

# Build Your Own Structured Note

Houston AAI Retirement SIG

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# Caveat Emptor!

I am a Registered Investment Advisor Representative of Millstein Advisors, LLC, a Registered Investment Advisor.

**This presentation is not a recommendation for any particular tactic, strategy, purchase, sale or other transaction. This presentation is informational.**

The following are some ideas you may find useful. It is impossible for me to know whether any of these ideas are appropriate for your particular situation. As Members of AAI, I fully expect that you will be able to make that judgment for yourself and, *in particular, to know whether you are sufficiently skillful with options to implement these ideas yourself.*

# A Structured Note

- Often something in the form of....
  - Your maximum gain will be X
  - You can't lose more than Y
    - Or we'll protect the first Z of the downside, after which the risk is yours
- This can be awfully attractive, except that...
- Often available only with a significant investment
  - And almost invariably illiquid
- Innovator addresses the cons and endeavors to deliver the pros

# Innovators' General Approach

- ETFs created for each month of the year
  - Each ETF stays invested for a year and then rolls over to the next year
- One series of ETFs offers downside protection of 9%
- Another series offers downside protection of 15%
- A third asks the investor to swallow the first 5% of losses but then offers protection on the next 30% down
- In return, upside is limited
  - The limit depends on option prices at the moment of rebalancing
- The expense ratio for each is 0.79%

# September is darn juicy

View Starting Caps

September 2022 ▾

## Buffer ETFs™

Ticker	Name	Ref. Asset	Upside/Downside	Outcome Period	Starting Cap
BSEP	U.S. Equity Buffer ETF	SPY	1x/1x + 9% Buffer	12 months	24.09%
PSEP	U.S. Equity Power Buffer ETF	SPY	1x/1x + 15% Buffer	12 months	17.50%
USEP	U.S. Equity Ultra Buffer ETF	SPY	1x/1x + 30% (-5 to -35%) Buffer	12 months	14.41%

# December was less exciting

View Starting Caps

December 2021 ▾

## Buffer ETFs™

Ticker	Name	Ref. Asset	Upside/Downside	Outcome Period	Starting Cap
BDEC	U.S. Equity Buffer ETF	SPY	1x/1x + 9% Buffer	12/1/2021-11/30/2022	14.97%
PDEC	U.S. Equity Power Buffer ETF	SPY	1x/1x + 15% Buffer	12/1/2021-11/30/2022	10.25%
UDEC	U.S. Equity Ultra Buffer ETF	SPY	1x/1x + 30% (-5 to -35%) Buffer	12/1/2021-11/30/2022	7.37%

# You Can Create Your Own

- If you create your own, you can
  - Create you own downside / upside tradeoffs
  - Fix the upside rather than the downside
    - Instead of asking “how high is the cap for 9% protection?”
    - Ask “how much protection is available for a 10% cap?”
  - You can choose your durations, within limits
    - Going short term (a few months) won’t work very well
    - You have to use publicly available options
      - So you won’t get the exact limits nor durations you seek, but close enough
- Let’s start with
  - I want 12% downside protection for a year; what sort of upside can I have?

# 12% Protection / Upside ?

- SPY closed on 9/9 at \$407
  - (All prices herein are as of the 9/9 close and rounded to simplify)
- First we create a put spread to build downside protection
  - 12% below 407 = 358
  - Puts for next September are available every \$5
  - Let's price a \$405 / 360 put spread
- SPY Sept 2023 \$405 puts cost \$33 / \$360 puts cost \$19
  - We buy the \$405 puts and sell the \$360s
  - Cost is \$14
- Outcomes???



# Our Put Spread Outcomes

- Remember, we own the \$405 puts and sold the \$360 puts
- If SPY = \$405 come next September
  - Both puts expire worthless
  - We lose \$2 (we paid \$407 for SPY)
- If SPY = \$380
  - We lost  $407 - 380 = \$27$  on the SPYs, but...
  - The \$405 put is worth \$25
  - So we still lost just \$2
- If SPY = \$360
  - We lost \$47 on the SPYs, but our \$405 put is worth \$45
    - We still lose only \$2 for SPY down 11.5% (from 407 to 360)
- For every dollar  $SPY < 360$ , we lose a buck

# What if SPY goes UP?

- If SPY goes up from \$407 to \$420
  - We make \$13 in the stock
    - But remember, we paid \$14 for the downside protection
    - That means we *lost* a buck even though the stock is up. That's no good
- And this is where the cap comes in
  - We establish a cap to pay for the downside protection
  - What's the highest call strike we can sell to cover that \$14?
    - Turns out to be the \$465
- So we sell the \$465 call at the same time that we purchase the protective put spread and voila
  - We have downside protection of 11.5%
  - And 465 is an upside cap of 14.3%

# RECAP

- SPY is \$407
  - We chose 12% protection
  - That required a purchase of the Sep 405/360 put spread for \$19
    - Ignoring the first two bucks from \$407 to \$405
    - We are protected against a drop of 12% in the S&P 500
    - Beyond that drop, we lose \$ for \$ with the SPYs
  - We recovered the \$19 cost of the protection by selling a Sep 465 call
    - This means for all SPY above \$465, our gain is limited to \$58 (465 less 407)
- We have downside protection to \$360 (or 11.5%)
- Our upside is limited to 465 or a gain of 14.3%

# A More Interesting Question

- Say you believe the market is richly priced
  - And therefore a potential 10% feels like plenty to you
- Assume further that you are not worried about losing 2%
- Then what's possible?
- 10% more than 407 is 448. Let's round up to the 450 calls
  - They can be sold for \$20
- So now the question becomes "What protection can \$20 buy?"
- The world is your oyster ;)

Strike ▲	Action	Last	Change	Bid	Ask	V
PUTS						
320	▼	11.12	0.00	10.73	11.60	
325	▼	12.08	0.00	11.52	12.49	
330	▼	13.20	0.00	12.36	13.33	
335	▼	13.94	0.00	13.25	14.23	
340	▼	14.60	0.00	14.40	15.17	
345	▼	17.62	0.00	15.20	16.18	
350	▼	16.74	0.00	16.26	17.23	
355	▼	17.95	0.00	17.39	18.36	
360	▼	19.10	0.00	18.58	19.57	
365	▼	22.70	0.00	19.84	20.81	
370	▼	22.00	0.00	21.15	22.14	
375	▼	23.10	0.00	22.54	23.54	
380	▼	24.90	0.00	24.02	25.02	
385	▼	26.11	0.00	25.57	26.58	
390	▼	27.54	0.00	27.21	28.23	
395	▼	32.99	0.00	28.93	29.96	
400	▼	30.96	0.00	30.74	31.78	
405	▼	32.95	0.00	32.64	33.70	

Say you don't mind losing from 407 down to 400.  
Remember that we have \$20 to spend.

Buy the \$400 put & sell that costs \$20 less  
That's the \$320

That means, if you are willing to

- 1) cap your upside at 10%
- 2) risk the first \$7 on SPY (1.7%).....

**You can buy protection all down to 320**  
**That's 21.4% below the current 407 price**

But what if you are willing to take the hit down to \$385. Then what sort of protection will \$20 buy?

Turns out all the way down to \$280 or 31.2%.  
That is, if you take the first 5.4% loss, you are protected for the next 25.8%.

# Pros of the DIY Approach

- By far the largest is that you get to set your own parameters
  - Maybe you want 10% protection, or 20%
  - Maybe you are willing to suffer a loss of 3% or 5% and just protect from catastrophes
  - Maybe you want to fix an upside cap at 8, 10 or 12% and accept whatever downside protection that can purchase
  - Not limited to 12 months or less
- No expense fee
- Not limited to SPY
  - You can take this approach with any index or stock with sufficiently liquid options
    - Tesla, anyone? Stock closed at \$300
    - 20% upside to Jan 2024 gives you \$63 from the Jan 2024 \$360 call
    - The 300/150 put spread costs \$58
    - So \$5 profit if the stock goes nowhere, no loss even if the stock is cut in half and 20% upside
    - Not a recommendation !!!!

# On the Other Hand, the Cons

- You are limited to publicly traded options
  - That means you have to accept strike prices in the right neighborhood as opposed to exact percentages of upside or downside
  - You have to accept the available time frames
- Your investment will be “lumpy”
  - To use SPY options, you’ll need 100 shares of SPY
    - That will cost  $100 \times 407 = 40,700$ .
    - You can’t readily invest \$10k or \$30k or \$50k; you gotta do \$40,700
  - But what if.....

# Holdings of BAUG as of Sept 8, 2022

Holdings	% Portfolio Weight	Market Value
Spy 07/31/2023 4.13 C	197.44	275,945,151
Spy 07/31/2023 412 P	17.11	23,918,839
U.S. Bank Money Market Deposit Account	0.28	390,261
Spy 07/31/2023 504.52 C	-2.13	-2,971,217
Spy 07/31/2023 374.91 P	-10.90	-15,232,549
Cash Offset	-101.80	-142,285,482

Notice that Innovator does NOT hold the stock.

They purchase an absurdly in-the-money call



# Can We Use a Long Call Instead of the Stock?

- SPY is at \$407
- SPY Sept 2023 \$150 calls cost for \$257
  - $150 \text{ strike price} + 257 \text{ premium} = \$407$ , the price of SPY
- No premium paid
  - Position now costs \$25,700 to purchase rather than \$40,700
- TANSTAAFL
  - The SPY Sept'24 \$150 call doesn't pay dividends; SPYs do
  - You lose the dividend yield for a year
  - But you can better calibrate your investment

# Summary

- Innovator ETFs offer
  - Liquidity
  - Easy investment amounts
  - Fixed protection/upside parameters
  - A non-trivial expense ratio
- DIY offers
  - Liquidity
  - Lumpy investment amounts
  - Ability to choose protection / upside parameters
  - No expense ratio
  - Nearly boundless investment choices

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# Holdings of BMAR as of Sept 8, 2022

<b>Current Portfolio Date</b>	<b>Equity Holdings</b>	<b>Bond Holdings</b>	<b>Other Holdings</b>	<b>% Assets in Top 10 Holdings</b>	<b>Reported Turnover %</b>			
Sep 08, 2022	0	0	6	203	0.00			
<b>Holdings</b>	<b>% Portfolio Weight</b>	<b>Market Value</b>	<b>Prospectus Net Expense Ratio</b>	<b>1-Year Return</b>	<b>Morningstar Rating</b>	<b>Analyst Rating</b>	<b>Total Assets</b>	
Spy 02/28/2023 3.51 C	197.14	169,716,246	—	—	—	—	—	
Spy 02/28/2023 436.64 P	19.27	16,593,356	—	—	—	—	—	
U.S. Bank Money Market Deposit Account	0.50	432,691	—	—	—	—	—	
Spy 02/28/2023 509.24 C	-1.98	-1,701,389	—	—	—	—	—	
Spy 02/28/2023 397.33 P	-11.33	-9,750,880	—	—	—	—	—	
Cash Offset	-103.62	-89,202,277	—	—	—	—	—	

# Holdings of PMAR as of Sept 8, 2022

Holdings	% Portfolio Weight	Market Value
Spy 02/28/2023 3.49 C	193.48	445,490,994
Spy 02/28/2023 436.63 P	19.68	45,309,648
U.S. Bank Money Market Deposit Account	0.47	1,078,640
Spy 02/28/2023 487.76 C	-3.36	-7,731,557
Spy 02/28/2023 371.14 P	-7.93	-18,250,548
Cash Offset	-102.34	-235,647,079

# Holdings of UMAR as of Aug 24, 2022

Holdings	% Portfolio Weight	Market Value
Spy 02/28/2023 3.48 C	193.30	113,879,283
Spy 02/28/2023 414.8 P	14.33	8,444,524
U.S. Bank Money Market Deposit Account	0.45	265,704
Spy 02/28/2023 283.81 P	-2.05	-1,206,943
Spy 02/28/2023 475.32 C	-4.00	-2,357,324
Cash Offset	-102.04	-60,113,210