

# PORTFOLIO OPTIONS PLAYBOOK

IMPLIED VOLATILITY MEAN REVERSION OPTIONS STRATEGIES

DATA GATHERED FROM [TASTYTRADE OPTIONS BACKTESTING SOFTWARE](#)

BY LUCAS TROY

This presentation is for informational purposes only. This presentation and all information contained herein is not investment advice, and not intended to be investment advice. Any trades you make based on this information are your responsibility alone. The presenter disclaims any liability, loss, or risk resulting directly or indirectly, from the use or application of any of the contents of this presentation.



# INTRODUCTION TO STRATEGY THEORY

THE FOLLOWING STRATEGIES UTILIZE THE THEORY OF IMPLIED VOLATILITY (IV) MEAN REVERSION TO PROFIT ON PREMIUM DEPRECIATION BY SELLING OPTIONS WHEN IV IS HIGH. A MEAN REVERSION-BASED TRADE EXPRESSES THE BELIEF THAT AN ASSET'S VOLATILITY HAS DEVIATED TOO FAR FROM ITS MEAN HISTORICAL VOLATILITY, AND THAT PRESENTS OPPORTUNITIES TO PROFIT ON THE CONTRACTION BACK TO THE MEAN.

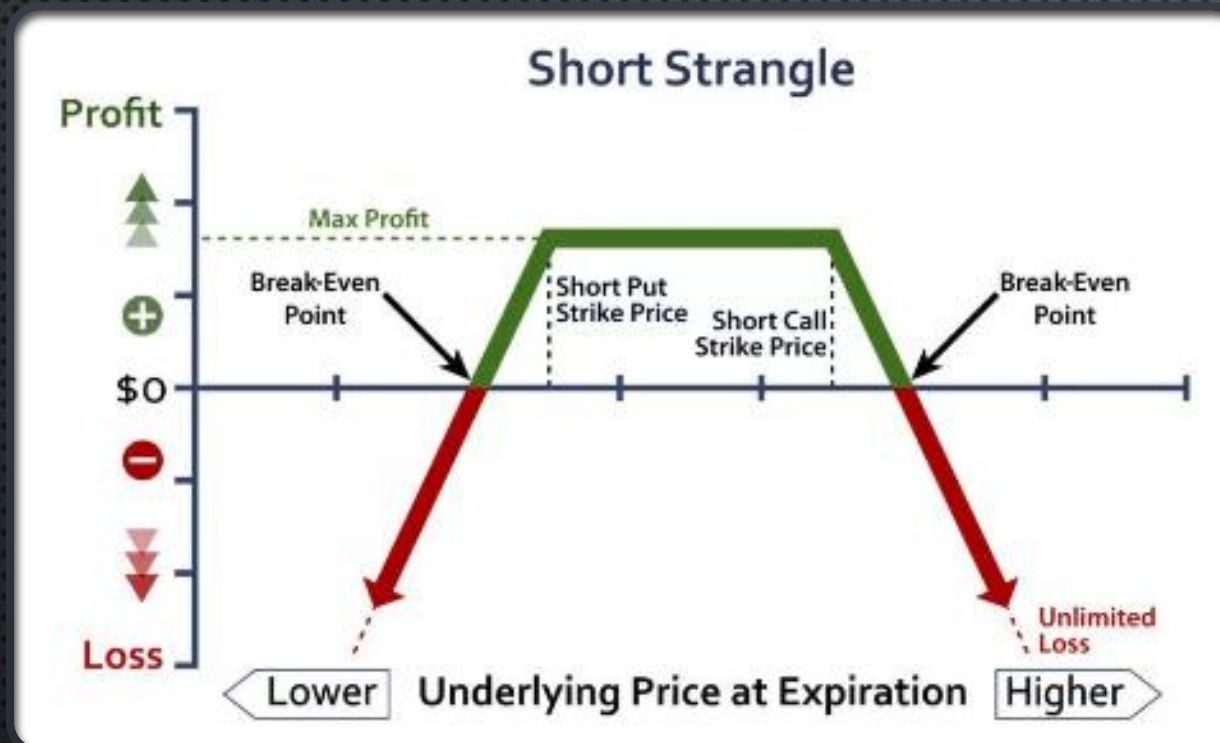
I BELIEVE AN OPTIMAL PORTFOLIO IS ONE THAT IS DIVERSIFIED ACROSS UNCORRELATED ASSET CLASSES, TIMEFRAMES AND STRATEGIES. HOWEVER, TO AVOID CONFUSION AND MAINTAIN CONSISTENCY, OUR STRATEGIES WILL BE TESTED ONLY ON THE S&P 500. MY MAIN STRATEGIES FOCUSES ON SELLING PREMIUM IN HIGH IV ENVIRONMENTS IN ORDER TO COLLECT THE MOST EXTRINSIC VALUE, ESPECIALLY WHEN THE DIFFERENCE BETWEEN IV AND HISTORICAL VOLATILITY (HV) IS GREATEST.

# DELTA NEUTRAL MONTHLY OPTIONS STRATEGIES

45 DTE  $1\sigma$  SHORT STRANGLES



# 45 DTE 1 $\Sigma$ SHORT STRANGLES - SPX



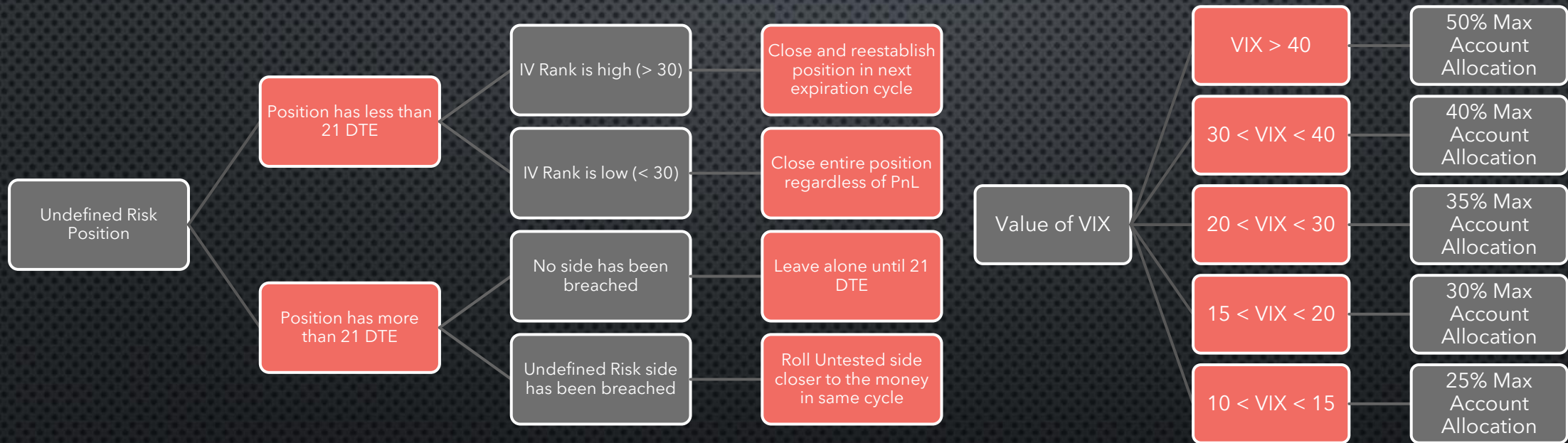
## BASIC STRATEGY RULES:

1. SELL A CALL AND A PUT AT 16 DELTA OR 1 $\Sigma$  STRIKE
2. CLOSE AT 21 DTE WIN OR LOSE
3. SET PROFIT TARGET AT 50% AND STOP LOSS AT 200% OF NET CREDIT RECEIVED
4. DO NOTHING WHILE THE STOCK TRADES BETWEEN YOUR STRIKES

## OPTIONAL MANAGEMENT TIPS:

1. Sell when IVR and IVx are > 30%
2. ROLL UNTESTED SIDE WHEN IT HAS DECAYED 50-80% OR WHEN PRICE HAS BREACHED ONE OF STRIKES
3. ROLL UNTESTED SIDE INTO A STRADDLE
4. GO INVERTED AND ROLL ONE UNTESTED STRIKE ABOVE THE TESTED STRIKE (MAKE SURE THE CREDIT YOU HAVE RECEIVED THUS FAR IS GREATER THAN THE INVERSION WIDTH)
5. ROLL OUT IN TIME AND RECENTER YOUR STRANGLE

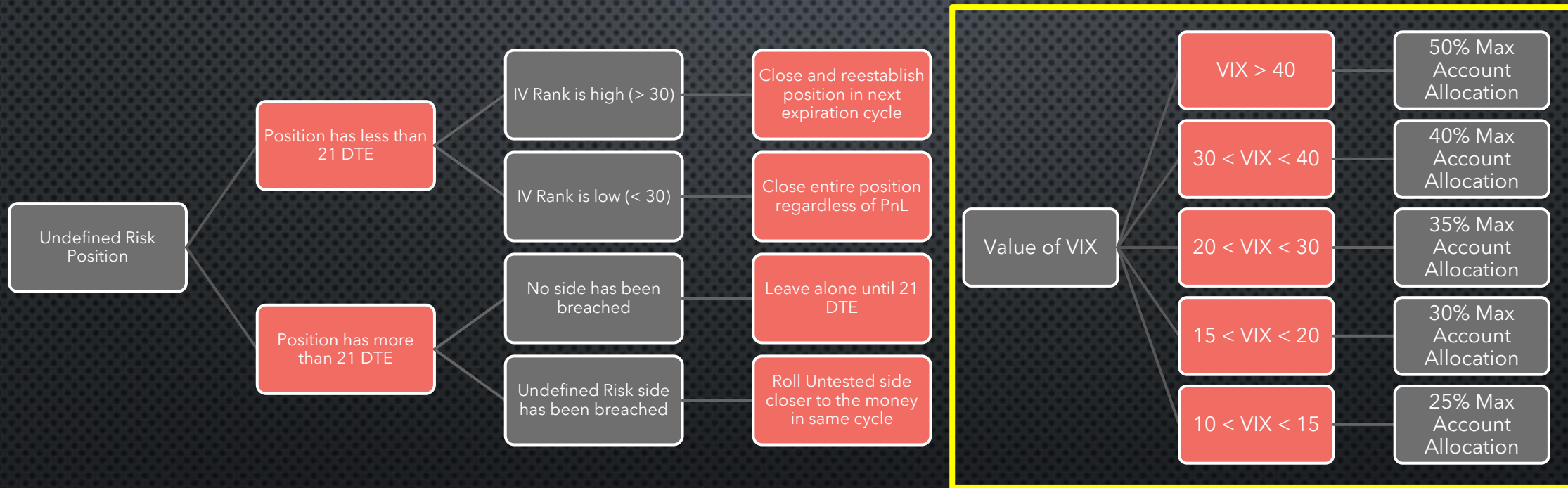
# UNDEFINED RISK MANAGEMENT FLOW CHART



Credit to [TastyTrade Research](#)  
Anton Kulikov, BS  
(anton@tastytrade.com)  
Mike Hart, MBA (mike@tastytrade.com)



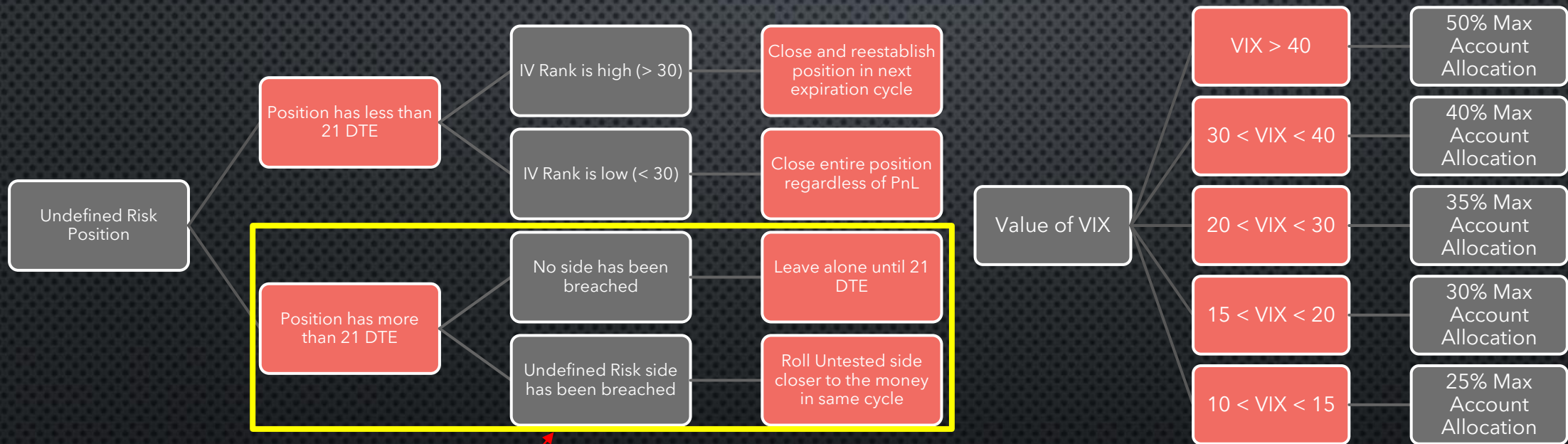
# UNDEFINED RISK MANAGEMENT FLOW CHART



Credit to [TastyTrade Research](#)  
Anton Kulikov, BS  
(anton@tastytrade.com)  
Mike Hart, MBA (mike@tastytrade.com)

The VIX Index will only be considered for position sizing purposes.

# UNDEFINED RISK MANAGEMENT FLOW CHART

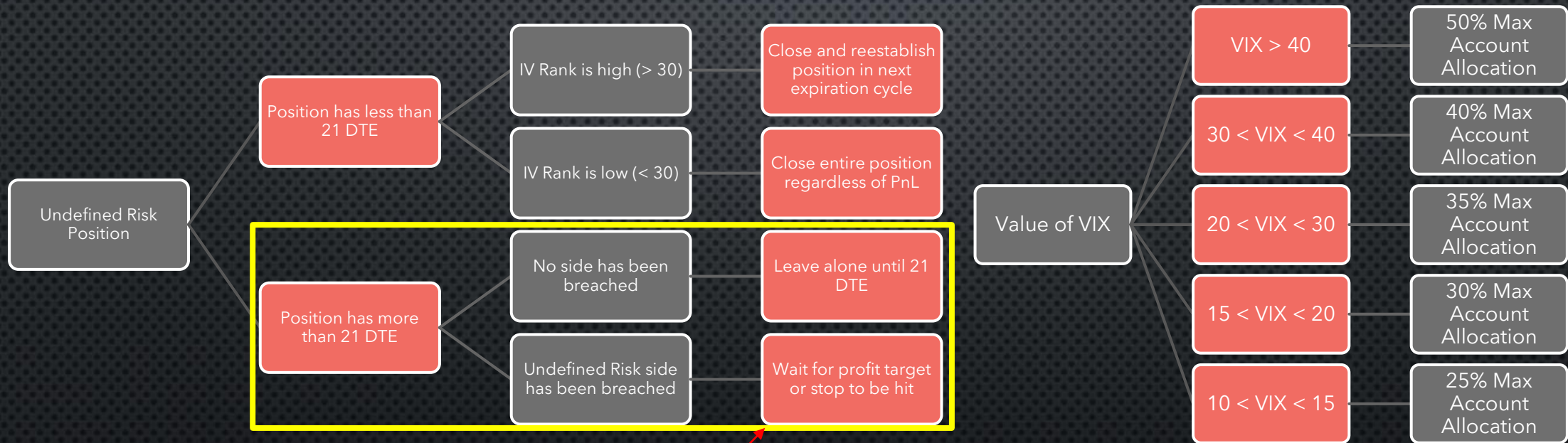


Our strategy focuses on this side of the undefined risk decision tree

Credit to [TastyTrade Research](#)  
Anton Kulikov, BS  
(anton@tastytrade.com)  
Mike Hart, MBA (mike@tastytrade.com)



# UNDEFINED RISK MANAGEMENT FLOW CHART



Since rolling is subjective for short options, I will adjust the final decision for simplicity

Credit to [TastyTrade Research](#)  
Anton Kulikov, BS  
(anton@tastytrade.com)  
Mike Hart, MBA (mike@tastytrade.com)





**WARNING: THE FOLLOWING BACKTESTS  
INCLUDE NO ROLLING OR STOPPING OUT ON  
TESTED SIDES**

# 45 DTE 1 $\Sigma$ SHORT STRANGLES – SPX

## PROFIT TARGET COMPARISON WITH 200% STOP

Statistics	25%	50%	75%	Hold till 21 DTE
Win Rate %	86%	<b>77%</b>	75%	75%
Total Trades Examined	227	<b>227</b>	227	227
Largest Profit	\$2,645 (03/20)	<b>\$3,575 (02/22)</b>	\$4,985 (02/22)	\$4,825 (02/22)
Largest Loss	(\$19,287) (03/20)	<b>(\$19,287) (03/20)</b>	(\$19,287) (03/20)	(\$19,287) (03/20)
Average Premium Collected	\$2,059	<b>\$2,059</b>	\$2,059	\$2,059
Median Premium Collected	\$1,530	<b>\$1,530</b>	\$1,530	\$1,530
Average Profit per Trade	\$17	<b>\$98</b>	\$74	\$78
Median Profit per Trade	\$430	<b>\$655</b>	\$620	\$620
Average Days in Trade	13	<b>20</b>	24	24
Median Days in Trade	12	<b>21</b>	24	24

Dates of Study: Jan 2006 – November 2022  
 Credit to [TastyTrade Research](#)



# 45 DTE 1 $\Sigma$ SHORT STRANGLES – SPX

## PROFIT TARGET COMPARISON WITH 100% STOP

Statistics	25%	50%	75%	Hold till 21 DTE
Win Rate %	81%	<b>73%</b>	72%	72%
Total Trades Examined	227	<b>227</b>	227	227
Largest Profit	\$2,645 (03/20)	<b>\$3,575 (02/22)</b>	\$4,825 (02/22)	\$4,825 (02/22)
Largest Loss	(\$13,760) (05/22)	<b>(\$13,760) (05/22)</b>	(\$13,760) (05/22)	(\$13,760) (05/22)
Average Premium Collected	\$2,059	<b>\$2,059</b>	\$2,059	\$2,059
Median Premium Collected	\$1,530	<b>\$1,530</b>	\$1,530	\$1,530
Average Profit per Trade	\$11	<b>\$90</b>	\$80	\$80
Median Profit per Trade	\$415	<b>\$612</b>	\$590	\$590
Average Days in Trade	12	<b>19</b>	23	23
Median Days in Trade	12	<b>20</b>	24	24

Dates of Study: Jan 2006 – November 2022  
 Credit to [TastyTrade Research](#)

# 45 DTE 1 $\Sigma$ SHORT STRANGLES – SPX

## PROFIT TARGET COMPARISON WITH 50% STOP

Statistics	25%	50%	75%	Hold till 21 DTE
Win Rate %	76%	<b>68%</b>	67%	67%
Total Trades Examined	227	<b>227</b>	227	227
Largest Profit	\$2,645 (03/20)	<b>\$3,575 (02/22)</b>	\$4,985 (02/22)	\$4,825 (02/22)
Largest Loss	(\$7,340) (01/18)	<b>(\$7,340) (01/18)</b>	(\$7,340) (01/18)	(\$7,340) (01/18)
Average Premium Collected	\$2,059	<b>\$2,059</b>	\$2,059	\$2,059
Median Premium Collected	\$1,530	<b>\$1,530</b>	\$1,530	\$1,530
Average Profit per Trade	\$77	<b>\$145</b>	\$141	\$145
Median Profit per Trade	\$402	<b>\$570</b>	\$540	\$540
Average Days in Trade	11	<b>17</b>	21	21
Median Days in Trade	9	<b>17</b>	24	24

Dates of Study: Jan 2006 – November 2022

Credit to [TastyTrade Research](#)



# ADVANTAGES TO DELTA NEUTRAL STRATEGIES WITH SHORT OPTIONS ON THE UNDERLYING

- DELTA NEUTRAL TRADING USING SHORT OPTIONS CAN MAKE A PROFIT WITHOUT TAKING ANY DIRECTIONAL RISK AT TIME OF ENTRY, ESPECIALLY IF THE UNDERLYING STAYS STAGNANT FOR SOME TIME AFTER.
- DELTA NEUTRAL POSITIONS ARE NOT AFFECTED BY SMALL MOVEMENTS MADE BY THE UNDERLYING BUT ARE STILL AFFECTED BY TIME DECAY AS THE PREMIUM VALUE OF THE OPTIONS DECAY OVER TIME.
- BY EXECUTING A DELTA NEUTRAL POSITION, ONE CAN ALSO PROFIT FROM A DECREASE IN VOLATILITY WITHOUT TAKING SIGNIFICANT DIRECTIONAL RISK.



# DISADVANTAGES TO DELTA NEUTRAL STRATEGIES WITH SHORT OPTIONS ON THE UNDERLYING

- DELTA NEUTRAL TRADING USING SHORT OPTIONS CAN TURN SOUR IF THE UNDERLYING CONTINUES TO TREND IN ONE DIRECTION FOR MULTIPLE DAYS OR WEEKS.
- DELTA NEUTRAL POSITIONS ARE AFFECTED BY LARGE MOVEMENTS MADE BY THE UNDERLYING. THETA, OR TIME DECAY OF THE PREMIUM VALUE OF THE OPTION, IS USUALLY NOT ENOUGH TO COMPENSATE THE LARGE MOVE UNLESS THE TRADE HAS BEEN ON FOR SOME TIME OR THE DELTAS ARE SMALL.
- BY EXECUTING A DELTA NEUTRAL POSITION WITH SHORT OPTIONS, ONE CAN LOSE MONEY FROM AN INCREASE IN VOLATILITY.