

## DOWNSIDE HEDGING

$\zeta$

**Positive  
Returns when  
Equities Down  
(Max Payoff)**

**Disciplined Premium  
Budgeting  
(Cost Minimization)**

## ABSOLUTE RETURN

$\alpha$

**Low  
Correlation w.  
Equities**

**Outperform  
Cash  
(Max Sharpe)**

## PASSIVE OVERLAY

$\beta$

**Equity Exposure via  
Options**

**Enhanced Income,  
Enhanced Upside, or  
Reduced Volatility  
(Max Information Ratio)**

FEATURED STRATEGIES:

# Nasdaq-100<sup>®</sup> Option Overlays

SEPTEMBER, 2025

















All returns are hypothetical and net of estimated transaction costs. Plots for illustrative purposes. Not investment advice. Report Produced by Volos Portfolio Solutions, Inc. © 2025 Volos Portfolio Solutions, Inc. All Rights Reserved

## Featured Model Portfolio Strategies, September, 2025

# Nasdaq-100<sup>®</sup> Option Overlays

Time Period: Jan 2<sup>nd</sup> 2019 → Aug 29<sup>th</sup> 2025  
Strategies: 14

		Annual Return	Volatility	Ret/ Risk	Max DD
	NDX Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m)	37.10%	36.43%	1.02	-46.08%
	NDX 4x 1-Month 40 Delta Long Call	34.47%	39.25%	0.88	-43.44%
	NDX 3-Month ATM PutWrite (3x)	28.88%	58.35%	0.49	-63.86%
	Long QQQ	22.44%	24.57%	0.91	-35.12%
	NDX 1-Month 0.5x2 Call x Put ATM Ratio Straddles	21.64%	22.90%	0.94	-28.18%
	NDX 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches)	19.50%	31.52%	0.62	-37.77%
	40/30/30-60-120 proxy (SPY / NDX 1m2m Monthly 5% Buffer /TLT)	13.89%	15.07%	0.92	-31.58%
	NDX Quarterly Risk Reversal 40dp 20dc	13.88%	17.51%	0.79	-26.34%
	NDX 12m 105 Call (95 Knock Out) -5%	12.43%	13.11%	0.95	-19.30%
	NDX Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%)	7.93%	6.58%	1.21	-9.21%
	NDX 1% Premium 3-Month ATM Calls	7.91%	7.45%	1.06	-11.87%
	Nasdaq-100 ATM - 5% ITM 3 Months Long Ratios Put Spread	7.01%	12.28%	0.57	-20.82%
	NDX Iron Condor 5% 1m with UXVY	5.71%	6.49%	0.88	-8.64%
	NDX 10% Daily Risk Control + NDX Dynamic 1r12m ATM 1m Put Replication	0.99%	6.12%	0.16	-18.47%



ABSOLUTE RETURN



PASSIVE OVERLAY



DOWNSIDE HEDGING

# PASSIVE OVERLAY



FEATURED STRATEGIES: September, 2025

## Nasdaq-100<sup>®</sup> Option Overlays

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*In collaboration with*





## PASSIVE OVERLAY

# Long QQQ

Access **100** of the **largest domestic and international** non-financial companies listed on the **Nasdaq Stock Market** based on **market capitalization**.

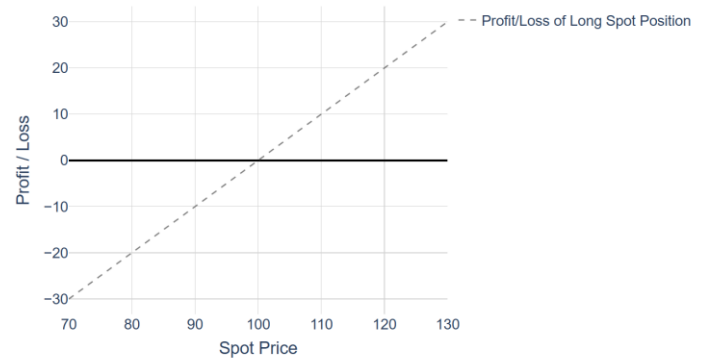


Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	Long QQQ	Long SPY
Annualized Returns	18.47%	13.37%
Annualized Volatility	21.59%	17.51%
Max Drawdown	-35.12%	-33.70%
Return / Risk	0.86	0.76

Profit/Loss vs Spot



Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Nov 2022	-35.12%	57
Benchmark	Mar 2020	-33.70%	20

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(8.75%)	(4.48%)	4.67%	(13.60%)	(1.59%)	(8.91%)	12.55%	(5.13%)	(10.54%)	4.00%	5.54%	(9.01%)
Bench.	(5.27%)	(2.95%)	3.76%	(8.78%)	0.23%	(8.25%)	9.21%	(4.08%)	(9.24%)	8.13%	5.56%	(5.76%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	10.64%	(0.36%)	9.49%	0.51%	7.88%	6.16%	3.86%	(1.48%)	(5.08%)	(2.07%)	10.82%	5.59%
Bench.	6.29%	(2.51%)	3.71%	1.60%	0.46%	6.48%	3.27%	(1.63%)	(4.74%)	(2.17%)	9.13%	4.57%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.82%	5.28%	1.27%	(4.37%)	6.15%	6.47%	(1.68%)	1.10%	2.62%	(0.86%)	5.35%	0.45%
Bench.	1.59%	5.22%	3.27%	(4.03%)	5.06%	3.53%	1.21%	2.34%	2.10%	(0.89%)	5.96%	(2.41%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	2.16%	(2.70%)	(7.59%)	1.40%	9.18%	6.38%	2.42%	0.95%				
Bench.	2.69%	(1.27%)	(5.57%)	(0.87%)	6.28%	5.14%	2.30%	2.05%				





## PASSIVE OVERLAY

# NDX 1% Premium 3-Month ATM Calls

Capture **upside** exposure to the Nasdaq-100 (NDX) with a consistent **1% premium budget**, using rolling **long call** positions at-the-money (**ATM**) across three staggered monthly expiration cycles (Jan, Feb, Mar).



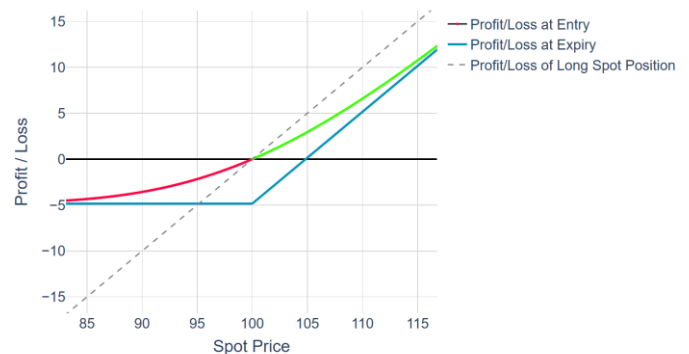
Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 1% Premium 3-Month ATM Calls	SPY 1% Premium 3-Month ATM Calls
Annualized Returns	6.43%	5.57%
Annualized Volatility	7.17%	6.79%
Max Drawdown	-11.87	-10.14
Return / Risk	0.90	0.82

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Dec 2022	-11.87%	23
Benchmark	Feb 2016	-10.14%	74

Long ATM Call: Profit/Loss vs Spot



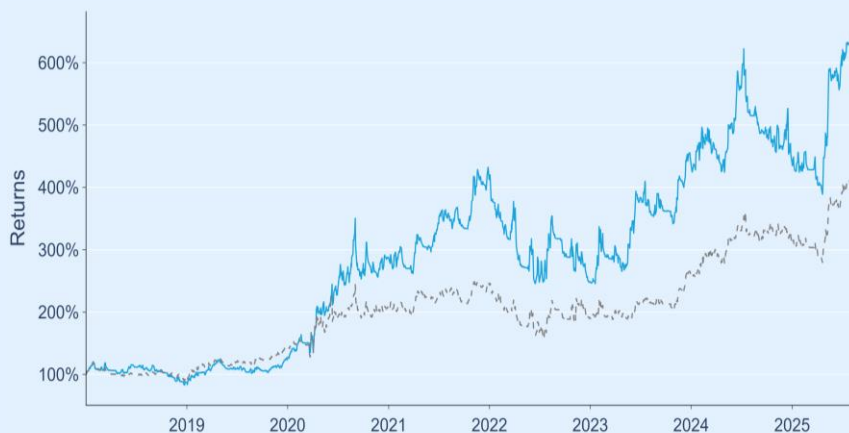
2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(3.78%)	(0.81%)	0.96%	(3.65%)	0.21%	(0.90%)	3.33%	(1.52%)	(2.19%)	0.35%	0.96%	(2.68%)
Bench.	(3.64%)	(0.92%)	0.70%	(3.42%)	0.29%	(1.06%)	3.26%	(1.57%)	(2.17%)	1.12%	1.55%	(2.90%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	2.69%	(0.18%)	3.80%	(0.20%)	4.07%	3.47%	1.98%	(1.60%)	(1.98%)	(0.73%)	3.69%	3.13%
Bench.	2.15%	(1.34%)	1.09%	0.37%	0.09%	3.90%	2.24%	(1.91%)	(2.03%)	(0.56%)	3.40%	3.36%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.06%	3.20%	0.36%	(2.51%)	2.29%	3.97%	(0.88%)	(0.17%)	0.62%	(0.44%)	1.72%	(0.09%)
Bench.	1.21%	4.39%	2.26%	(3.45%)	2.85%	2.76%	0.86%	1.04%	1.36%	(0.43%)	3.16%	(2.30%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	0.62%	(0.99%)	(1.20%)	0.94%	2.39%	2.79%	0.98%	0.26%				
Bench.	1.14%	(0.82%)	(1.82%)	0.58%	1.76%	2.67%	1.17%	1.18%				



# PASSIVE OVERLAY

## NDX 4x 1-Month 40 Delta Long Call

Capture **enhanced upside** exposure to the Nasdaq-100 (NDX) with a **400% notional sizing**, using 40 delta **call** positions with a 1-month maturity.



Start Date: Jan 02, 2018  
Report Date: Aug 29, 2025

— NDX 4x 1-Month 40 Delta Long Call Returns - - SPY 4x 1-Month 40 Delta Long Call Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 4x 1-Month 40 Delta Long Call	SPY 4x 1-Month 40 Delta Long Call
Annualized Returns	27.09%	20.28%
Annualized Volatility	37.46%	29.33%
Max Drawdown	-43.44	-36.10
Return / Risk	0.72	0.69

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Jan 2023	-43.44%	46
Benchmark	Jul 2022	-36.10%	73

Long ATM Call: Profit/Loss vs Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(10.58%)	(7.51%)	2.86%	(22.20%)	11.43%	(18.56%)	21.67%	5.62%	(8.89%)	1.89%	0.26%	(15.98%)
Bench.	(7.60%)	(7.11%)	(1.01%)	(13.98%)	11.28%	(15.66%)	14.81%	6.38%	(7.32%)	9.74%	6.56%	(13.65%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	14.79%	1.42%	6.11%	(9.01%)	18.22%	16.14%	(0.99%)	2.94%	(7.46%)	(5.18%)	19.04%	9.55%
Bench.	6.83%	(5.70%)	4.85%	(2.05%)	(3.58%)	13.95%	2.71%	0.64%	(5.21%)	(4.07%)	16.61%	10.59%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(1.02%)	8.73%	(4.28%)	(6.57%)	12.82%	14.87%	(5.83%)	(3.83%)	(2.69%)	(6.73%)	1.21%	(6.19%)
Bench.	(0.82%)	12.28%	2.71%	(6.65%)	11.64%	5.61%	(1.07%)	0.36%	1.53%	(2.70%)	2.42%	(6.77%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	(0.69%)	(0.82%)	(3.80%)	10.26%	26.39%	6.62%	1.99%	(0.11%)				
Bench.	0.59%	(2.16%)	(2.50%)	6.00%	18.02%	5.39%	2.80%	1.76%				



# PASSIVE OVERLAY

## NDX 3-Month ATM PutWrite (3x)

Harvest **premium income** by systematically selling at-the-money (ATM) puts on NDX across **three staggered maturities, each with 100% notional exposure**. The strategy maintains continuous exposure with equal weighting and **quarterly rolls**, aiming to **benefit from volatility risk premia and time decay**.

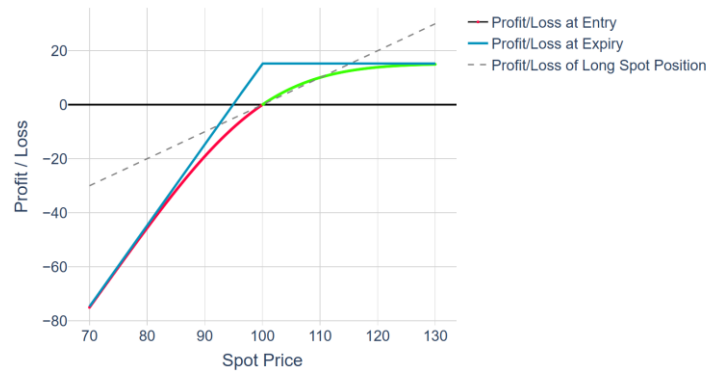


— NDX 3-Month ATM PutWrite (3x) Returns -- SPY 3-Month ATM PutWrite (3x) Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 3-Month ATM PutWrite (3x)	SPY 3-Month ATM PutWrite (3x)
Annualized Returns	26.45%	19.50%
Annualized Volatility	49.13%	56.03%
Max Drawdown	-63.86	-85.22
Return / Risk	0.54	0.35

PutWrite (3x): Profit/Loss vs. Spot



Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Mar 2020	-63.86%	18
Benchmark	Mar 2020	-85.22%	71

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(10.45%)	(9.62%)	8.68%	(21.33%)	(6.40%)	(24.75%)	17.62%	(4.80%)	(16.96%)	11.83%	11.45%	(8.34%)
Bench.	(4.37%)	(5.29%)	8.86%	(12.91%)	(0.79%)	(20.93%)	12.41%	(4.23%)	(16.34%)	21.20%	9.05%	(1.85%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	16.84%	1.65%	8.25%	3.43%	4.80%	3.57%	3.36%	3.31%	(5.29%)	(1.14%)	14.94%	3.42%
Bench.	9.83%	(0.04%)	6.81%	3.82%	2.49%	4.82%	2.47%	2.34%	(7.15%)	(3.14%)	16.09%	2.69%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	2.45%	4.00%	2.65%	(1.92%)	8.85%	3.31%	(1.01%)	4.49%	5.68%	0.86%	7.67%	1.65%
Bench.	2.20%	3.27%	2.58%	(1.13%)	5.80%	2.67%	1.17%	4.00%	2.39%	(0.31%)	7.03%	0.06%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	4.46%	(3.20%)	(16.31%)	(1.40%)	16.06%	5.24%	2.49%	1.15%				
Bench.	4.63%	(0.69%)	(10.11%)	(5.03%)	12.32%	4.71%	2.29%	2.25%				



# PASSIVE OVERLAY

## NDX 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches)

Provides up to **3x** exposure to the Nasdaq-100 with full upside participation and a built-in **15% downside buffer** through a **ladder of quarterly 1-year tranches**. Each tranche combines a long ATM call and short 85% OTM put with an offsetting short call to create a **zero-cost** structure that caps gains but absorbs initial losses. By rolling each quarter independently, the strategy maintains continuous, diversified exposure while targeting efficient capital use and **risk-managed equity participation**.



Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025

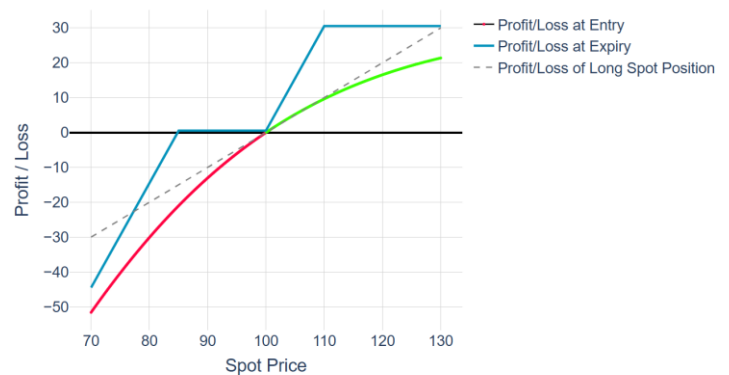
— NDX 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches) Returns  
-- SPY 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches) Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches)	SPY 3x Zero-Cost Buffer 15% 1-Year (Qtly Tranches)
Annualized Returns	16.69%	15.25%
Annualized Volatility	26.92%	23.77%
Max Drawdown	-37.77	-43.56
Return / Risk	0.62	0.64

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Oct 2022	-37.77%	62
Benchmark	Mar 2020	-43.56%	11

3x Zero-Cost Buffer 15% 1-Year: Profit/Loss vs Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(5.92%)	(3.96%)	7.35%	(18.12%)	0.63%	(15.34%)	24.46%	(6.20%)	(16.87%)	9.61%	11.16%	(13.87%)
Bench.	(2.63%)	(2.09%)	5.97%	(11.03%)	1.14%	(8.15%)	13.28%	(3.03%)	(11.14%)	13.39%	7.14%	(3.77%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	10.35%	1.16%	9.00%	1.93%	4.90%	2.91%	2.04%	0.47%	(3.06%)	(0.81%)	7.81%	2.90%
Bench.	8.06%	(0.79%)	3.19%	2.77%	1.72%	4.49%	1.92%	0.53%	(3.00%)	(1.09%)	7.45%	2.51%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.40%	3.00%	0.78%	(1.26%)	4.37%	1.57%	(0.32%)	1.39%	0.83%	0.18%	4.54%	0.39%
Bench.	1.37%	2.59%	1.24%	(0.67%)	2.89%	1.01%	0.82%	1.27%	0.70%	0.05%	3.62%	(0.46%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.54%	(0.91%)	(5.40%)	0.79%	10.21%	5.53%	2.27%	1.35%				
Bench.	1.57%	(0.16%)	(3.06%)	(1.53%)	6.89%	4.30%	1.93%	1.57%				





## PASSIVE OVERLAY

# NDX Quarterly Risk Reversal 40dp 20dc

The **NDX Quarterly Risk Reversal 40dp/20dc** strategy systematically expresses a bullish view by selling higher-delta puts and buying lower delta calls on the Nasdaq-100. Specifically, it sells **40-delta puts** and buys **20-delta calls**, creating a risk reversal with favorable premium dynamics. Each position is set with a **3-month expiration** and rolled **every 2 months** to maintain overlapping exposure and consistent participation. The structure aims to generate positive convex returns in upward markets while maintaining defined downside exposure through the short put.

Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025



Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX Quarterly Risk Reversal 40dp 20dc	SPY Quarterly Risk Reversal 40dp 20dc
Annualized Returns	11.38%	8.32%
Annualized Volatility	14.87%	12.69%
Max Drawdown	-26.34	-30.71
Return / Risk	0.76	0.66

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Oct 2022	-26.34%	56
Benchmark	Mar 2020	-30.71%	35

Strategy: Profit/Loss vs. Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(4.04%)	(3.05%)	2.71%	(7.42%)	0.05%	(9.20%)	7.20%	(2.78%)	(8.36%)	2.88%	2.74%	(3.47%)
Bench.	(2.23%)	(1.37%)	2.32%	(4.87%)	1.23%	(8.34%)	5.28%	(2.13%)	(7.76%)	5.77%	2.64%	(2.70%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	5.84%	(0.16%)	5.17%	0.65%	5.30%	5.38%	2.11%	0.67%	(2.17%)	(0.35%)	5.69%	3.23%
Bench.	3.46%	(0.94%)	2.40%	1.48%	0.89%	3.53%	1.71%	0.42%	(1.94%)	(0.30%)	5.11%	3.10%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.34%	3.09%	0.90%	(1.57%)	3.07%	4.50%	(0.71%)	1.38%	1.59%	(0.31%)	3.15%	0.27%
Bench.	1.20%	3.02%	1.80%	(1.50%)	2.48%	2.63%	0.84%	1.53%	1.28%	(0.29%)	3.22%	(0.54%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.60%	(2.06%)	(5.79%)	(1.01%)	6.05%	4.22%	1.36%	0.46%				
Bench.	1.61%	(0.97%)	(3.84%)	(2.74%)	3.86%	3.05%	1.26%	1.43%				



## PASSIVE OVERLAY

# 40/30/30-60-120 proxy (SPY / NDX 1m2m Monthly 5% Buffer /TLT)

The 40/30/30-60-120 proxy is a blended equity-fixed income strategy with a built-in 5% downside buffer on NDX. It allocates **40% to SPY** for core equity exposure, **30% to TLT** for fixed-income ballast, and **the following exposure to an NDX "buffer" overlay via three monthly-rolling legs: Short 2-month NDX put at 95% moneyness (30% target exposure), Long 1-month NDX call at 100% moneyness (60% target exposure), and Short 1-month NDX call at 110% moneyness (120% target exposure).** The result is a portfolio designed to capture equity upside with limited downside risk, supplemented by bond exposure through TLT.

Start Date: Jan 20, 2005

Report Date: Jul 01, 2025



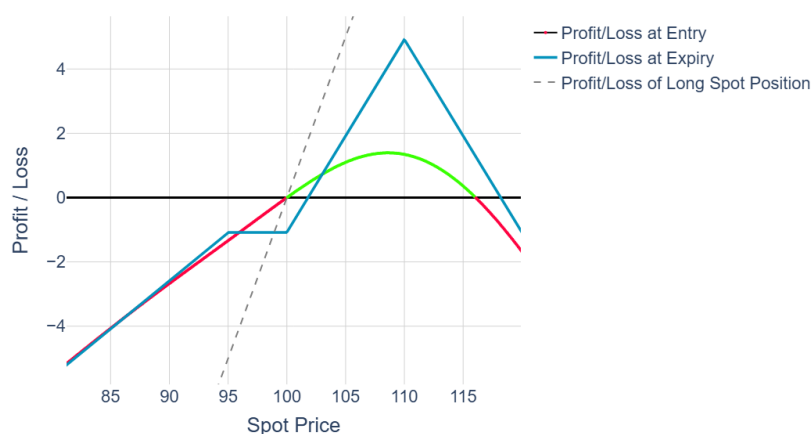
— 40/30/30-60-120 proxy (SPY / NDX 1m2m Monthly 5% Buffer /TLT) Returns  
-- 60/40 proxy (SPY / TLT) Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	40/30/30-60-120 proxy (SPY / NDX 1m2m Monthly 5% Buffer /TLT)	60/40 proxy (SPY / TLT)
Annualized Returns	11.38%	8.50%
Annualized Volatility	13.18%	11.18%
Max Drawdown	-32.82	-29.94
Return / Risk	0.86	0.76

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Mar 2009	-32.82%	53
Benchmark	Mar 2009	-29.94%	78

## 30-60-120 Modified Buffer Overlay



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(6.14%)	(3.41%)	0.61%	(11.52%)	(0.46%)	(6.41%)	8.25%	(5.23%)	(8.92%)	2.60%	6.93%	(6.48%)
Bench.	(4.67%)	(2.36%)	0.11%	(8.98%)	(0.60%)	(5.40%)	6.52%	(4.21%)	(8.76%)	2.36%	6.26%	(4.45%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	7.05%	(1.14%)	5.48%	0.51%	2.95%	5.89%	1.52%	(1.38%)	(5.90%)	(3.43%)	11.27%	6.84%
Bench.	6.90%	(3.44%)	4.28%	1.13%	(0.89%)	3.96%	0.91%	(2.20%)	(6.01%)	(3.44%)	9.48%	6.23%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.46%	3.62%	1.30%	(5.19%)	5.76%	4.98%	0.24%	1.17%	1.85%	(2.71%)	4.58%	(3.68%)
Bench.	0.07%	2.19%	2.29%	(4.97%)	4.19%	2.86%	2.20%	2.34%	2.10%	(2.71%)	4.42%	(4.00%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.34%	0.82%	(4.34%)	(0.12%)	0.27%	4.97%	(0.43%)	0.00%				
Bench.	1.82%	1.49%	(3.78%)	(0.83%)	2.42%	4.17%	0.93%	1.25%				

# DOWNSIDE HEDGING



FEATURED STRATEGIES: September, 2025

## Nasdaq-100<sup>®</sup> Option Overlays

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*In collaboration with*





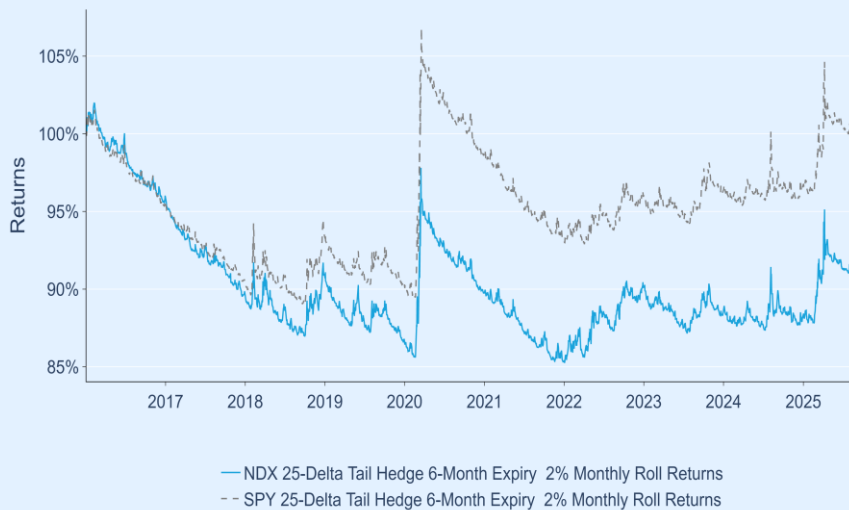
## DOWNSIDE HEDGING

# NDX 25-Delta Tail Hedge 6-Month Expiry 2% Monthly Roll

A **vanilla tail-hedge strategy** which buys 25-delta, 6-month expiration NDX puts, investing 2% each monthly roll and restrike.

Start Date: Jan 04, 2016  
Report Date: Aug 29, 2025

NDX 25-Delta Tail Hedge 6-Month Expiry 2% Monthly Roll vs SPY 25-Delta Tail Hedge 6-Month Expiry 2%



Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Trade Count	Win %	Mean % Return	Min % Return	Max % Return
116.00	25.00	-12.55	-77.64	584.78

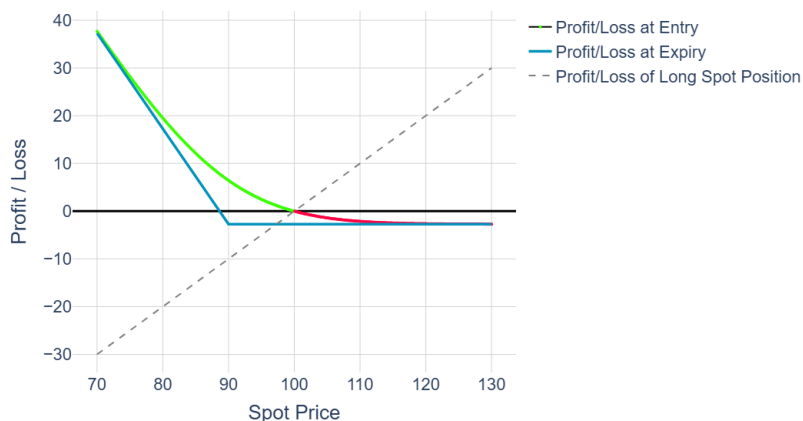
### Performance Metrics

	NDX 25-Delta Tail Hedge 6-Month Expiry 2% Monthly Roll	SPY 25-Delta Tail Hedge 6-Month Expiry 2% Monthly Roll
Annualized Returns	-0.97%	-0.01%
Annualized Volatility	5.22%	5.69%
Max Drawdown	-16.42	-13.06
Return / Risk	-0.19	-0.00

### Strategy

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Jan 2022	-16.42%	—
Benchmark	Mar 2022	-13.06%	—

### Long 25-Delta Put Strategy: Profit/Loss vs. Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.95%	0.26%	(0.69%)	1.93%	0.47%	0.81%	(1.22%)	1.34%	1.70%	(0.60%)	(0.52%)	1.05%
Bench.	0.60%	0.18%	(0.78%)	1.26%	(0.04%)	0.86%	(1.08%)	1.13%	1.81%	(1.04%)	(0.46%)	0.70%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(1.25%)	0.43%	(0.81%)	(0.07%)	(0.49%)	(0.73%)	(0.22%)	0.97%	1.43%	0.49%	(1.21%)	(0.45%)
Bench.	(1.04%)	0.55%	(0.13%)	(0.10%)	0.05%	(0.95%)	(0.18%)	0.94%	1.91%	0.69%	(1.04%)	(0.36%)
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(0.10%)	(0.62%)	0.03%	1.11%	(0.54%)	(0.54%)	0.83%	(0.05%)	-0.00%	0.49%	(1.06%)	0.49%
Bench.	(0.04%)	(0.61%)	(0.25%)	1.34%	(0.32%)	(0.31%)	0.34%	(0.14%)	0.21%	0.59%	(1.33%)	0.99%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	(0.25%)	1.01%	2.41%	1.17%	(0.35%)	(0.73%)	(0.10%)	0.06%				
Bench.	(0.29%)	0.70%	2.16%	2.04%	(0.26%)	(0.61%)	(0.12%)	(0.15%)				



## DOWNSIDE HEDGING

# NDX 1-Month 0.5x2 Call x Put ATM Ratio Straddles

This strategy consists of a **monthly rolling ratio long straddle** on the Nasdaq-100 Index (NDX), targeting at-the-money (ATM) options with a 1-month expiration horizon. Each month, the strategy **purchases 0.5x notional exposure to ATM NDX puts** and **2x notional exposure to ATM NDX calls**, resulting in a **4:1 notional weighting of calls to puts**. The structure is rebalanced monthly using the January series as a contract anchor. This exposure profile is designed to **overweight upside convexity while maintaining limited downside participation**, benefiting from sharp bullish moves or volatility spikes while preserving capital through disciplined rolling and sizing mechanics.

Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025



Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 1-Month 0.5x2 Call x Put ATM Ratio Straddles	SPY 1-Month 0.5x2 Call x Put ATM Ratio Straddles
Annualized Returns	13.05%	8.98%
Annualized Volatility	19.21%	14.83%
Max Drawdown	-28.18	-26.55
Return / Risk	0.68	0.61

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Jun 2022	-28.18%	56
Benchmark	Jul 2022	-26.55%	73

## 0.5x2 Ratio Straddle: Profit/Loss vs. Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(5.74%)	(5.17%)	(1.54%)	(11.93%)	9.01%	(11.53%)	12.98%	5.67%	(3.45%)	(0.35%)	1.59%	(11.12%)
Bench.	(4.03%)	(5.41%)	(2.60%)	(6.93%)	8.21%	(9.45%)	8.76%	6.01%	(2.12%)	3.99%	4.40%	(9.44%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	5.10%	1.17%	3.08%	(3.88%)	10.39%	8.76%	0.87%	2.17%	(3.29%)	(3.77%)	11.25%	6.20%
Bench.	2.20%	(2.92%)	1.97%	(0.56%)	(1.61%)	7.70%	2.53%	0.56%	(1.42%)	(2.74%)	10.23%	5.77%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.20%	5.44%	(2.50%)	(4.32%)	7.77%	8.51%	(4.41%)	(3.82%)	(0.85%)	(3.03%)	1.41%	(3.93%)
Bench.	(0.05%)	7.07%	2.32%	(3.85%)	6.81%	3.70%	(0.66%)	(0.59%)	1.34%	(1.13%)	2.25%	(5.46%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	(1.92%)	1.09%	0.38%	6.46%	15.14%	3.80%	1.38%	0.42%				
Bench.	0.47%	(0.37%)	0.50%	4.63%	9.85%	2.70%	1.70%	0.93%				





## DOWNSIDE HEDGING

# NDX 12m 105 Call (95 Knock Out) -5%

This strategy expresses a bullish 12-month view on the Nasdaq-100 by pairing a **long call struck at 105%** of spot with a **short put struck at 90.25%**, forming a leveraged risk-reward profile with limited capital outlay. The call leg is subject to a **monetization trigger if SPY experiences a sharp daily drop (P&L < -5%)**, acting as a dynamic risk-off mechanism during market stress. The short put provides premium to help fund the long call and is statically sized using **put-call symmetry** principles to maintain consistent exposure and strike relationships. Overall, the structure targets upside participation while introducing downside discipline via the SPY-based **knockout and embedded funding logic**.

Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025



— NDX 12m 105 Call (95 Knock Out) -5% Returns -- SPY 12m 105 Call (95 Knock Out) -5% Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX 12m 105 Call (95 Knock Out) -5%	SPY 12m 105 Call (95 Knock Out) -5%
Annualized Returns	10.02%	11.00%
Annualized Volatility	11.31%	8.94%
Max Drawdown	-19.30	-13.59
Return / Risk	0.89	1.23

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Jan 2023	-19.30%	18
Benchmark	Apr 2025	-13.59%	11

## Synthetic Knock-Out Call: Profit/Loss vs. Spot



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(8.79%)	(7.02%)	0.04%	0.06%	0.09%	0.12%	0.18%	0.24%	0.26%	0.32%	0.36%	0.36%
Bench.	(6.19%)	(4.95%)	0.04%	0.06%	0.09%	0.12%	0.18%	0.24%	0.26%	0.32%	0.36%	0.36%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.78%	0.35%	8.37%	0.34%	8.06%	6.39%	3.77%	(1.54%)	(5.46%)	(2.22%)	11.24%	5.78%
Bench.	3.32%	(1.44%)	2.40%	1.24%	0.41%	5.50%	2.91%	(1.60%)	(4.31%)	(1.87%)	7.61%	4.48%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.64%	4.57%	1.18%	(3.49%)	4.64%	5.71%	(1.53%)	0.60%	2.25%	(0.61%)	4.50%	0.12%
Bench.	1.39%	4.58%	2.78%	(3.22%)	3.72%	3.27%	1.08%	1.93%	2.05%	(0.73%)	5.39%	(2.76%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.49%	(2.21%)	(4.78%)	0.36%	0.36%	0.38%	0.38%	0.34%				
Bench.	2.12%	(0.99%)	(3.73%)	(0.56%)	4.28%	3.57%	1.68%	1.54%				



## DOWNSIDE HEDGING

# NDX Iron Condor 5% 1m with UXVY Calls

This strategy implements a monthly iron condor on the Nasdaq-100 (NDX), selling a **95/105 strangle and hedging with 90/110 wings to define a  $\pm 5\%$  risk corridor and profit from range-bound markets**. The positions are fully allocated and systematically rolled every month to maintain consistent exposure and harvest premium from decaying out-of-the-money options. To **mitigate tail risk** during periods of elevated implied volatility, the strategy dynamically adds a **3-month at-the-money UXVY long call** when the 30-day NDX implied volatility exceeds 30%. This protective overlay deactivates when volatility falls below the threshold, aiming to provide convex upside in volatility spikes while preserving premium harvesting in stable conditions.

Start Date: Mar 21, 2014  
Report Date: Aug 29, 2025

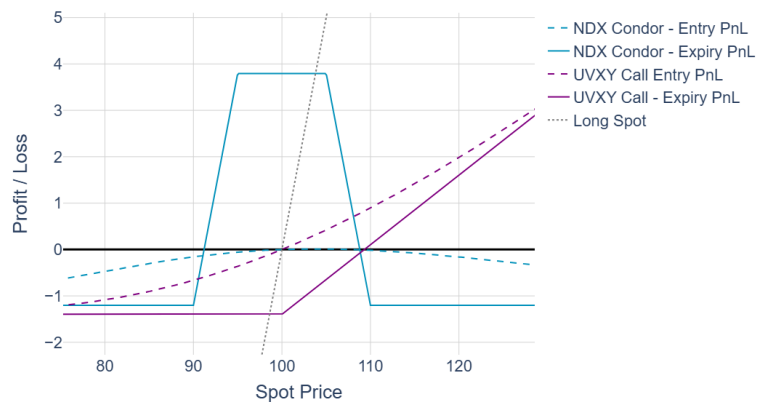


Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

Performance Metrics	NDX Iron Condor 5% 1m with UXVY	SPY Iron Condor 5% 1m with UXVY
Annualized Returns	4.15%	3.65%
Annualized Volatility	5.52%	4.33%
Max Drawdown	-8.64	-7.46
Return / Risk	0.75	0.84

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Oct 2022	-8.64%	37
Benchmark	Mar 2020	-7.46%	2

## 1m 5% NDX Iron Condor + NDX IV 30 Conditional ATM 3m UXVY Calls



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(1.28%)	0.27%	1.45%	(2.15%)	(1.56%)	(2.11%)	3.01%	(0.06%)	(4.11%)	0.96%	0.54%	(0.46%)
Bench.	0.04%	0.40%	1.14%	(1.30%)	(1.84%)	(1.47%)	2.30%	(0.12%)	(3.19%)	2.77%	0.17%	0.26%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	3.21%	(0.70%)	2.06%	0.48%	0.99%	0.72%	0.83%	0.85%	(0.58%)	1.38%	1.31%	0.64%
Bench.	1.50%	0.03%	1.52%	0.61%	0.68%	0.76%	0.62%	0.77%	(0.49%)	1.07%	0.95%	0.55%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.72%	0.72%	0.71%	0.76%	0.68%	0.66%	0.42%	1.12%	0.76%	0.36%	1.09%	0.66%
Bench.	0.65%	0.58%	0.60%	0.72%	0.58%	0.57%	0.62%	0.74%	0.58%	0.25%	1.03%	0.67%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	0.87%	(0.61%)	(3.69%)	0.30%	5.89%	1.15%	0.38%	0.33%				
Bench.	0.65%	0.01%	(1.71%)	(0.44%)	2.50%	1.01%	0.54%	0.52%				

# ABSOLUTE RETURN



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FEATURED STRATEGIES: September, 2025

## Nasdaq-100<sup>®</sup> Option Overlays

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*In collaboration with*





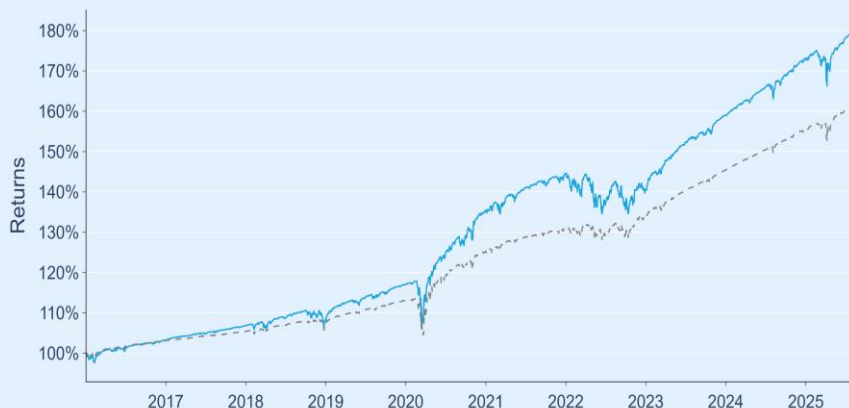
## ABSOLUTE RETURN

# NDX Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%)

This strategy involves selling a 3-month out-of-the-money collateralized put option on the Nasdaq-100 (NDX). The position is rolled each month, with the strike prices adjusted between **10% and 0% out of the money (OTM)**. The notional exposure is scaled between **25% and 100%**. Both strike and notional adjust based on the 30-day at-the-money forward implied volatility (IV) of the NDX, with a linear correspondence from **5% to 40%**. For instance, when the implied volatility is low (5% or lower), the strategy utilizes 10% OTM strikes and 25% notional sizing. Conversely, when the implied volatility is high (40% or higher), the strategy uses at-the-money options (ATM) and increases the notional exposure to 100%.

Start Date: Jan 04, 2016

Report Date: Aug 29, 2025



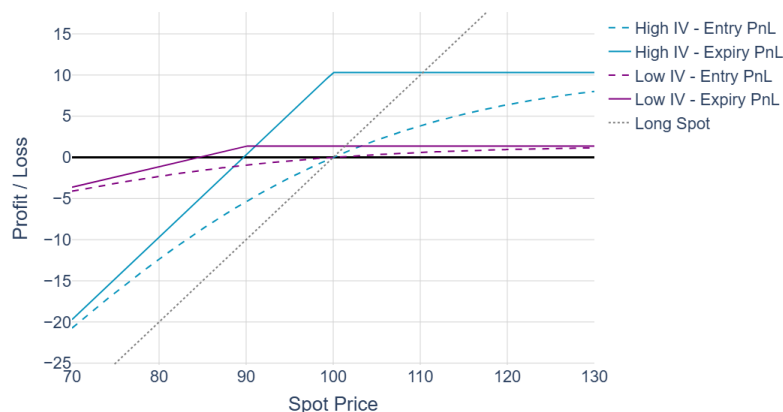
— NDX Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%) Returns  
 - - SPY Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%) Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

## Performance Metrics

	NDX Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%)	SPY Short Put (90% to 100% Strike 25% to 100% Notional by IV 5% to 40%)
Annualized Returns	6.31%	5.15%
Annualized Volatility	5.73%	3.94%
Max Drawdown	-9.21	-8.03
Return / Risk	1.10	1.31

## IV Sized and Struck PutWrite



Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Mar 2020	-9.21%	4
Benchmark	Mar 2020	-8.03%	2

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(1.25%)	(0.48%)	1.47%	(2.94%)	(0.76%)	(1.53%)	3.58%	(1.33%)	(2.95%)	2.48%	2.26%	(0.96%)
Bench.	(0.36%)	(0.12%)	1.09%	(1.25%)	0.10%	(0.98%)	1.92%	(0.65%)	(1.77%)	2.53%	1.51%	0.03%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	2.65%	0.34%	2.02%	0.87%	1.16%	1.02%	0.91%	0.48%	0.02%	0.54%	1.66%	0.76%
Bench.	1.50%	0.33%	0.93%	0.71%	0.67%	0.82%	0.63%	0.57%	0.20%	0.53%	1.01%	0.56%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.73%	0.84%	0.67%	0.27%	0.98%	0.70%	0.32%	0.83%	0.79%	0.39%	1.26%	0.50%
Bench.	0.60%	0.61%	0.55%	0.45%	0.66%	0.54%	0.54%	0.62%	0.53%	0.36%	0.86%	0.44%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	0.81%	(0.01%)	(0.80%)	0.57%	1.33%	1.25%	0.69%	0.52%				
Bench.	0.62%	0.27%	(0.02%)	0.36%	1.03%	0.87%	0.60%	0.55%				

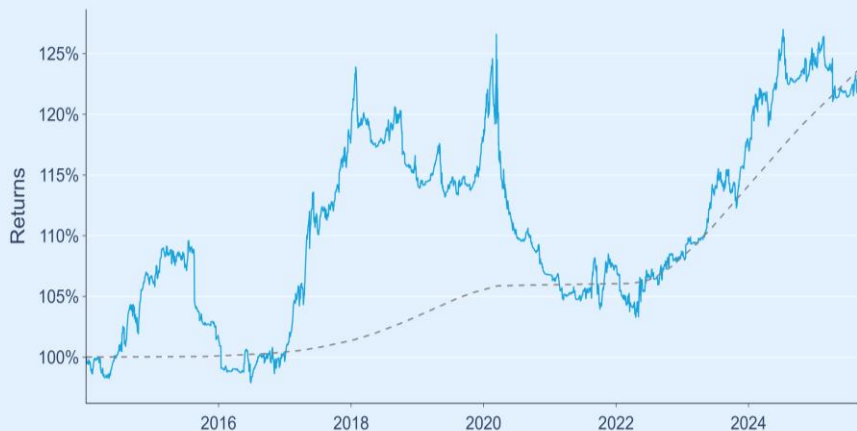


## ABSOLUTE RETURN

# NDX 10% Daily Risk Control + NDX Dynamic 1r12m ATM 1m Put Replication

This strategy combines risk controlled exposure to the Nasdaq-100 Total Return Index (XNDX) with a dynamic, **delta-replicated long put overlay at-the-money** with a **12-month tenor, rolled monthly**. The put position uses **50% relative exposure** and is recalibrated daily to maintain a smooth hedge that adapts to market conditions without over-committing capital. The long equity exposure is constrained by a **10% daily risk control mechanism**, ensuring volatility-adjusted allocation that limits excessive drawdowns. Together, the structure aims to participate in long-term equity upside while mitigating downside risk through systematic, forward-looking protection that responds to market changes on a daily basis.

Start Date: Jan 02, 2014  
Report Date: Aug 29, 2025



— NDX 10% Daily Risk Control + NDX Dynamic 1r12m ATM 1m Put Replication Returns - - Cash Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

## Performance Metrics

**NDX 10% Daily Risk  
Control + NDX Dynamic  
1r12m ATM 1m Put  
Replication**

## Cash

Annualized Returns	1.74%	1.84%
Annualized Volatility	5.67%	0.16%
Max Drawdown	-18.47	0.00
Return / Risk	0.31	11.42

## Strategy

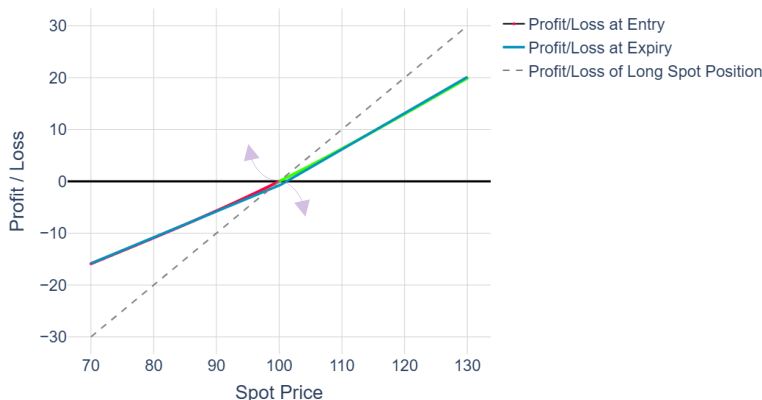
## DD Month

## Max Drawdown

Weeks to  
Recover

Strategy	Apr 2022	-18.47%	116
Benchmark	Jan 2014	0.00%	0

## 10% Risk Control + 50% ATM 12m Put Replication



2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(2.17%)	(0.73%)	(0.15%)	0.44%	0.84%	1.28%	(0.38%)	0.57%	0.86%	0.41%	(0.56%)	0.54%
Bench.	0.01%	0.02%	0.04%	0.06%	0.09%	0.12%	0.18%	0.24%	0.26%	0.32%	0.36%	0.36%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	0.90%	0.05%	0.32%	0.27%	1.87%	1.70%	1.08%	0.10%	(1.45%)	(0.89%)	2.66%	1.91%
Bench.	0.41%	0.37%	0.41%	0.39%	0.48%	0.45%	0.47%	0.47%	0.44%	0.49%	0.46%	0.43%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.31%	1.79%	0.10%	(1.64%)	1.97%	2.27%	(1.11%)	(0.39%)	0.03%	0.24%	0.06%	0.55%
Bench.	0.49%	0.43%	0.42%	0.49%	0.46%	0.42%	0.49%	0.44%	0.42%	0.40%	0.37%	0.39%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.08%	(1.00%)	(0.34%)	(1.85%)	0.47%	(0.42%)	0.70%	(0.03%)				
Bench.	0.37%	0.33%	0.37%	0.36%	0.36%	0.38%	0.38%	0.34%				





## ABSOLUTE RETURN

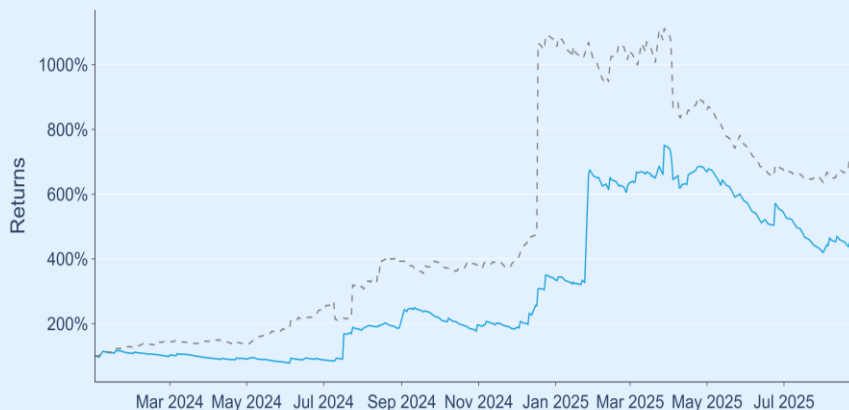
# NDX Daily 2% Premium 97-98 Put Ratios 101-102 Call Ratios

The strategy implements a daily-rolling NDX options overlay. Each trading day, a **98%-moneyness put** is purchased using **1% of available capital**, while a **97%-moneyness put** is sold **at 200% of the leg's notional**, both expiring that same day. In parallel, a **101%-moneyness call** is bought with a **1% budget** and a **102%-moneyness call** is sold at **200% notional**, also with one-day expiry.

Note: The transaction cost assumption of 50% slippage (used for consistency with the other strategies in this report) has a significant impact on average returns in this backtest. Initial sensitivity analysis estimates empirical "breakeven" slippage of around 200%, representing the slippage level at which the annual returns for the study period would be 0%.

Start Date: Jan 02, 2024

Report Date: Aug 29, 2025



— NDX Daily 2% Premium 97-98 Put Ratios 101-102 Call Ratios Returns  
-- SPY Daily 2% Premium 97-98 Put Ratios 101-102 Call Ratios Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

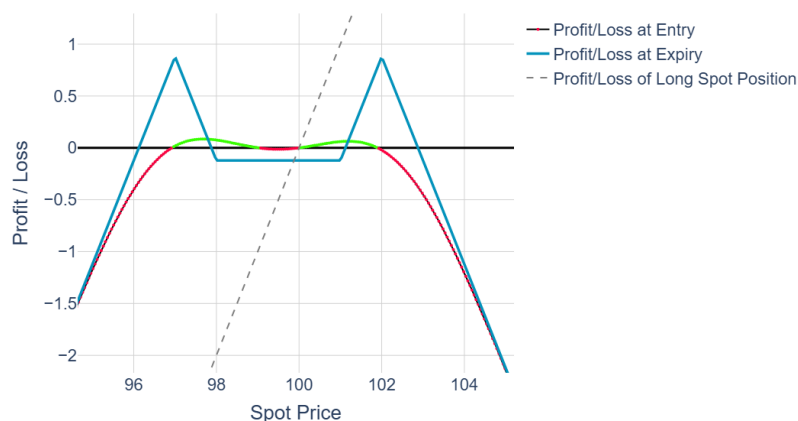
### Performance Metrics

	NDX Daily 2% Premium 97-98 Put Ratios 101-102 Call Ratios	SPY Daily 2% Premium 97-98 Put Ratios 101-102 Call Ratios
Annualized Returns	140.32%	225.69%
Annualized Volatility	88.10%	77.95%
Max Drawdown	-44.04	-42.74
Return / Risk	1.59	2.90

### Strategy

Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Aug 2025	-44.04%	—
Benchmark	Aug 2025	-42.74%	—

### Daily Dual Ratio Spread



2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	7.03%	(8.55%)	(2.55%)	(4.91%)	(11.67%)	11.39%	100.79%	4.51%	17.05%	(10.27%)	(6.80%)	83.87%
Bench.	27.51%	13.90%	0.38%	(4.38%)	30.59%	32.89%	30.33%	24.70%	(0.84%)	(2.72%)	3.54%	172.27%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	94.68%	(3.45%)	17.65%	(9.93%)	(13.56%)	(5.75%)	(22.53%)	0.68%				
Bench.	(5.21%)	2.96%	5.57%	(21.24%)	(12.90%)	(10.31%)	(5.18%)	9.81%				



## ABSOLUTE RETURN

# NDX Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m)

The NDX Risk Reversal w 45dc Restrike sells a 3-month, 40-delta put for income while simultaneously buying a 3-month, 20-delta call at twice the premium to capture upside. Both legs are rolled every 2 months to maintain consistent exposure. If the long call's delta rises above 0.45, all tranches are restruck to reset the upside risk profile.



Start Date: Jan 02, 2019  
Report Date: Aug 29, 2025

— NDX Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m) Returns  
-- SPY Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m) Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

## Performance Metrics

	NDX Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m)	SPY Risk Reversal w 45dc Restrike (3m 40dp 2x 20dc rolled every 2m)
Annualized Returns	37.07%	21.84%
Annualized Volatility	36.22%	28.06%
Max Drawdown	-46.08	-34.48
Return / Risk	1.02	0.78

## Strategy: Profit/Loss vs. Spot



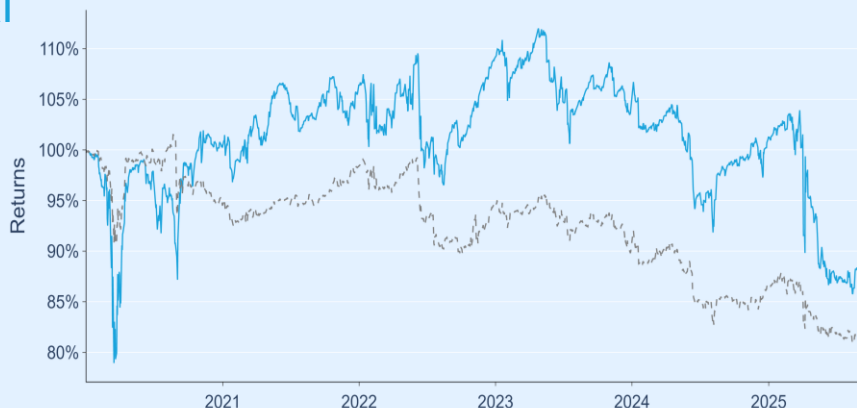
Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Dec 2022	-46.08%	24
Benchmark	Mar 2020	-34.48%	10

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(10.61%)	(4.70%)	4.12%	(19.41%)	(1.23%)	(9.98%)	25.24%	(5.37%)	(9.95%)	3.63%	3.14%	(16.28%)
Bench.	(6.88%)	(2.38%)	2.13%	(13.84%)	0.33%	(8.31%)	16.92%	(2.98%)	(8.85%)	11.88%	5.44%	(9.66%)
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	12.13%	(2.16%)	12.49%	(5.14%)	23.15%	24.52%	2.71%	2.67%	(11.66%)	(5.10%)	15.85%	13.69%
Bench.	4.87%	(5.75%)	2.37%	0.27%	(1.65%)	14.81%	3.95%	(1.97%)	(7.68%)	(3.66%)	13.73%	7.53%
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	1.12%	8.92%	(0.52%)	(5.74%)	6.13%	22.27%	(2.66%)	(0.62%)	1.73%	(3.88%)	3.00%	(2.03%)
Bench.	1.24%	9.26%	4.45%	(4.90%)	8.50%	3.86%	0.98%	1.65%	3.42%	(0.08%)	5.03%	(5.46%)
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.01%	(6.23%)	(6.87%)	7.95%	28.45%	11.83%	1.59%	1.99%				
Bench.	2.35%	(3.79%)	(5.10%)	3.14%	13.48%	8.92%	2.29%	0.97%				


**ABSOLUTE RETURN**

# NDX Dispersion Vega Neutral Weighted Components (Unhedged Straddles)

This benchmark dispersion strategy involves selling 3-month, monthly rolled **ATM** straddles on the Nasdaq-100, and buying a **premium neutral** portfolio of long 3-month, monthly rolled ATM straddles on the top-10 NDX constituent securities, with an **equal vega exposure** to each constituent straddle.



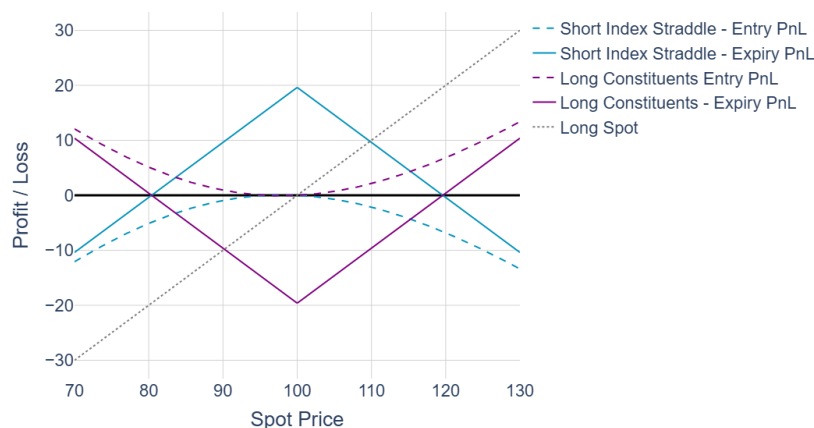
Start Date: Jan 02, 2020  
Report Date: Aug 29, 2025

— NDX Dispersion Vega Neutral Weighted Components (Unhedged Straddles) Returns  
-- NDX Dispersion (Unhedged Straddles) 90-20 Returns

Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

**Performance Metrics**

	NDX Dispersion Vega Neutral Weighted Components (Unhedged Straddles)	NDX Dispersion (Unhedged Straddles) 90-20
Annualized Returns	-2.17%	-3.51%
Annualized Volatility	14.98%	7.46%
Max Drawdown	-23.41	-20.24
Return / Risk	-0.14	-0.47

**Premium Neutral Dispersion Payoff - Unhedged**


Strategy	DD Month	Max Drawdown	Weeks to Recover
Strategy	Aug 2025	-23.41%	—
Benchmark	Aug 2025	-20.24%	—

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(0.92%)	(3.01%)	1.15%	1.79%	3.07%	(7.16%)	(2.09%)	2.91%	(0.60%)	2.95%	1.91%	3.04%
Bench.	(0.52%)	(1.74%)	0.04%	1.44%	1.52%	(5.65%)	(2.69%)	(0.17%)	(0.42%)	0.69%	0.94%	2.73%
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(0.45%)	(0.20%)	0.32%	2.20%	(3.57%)	(2.23%)	(1.20%)	2.30%	0.48%	1.87%	(2.20%)	(1.81%)
Bench.	(1.20%)	0.82%	(0.37%)	1.32%	(0.61%)	(1.42%)	(1.48%)	1.03%	0.40%	0.76%	(1.43%)	(2.47%)
2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Strat.	(1.39%)	(0.14%)	0.87%	0.58%	(2.19%)	(5.95%)	0.49%	2.33%	0.31%	0.44%	1.85%	0.33%
Bench.	(1.15%)	0.18%	0.78%	0.38%	(1.45%)	(4.18%)	(0.23%)	0.52%	(0.29%)	(0.49%)	0.31%	2.04%
2025	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Strat.	1.12%	1.15%	(3.14%)	(6.29%)	(5.28%)	(2.17%)	0.08%	1.34%				
Bench.	0.70%	(0.18%)	(1.79%)	(2.89%)	(0.97%)	(0.67%)	0.37%	(0.49%)				



## ABSOLUTE RETURN

# VPS4040 Nasdaq-100 Dispersion Strategy

Nasdaq-100 Top-30 Delta-Hedged Dispersion Strategy  
 Engine Starting Assumptions Sizing : Vega Notional  
 Overlay Sizing Vega Notional percent : 40% Vega Ratio  
 Dispersion Trade Type: Index IV / Weighted Average  
 Constituent IV Vega Ratio Percent : 40% Equal Vega  
 Constituent Sizing: ATM Straddles, 3m Expiry, 1m Roll.

Preliminary, for research & discussion purposes.



Trades assume 3:59 execution with 50% slippage; i.e. selling half-way between the mid and bid, and/or buying half-way between the mid and ask.

20-Day Rolling Sharpe Ratio (VPS4040 Dispersion Strategy rd1 vs Long QQQ)

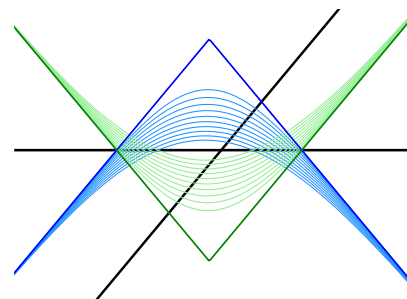


Start Date: Jul 01, 2024  
 Report Date: Jun 30, 2025

Performance Metrics	VPS4040 Dispersion Strategy rd1	Long QQQ
Annualized Returns	104.09%	15.24%
Annualized Volatility	148.61%	25.50%
Max Drawdown	-73.55	-22.77
Return / Risk	0.70	0.60

Strategy	DD Month	Max Drawdown
Strategy	Jun 2025	-73.55%
Benchmark	Apr 2025	-22.77%

2025	Jan	Feb	Mar	Apr	May	Jun
Strat.	7.65%	12.47%	34.46%	79.23%	(30.21%)	(40.66%)
Bench.	2.16%	(2.70%)	(7.59%)	1.40%	9.18%	6.38%





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