sharpe period of 2023-24 and the 5-Aug & 18-Dec vol shocks that preceded today's selloff, the Q4-18 correction followed a 19.4% tech-led rally during 2017's sub-7% realized vol year and 5-Feb-18's "Volmageddon".
- Tariffs, growth concerns & uncertain policy puts:** Today's macro backdrop faces similar challenges to late 2018, which was embroiled with growth concerns, tariff stress and government shutdown uncertainty. Moreover, the uncertainty around the Fed put and its strike is another commonality in the analogue.
- Tech cracks in a grind lower:** Q4-18 saw a tech-led selloff (Exhibit 9) that played out as a 'grind lower' at the index level, uncannily similar to today's grind lower led by the lagging "Magnificent 7". While 2018 saw a more traditional growth shock in terms of sector price action<sup>1</sup> (compared to today), hitting cyclicals like Energy (-25%), Industrials (-18%) and Materials (-14%), the combination of Tech weakness (-18%) and its concentration in the S&P show similarities to today's backdrop, in our view.

#### Exhibit 8: The current paths of the S&P and VIX have tracked those during the Q4-18 selloff surprisingly closely

S&P 500 and VIX in Q4-18 selloff vs Feb-25 to present

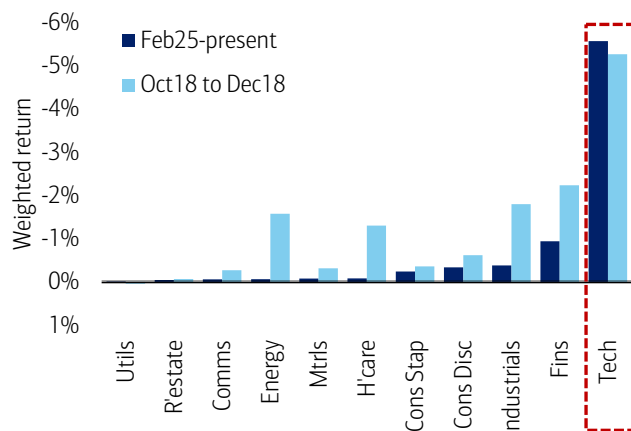


Source: BofA Global Research, Bloomberg. 2018 data from 3-Oct-18 to 24-Dec-18; 2025 data from 19-Feb-25 to 17-Mar-25.

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#### Exhibit 9: Similar to today's selloff, late 2018 also saw cracks in tech, which was key in the ~20% selloff in the tech-concentrated S&P

Weighted S&P 500 sector\* performance in Q4-18 and Feb25-present



Source: BofA Global Research. Data from 3-Oct-18 to 31-Dec-25 and 19-Feb-25 to 14-Mar-25.

\*Sectors are defined as per GICS with re-classification of certain internet/tech driven stocks (e.g., Tesla, Amazon, Meta etc.). Sector weights as of 3-Oct-18 (for 2018) and 19-Feb-25 (for 2025).

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<sup>1</sup> Sectors are defined as per GICS with re-classification of certain internet/tech driven stocks (e.g., Tesla, Amazon, Meta etc.).



4. **‘Strict’ inversion of vol term structure:** Front-end vol has been well bid recently as the market whipsaws with high intraday vol, inverting the vol term structure to the point where we have seen  $VIX9D > VIX > VIX3M > VIX6M$ . This has not been a common shape in recent history (a rarity in 2022), but Q4-18 showed a sustained period of such inversion with comparable levels of intraday vol (Exhibits 10 & 11).

**Exhibit 10: Intraday vol during the late 2018 selloff was comparable to today’s elevated levels, peaking close to 30%**

S&P 500 e-mini future 1d intraday vol\* during 2018 vs average from 19-Feb-25 to present

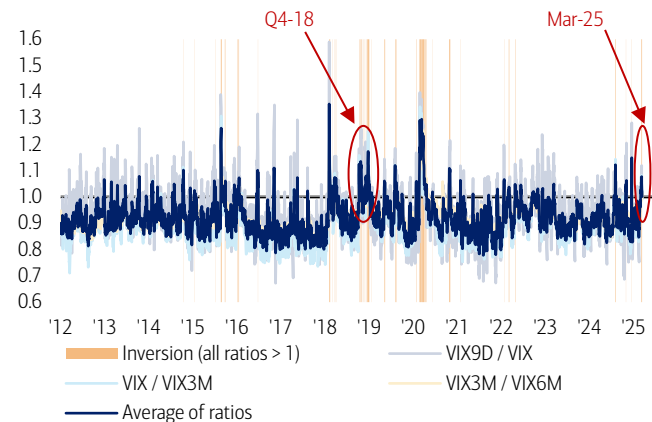


Source: BofA Global Research. Data 1-Jan-18 to 31-Mar-19; current average from 19-Feb-25 to 14-Mar-25. \*5-min sampling frequency.

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**Exhibit 11: Today’s “strict” inversion of the vol term structure, whereby shorter-dated VIX indices are consistently higher than longer-dated ones, was persistently observed in late 2018 as well**

Ratios of (i)  $VIX9D / VIX$ , (ii)  $VIX / VIX3M$ , (iii)  $VIX3M / VIX6M$



Source: BofA Global Research. Data from 1-Jan-12 to 14-Mar-25.

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With the looming risk of this week’s FOMC meeting where equities could take another leg lower, especially as Bessent once again shrugged off equity market weakness on Monday (17-Mar), we continue to find it prudent to hedge the grind (while being cognizant of fragility risk) in this environment. As a reminder, the hawkish stance from the Dec-18 FOMC meeting precipitated a nearly 8% S&P selloff in the subsequent 4 days. Grind lower hedges that can offer *reliable* protection continue to offer attractive propositions in our view, both systematically and tactically (see the S&P put fly as one tactical idea from our [11-Mar-25 GEVI](#) and our [Mind the grind](#) report for our approach to systematic grind lower hedges).

**The case to own forward vol**

While hedges like S&P put spreads & flies continue to perform as vol convexity remains elusive, we find the setup for long (implied) vol hedges interesting as well, especially owning medium-dated forward vol via structures like VIX Jun call spreads.

**Trade (VIX call spread):** Buy VIX Jun 25/35 call spread for 89c indicatively (**11.2x max payout ratio**; UXM5 ref. 20.01). Risk involves upfront premium paid.

Why?

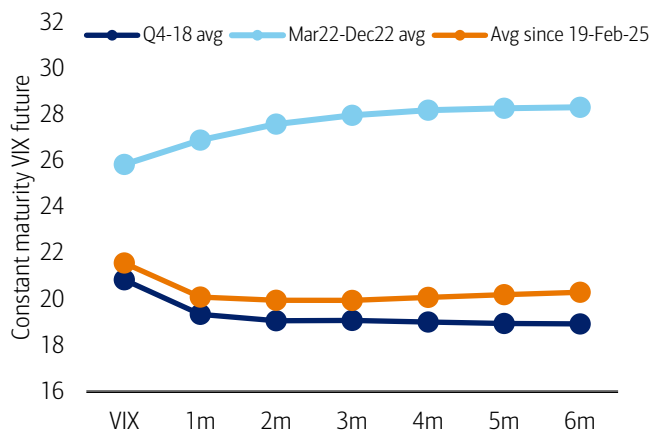
- **Long vol can work even without vol convexity:** Despite the lack of vol convexity during this bout of equity weakness, owning implied vol has paid during the grind lower. Interestingly, long vol also paid off in spades during the Q4-18 selloff despite similar grind lower price action and a lack of vol convexity. Indeed, as one simple example, the VXX ETN (which provides exposure to a long constant maturity VIX 1m future) was up 88% in Q4-18 with minimal cost of carry.

- **Flat/inverted term structure:** In our view, front-end inversion of the VIX curve creates an attractive entry point for owning medium-dated forward vol, which can benefit from the roll-up should the status quo persist. While the inversion has abated this week compared to last, the current selloff has had similar inversion to Q4-18 (and far greater inversion than 2022's contango; see Exhibit 12).
- **Policy & data uncertainty can keep front-end vol elevated:** As policy uncertainty collides with concerns around the trajectory of macro data, markets may continue to see a bid to front-end vol. The resulting persistence in term structure inversion improves the case for the forward vol all the more.
- **Potential medium-term VIX future reactivity if concerns persist:** Continued market turbulence and/or equities taking another leg lower could precipitate systemic fears moving further out into the term structure, eliciting increased reactivity in the so-far muted medium-term VIX futures. In such a scenario, owning forward vol can be beneficial.

We like the VIX call spread expression in particular because of its risk-limited nature, especially in the scenario Powell offers relief to markets at this week's FOMC meeting and vol moves lower. However, for those looking for more leverage, one could look to sell the 16- or 17-strike put to monetizing the vol floor and cheapen the hedge further.

**Exhibit 12: While the VIX term structure inversion has come undone since last week, it remains relatively flat around 20, and has so far been in similar shape to Q4-18's curve and more inverted than 2022's**

VIX constant maturity futures curve during (i) Q4-18, (ii) Mar22-Dec-22 & (iii) 19-Feb-25 to present



Source: BofA Global Research. Data from (i) 3-Oct-18 to 24-Dec-18 for 2018, (ii) 1-Mar-22 to 31-Dec-22 for 2022, and (iii) 19-Feb-24 to 17-Mar-25 for 2025.

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**Cyclical equities & HY credit still complacent for growth shock à la 4Q18**

One important difference between 4Q18 and this year's US equity drawdown has been the relative performance across sectors. In particular, despite the "growth scare" narrative around the current selloff (owing to weaker than expected soft data and high tariff-related uncertainty), cyclical sectors that would traditionally underperform in growth shocks have been better supported this year.

Indeed, Exhibits 13 & 14 show that cyclical/high beta sectors like Energy (XLE), Materials (XLB), Metals & Mining (XME), and Industrials (XLI) got hit the hardest in 4Q18 (both in the first leg in October and over the entire Oct-Dec drawdown). On the other hand, Tech and Consumer Discretionary (the latter with 33% weight in AMZN & TSLA) have led the way lower in 2025.



The resilience of HY credit during this year's selloff tells a similar story. Both CDX HY and HYG have been much more well-behaved this year than in 4Q18 (when CDX HY spreads reached 480bps and HYG sold off 7.9%, vs. 355bps and -2% YTD).

As a result, should growth concerns end up realizing (and policy puts not come into play), hedges in some of these cyclical sectors or in HY credit have room to pay off, in our view. For cyclical equities, **2m 25-delta puts on XLI** (Industrials) stand to pay off ~15x current costs in a repeat of the 4Q18 drawdown; see Exhibit 15 (XLE offers better value by this metric but may have more idiosyncratic risk). On the credit side, we still like HYG put spreads, which we first recommended in the [4-Mar-25 GEVI](#).

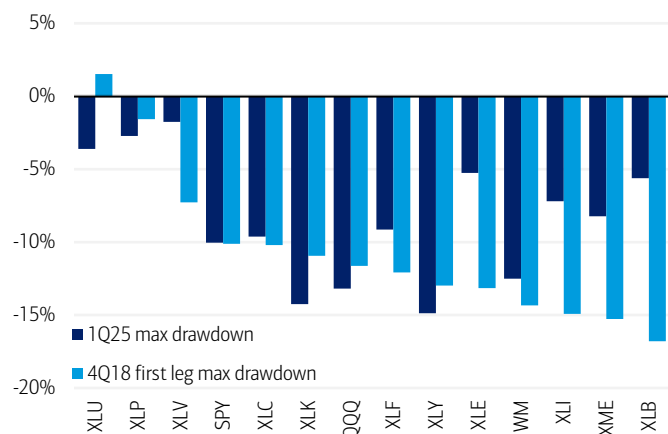
**Industrials hedge:** Buy XLI May 125 puts for \$1.53 or 1.15% (ref. 132.72)

**Credit hedge:** Buy HYG May 78-76 put spreads for \$0.39 (5x max payout, ref. 79.00)

*Risks to both trades would involve the upfront premium paid.*

**Exhibit 13: This year's equity drawdown has been most painful for large-cap Tech, unlike the first leg of the 4Q18 shock which was most felt in cyclical sectors**

US equity sector performance in 2025's S&P selloff and first leg of 4Q18

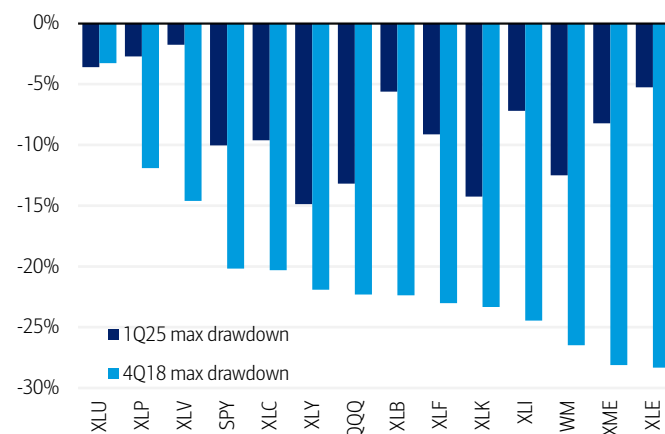


**Source:** BofA Global Research. Performance during S&P's max drawdowns in Sep-Oct 2018 and 2025.

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**Exhibit 14: Cyclical sectors like Energy (XLE), Materials (XLB), Metals & Mining (XME), and Industrials (XLI) got hit the hardest in 4Q18 and have plenty of room to fall from here to match those negative returns**

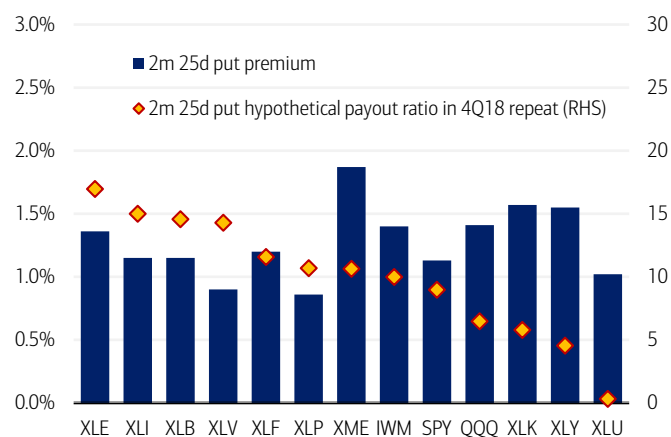
US equity sector performance in 2025 and 4Q18 S&P selloffs



**Source:** BofA Global Research. Performance during S&P's max drawdowns in Sep-Dec 2018 and 2025.

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**Exhibit 15: Should we end up seeing a growth/policy shock à la 4Q18, puts on cyclical sectors (XLE, XLI, XLB) offer the best value to hedge**  
 Current cost of 2m 25-delta puts & hypothetical payout ratio in 4Q18 repeat



**Source:** BofA Global Research. Data as of 14-Mar-25. Assumes all assets end up falling from 19-Feb-25 (SPX YTD high) until May expiry as much as they did during the entire S&P drawdown of 4Q18.

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## Europe unleashed amidst growth-tariff tussle: Buy low cost SXXP calls

**What:** Buy SXXP Jun25 103.5% (23-delta) calls for 82bps (ref 550.6) for continued European upside exposure at low cost.

**Why:** Germany's likely fiscal stimulus may have the potential to kickstart economic growth in Europe, even as headwinds persist with ongoing tariff concerns and European sensitivity to US recessionary concerns. A tighter valuation spread vs US equities driven by EU outperformance and the recent sharp recovery in positioning serve as a reminder to position for further upside with caution, via risk-limited structures. The STOXX600's (SXXP) relative risk exposure to key growth-sensitive industries and low implied volatility in our view make calls on the index an attractive alternative to SX5E calls for further EU upside.

**Risks:** Risks would involve the premium paid

### EU exuberance unleashed as hopes ride high on historic German debt reform

Last Friday's agreement between incoming Chancellor Merz and Germany's Green Party removed a potential key roadblock to implementing a historic debt-funded spending package. Financial markets have treated it as such with the DAX and MDAX rallying 2.6% and 3.7% respectively, since last Thursday's close. Broader European equities also participated in the rally (SXXP +1.9%), reflecting investor expectations of a fresh fiscal tailwind spurring an economic revival in Germany and potentially across the region.

While the European investment thesis looks promising and maintaining upside exposure to this important European growth catalyst is key, there are important headwinds to bear in mind. First, US tariff policy continues to pose risk and the EU remains tied to the US economic cycle and recession fears. Given this backdrop, we emphasize the importance of using optionality to position for ongoing upside.

**Valuations:** A notable rotation from Growth to Value has fuelled the remarkable outperformance of Europe vs US equities (12% YTD gain for SXXP vs SPX). History suggests that episodes of similar or longer length and magnitude outperformances are not unprecedented (see [GEVI, 4-Mar-25](#)) and this one may also have room to run further. However, the outperformance so far has resulted in a compression of the valuation spread between the regions (SPX Price/Equity ratios are at a premium of ~6.3 points over SXXP, a level not seen since mid-2023, Exhibit 16). This compression has been driven by exuberance about European equities as well as US underperformance in that time. All else equal, the fact that the European equity valuation discount is less extreme than last year suggests using risk-limited structures for further upside.

**Positioning:** Investor interest in European equities (as indicated by Agent positions from Eurex) has rebounded from last year's lows to at least 18-month highs across SX5E, EZ-Banks (SX7E) as well as the SXXP (Exhibit 17). While it's likely that on a longer time horizon European positioning is still low, we see the recent rapid recovery in positioning as a reminder to risk-manage long EU exposure in the near term given a weakening of the positioning tailwind that helped EU equities YTD.

### Cheap European upside: SXXP sector gearing and volatility stand out

We think STOXX600 (SXXP) out of the money calls present an attractive way to retain European upside exposure, and outrank typically more popular SX5E calls, as:

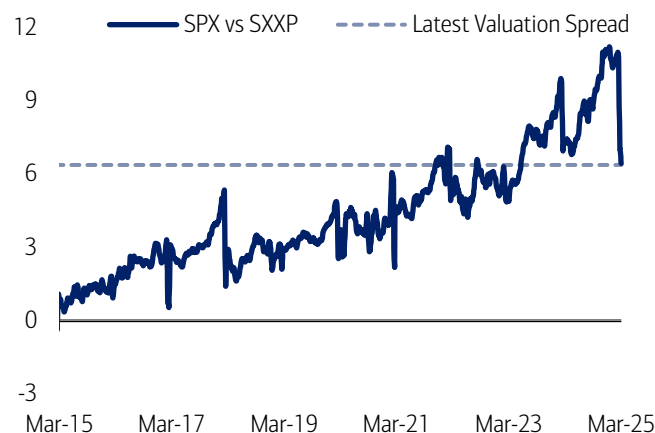


**Sector exposures:** While the SXXP is more diverse in composition than the ESTX50, it has recently started showing increased concentration in Capital Goods, Banks and Materials - key industries benefiting from European Defence and German fiscal stimulus themes. While these sectors now account for 32% of the index by notional weight, they drive 57% of its risk (Exhibit 18). Notably, risk contributions from Capital Goods and Banks have significantly risen YTD (+10% and +9%, respectively, Exhibit 19). SXXP's exposure to these key industries strengthens its positioning for continued European upside. In contrast, ESTX50's risk is less concentrated in these industries and more driven by Tech (Semis and Software, see Exhibit 20), which remains vulnerable to US growth risk, particularly those affecting the Mag7.

**Volatility:** While implied volatility has risen to near 1y highs across most equity indices, SXXP 3m OTM call implied volatility at ~12% remains a compelling buying opportunity in absolute terms, in our view. Moreover, its spread vs SX5E call implied volatility is near 1y lows (Exhibit 21), making SXXP calls a relatively attractive alternative for the more typical SX5E call that European beta-seekers would consider.

**Exhibit 16: EU equities remain cheap vs US but recent outperformance has resulted in significant compression of the valuation spread**

SX5E and SPX Price/Equity ratios and their spread

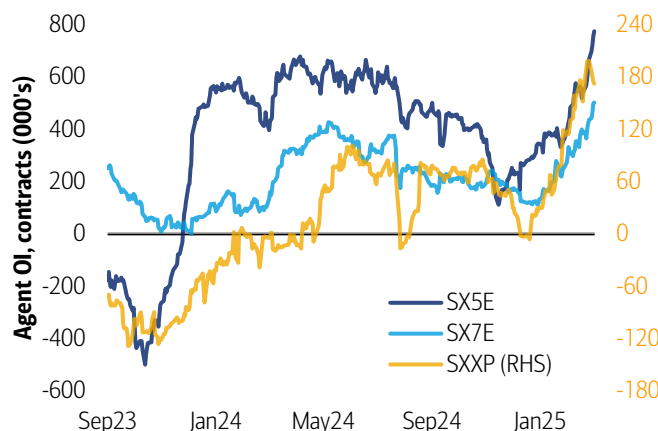


Source: BofA Global Research, Bloomberg. Data from 16-Mar-2015 till 17-Mar-2025.

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**Exhibit 17: Agent positioning in EU equity index futures is stretched relative to recent history, with OI at or close to its 100<sup>th</sup> %-ile**

Open interest (in thousands of contracts) on SX5E, SX7E and SXXP futures for Agent participants\*



Source: BofA Global Research, Bloomberg, Deutsche Börse. Data: 11-Sep=23 to 13-Mar-25.

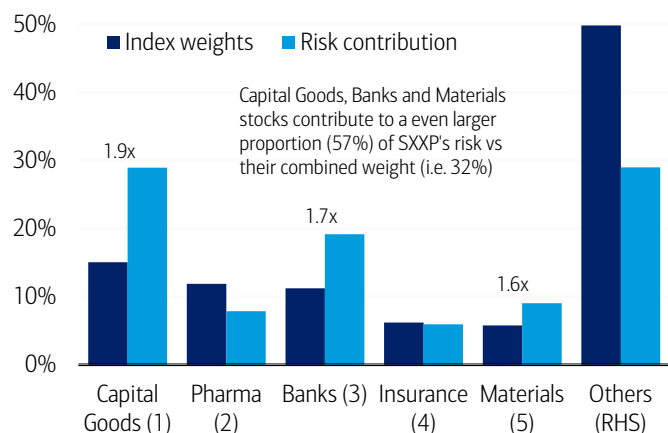
\*EUREX defines participant types as: Agent – trading on behalf of customers, Market Maker – providing liquidity, and Proprietary – trading for own account.

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### Exhibit 18: Capital Goods, Banks and Materials stocks make up only 32% of the SXXP but have accounted for 57% of its risk lately

Current SXXP index weights and risk contribution by GICS industry group

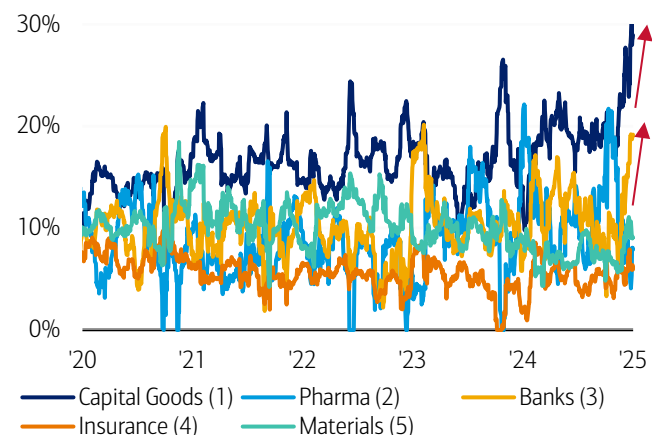


**Source:** BofA Global Research, Bloomberg. Data as of 14-Mar-25. Industry groups are ordered by their latest index weights, we show the top 5 and club the others together. Risk contributions are calculated using the latest 1m realized vols and correlations.

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### Exhibit 19: Risk from Capital Goods and Banks has significantly risen YTD (+10% and +9%, respectively)

History of SXXP's risk contribution from top 5 industry groups in Exhibit 18.

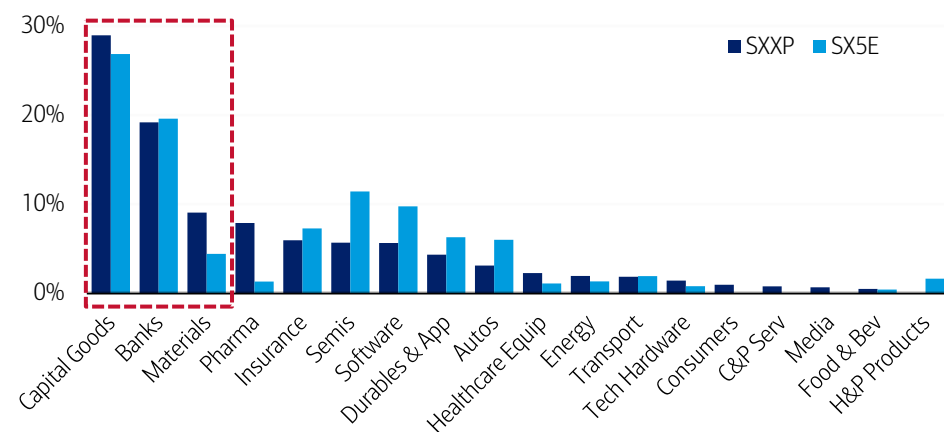


**Source:** BofA Global Research, Bloomberg. Data from 14-Mar-20 to 14-Mar-25. Risk contributions calculated using 1m realized vols and correlations for past constituents, which are categorized into GICS industry groups.

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### Exhibit 20: Capital Goods, Banks and Materials are the main risk drivers in SXXP and, to a lesser extent, in SX5E, which is also influenced by Semiconductors and Software.

Current STOXX600's risk contribution by GICS industry group for STOXX600 and EURO STOXX50.

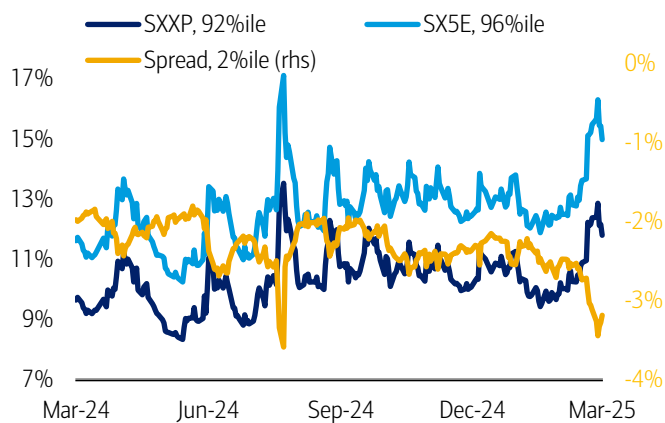


**Source:** BofA Global Research, Bloomberg. Data as of 14-Mar-25. Risk contributions are calculated using the latest 1m realized vols and correlations.

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**Exhibit 21: While implied volatility is elevated for most equity indices, SXXP out-of-the-money call implied vol is still only ~12%, and trading more than 3v below SX5E (2<sup>nd</sup> percentile of the last year)**

SXXP and SX5E 3M 25delta call implied volatility and its spread



Source: BofA Global Research, Bloomberg. Data from 14-Mar-2024 till 14-Mar-2025.

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## SX5E gamma ahead of Mar-25 expiry: Positioning suggests dealers are short

**The View:** Against the backdrop of a sharp equity rally and heightened bi-directional risks, we believe that investors are likely net long short-dated SX5E options. As a result, dealers are likely short SX5E gamma ahead of 21-Mar-25 expiry, with the short gamma itself likely to increase in any rally through 5500 this week. Dealer delta-hedging could be expected to amplify moves and increase volatility in the coming days.

A sharp rally in European equities, fuelled by investor enthusiasm around German fiscal stimulus expectations, has led to a notable increase in SX5E put and call option open interest for 21-March-25 expiry, particularly at 5000 and higher strikes (Exhibits 22 and Exhibit 23). Given the nature of recent and upcoming catalysts:

- We expect that majority of the **call** open interest will likely be investors establishing long positions, or re-striking (higher) their existing calls through the rally
- Similarly, we expect that the increase in **puts** is reflective of investors hedging recent gains or rolling up their protection to lock-in high spot levels.

### Gamma positioning and volatility impact

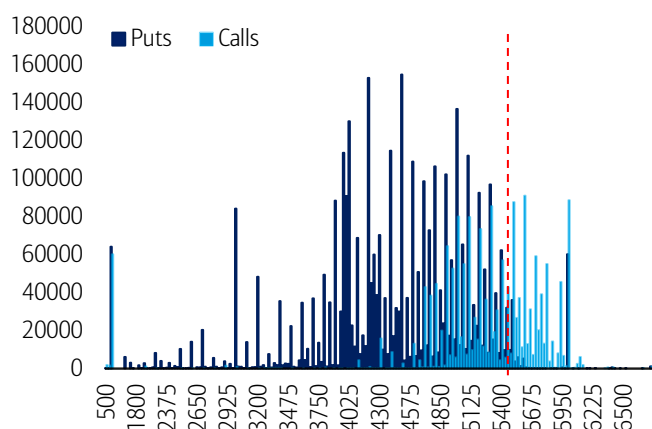
Positioning data from Eurex can offer insight into SX5E gamma positions. In Exhibit 24, we chart the aggregate gamma positioning of SX5E index options for Market maker (MM) accounts.

1. We note that gamma positioning is negative local to the current SX5E spot level, indicating that potential moves in spot may be exacerbated by MM delta-hedging flows (MM accounts are assumed to trade under tight risk-limits and thus are expected to be delta-hedging option positions).
2. A continued rally through 5500 on the SX5E after the 18-Mar Bundestag vote could push this gamma deeper into negative territory, fuelling the rally in the near term.
3. Conversely, a decline in spot may trigger dealer delta hedging to exacerbate the move.

In summary, we believe delta hedging can amplify moves and increase volatility ahead of 21-Mar-25 expiry.



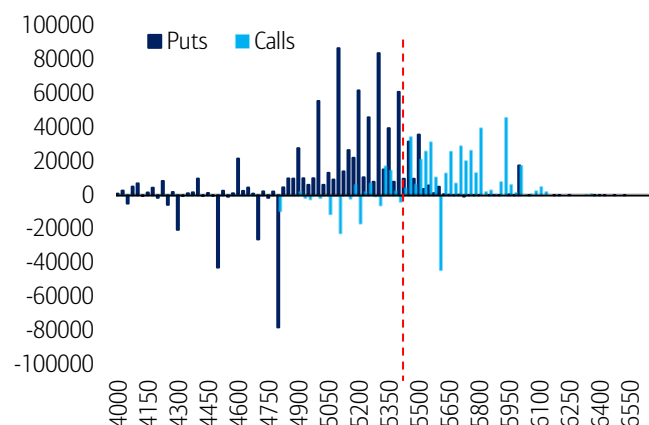
**Exhibit 22: SX5E option open interest shows large positions in 21-Mar-25 calls just above current spot, and puts at strikes slightly below spot**  
 SX5E 21-Mar-25 put and call option open interest by strike



Source: BofA Global Research, Bloomberg. Data as of 17-Mar-2025

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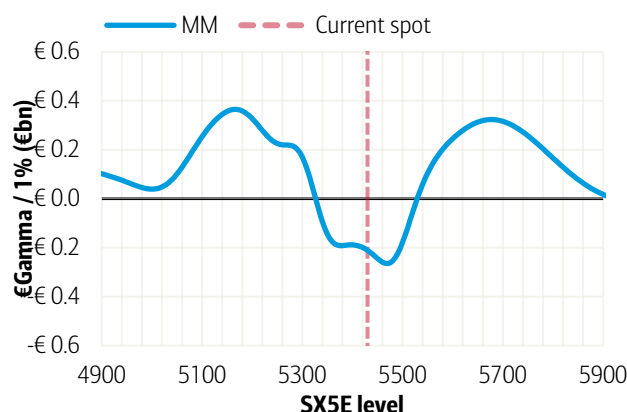
**Exhibit 23: The growth in SX5E option open interest at 5000 and higher strikes suggest these positions may be longs built up through the 9% rally in SX5E in the last 2 months**  
 2-month change in SX5E 21-Mar-25 put and call option open interest



Source: BofA Global Research, Bloomberg. Data from 14-Jan-2025 till 17-Mar-2025

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**Exhibit 24: As of March 13th, Market maker (MM) accounts are on aggregate locally short gamma for the upcoming March-21<sup>st</sup> expiry**  
 Latest\* SX5E total gamma for options expiring on 21-Mar-25 for Market maker participant types given varying levels of spot



Source: BofA Global Research, Bloomberg, Deutsche Börse. \*Gamma and open interest data as of 13-Mar-25 for options expiring on 21-Mar-25, and spot is as of 17-Mar-25. EUREX defines participant types as: Agent – trading on behalf of customers, Market Maker – providing liquidity, and Proprietary – trading for own account.

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#### 4.6x max payout Nifty call spreads as India might fare better amid US tariffs

**What:** 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).

**Why:** India might fare better than China when it comes to US tariff headlines; at least in the near future. Trade Secretary Sunil Barthwal told reporters on Monday that we should “see a positive outcome” with respect to a bilateral trade deal with the U.S. BofA’s India Economist also notes that expectations of cooperation have risen on the Indian as



well as the U.S. side (see: [India Watch, 17 Mar 2025](#)). Meanwhile, some investors are preparing for less favourable China tariff headlines ahead of Trump/Xi negotiations (see [11 Mar GEVI](#)).

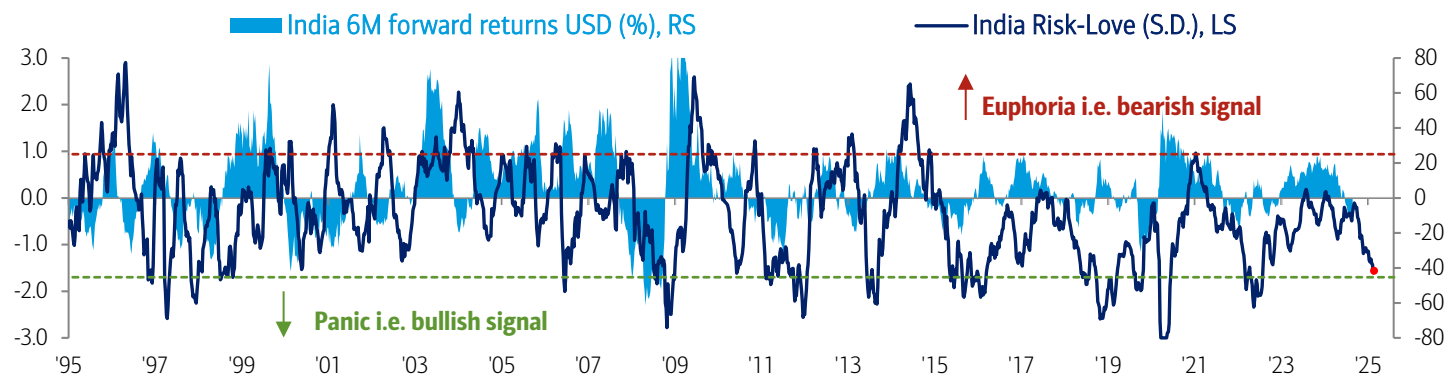
After a 14% Nifty decline and a 49% China rally over the last 6 months – consistent with a reversal of the ABC trade (Anything But China) – profit taking and tariff concerns might cause a China pause and a reason for investors to reengage in India (Exhibit 26). While macro data have been slowing in India, stocks could receive tailwinds from monetary easing. Last week's headline CPI of 3.6% fell below target and gave a green light to a rate cut at the 7-9 April RBI meeting (see [India Watch, 12 March 2025](#)).

While India isn't outright cheap, we think the recent correction has opened an opportunity for investors that missed India's impressive post-Covid recovery (Exhibit 28). Forward PEs are close to the lower bound over the last 10 years (Exhibit 31) and Nifty vol trades in the low teens; ranking by far the lowest globally (Exhibit 29). At the same time, Nifty call skew is relatively flat, making call spreads more attractively priced (Exhibit 30).

**Risks:** Risks would involve the premium paid

#### Exhibit 25: India Risk-Love, BofA's proprietary signal, is within touching distance of giving a bullish signal

India Risk-Love is at the 13<sup>th</sup> percentile of its history since 1995



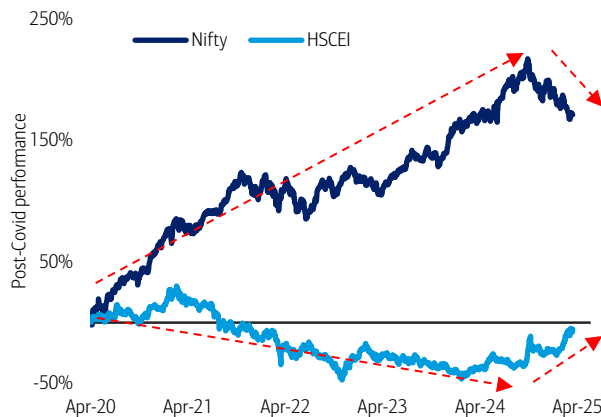
**Note:** The indicator identified as the BofA Risk-Love Indicator above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purposes, without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

**Source:** BofA Predictive Analytics, FactSet. Data from Jan-1995 through 21-Feb-2025.

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**Exhibit 26: As investor flows returned to China in recent months, India experienced outflows. Could the pendulum swing back in the near-term amid China profit taking and tariff concerns?**

Nifty and HSCEI post-Covid performance

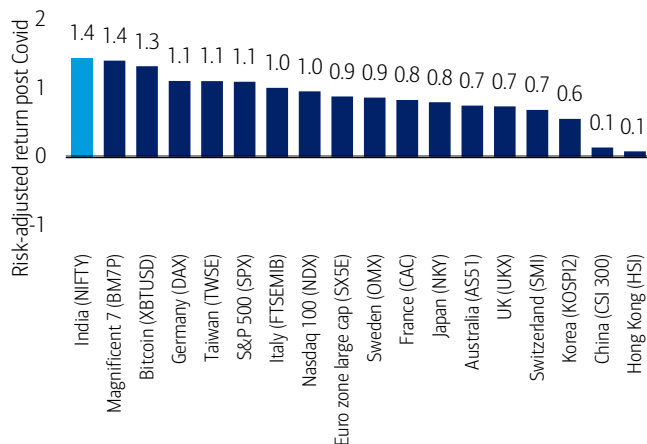


Source: BofA Global Research and Bloomberg. Data from 1-Jan-2024 through 14-Mar-2025.

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**Exhibit 28: Despite the last few months' correction, India's post-Covid recovery remains stronger than most other assets. Rallying 24.2% per annum at 16.8% vol since the March 2020 lows, equating to a 1.4 risk-adjusted return ratio, the Nifty has trumped Mag 7 as well as Bitcoin**

Risk adjusted returns in the post-Covid recovery



Source: BofA Global Research and Bloomberg. Data from 23-Mar-2020 through 14-Mar-2025.

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**Exhibit 27: Year-to-date performance attribution by sectors illustrates that "China Tech" has been the key difference (many "China Tech" names are classified as IT, Consumer Disc. and Comm. Services)**

Sector weight and performance attribution broken down by sector

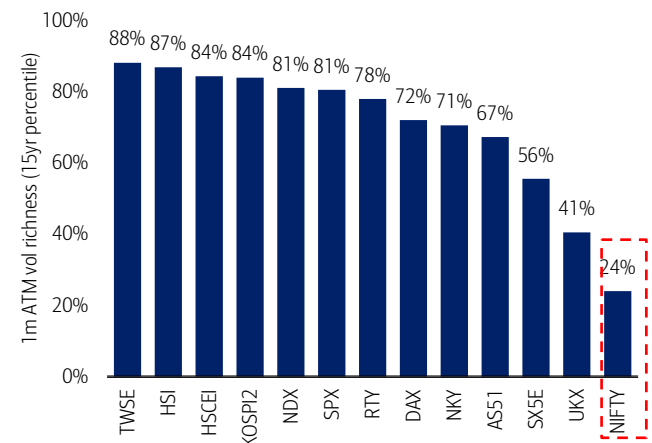
	Nifty weight*	HSCEI weight*	Nifty contribution	HSCEI contribution
Financials	34.6%	27.6%	-0.4%	2.7%
IT	14.1%	10.3%	-2.2%	5.3%
Consumer Disc.	10.1%	29.5%	-1.1%	9.7%
Energy	10.0%	7.7%	0.1%	-0.4%
Consumer Staples	8.0%	2.3%	-0.5%	0.3%
Industrials	6.4%	1.3%	-0.7%	0.0%
Materials	5.8%	1.0%	0.1%	0.2%
Health Care	4.2%	0.9%	-0.5%	0.0%
Comm. Services	4.0%	17.5%	0.1%	3.8%
Utilities	2.8%	0.5%	-0.2%	0.0%
Real Estate	0.0%	1.4%	0.0%	0.3%
TOTAL			-5.2%	21.8%

Source: BofA Global Research. Data from 31-Dec-2024 through 14-Mar-2025. \*Sector weights are as of 31-Dec-2024

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**Exhibit 29: Nifty 1-month ATM vol of 13.3% corresponds to the 24<sup>th</sup> 15-year percentile; well below index peers globally**

15-year percentiles of 1-month ATM vol



Source: BofA Global Research. Data from 14-Mar-2010 through 14-Mar-2025.

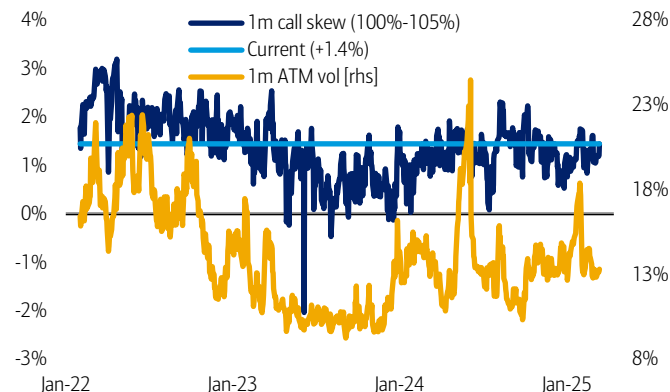
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**Exhibit 30: At 13.3%, Nifty 1-month ATM vol is the 2<sup>nd</sup> lowest globally\* on an absolute basis; only surpassed by the FTSE 100 at 12.0%. At the same time, call skew is relatively flat compared to most index peers (in the 57<sup>th</sup> percentile since Jan-2022)**

Nifty 1-month ATM vol and call skew



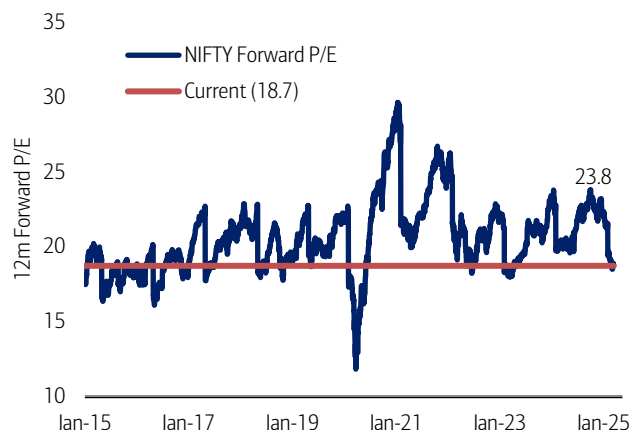
\*Global refers to major stock market indices including SPX, NDX, RTY, SX5E, UKX, DAX, NKY, AS51, HSI, HSCEI, KOSPI2 and TWSE

Source: BofA Global Research. Data from 01-Feb-2022 through 13-Mar-2025.

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**Exhibit 31: Nifty 12-month forward P/E of 18.7x, is near the lower end of its range over the last 10 years (excluding the Covid crash)**

Nifty 12-month forward P/E



Source: BofA Global Research. Data from 1-Jan-2015 through 13-Mar-2025.

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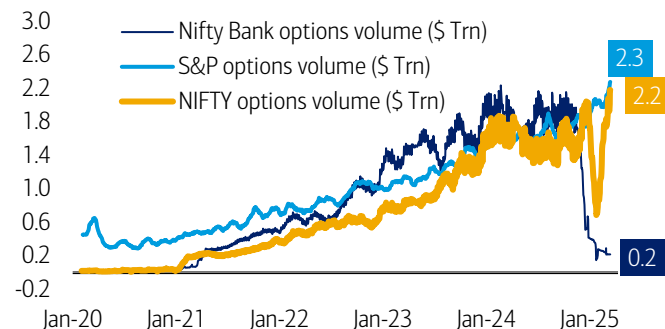
### Nifty at attractive levels: Compelling risk-reward

Despite the recent weakness, India's post-Covid recovery remains impressive. Since the Mar 2020 lows, Nifty has delivered 24.2% annual returns at 16.8% vol, translating to a risk-adjusted return of 1.4. This outpaces even the Mag7 and Bitcoin. Longer term, India's fundamental story remains quite positive and the pull-back may prove to be a good opportunity to re-engage in the Indian stock market. Furthermore, we note:

- 1) Valuations look less stretched, with Nifty's 12-month forward P/E ratio now at 18.7x, representing > 20% discount from its 2024 peak of 23.8x (Exhibit 31).
- 2) BofA's Risk-Love sentiment indicator is on the cusp of sending a buy signal (Exhibit 25, see [Investor Sentiment: Risk-Love](#)).
- 3) BofA's India Equity Strategist maintain a constructive outlook with potential 14% upside from current levels (Exhibit 28, see [Equity Strategy - India](#)).
- 4) Could profit taking and tariff concerns make the China-India pendulum favour India in the near term? With India benefiting from the ABC trade pre 2024 (ABC = Anything But China), those flows were reversed in recent months.

**Exhibit 32: While Nifty Bank options volumes plunged after new regulations, Nifty options continue to trade in several US\$ trillions per day (e.g. US\$5.7 Trn on Mar 6<sup>th</sup>)**

1-month trailing average of daily option notional turnover



Source: BofA Global Research. Data from 01-Jan-2020 through 13-Mar-2025. Volume measured across all strikes and tenors.

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# Summary of Open Trades (17-Mar-25)

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 17-Mar-25**

Summary of open trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
Long 3y, short 4y ESTX50 Total Return Futures (TRFs) offer 7bps of implied carry, an expected 1y P&L* of 19bps (both elevated vs history in the 72nd and 97th 5Y percentiles, respectively), and attractive risk-reward	19-Oct-21	62bps	Dec-24	Long 3y (~Dec24), short 4y (~Dec25) trades screen particularly attractive: their 7bps of implied carry lies in the 72nd 5y percentile and the expected 1y P&L (assuming the curve remains unchanged) of 19bps lies in its 97th 5y percentile – both of which are the highest across long, short pairs
i) Long Dec24 ESTX50 divs (ref 115.2)	23-Nov-21	115.2	Dec24	Dividends are set to benefit from higher inflation and a recovery in earnings, while implied yields remain low. Risks: Dividends realising less than current implied levels. S&P dividends rising (falling) less (more) than ESTX50 divs will see the relative value trade underperform
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-24	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
Buy SX5E Dec24 div future at 113.4, which is over-pricing recession risk	22-Nov-22	113.4	Dec-24	Dividends are likely to be resilient and backwardation in the div curve creates value that has favourable risk/reward vs bear scenarios. We estimate 2024 dividends may have 8-10% ann. upside potential
Buy ESTX50 Dec24 70% UpVar funded by ESTX50 Dec24 Var to collect 3.5v (spot ref. 4167.37)	26-Sep-23	3.5v	26-Dec-24	Wings of carry: Harvest longer-dated ESTX50 var vs upvar
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-24	Alpha from still-stressed variance premia for long or short volatility
Harvest SPX var premium: Buy SPX Dec24 60% upvar replication, funded by Dec24 Var to collect 3.0v (SPX spot ref: 4508.24)	21-Nov-23	3.0v (Credit)	Dec-24	Alpha from still-stressed variance premia for long or short volatility
Buy SX7E Dec24-Dec25 Forward Var corridor replication* for 22.4v (~6v discount with replication, spot ref: 118.66).	17-Jan-24	22.4v	Dec-24	How to buy EZ Banks vol on the cheap
Buy SX8P 90% Upvar for 20.9v and buy ASML and SAP Dec24 ~90% Upvar replication* for 27.7v and 21.1v, respectively (spot refs: 859.50 and 164.24)	21-Feb-24	20.9/27.7/21.1v	Dec-24	EU Tech better than "magnificent"? Leverage low vol & hedge potential melt-up
Buy 1x SX7E Dec24 25d (~112%f) call, fully funded by a SXXP Dec24 35d (~104%f) call (spot refs: SX7E: 123.20, SXXP: 497.24)	27-Feb-24	0%	Dec-24	Record cheap upside RV: Long/short Dec24 calls on EZ Banks vs STOXX600
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
Long SX5E Dec24 5425 (31d) call fully funded by selling a Dec25 168 (38d) call on the DED25 div future (spot refs: DED25: 163.7; SX5E: 5077.08)	14-May-24	0	Dec-24	SX5E upside at 0 cost by fading toppish dividends via long/short equity/div call RV
Short a SX5E Jun26 call ratio -1x 5100 (50d) +2x5600 (35d) for 42bps (spot ref: 5016, net delta: +0.21, net vega: €25) with the intention of unwinding early (say in 6m)	04-Jun-24	42bps	Dec24	Own SX5E vega cheaply with vol at 2-decade lows via short call ratios
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 may payout ratio)	16-Jul-24	0.50%	Jun-25	Taiwan risk: Unlikely but high impact; low-cost tail hedge for 40x max payout
Long Dec24 SX7E (EZ Banks) vs SX6P (EU Utils) 102.5% outperformance option, contingent on the SX7E up at expiry, for 3.48%.	22-Jul-24	3.48%	Dec-24	European Banks vs Utilities outperformance attractive
Long Dec24 FTSE 100 35d – 15d call spreads for 1.1% (4.1x max payout ratio, spot ref: 8168.10)	12-Aug-24	1.1%	Dec24	Low vol, 'Anti-Nasdaq' & defensive – more reasons for FTSE 100 upside
Buy SX5E Jun25/Dec25 floating (110% of spot) FVA call for 1.1% (14v)	19-Aug-24	1.1%	Jun25	Leverage record-low SX5E forward-starting implied volatility.
Buy SX5E Mar25 35d-15d put spreads for 1.7% (5.5x max payout ratio)	19-Aug-24	1.7%	Mar25	Steep put skew offer cheap longer-dated downside protection in Europe if recessionary risks rise.
Buy DAX Dec24 90% upvar at 14.0v (versus a fair variance ref of 16.8v).	27-Aug-24	14.0v	Dec-24	Hedge a risk in DAX volatility via long upvar into year-end
Short V2X Oct24 17 put and long V2X Dec24 15 put for +0.25v indicatively (V2X Oct24 & Dec24 refs: 18.45v and 16.95v, respectively)	4-Sep-24	+0.25v	Dec-24	V2X put calendars attractive to cheaply position for post US-election vol reset
Long SX7E Mar25 90% Upvar replication* for 19.8v (spot ref: 140.83)	9-Sep-24	19.8v	Mar25	Hedge growth risks to EZ banks efficiently via dividend RV & var replication
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 a Dec24 102% outperformance option on DAX over SX5E for 29bps, contingent on both indices being up (73% discount vs the vanilla outperformance)	21-Oct-24	29bps	Dec24	DAX over SX5E for a cheap upside hedge as the index shrugs off Germany risks
Buy SPX over RTY 103% Jun25 outperf. call cont. on RTY up	26-Nov-24	0.59%	20-Jun-25	High rates & AI boom likely to keep large-cap Tech mkt leader. Owing to 98th %ile RTY vol vs SPX vol, the contingent trade costs just 18% as much as vanilla & would have paid off 67% as often in the last 10y.
Buy SPX Mar25 95% put contingent on 10y SOFR > ATMF+15bps	26-Nov-24	0.53%	21-Mar-25	Long-end rates unanchoring (on inflation or fiscal concerns) is a major risk to the bull market. Sell positive implied correlation and get a 65% discount on S&P puts.
Buy SPX over SX5E Mar25 ATM outperf call cont. on EURUSD down	26-Nov-24	2.21%	21-Mar-25	US election results support case for continued US over EU outperf., but policy and positioning risks are real. The contingent option costs 57% as much as vanilla & would have paid off 69% as often since '08.
Buy NDX Dec25 ATM upvar for 17v indicatively (t & t-1 convention, Dec25 var ref. 25.1v)	26-Nov-24	17v	19-Dec-25	Dislocations in deep OTM put skew have created a historically attractive entry point for upside conditioned variance relative to unconditional variance.



**Table 1: Summary of open trades as of 17-Mar-25**

Summary of open trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
Buy NDX Dec25 80% upvar for 20.15v indicatively (t & t-1 convention, Dec25 var ref. 25.1v)	26-Nov-24	20.15v	19-Dec-25	Dislocations in deep OTM put skew have created a historically attractive entry point for upside conditioned variance relative to unconditional variance.
Buy SX5E Mar25 calls vs short SX6P (Utilities) calls for a small credit.	26-Nov-24	8 bps credit	21-Mar-25	We find it prudent to have cheap upside hedges on in Europe in case of a positive surprise as few expect this or are positioned for it. SX5E vol is low compared to SX6P, beneficial for call relative value.
Buy a SX5E vs SX6P Mar25 ATM outperformance call conditioned on SX6P up at expiry	26-Nov-24	1.3%	21-Mar-25	We find it prudent to have cheap upside hedges on in Europe in case of a positive surprise as few expect this or are positioned for it. SX5E is positively correlated to SX6P, helping to cheapen the price of outperformance options.
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%	20-Jun-25	We anticipate the coming months to be rife with US trade policy discussions. Swings in the USD are to be expected and a call on return dispersion on low(er) vol, USD-sensitive stocks can offer a way to position for currency volatility.
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 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%	19-Dec-25	Taiwan risk: Low-cost tail hedge for 22x max payout
XUA Jun25 110% 130% call spreads for 2.94% (indic. 22% delta)	26-Nov-24	2.94%/1.02 %	13-Jun 25	China > Japan: Hedging a reversal of the ABC trade
Partially funded by selling a NKY Jun25 110% call conditional on US 2yr rates lower, for 1.02% (47% of vanilla, corr bid @0.1, indicative only)				
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	Apr25	Hedge risk from unanchored rates via equity-rates hybrids that sell rich implied correlation
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) +1x HSCEI delta 1 / +1x 6,300 put / -1x 7,800 call. (Mar fut ref 6,900, 12.3 delta, Vols: 28.5% / 25.8%)	13-Jan-25	0.17%	Mar 25	Rare asymmetric HSCEI upside with limited downside risk
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%	Apr-25	Position for global coordinated rally in case of friendlier trade relations.
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%	Apr-25	Nikkei upside trade: Call ratios for 6.1x max payout
Buy NDX Dec25 ATM upvar for 16.8v indicatively (t & t-1 convention)	27-Jan-25	16.8v	Dec25	Own upside vol at historic entry point with NDX upvar
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	HKD 8	21-Mar-25	DeepSeek improving China sentiment? Add HSCEI overlaid by risk reversals
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%	Apr25	Leverage negative correlation of co-moving gold & rates with 10x payout hybrids
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
Sell VIX Mar 15 put to buy VIX Mar 20/30 call spread for indicatively \$0.44 (22.7x max payout ratio; UXHS ref. 17.55)	10-Feb-25	\$0.44	Mar25	Monetize VIX floor by selling 15-strike VIX put and cheapen vol hedge to get 22x max payout.
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%	Jun25	Unloved EU Autos can race ahead in a beta-fuelled rally; leverage the extreme flat call skew for over 10x upside
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%	Mar-25	Own China + US AI "barbell" cheaply & with limited risk
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 XIN91 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%	27-Jun 25	China laggards: FTSE China A50 call spreads for 4.5x max payout
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%	Jun25	EZ Banks lead but hedge EU risks &/or rotation into US banks from deregulation
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	\$42.6	Apr25	With vol off the lows and skew steeper than 2024 levels, hedge continued rotation out of tech via S&P put spreads.
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	Apr25	Leverage record high RSP-SPY vol ratio to enter into calls vs call spreads to directionally trade rotation out of tech.
Buy HYG May 79-77 put spread for \$0.36 (5.5x max payout, ref. 79.585).	3-Mar-25	\$0.36	May-25	Historic entry point for HYG put spreads as credit discounts growth risks
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%	Sep-25	Buy the NKY & USD/JPY dips at limited risk: 6.3x payout via dual digitals
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	\$39.2	Jun25	Hedge grind lower in equities as vol and skew pick up
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%	Jun25	Hedge hard landing risk by targeting equity lower, rates lower scenario.
Buy an HSCEI 16-May-25 9,100 9,700 10,300 call fly for HK\$77.5 (~0.9%, 6d, Vols: 28.5 29.9 31.2, Options on futs, Spot/May fut refs: 8,725/8,757, +1x 9,100 call/-2x 9,700 calls/+1x 10,300 call)	10-Mar-25	0.9%	16-May-25	Replacing HSCEI longs with low premium 7.7x max payout call flies
Buy VIX Jun 25/35 call spread for 89c indicatively (11.2x max payout ratio; UXM5 ref. 20.01)	17-Mar-25	\$0.89	Jun25	Own forward vol with limited risk to hedge second leg lower in equities and benefit from flat vol term structure
Buy XLI May 125 puts for \$1.53 or 1.15% (ref. 132.72)	17-Mar-25	\$1.53	May25	Hedge laggard cyclical catch down in case of traditional growth shock
Buy HYG May 78-76 put spreads for \$0.39 (5x max payout, ref. 79.00)	17-Mar-25	\$0.39	May25	Hedge laggard cyclical catch down in case of traditional growth shock



**Table 1: Summary of open trades as of 17-Mar-25**  
Summary of open trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Expected Trade Term	Rationale
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	Apr-25	4.6x max payout Nifty call spreads as India might fare better amid US tariffs

**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".

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# Summary of Closed Trades (17-Mar-25)

**Table 2: Summary of closed trades as of 17-Mar-25**

Summary of closed trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy VSTOXX Feb24 30 calls for 1.1v or V2X Feb24 25-40 call spreads for 1.0v indicatively (max payout ratio of 15x, futures ref 18.2).	06-Nov-23	1.1v or 1.0v	0	16-Feb-24	Trade expired
Buy NKY 8-Mar-24 104% 110% call spreads for 0.95% (20% delta, 6.3-to-1 max payout ratio; vols: 18.45% 18.84%; spot ref: 36.022)	17-Jan-24	0.95%	6%	8-Mar-24	Trade expired ITM
Buy NKY 8-Mar-24 38,000/39,000 1x1.5 call ratios for JPY 113 (-0.30% of spot; +1x 38k calls, -1.5x 39k calls; 9% delta and 8.9-to-1 max payout ratio; vols: 16.50% 16.81%; spot ref: 36.897)	13-Feb-24	0.3%	1.8%	8-Mar-24	Trade expired ITM
Buy Mar24 volswap dispersion basket (vega-neutral) on a basket: MBG GY (34.66%), STLAM IM (25.45%), BMW GY (20.23%), VOW3 GY (14.83%), RNO FP (4.83%) and sell the SXAP volswap.	8-Aug-23	4.0v	5.3v	15-Mar-24	Trade expired ITM
Buy Mar24 40-delta strangles on EU-Banks (SX7E), Autos (SXAP), Basic Resources (SXPP) and Energy (SXEP) sectors, equally-weighted and partially fund them by the sale of a Mar24 50-delta straddle on the STOXX600 (SXXP) index, for a net indicative premium of 1.6%	31-Oct-23	1.6%	-6.0%	15-Mar-24	Trade expired
Buy a Dec23 95% mileage put on the SX5E with a vol-budget of 15% for 1.55%.	8-Aug-23	1.55%	0%	15-Mar-24	Trade expired
Buy SPX Mar24 4200 puts contingent on 2Y SOFR > 5% for \$32 (63% discount to vanilla put, 0 correl bid, ref. 4460 & 4.87%)	12-Sep-23	\$32	0	15-Mar-24	Trade expired
Buy SPX Mar24 4200 puts contingent on 2Y SOFR > 5% for \$53 (57% discount to vanilla put, indicative implied correl of 0%, ref. 4337.44 & 4.67%)	26-Sep-23	\$53	0	15-Mar-24	Trade expired
Buy SPX Mar24 105% call contingent on 2Y SOFR between ATMf & ATMf-50bps for 58bps (55% discount to vanilla, +10/+17 equity/rates correl bid/offer, ref. 4504 & 4.45%)	21-Nov-23	58bps	0	15-Mar-24	Trade expired
Trade 1: Buy a 14-Mar-24 NKY KOSPI2 AS51 85% 65% Best of put spread for 0.77% (26x max payout, 49% discount to avg. vanilla puts)	10-May-23	0.77%/0.86%	0/0	14-Mar-24	Trade expired
Trade 2: Buy a 14-Mar-24 NKY KOSPI2 SX5E 85% 65% Best of put spread for 0.86% (23x max payout, 47% discount to avg. vanilla puts)					
Buy KOSPI2 14-Mar-24 310 345 360 call spread collars for KRW 1.96 (Short 1x put and long 1x call spread; 34% delta and 7.7x max payout ratio; vols: 18.35%, 15.80%, 15.39%; spot ref: 334.73)	17-Jan-24	KRW 1.96	KRW 15	14-Mar-24	Trade expired ITM
MarQ SPX 95% puts contingent on 2Y SOFR > ATMf+25bps for 35bps (51% disc. to vanilla, -4 correl bid, ref. 4697.24 & 4.25%)	9-Jan-23	35bps	0	28-Mar-24	Trade expired
MarQ 4500/4250 put spread for \$19.60 (approx. 95%/90% moneyness of spot; 18 delta/10 delta) for \$19.60 (12.8x max payout ratio)	9-Jan-23	\$19.60	0	28-Mar-24	Trade expired
Buy MarQ SPX > SX5E outperformance calls contingent on SPX < 100% qto USD for 1.05% indic. (50% discount vs unconditional, 70 correl bid, spot ref. 4851, 4480)	23-Jan-24	1.05%	0	28-Mar-24	Trade expired
Buy MarQ SPX > SX5E outperformance calls qto USD for 2.15% indic. (70 correl bid, spot ref. 4851, 4480)	23-Jan-24	2.15%	0	28-Mar-24	Trade expired
Buy IWM 12Apr 208-212 call spreads for \$0.86 (4.7x max payout, 30-15 delta, ref. 203.77)	5-Apr-24	\$0.86	0	12-Apr-24	Trade expired
Buy NKY 12-Apr-24 41,000 42,000 1x1.5 call ratios for JPY 107 (-0.27% of spot; +1x 41k calls, -1.5x 42k calls; 3% delta and 9.4x-to-1 max payout ratio; vols: 17.7% 17.9%; spot ref: 40,109)	5-Mar-24	0.27%	0	12-Apr-24	Trade expired
Long Kospi2 and sell a 1-month 103% call option for 0.77% (~9.2% yield per annum, indic. spot ref: 361.31, 27% delta, 15.9 vol)	18-Mar-24	0.77%	0	11-Apr-24	Trade expired
Buy VSTOXX Apr24 18-25 call spread, part-funded by a Mar24 13 put for 0.73v indicatively (Apr24 fut ref: 16.7, Mar24 fut ref: 16.0).	09-Jan-23	0.73v	0.02v	17-Apr-24	Trade expired
Buy VIX Apr24 14.5 calls for \$0.89 (fwd ref. 14.45)	25-Mar-24	\$0.89	\$3.53	17-Apr-24	Trade expired ITM
Consider selling SX5E May24 -4900+4850 (1x2) put ratios and pay 74bps upfront (spot ref: 4935), hedged or unhedged.	23-Apr-24	74 bps	0	17-May-24	Trade expired
Buy IWM May 212-225 call spreads for \$3.34 (3.9x max payout, 40d-18d, ref. 205.24)	11-Mar-24	\$3.34	0	17-May-24	Trade expired
Buy IWM May 185-175 put spreads for \$1.11 (9x max payout, ref. 195.78)	16-Apr-24	\$1.11	0	17-May-24	Trade expired
Buy SPY May 510-525 call spreads for \$5	29-Apr-24	\$5.00	\$15.00	17-May-24	Trade expired ITM
Fully finance a NIFTY 30-May-24 22,500 call by selling a NIFTY 27-Jun-24 23,700 call (indic. +13% delta, vols: 13.0/18.7, spot ref: 22,004). Consider delta hedging	14-may-24	0	0.03%	30-May-24	Trade expired
Buy a 13-Jun-24 NKY KOSPI2 SX5E 90%-70% Best of put spread for 0.85% (qUSD, 24x max payout, 52% discount to avg. vanilla)	06-Nov-23	0.85%	0	13-Jun-24	Trade expired
Buy KOSPI2 Jun-24 variance against NKY variance at -4.25% KOSPI2 var offered at 18.10% vs NKY var bid at 22.35% (Indic. Sep fut refs: 346.00 and 32.670)	25-Jul-23	-4.25%	+1.63%	Jun-24	Trade expired
Long 1.5x SX7E Jun24 132 (50d) calls and short 1x Mar25 142.5 (40d) call for indicatively 0 upfront premium (spot ref: 135.69).	25-Mar-24	0	15.5%	Jun-24	Trade expired ITM
Consider Jun24 SX7E vs SX5E ATM outperformance, contingent on SX5E being up at expiry for 0.91%, a discount of 53% vs vanilla outperformance (spot ref: SX7E: 127.30, SX5E: 4925.73)	12-Mar-24	0.91%	0	Jun-24	Trade expired
Buy SX8P Jun24 900 calls for 2.3% (33d, 19v; Mar fut ref: 848)	21-Feb-24	2.3%	0	Jun-24	Trade expired
Replicate an SX7E Jun24 varswap at 24.8v with just 5 puts and 5 calls with strikes ranging from €70 to €135 (~10d, SX7E ref: 104.37).	23-May-23	24.8v	16.6v	Jun-24	Trade expired
Long SX5E Jun24 90% put (20d) for 1.7% (ref: 4340), short iTraxx Main S40 5y CDS at 69bp. Credit/equity notional =1.61x (8.1x delta-adjusted). Sizing such that CDS carry & roll P&L in 6m funds -65% of the equity put premium.	21-Nov-23	1.7%	9 bps	Jun-24	Trade expired
Sell 1x Jun24 4850 call, buy 1.5x Aug23 4425 calls	11-Jul-23	\$0.40 credit	-\$118.37	18-Aug-23	Trade exited in Aug23
Buy a Jun24 Mag7 40D equal-weight basket of calls (AAPL @ 205, MSFT @ 430, NVDA @ 700, AMZN @ 175, META @ 435, GOOGL @ 165 and TSLA @ 215, equal notional) for 5.18% offer (spot refs. 191.73, 409.72, 624.65, 161.26, 401.02, 153.51, 190.93)	29-Jan-24	5.18%	18.55%	21-Jun-24	Trade expired ITM
Buy a Jun24 Mag7 40D equal-weight basket of calls (see Trade #1), sell an equal notional of Jun24 XLK 215 calls for 2.92% (40D equiv. strike on XLK, spot ref. 203.60)	29-Jan-24	2.92%	12.09%	21-Jun-24	Trade expired ITM
Buy Jun24 QQQ 450 calls, sell an equal notional of IWM Jun24 210-220 call spreads for 1.36% (40D equiv. strike on QQQ, 40D-25D equiv. strikes on IWM, spot refs. 428.15, 199.36)	29-Jan-24	1.36%	7.05%	21-Jun-24	Trade expired ITM
Buy SMH Jun24 110%/130%/150% call fly (+1x/-2x/+1x) for 2.24% (spot ref. 210.35)	26-Feb-24	2.24%	15.93%	21-Jun-24	Trade expired ITM
Buy NVDA Jun24 105% calls contingent on 2y SOFR > ATMS for 5.95% (37% discount to vanilla, ref. 785, 4.56%, +0.2 correl offer). Risk limited to upfront premium paid.	26-Feb-24	5.95%	49.12%	21-Jun-24	Trade expired ITM
Buy HYG Jun 75-72 put spreads for \$0.36 (8x max payout, 25d-6d, ref. 77.34)	11-Mar-24	\$0.36	0	21-Jun-24	Trade expired
Buy IWM Jun ATM call contingent on 10Y SOFR between ATMf-ATMf+50bps for 2.25% (54% disc. vs vanilla call, 15 correl offer, ref. 205.24, 3.673%)	11-Mar-24	2.25%	0	21-Jun-24	Trade expired
Buy IWM over QQQ Jun-24 3% outperf. call for 2.43% (+55 correl bid, ref. 201.96 & 438.71)	18-Mar-24	2.43%	0	21-Jun-24	Trade expired
Buy SPX Jun24 5050 puts (~25D strike) for \$55.20, with an initial offsetting long delta position on the underlying index (spot ref. 5218.19).	25-Mar-24	\$55.20	\$61.61	21-Jun-24	Trade expired ITM
Buy XLE Jun 100-105 calls for 0.66% (4.6x max payout, 34-15 delta, ref. 95.59)	22-Apr-24	0.66%	0	21-Jun-24	Trade expired
Buy USO Jun 85-90 call spread for \$0.91 (5.5x max payout, 30-15 delta, ref. 78.78)	22-Apr-24	\$0.91	0	21-Jun-24	Trade expired
Buy QQQ Jun 445/470 call spread for \$6.39 (3.9x max payout, 40-10 delta, ref. 432.75)	30-Apr-24	\$6.39	\$25	21-Jun-24	Trade expired ITM



**Table 2: Summary of closed trades as of 17-Mar-25**

Summary of closed trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy SMH Jun 230/240/250 call fly (+1x/-2x/+1x) for \$1.29 (7.8x max payout, 38-25-15 delta, ref. 218.38)	30-Apr-24	\$1.29	0	21-Jun-24	Trade expired
Buy HYG Jun 76-73 put spreads for \$0.30 (~25D-5D strikes, 10x max payout ratio, spot ref 77.1).	7-May-24	\$0.30	0	21-Jun-24	Trade expired
Buy VIX Jun 15.5-20 call spreads for \$0.57 (7.9x max payout ratio, futures ref. 14.71).	7-May-24	\$0.57	0	18-Jun-24	Trade expired
Buy HSCEI 21-Jun 6,500 calls funded by selling 5,200/5,700 put spreads for HK\$103 (~1.64% of spot) (Indicative, 49% delta, Options on Futures [OOF], May fut ref: 6,292)	30-Apr-24	HK\$103	0	21-Jun-24	Trade expired
Buy HSCEI 21-Jun 6,800 calls funded by selling 5,500/6,000 put spreads for HK\$72.7 (~1.11% of spot) (Indicative, 46% delta, Options on Futures [OOF], May fut ref: 6,536)	7-May-24	HK\$72.7	0	21-Jun-24	Trade expired
Buy NVDA Sep24 840 calls for \$97.30 with an initial partially offsetting short delta position on the underlying stock (spot ref. 790.92).	26-Feb-24	\$97.30	\$263.66	8-Jul-24	Exited early at a profit
Buy a 20-Sep-24 105% Worst of Call (WoC) on 5 global AI-linked stocks for 2.05% (qUSD, 76% discount to avg. vanilla call): NVIDIA (US), ASML (EU), TSMC (Taiwan), Samsung Elec (Korea) and Tokyo Electron (Japan)	25-Mar-24	2.05%	TBD	9-Jul-24	Taking early profit
Buy KOSPI2 vs NKY Jun-24 delta-hedged ATM straddles at -2.82% (indic.)					
KOSPI2 Jun24 ATM Straddles cost 10.85% (14.88 vol, spot ref 344.32)	25-Jul-23	-2.82%	+0.4%	Jun-24	Trade expired
NKY Jun24 ATM Straddles cost 13.15% (17.70 vol, spot ref 32,701)					
Buy NIFTYM 27-Jun-2024 1x1.5 23,750 24,250 call ratio for 59					
Max payout ratio 8.5x; upside break-even at 25,191 (+10.1% from here)	28-May-24	0.3%	1.3%	27-Jun-24	Trade expired
(indic. Spot ref: 22,888, 2.6% delta, -0.01% vega, 20.2/19.6% vols)					
Buy NIFTYM 27-Jun-2024 1x1.5 24,000 24,500 call ratio for 55					
Max payout ratio 9.1x; upside break-even at 25,445 (+9.4% from here)	04-Jun-24	0.24%	0.2%	27-Jun-24	Trade expired
(indic. Spot ref: 23,264, 4.3% delta, -0.01% vega, 18.6/18.8% vols)					
COQ4 > 95.25 & EURUSD < 98.5%*spot 25-Jun-24 expiry dual digital for 8% indic. (12.5x max payout ratio, correl bid = -0.12, ref. 88.25, 1.0855)	8-Apr-24	8%	0	25-Jun-24	Trade expired
COQ4 > 95.25 & USDCAD > 101.5%*spot 25-Jun-24 expiry dual digital for 7.8% indic. (12.8x max payout ratio, correl offer = +0.05, ref. 88.25, 1.3575).	8-Apr-24	7.8%	0	25-Jun-24	Trade expired
Long V2X Jun24 20 call for €0.425 (Jun fut. ref: 14.55)	14-May-24	€0.425	0	16-Jul-24	Trade expired
Buy SPX 1y 95% put for indicatively 3.48% (ref. 4556.64)	25-Jul-23	3.48%	0	22-Jul-24	Trade expired
Buy SPX 1y 95-75% put spread for indicatively 2.44% (8.2x max payout, ref. 4556.64)	25-Jul-23	2.44%	0	22-Jul-24	Trade expired
GLD Jul 225-235 call spread for \$2.3 (4.3x max payout, ref. 216.5).	8-Apr-24	\$2.30	0	22-Jul-24	Trade expired
SLV Jul 27-30 call spread for 59c (5.1x max payout, ref. 25.4).	8-Apr-24	\$0.59	0	22-Jul-24	Trade expired
HYG Jul24 74-71 put spread for 30c (10x max payout, 25-delta/10-delta strikes, ref. 76.425).	11-Apr-24	30c	0	22-Jul-24	Trade expired
Buy VIX Jul 16/26 call spread for \$0.53 indicatively (~18.8x max payout ratio, ref. 14.3967 in UXN4).	24-Jun-24	~\$0.53	0	22-Jul-24	Trade expired
Sell 1x NKY 1y 95-75% put spread, buy 2x SPX 1y 95-75% put spreads for ~zero cost (ref. 32700.94 & 4556.64)	Jul-24	0	0	22-Jul-24	Trade expired
Buy HSCEI 19-Jul-24 6,600 / 6,900 / 7,200 call fly financed by selling a 5,700 put for a HK\$5 (-0.08%) -1x 5,700 put / +1x 6,600 call / -2x 6,900 calls / +1x 7,200 call (indic. OOF, June fut ref: 6,466, +18% delta, -0.1% vega)	19-Jul-24	HK\$5	0	22-Jul-24	Trade expired
Buy QQQ Aug24 455/440 put spread for \$3.36 (4.5x max payout ratio, ref. 463.9, ~34D/-16D strikes).	29-Jul-24	\$3.36	\$7.69	5-Aug-24	Exited early at a profit
Buy QQQ 5-Aug-24 490-500 call spread for \$2.78 indicatively (3.59x max payout, ~36D-16D strikes, ref. 482.32)	22-Jul-24	\$2.78	0	5-Aug-24	Trade expired
Sell 1x SPX 12m 110% call, buy 1x SPX 12m 90% put (ref. 4588.96)	1-Aug-23	\$7.62 credit	\$483 debit	16-Aug-24	Trade expired ITM
Sell 1x SPX 12m 110%-120% call spread, buy 1x SPX 12m 90% put (ref. 4588.96)	1-Aug-23	\$19.82	\$458 debit	16-Aug-24	Trade expired ITM
Buy SPX Aug24 5500-5300 put spread for \$30.8 indicatively (6.49x max payout, ~33D-11D strikes, ref. 5564.41).	22-Jul-24	\$3.63	0	16-Aug-24	Trade expired
Buy IWM (Russell 2000) Aug24 228/238 call 1x1.5 for \$1.78 (5.6x max payout ratio, ref. 222.06, ~35D/-13D strikes)	29-Jul-24	\$1.78	0	16-Aug-24	Trade expired
Buy 1x VIX Sep 25 put, sell 1x VIX Oct 25 put for zero upfront cost indicatively (UXU4 ref. 30.39111, UXV4 ref. 27.3048)	5-Aug-24	-\$0	\$1.20 credit	27-Aug-24	Exited early at a profit
Sell 1x KOSPI2 3-motnh 105% call against 1x NDX 3-month 105% call for zero cost (both 105% of forward) (Indic., both 28.5% delta & 15.8% vol; forward refs: 375.29 & 18,365)	7-May-24	0	0	8-Aug-24	Trade expired
Buy NKY 3-month 103% 110% call spreads funded by selling 95% 88% put spreads for 0.48% (spot ref: 39,070, +42% delta) +1x 103% call / -1x 110% call / -1x 92% put / +1x 85% put	21-May-24	0.48%	0	9-Aug-24	Trade expired
Buy 29-Aug NIFTYM "bullish condors" and collect \$149 (indic. listed, ~0.61% of spot, corresponding to 7.3% annualised yield)					
+1x 22,800 put / -1x 23,800 put / -0.5x 25,500 call / +0.5x 26,500 call	22-Jul-24	\$149	0	29-Aug-24	Trade expired
Buy SPY 6-Sep 555-545 put spreads for \$1.81 offer over 5x max payout, ref. 561.07	25-Aug-24	\$1.81	\$10.00	6-Sep-24	Trade expired ITM
Sep24 SXPP > UKX 105% outperformance call, contingent on UKX > 0 at expiry, for 2.17% (implied correl: 58%, fwd: 99.9% for SXPP; 100.5% for UKX)	09-Apr-24	2.17%	0	20-Sep-24	Trade expired
Buy a Sep24 Dual digital that pays out if SXSE < 4600 (25d) & oil (COX4) > 94 (25d) for 5.6% indicatively (refs VGM4: 4900; COX4: 83, correl bid: -15%).	23-Apr-24	5.6%	0	20-Sep-24	Trade expired
Buy a Sep24 SXSE 105% (~30d) call contingent on EURUSD < 1.055 (33d) for 55bps indicatively, a ~65% discount vs vanilla call (vanilla ref 1.58%).	23-Apr-24	55 bps	0	20-Sep-24	Trade expired
Long SXSE Sep24 97.5% put conditioned on EURUSD > 1.09 for 86bp (~60% discount vs vanilla put, EURUSD spot ref: 1.078).	7-May-24	86bps	38bps	20-Sep-24	Trade expired ITM
Long SXSE Sep24 €4700 put (30d, ref: €4815.4) for 1.25%, sell RSP Sep24 \$166 put (30d ref: \$170.2) for 1.06%.	30-Jul-24	1.06%	0	20-Sep-24	Trade expired
Buy an SPX Sep24 95% resettable put with single monthly reset until Jun24 and reset barrier of 105% for 2.22% indic. (34bp premium to vanilla, spot ref. 5123.69)	11-Mar-24	2.22%	0	20-Sep-24	Trade expired
Buy an SPX Sep24 95% max lookback put with reset in Jun24 (monthly observation) for 2.58% indic. (70bp premium to vanilla, spot ref. 5123.69)	11-Mar-24	2.58%	0	20-Sep-24	Trade expired
Buy INDU, NDX & RTY Sep 100% call on an equally weighted basket, sell equal notional of INDU, NDX & RTY Sep 100% worst-of calls for 3.35% (44% discount to average individual call, spot ref. 38790.43, 17985.01, 2024.74)	18-Mar-24	3.35%	1.07%	20-Sep-24	Trade expired ITM
Buy EFA 103% Sep24 calls contingent on EURUSD < ATMs for 47bps (65% discount to vanilla, +0.33 correl bid, ref. 81.17, 1.0755)	10-Jun-24	47bps	0	20-Sep-24	Trade expired
Buy SPW > SPX Sep24 ATM outperformance call for 1.75% offer (+80 correl bid, ref. 6725.85, 5447.87)	24-Jun-24	1.75%	1.94%	20-Sep-24	Trade expired ITM
Buy SPW > SPX Sep24 ATM outperformance call contingent on SPX > 100% at expiry for 0.87% offer (50% discount to unconditional, +80 correl bid, ref. 6725.85, 5447.87)	24-Jun-24	0.87%	1.94%	20-Sep-24	Trade expired ITM





**Table 2: Summary of closed trades as of 17-Mar-25**

Summary of closed trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy VIX Sep 35/50/65 call fly (+1x/-2x/+1x) for ~\$1 indicatively (theoretical mid pricing + bid-offer TBD at time of trade), ~15x max payout ratio, UUX4 ref. 30.3911)	5-Aug-24	~\$1	0	18-Sep-24	Trade expired
Buy HYG Sep 75/72 put spread for \$0.24 indicatively (12.5x max payout ratio, ~23D/11D strikes, ref. 77.22)	5-Aug-24	\$0.24	0	20-Sep-24	Trade expired
Buy QQQ Sep 480/500 call spread for \$3.12 indicatively (6.4x max payout ratio, ~19D/8D, ref. 435.37)	5-Aug-24	\$3.12	\$2.44	20-Sep-24	Trade expired ITM
Buy XLP Sep 83/81 put spread for \$0.40	16-Sep-24	\$0.40	0	20-Sep-24	Trade expired
Buy CSI 1000(1) 20-Sep-24 110% calls for 4.98% (+27d, 37.3v)	5-Feb-24	4.98%	0	20-Sep-24	Trade expired
Buy a 12-Sep-24 105% Worst of call on NKY, KOSPI2 & TWSE for 0.74% (qUSD, 70% discount to avg. vanilla calls)	25-Mar-24	0.74%	0	12-Sep-24	Trade expired
Buy NKY 13-Sep-24 42,500 44,000 1x1.5 call ratios for JPY 236 (~0.57% of spot; +1x 42.5k calls, -1.5x 44k calls; 8% delta and 6.3x-to-1 max payout ratio; vols: 16.6% 16.3%; spot ref: 41,190)	16-Jul-24	JPY 236	0	12-Sep-24	Trade expired
Sell KOSPI2 12-Sep-24 350 365 390 PSC for a KRW 0.48 debit (~0.13% of spot. Spot ref: 374.20, 45% delta, 19.1v/17.9v/16.2v)	29-Jul-24	0.48 debit	15	12-Sep-24	Trade expired ITM
Sell NKY 13-Sep-24 105% calls and buy 13-Dec-24 105% 112% call spreads for 0.46% (indic. Spot ref: 35,609, vols: 27.5/22.6/20.9)	12-Aug-24	0.46%	0	13-Sep-24	Trade expired
Buy SPY 40Oct 580-585 call spreads for \$0.82 (6x max payout, ref. 571.47)	30-Sep-24	\$0.82	0	4-Oct-24	Trade expired
6m SPX>RTY 3% outperformance calls for 3.24% (72 correl bid, ref. 5071 & 1975)	16-Apr-24	3.24%	0	18-Oct-24	Trade expired
6m SPX>RTY 3% outperformance calls contingent on RTY up at expiry for 0.61% (81% discount to vanilla).	16-Apr-24	0.61%	0	18-Oct-24	Trade expired
Buy SPX Oct24 5450-5250 put spread for \$25.8 indicatively (~31D/~17D strikes; 7.7x max payout ratio; ref. 5608.25).	19-Aug-24	\$25.80	0	18-Oct-24	Trade expired
Sell VIX Oct24 17 puts (~36D strike, UUX4 ref. 17.92) to buy SPX Dec24 5450-5000 put spreads (~34D/~14D strikes, ref. 5608.25).	19-Aug-24	\$0.00	\$61.60	16-Oct-24	Trade closed at expiration of VIX leg
Sizing for zero cost is ~2.2 SPX put spreads for every 100 VIX puts sold.					
Buy SPX Oct24 5550-5300 put spread for \$37.3 indicatively (~34D/15D strikes, 6.7x max payout ratio; ref. 5625.80).	27-Aug-24	\$37.30	0	18-Oct-24	Trade expired
Sell VIX Oct24 17 puts (~39D strike, UUX4 ref. 17.64) to buy SPX Oct24 5550-5300 put spreads (~34D/15D strikes; ref. 5625.80).	27-Aug-24	\$0.00	0	18-Oct-24	Trade expired
Buy SPX Oct24 5400-5150 put spread for \$46 indicatively (~36D/~16D strikes; 5.4x max payout ratio; ref. 5471.05)	9-Sep-24	\$46.00	0	18-Oct-24	Trade expired
Buy SPX Oct24 5400-5200-5000 put fly (+1x/-2x/+1x) for \$21.3 indicatively (~36D/~19D/~10D strikes; 9.3x max payout ratio; ref. 5471.05)	9-Sep-24	\$21.30	0	18-Oct-24	Trade expired
Buy XLU Oct 80 calls for \$0.65	16-Sep-24	\$0.65	\$1.95	18-Oct-24	Trade expired ITM
Sell 1x KOSPI2 3-month 105% call against 1x NDX 3-month 105% call for 0.04% (both strikes 105% of fwd, indic. NDX delta 27.9%, KOSPI2 delta 27.6%, both 15.4% vol; fwd refs: 396.58 & 20.711)	9-Jul-24	0.04%	0	Oct-24	Trade expired
Sell NIFTYM 26-Sep-24 24,000 24,500 25,700 26,200 Iron Condors for \$130 (~0.52% of spot or 6.7% p.a.; spot ref: 25,018) +1x 24,000 put / -1x 24,500 put / -1x 25,700 call / +1x 26,200 call	27-Aug-24	\$130	\$500	26-Sep-24	Call legs expired ITM
Buy FXI Oct24 33-36 call 1x2 (buy 1x, sell 2x) for \$0.41 indicatively. (7.3x max payout ratio, ~37D/13D strikes, ref. 31.805).	30-Sep-24	\$0.41	0	18-Oct-24	Trade expired
Buy an SX7E Nov24 147 call (for 2.1% indic., spot ref 144.47, 40delta, 13bps vega), initially delta-hedged.	07-Oct-24	2.1%	0	Nov-24	Trade expired
Buy SPX > RTY 6m 3% outperformance calls for 2.49% (spot ref. 5187.7, 2064.65)	7-May-24	2.49%	0	15-Nov-24	Trade expired
Buy SPX > RTY 6m ATM outperformance calls contingent on RTY up at expiry for 0.9% (76% discount to vanilla, spot ref. 5187.7, 2064.65).	7-May-24	0.90%	1.6%	15-Nov-24	Trade expired ITM
Buy KRE Nov 60-65 call spreads for \$0.87 (6x max payout, ref. 55.92)	30-Sep-24	\$0.87	\$5.00	15-Nov-24	Trade expired ITM
Buy SPX Nov 5500-5200 put spread for \$37.3 indicatively (8x max payout ratio, ~27D/~12D strikes, spot ref. 5695.94)	7-Oct-24	\$37.30	0	15-Nov-24	Trade expired
Buy VIX Nov 18-16 1x1.5 put ratio (buy 1x / sell 1.5x) for \$0.69 indicatively (2.9x max payout ratio, ~28D/15D strikes, UXX4 ref. 19.47)	7-Oct-24	\$0.69	\$1.35	20-Nov-24	Trade expired ITM
Buy ASHR Nov24 30-35 call spread for \$0.71 indicatively (~35D/10D strikes, 7x max payout ratio, ref. 28.03).	14-Oct-24	\$0.71	0	15-Nov-24	Trade expired
Buy QQQ 31Oct 510 call for \$2.52 or 0.50% (2.5% OTM, 25 delta, ref. 497.50).	14-Oct-24	\$2.52	0	31-Oct-24	Trade expired
Buy QQQ 31Oct 505-515 call spread for \$2.84 (36-16 delta, ref. 497.50).	14-Oct-24	\$2.84	0	31-Oct-24	Trade expired
Buy NIFTYM 31-Oct 24 expiry 23.6k/25.9k risk reversals for 18.5 INR (indic. spot ref: 24,796, 20.6% delta, vols: 16.7% and 11.5%).	7-Oct-24	18.5 INR	0	31-Oct-24	Trade expired
Buy SPY Nov 575-555 put spreads for \$3.35 or 0.57% (6x max payout, 98.5%-95%, 32d-12d, ref. 583.68).	21-Oct-24	\$3.35	0	15-Nov-24	Trade expired
Buy XLF Nov 46 puts for \$0.45 or 0.94% (2.6% OTM, 28d, ref. 47.235).	21-Oct-24	\$0.45	0	15-Nov-24	Trade expired
Buy SPX 1-Nov 5875 call for \$21.3 indicatively (~35D strike, ref. 5823.52).	28-Oct-24	\$21.30	0	1-Nov-24	Trade expired
Sell 1x IWM 8Nov ATM straddle, buy 1.6x SPY 8Nov ATM straddles for zero cost (refs. 222.49, 580.77)	28-Oct-24	\$0.00	-\$4.92	8-Nov-24	Trade expired
Buy SPY 22Nov 610-620 call spreads for \$0.93, over 10x max payout, ref. 598.20).	11-Nov-24	\$0.93	0	22-Nov-24	Trade expired
Buy SPY 22Nov 610-620 call spreads for \$1.03, nearly 10x max payout, ref. 597.87	11-Nov-24	\$1.03	0	22-Nov-24	Trade expired
Buy QQQ 22Nov 490-480 put spreads for \$2	17-Nov-24	\$2.00	0	15-Nov-24	Trade expired
Buy KOSPI2 3-month 90-110 risk reversals for a 0.32% credit (indic. spot ref: 365.52, 30% delta, vols: 22.5% and 16.7%). -1x KOSPI2 3m 90% put / +1x KOSPI2 3m 110% call	19-Aug-24	0.32%	3.08%	Nov-24	Put leg expired ITM
Buy 3x TWSE 20-Nov-24 23,500 calls and sell 1x 20-Nov-24 22,300 call for a total cost of TWS15 (~0.07% of spot, spot ref: 21,850) -1x 22,300 call: \$536, 42d, 19.9v / +3x 23,500 call: \$184, 19.4d, 19.1v	16-Sep-24	0.07%	1.7%	20-Nov-24	Call leg expired ITM
Buy SPY 13Dec 605-600 put spreads cost \$0.83	8-Dec-24	\$0.83	\$0.79	13-Dec-24	Trade expired ITM
Buy 12-Dec-24 110% 130% call spreads on a basket of strong momentum Asia Tech names for 3.7%. 5.4x max payout ratio (indic. quanto USD, equal weighted basket of 3690 HK / 2330 TT / 000660 KS)	24-Jun-24	3.7%	2.69%	12-Dec-24	Trade expired ITM
Buy a 13Dec24 NKY 105% call option contingent on JPY OIS 10y rates > ATMF+20bps at expiry for 1.32% (Correlation offer: -0.05, 63% discount to vanilla; indicative)	30-Apr-24	1.32%	0	13-Dec-24	Trade expired
Buy NDX Dec24 ATM Upvar for 16.3v (t & t-1 convention, Dec24 var ref: 23.9v).	5-Feb-24	16.3v	18.10v	20-Dec-24	Trade expired ITM
Buy NDX Dec24 80% Upvar for 19.6v (t & t-1 convention, Dec24 var ref: 23.9v).	5-Feb-24	19.6v	18.48v	20-Dec-24	Trade expired
Buy XLI 105% Dec24 call contingent on TLT < 97% at expiry for 1.65% (42% discount to vanilla, -0.10 correl bid, ref. 122.71, 90.89).	10-Jun-24	1.65%	0	20-Dec-24	Trade expired
Buy RTY < 95%, TLT > 105% Dec24 dual digital for 10.5% (9.5x max payout, 0 correl bid, ref. 2031.61, 90.89)	10-Jun-24	10.50%	0	20-Dec-24	Trade expired
Buy SPX < 95% / 2y SOFR > ATMs + 25bps Dec24 dual digi for 8.25% indicatively (12.1x max payout ratio, +10 correl bid, ref. 5336.02, 3.8195)	12-Aug-24	8.25%	0	20-Dec-24	Trade expired
Buy SPX < 99% / 2y SOFR > ATMs + 25bps Dec24 dual digital for 6.5% indicatively (15.3x max payout ratio, +9 correl bid, ESU4. ref. 5598.5, 2y SOFR spot ref. 3.85%)	19-Aug-24	6.50%	0	20-Dec-24	Trade expired
Buy SPX < 98% / 2y SOFR > ATMF + 25bps Dec24 dual digital for 9.1% indicatively (~11x max payout ratio, +16 correl bid, SPX spot ref. 5616, 2y SOFR fwd ref. 3.043%).	16-Sep-24	9.10%	0	20-Dec-24	Trade expired



**Table 2: Summary of closed trades as of 17-Mar-25**

Summary of closed trades as of 17-Mar-25

Trade Description	Open Date	Open Level	Close Level	Close Date	Rationale
Buy SPX < 98% / EURUSD < 99.6% Dec24 dual digital for 15.2% indicative (~6.6x max payout ratio, +20 correl offer, SPX spot ref. 5616, EURUSD spot ref. 1.11245).	16-Sep-24	15.20%	0	20-Dec-24	Trade expired
Sell VIX Oct24 17 put to buy VIX Dec24 17 put for net cost of \$1.32 indicatively (UXV4 ref. 18.75, UXZ4 ref. 18.27).	16-Sep-24	\$1.32	\$1.34	18-Dec-24	Trade expired ITM
Buy VIX Dec24 17 / 14 put 1x2 (+1x / -2x) for \$1.27 indicatively (UXZ4 ref. 18.27).	16-Sep-24	\$1.27	\$1.34	18-Dec-24	Trade expired ITM
Buy FXI Dec24 105%-115%-125% appearing call spread (daily obs.) for 2.15% indicatively (9.3x max payout ratio, 12bps/6% premium to vanilla 105%-115% call spread, ref. 32.74).	14-Oct-24	2.15%	0	20-Dec-24	Trade expired
Buy FXI Dec24 105%-120% up & out call (daily obs.) with rebate of 1.6% for 1.06% indicatively (14.1x max payout ratio, 72% discount to vanilla 105% call, ref. 32.74).	14-Oct-24	1.06%	0	20-Dec-24	Trade expired
Buy SPY 31Dec 610-620 call spreads for \$1.72 (ref. 604.27)	15-Dec-24	\$1.72	0	31-Dec-24	Trade expired
Buy SPX < 95% / 2y SOFR > ATMf + 25bps Dec24 dual digital for 5.85% indicatively (17x max payout ratio, +13 correl bid, ESU4 ref. 5625, 2y SOFR fwd ref. 3.41%)	27-Aug-24	5.85%	0	20-Dec-24	Trade expired
Fund NKY Dec-24 36,500 calls by selling 25,000 30,000 put spreads for nearly zero cost (JPY 24 or ~0.07%, spot ref: 33,037, 49d)	06-Sep-23	0.07%	8.9%	13-Dec-24	Trade expired ITM
Sell 0.55x NKY Dec-24 95% 75% put spreads to fund Dec-24 SPX 95% 75% put spread for 0% (indic. spot refs: 4,547 & 33,354)	21-Nov-23	0%	0%	13-Dec-24	Trade expired
Buy NKY Dec-24 105% calls contingent on USDJPY in the [98%, 103%] range for 1.98% (corresponds to [147.0, 154.5] at a 150 JPY ref) (indic. 58% discount to vanilla @4.73%, 55 correl offer)	21-Nov-23	1.98%	12.3%	13-Dec-24	Trade expired ITM
Buy NKY Dec-24 105% calls contingent on USDJPY in the [98%, 103%] range for 1.50% (corresponds to [142.3, 149.6] at a 145.2 JPY ref) (indic. 64% discount to vanilla @4.22%, 46/52 correl bid/offer)	09-Jan-23	1.50%	0%	13-Dec-24	Trade expired
Buy NKY Dec-24 105% calls contingent on USDJPY > 105% for 1.63% (corresponds to 153.9 at a 146.6 JPY ref) (indic. 50% discount to vanilla @3.25%, 60 correl offer)	12-Aug-24	1.63%	0%	13-Dec-24	Trade expired
Buy HSCEI 20-Dec-24 6,500 7,000 call spreads for \$108 (OOF Sep fut ref 6,167, 20 delta, Vols: 21.2% / 21.5%, 4.6x max payout)	4-Sep-24	\$108	\$500	20-Dec-24	Trade expired ITM
Buy NKY 3-month 102% 106% 1x1.5 call ratio for 0.60% (indic. Spot ref: 37,724, 0 delta, -0.06% vega, vols: 21.4/20.4, 6.7x max payout)	23-Sep-24	0.60%	2.6%	13-Dec-24	Trade expired ITM
Buy a HSCEI 20-Dec-24 8,000 9,000 call spread financed by selling a 15-Nov-24 6,800 put for \$99	30-Sep-24	\$99	\$0	20-Dec-24	Trade expired 2.6%
Consider long DAX Dec24 35d-15d put spreads for ~1.2% (spot ref: 18617.01)	27-Aug-24	1.2%	0	24-Dec	Trade expired
Long DAX Dec24 97% put conditioned on EURUSD > 1.12 is offered at 0.6%, > 60% discount vs vanilla.	23-Sep-24	0.60%	0	24-Dec	Trade expired
Long Dec24 DAX < 97% & EURUSD > 1.12 dual digital offered at 10.45% (9.6x max payout).	23-Sep-24	10.45%	0	24-Dec	Trade expired
Buy a 102% Dec24 call on DAX, contingent on SX5E < 103% of spot at expiry for 46bps (71% discount vs vanilla DAX calls)	21-Oct-24	46bps	0	24-Dec	Trade expired
Buy FXI Jan25 106% calls contingent on USDCNH > 101% at expiry for 1.03% indicatively (76% discount to vanilla, -28 correl offer, ref. 32.13, 7.0000).	30-Sep-24	1.03%	0	17-Jan-25	Trade expired
Buy EEM Jan25 104% calls contingent on USDCNH > 101% at expiry for 0.72% indicatively (72% discount to vanilla, -26 correl offer, ref. 46.02, 7.0000).	30-Sep-24	0.72%	0	17-Jan-25	Trade expired
Buy Jan25 RTY < 95% / 10Y SOFR > ATMf + 15bps dual digi for 10% (+7 correl bid, ref. 2447, 3.8%)	11-Nov-24	10.00%	100%	17-Jan-25	Trade expired ITM
Buy Jan25 RTY < 95% / EURUSD < 98% dual digi for 10% (+25 correl offer, ref. 2447, 1.065)	11-Nov-24	10.00%	100%	17-Jan-25	Trade expired ITM
Sell VIX Oct24 17 put to buy VIX Jan25 22-27 call spread for zero cost indicatively (UXV4 ref. 18.75, UXF5 ref. 18.71).	16-Sep-24	\$0.00	0	22-Jan-25	Trade expired
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 1.5x KOSPI2 13-Mar-25 352.50 calls 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

**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

FOMC = Federal Open Market Committee

NFP = Non-Farm Payrolls

SPY = SPDR S&amp;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

META = Meta Platforms

TSLA = Tesla

NVDA = NVIDIA

LTCM = Long-Term Capital Management





## 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](#).

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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.

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BofA Securities is currently acting as Financial Advisor to Braemar Hotels & Resorts Inc. on potential Activism Defense.

BofA Securities is currently acting as advisor to EQT AB in connection with its proposed acquisition of a stake in Acronis International GmbH, which was announced on August 7, 2024.

BofA Securities is currently acting as advisor to Davidson Kempner Capital Management LLC on its potential acquisition Credit Suisse's mortgage servicing company, Select Portfolio Servicing (SPS), which was announced on August 15, 2024.

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BofA Securities is currently acting as financial advisor to HPS Investment Partners LLC in connection with its proposed sale to Blackrock Inc, which was announced on December 3, 2024.



# Disclosures

## Important Disclosures

One or more analysts contributing to this report owns stock of the covered issuer: NVIDIA, Taiwan Semi Mfg Co

One or more analysts contributing to this report owns options on the financial instrument: NVIDIA

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