

Simple Steps You Can Take Right Now To Trade Volatility Like A Pro

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About Me

- 20 years of experience trading options
- 8 years of online research & options services
- CBOE floor trader and market maker – provided liquidity on the largest options exchange in the world for stocks like Amazon
- Hedge fund analyst, options portfolio
- MBA, MSIM, Arizona State University
- BA Economics, University of Illinois



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What Is Options Volatility?

- When we talk about options volatility, we are generally referring to **implied volatility**
- Implied volatility measures the expected rate of change of a stock price (or any other underlying asset)
 - Expressed as a percentage (annualized version of standard deviation of daily price moves)
 - Better seen as an example – so if Coca-Cola (KO) has a 14% implied volatility, it's expected to move 14% up or down over the next year
 - Compare KO to Tesla (TSLA), considered a more volatile stock, which has an implied volatility of 42%

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Why Trade Volatility?

- Volatility tends to be more predictable than asset prices (despite what happened in February and after)
- It has mean reverting characteristics (statistical evidence)
- It's relatively easy to trade volatility with options or ETPs (not so much at the moment with ETPs – though that could change)
- My favorite way to sell volatility is with **iron condors**, although there are many different ways to do so

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Step 1: Follow Volatility Metrics

- At least the very least, keep an eye on the VIX and how its price compares to past levels
 - The VIX is the S&P 500 Implied Volatility Index (more in a minute)
- The VIX isn't the perfect indicator of market volatility but it does a good job for what it is – and it's easy to find and compare to past data
 - Remember, it only measures the S&P 500 implied volatility
- VIX can be a signal of a major upcoming move in the market
 - It can help show you when to increase hedging
 - It can also be a decent indicator of “all clear”

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What Is The VIX?

- The calculation isn't important
- It's a measure of 30-day implied volatility, so it's what the market expects to happen

Here's why the VIX is important:

- As more people buy options, the VIX goes up
- Investors tend to buy options when they are worried (especially to the downside) so the VIX goes up when investors are worried
- That's why it is commonly known as the investor "fear gauge"
- It's a major source of hedging by institutions and funds

$$\sigma^2 = \frac{2}{T} \sum_i \frac{\Delta K_i}{K_i^2} e^{RT} Q(K_i) - \frac{1}{T} \left[\frac{F}{K_0} - 1 \right]^2 \quad (1)$$

WHERE...

σ is $VIX/100 \Rightarrow VIX = \sigma \times 100$

T Time to expiration

F Forward index level desired from index option prices

K_0 First strike below the forward index level, F

K_i Strike price of the i th out-of-the-money option; a call if $K_i > K_0$; and a put if $K_i < K_0$; both put and call if $K_i = K_0$.

ΔK_i Interval between strike prices - half the difference between the strike on either side of K_i

$$\Delta K_i = \frac{K_{i+1} - K_{i-1}}{2}$$

(Note: ΔK for the lowest strike is simply the difference between the lowest strike and the next higher strike. Likewise, ΔK for the highest strike is the difference between the highest strike and the next lower strike.)

R Risk-free interest rate to expiration

$Q(K_i)$ The midpoint of the bid-ask spread for each option with strike K_i

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The VIX: 10 Year Chart



More About The VIX

- The VIX itself isn't tradeable, only futures, options, and ETPs
- ETPs ~~are~~ were extremely popular (but none truly replicate the VIX)
 - VXX (short-term futures)
 - VIXY
 - ~~XIV (inverse)~~
 - **SVXY**
 - TVIX (leveraged)
 - **UVXY**
 - VXZ (medium-term)
- Everything in the market goes in cycles, and no doubt these products will be popular again

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Other Volatility Measurements

3/10/2017		3/13/2017		CBOE VIX SUITE HEAT MAP									
PREVIOUS	TODAY	AllTime		Index	Close to Close % Change	Ticker	NON U.S.					COMMODITIES	
		AllTime Min	AllTime Max				U.S. EQUITY	EQUITY	INCOME	FX			
10.67	10.78	8.54	68	One Week S&P 500 Volatility	VXST	1%							
11.66	11.35	9.31	80.86	One Month S&P 500 Volatility	VIX	-3%							
14.38	14.36	11.05	69.24	Three Months S&P 500 Volatility	VXV	0%							
80.27	81.57	15.71	168.75	One Month VIX Volatility	VVIX	2%							
16.47	15.34	13.65	87.62	Russell Volatility	RVX	-7%							
11.9	11.19	11.19	80.64	One Month Nasdaq 100 Volatility	VXN	-6%							
11.63	7.62	7.62	81.02	Europe Far East Index	EFA		-34%						
17.07	15.21	13.71	64.1	Emerging Markets	VXEEM		-11%						
17.77	16.56	16.56	63.42	China	VXXXFI		-7%						
32.55	30.69	16.67	72.83	Brazil	VXEWZ		-6%						
4.79	5.03	3.62	14.72	Treasury Notes	TYVIX			5%					
9.35	8.41	6.41	24.21	High Yield Corporates	VXHYG			-10%					
87.58	87.58	76.27	211.25	Swap Rate	SRVX			0%					
8.05	8.13	4.43	29.67	Euro Dollar FX	EUVIX				1%				
9.94	9.89	4.33	30.86	BP Dollar FX	BPVIX				-1%				
10.12	9.93	5.03	36.33	Japanese Yen Dollar FX	JYVIX				-2%				
33.45	32.39	14.5	100.42	Oil	OVX						-3%		
18.25	15.37	13.53	57.47	Energy	VLXXE						-16%		
13.03	11.27	11.23	64.53	Gold	GVZ						-14%		
22.03	21.14	18.33	80.64	Silver	VXSLV						-4%		

PREVIOUS	TODAY	AllTime Min	AllTime Max	Stock Close to Close % Change	Ticker	U.S. EQUITY
16.75	12.52	12.52	62.6	Apple	VXAPL	-25%
16.16	5.13	5.13	66.06	Amazon	VXAZN	-68%
15.42	13.77	11.17	55.6	Google	VXGOG	-11%
23.32	22.36	16.16	87.47	Goldman Sachs	VXGS	-4%
19.3	19.96	13.23	44.26	IBM	VXIBM	3%

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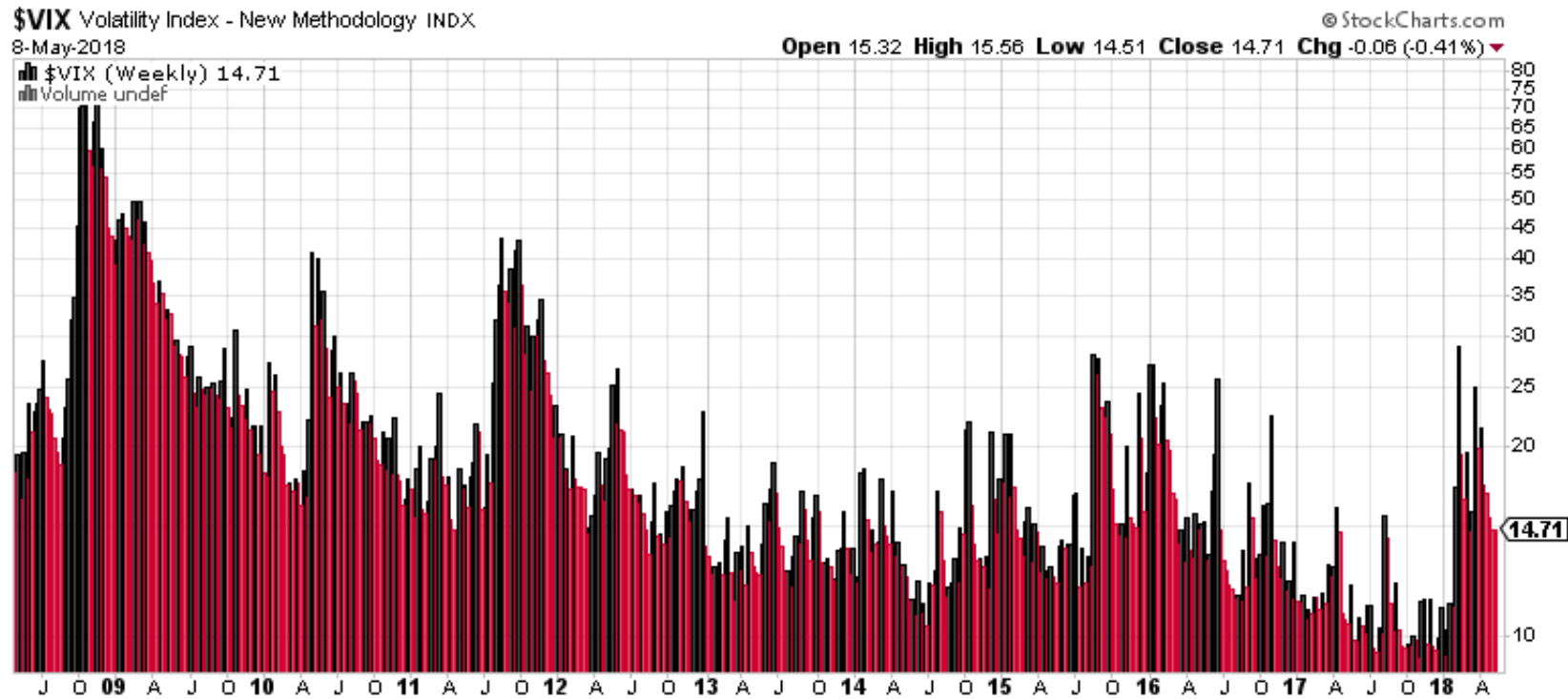
Step 2: Selling Volatility Is Still Good

- This used to say “Selling Volatility Is Key” – times have changed
- I mentioned before the volatility has mean reverting characteristics, and it’s very apparent with the VIX
 - The VIX is normally low
 - When it spikes, it tends to come back down quickly (unless there’s a major dislocation – see February 5th)
 - VIX up days tend to be infrequent and spread out
 - Magnitude is larger than down days in most cases
 - VIX down days are the norm and usually occur in bunches
 - It’s important to stay away from the short volatility strategy when there is a lot of uncertainty in the market (politics, economics, etc.)

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Why It's Usually Better To Sell Volatility



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Shorting Market Volatility: Results

Bottom line: Using the widely popular VXX ETN (short-term VIX), you would have made money over the last three years buying puts or selling calls

Buy 50 Delta Put	Buy 45 Delta Put	Sell 55 Delta Call	Sell 50 Delta Call
Expiration: 30 Days	Expiration: 30 Days	Expiration: 30 Days	Expiration: 30 Days
Risked: \$354	Risked: \$227	Risked: \$1532	Risked: \$1407
Total Return: \$2099	Total Return: \$1739	Total Return: \$2339	Total Return: \$2059
% Return: 593%	% Return: 766%	% Return: 153%	% Return: 146%
Commissions: -	Commissions: -	Commissions: -	Commissions: -
% Wins: 60.5%	% Wins: 57.9%	% Wins: 84.6%	% Wins: 84.6%
Wins: 23 Losses: 15	Wins: 22 Losses: 16	Wins: 33 Losses: 6	Wins: 33 Losses: 6
Gain: \$4395 Loss: -\$2296	Gain: \$3877 Loss: -\$2138	Gain: \$5770 Loss: -\$3431	Gain: \$5304 Loss: -\$3245

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Selling Volatility: Disclaimer

- I wrote this before February 5th and the aftermath and it still applies
- Keep in mind, funds use the VIX to hedge, so there will always be demand for long VIX
- However, don't forget, the VIX can move up in a hurry when the market starts to worry
 - Huge gaps can occur and you may not have time to exit positions
 - Always be aware of the macro environment
 - Try not to go short volatility through major events (like elections)
 - The ETP blowup was unforeseen but the political drama was more predictable*

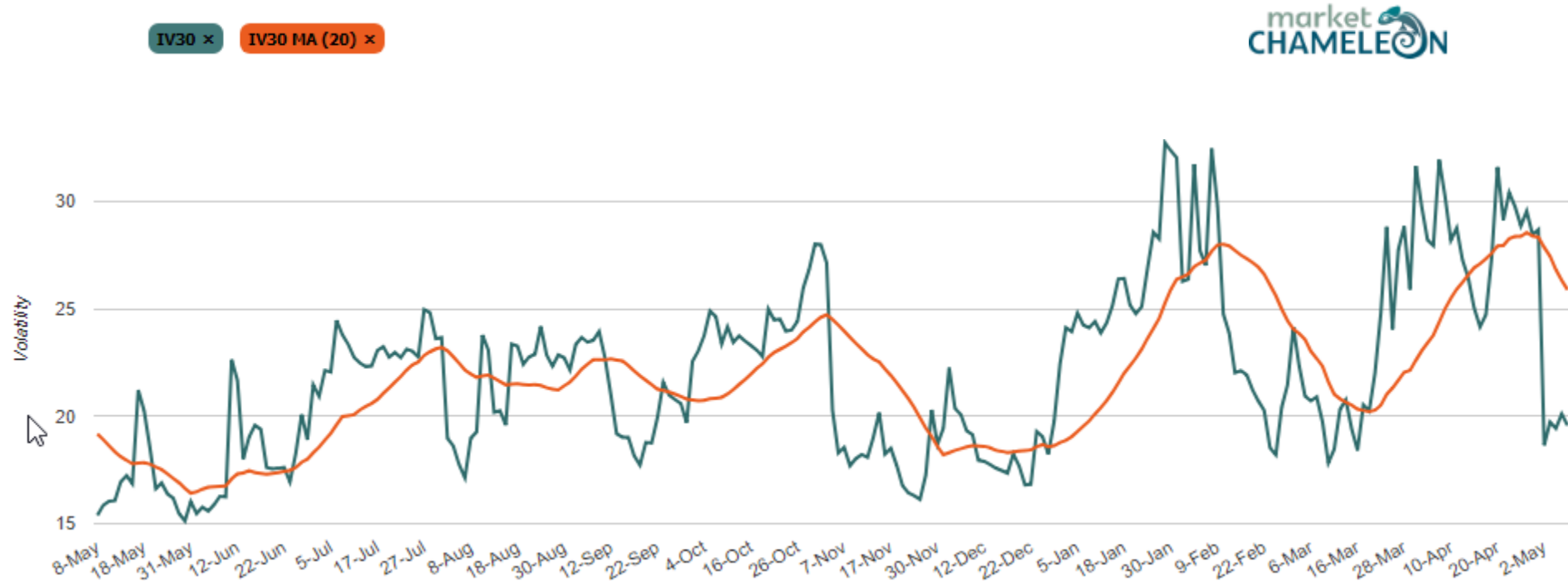
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Step 3: Follow The Implied Volatility

- Market volatility (VIX) isn't the only way to trade volatility
- Every stock and ETF has its own implied volatility curve you can look at and use to make trade decisions
- Individual equity implied volatility will also revert to the mean
- Single stocks have more volatility buying opportunities than index ETFs due to earnings, but both tend to mean revert.
 - AAPL versus SPY

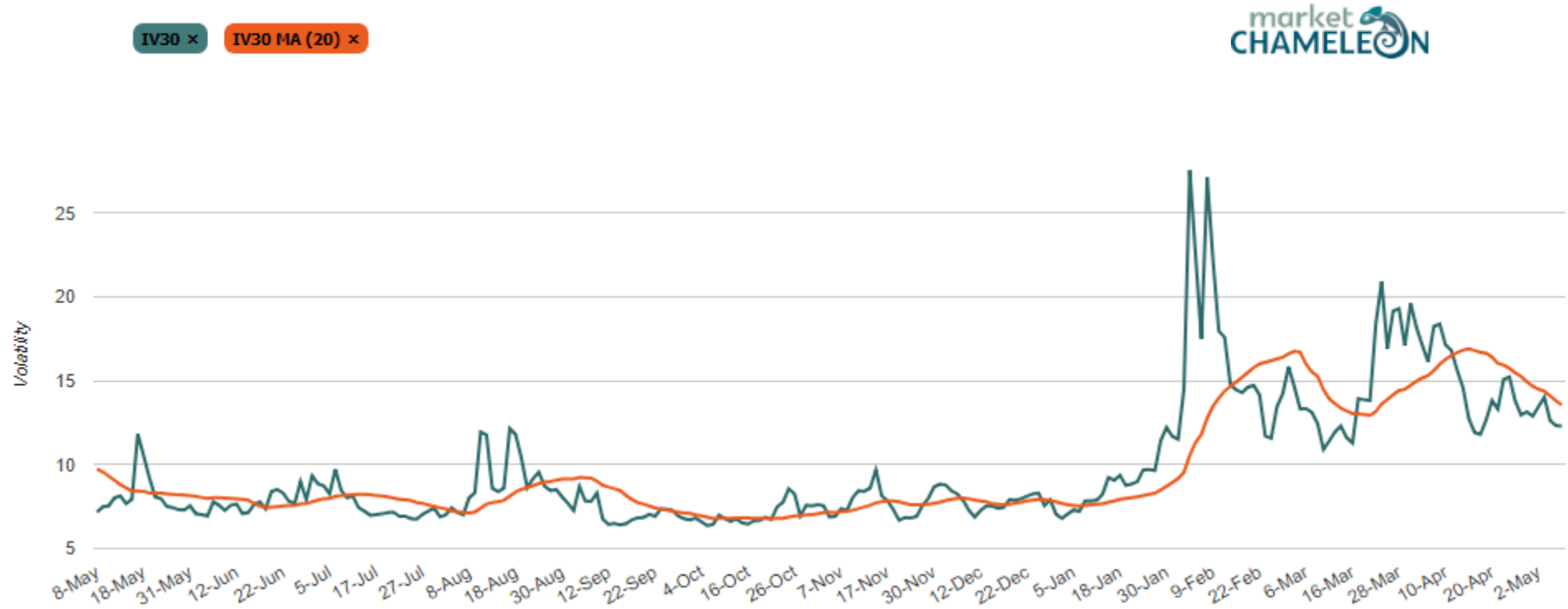
AAPL Implied Volatility Curve



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SPY Implied Volatility Curve



How To Sell Volatility In Equities

- Unlike with the VIX, there isn't an ETP available for individual stocks or ETFs
- As such, you have to use options to sell volatility
- My favorite way to sell volatility is using iron condors, which limits risk and margin requirements, but given our time constraints, I'll show you what it looks like to sell straddles
 - Straddles consist of buying or selling a call and put at the same strike in the same expiration – typically the ATM or 50 delta options.
 - It's a pure volatility play since its only focus is movement
 - This is only theoretical in nature – never sell a straddle without outside option protection (butterfly or iron condor)

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Selling Volatility: Straddle Results

AAPL: Sell 50 Delta Call, Sell 50 Delta Put	
Expiration:	45 Days
<u>Risked:</u>	\$26010
Total Return:	\$3017
% Return:	11.6%
Commissions:	-
% Wins:	54.9%
Wins: 28	Losses: 23
Gain: \$15113	Loss: -\$12096

JPM: Sell 50 Delta Call, Sell 50 Delta Put	
Expiration:	45 Days
<u>Risked:</u>	\$2054
Total Return:	\$1923
% Return:	93.7%
Commissions:	-
% Wins:	66%
Wins: 35	Losses: 18
Gain: \$5014	Loss: -\$3090

SPY: Sell 50 Delta Call, Sell 50 Delta Put	
Expiration:	45 Days
<u>Risked:</u>	\$4615
Total Return:	\$5578
% Return:	121%
Commissions:	-
% Wins:	67.4%
Wins: 29	Losses: 14
Gain: \$10920	Loss: -\$5342

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Gains and losses capped at 50%

Earnings not traded

(Straddles would never be traded without certain risk parameters)

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Summary

- Keep an eye on the VIX
 - Understand its limitations
- Selling volatility has a high probability of success
 - Know the risks
- You can trade individual equities by following implied volatility
 - Compare current implied volatility to the average
- There are many ways to sell volatility, but ultimately you need to trade your edge (even if it means being a volatility buyer)

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Thank You!

Let's take some questions now.



For more information, go to

www.OptionsProfitEngine.com

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