

The BOXX Anomaly: ETF Tax Enhances Inverted Yield Curve Strategy

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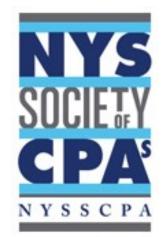
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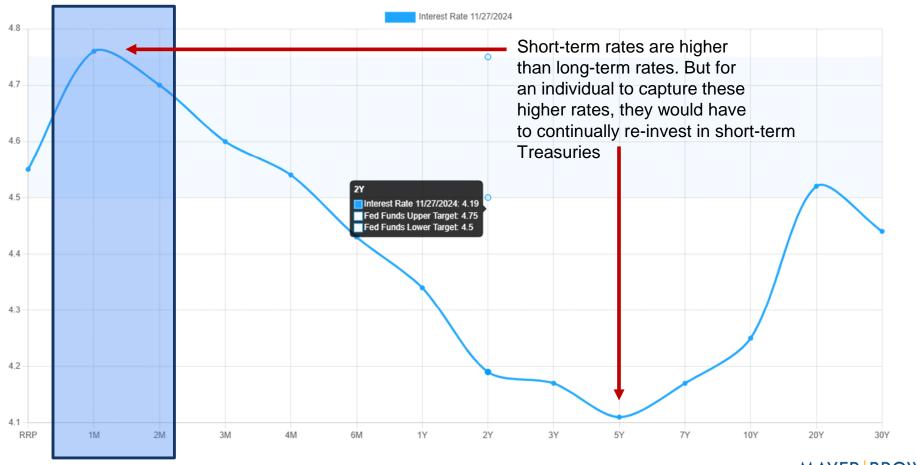
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Daniel Hemel is a Professor of Law at New York University School of Law. His wide-ranging research explores topics in taxation, intellectual property, administrative and constitutional law, and nonprofit organizations. He has published more than fifty scholarly articles and essays in law reviews and economics journals, and his academic work has been cited by the U.S. Supreme Court, multiple federal courts of appeals, and the Presidential Commission on the Supreme Court of the United States. Before joining the NYU faculty, he served as visiting counsel at the Joint Committee on Taxation, clerked for Associate Justice Elena Kagan on the U.S. Supreme Court, and was a Professor of Law and Ronald H. Coase Research Scholar at the University of Chicago Law School. He has held visiting professorships at Harvard, Stanford, and Yale Law Schools, and he serves on the board of the National Tax Association.

The Non-Tax Objective of BOXX



The Treasury Yield Curve as of November 27, 2024



The Yield Curve has Been Inverted for Over 2 Years

- BOXX is an exchange-traded fund taxable as a regulated investment company (a "RIC")
- BOXX shares are perpetual securities
- BOXX itself is constantly rolling over short-term investments to enable its shareholders to benefit from higher short-term rates.
- BOXX enables retail investors to benefit from the inverted yield curve without the investors having to roll-over short-term Treasuries
- BOXX has no minimum investment

BOXX's Strategy to Enable Its Investors to Benefit from High Short-Term Rates

YSSCP

BOXX Does Not Roll-Over Short-Term Treasuries

- BOXX's strategy utilizes 4 options treated as Section 1256 contracts. The options, taken together, provide a return that is approximately equal to the short-term Treasury rate
- A "bull call spread"
 - BOXX buys call options on the S&P500
 - BOXX then sells call options on the S&P500 with a higher strike price (but same expiration date)
- BOXX then enters into a "bear put spread"
 - BOXX purchases S&P500 put options
 - BOXX sells S&P500 put options with a lower strike price (but, again with the same expiration date

Example of the BOXX Strategy

- Assume SPY trades at \$51 per share
- Buy an S&P Call Option @ 49 and pay \$329 (in the money by \$200 ((51-49) x 100 shares)
- Sell an S&P Call Option @ 53 and receive \$123 (out of the money by \$200 ((53-51) x 200 shares)
- Buy an S&P Put Option @ 53 and pay \$269 (in the money by \$200 ((53-51) x 200 shares)
- Sell an S&P Put Option @ 49 and receive \$97 (out of the money by \$200 ((51-49) x 100 shares)
- Total cost = \$378 (439 123 + 269 97)
- Guaranteed Return: \$22 = \$400 (\$2 x 200 shares) minus \$378 cost (before commissions). Return is solely attributable to time value of money.

Some Observations on BOXX's Options

- Although locked-in return is solely attributable to time value of money, it is not a debt instrument
 - There is no debtor and yield is embedded within the options
- All positions are subject to Section 1256, requiring BOXX to use the mark-to-market method of accounting
- Section 1256 treatment also treats all gains and losses as 60% long-term and 40% short-term
- Net result is that BOXX has capital gains and losses (absent rules that would change character)

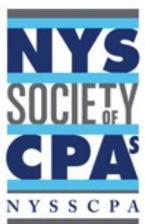
BOXX's Overlay (Do Not Appear to be Related to Yield Strategy)

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BOXX Also Enters Into Unrelated Options

- BOXX also enters into single stock options that are not subject to Section 1256
- These options create straddle positions. All options appear to have the same strike price and expiration. Not clear if there is no profit or loss potential.
- Long Strategy Replicates holding of physical stock
 - Buys call options at current market
 - Sells put options at current market
- Short Strategy Replicates short against the box
 - Sells call options at current market
 - Buys put options at current market

RIC Taxation and Creation Redemption Transactions



Some Basics of RIC Taxation

- RICs are "modified pass-through entities."
- RICs are subject to tax but are entitled to a deduction for ordinary income dividends and capital gain dividends.
- The deduction reduces the RIC's taxable income and net capital gain and the dividend is taxable to the RIC shareholders.
- A RIC must distribute at least 90% of its ordinary income and capital gains.

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Section 852(b)(6) Overrides Code § 311(b)

- Under Code § 311(b), a corporation recognizes gain when it distributes appreciated property to its shareholders
- Code § 852(b)(6) overrides Code § 311(b) for distributions of appreciated property by a RIC if the RIC is distributing the property in redemption of its stock.

Creation – Redemption Transactions

- In a creation redemption transaction, an "authorized participant," usually a bank, broker-dealer or market maker, buys stock in the RIC
- Shortly after the authorized participant buys the RIC stock, the RIC redeems the stock by distributing appreciated securities to the authorized participant
- The RIC does not recognize any gain or loss because Code § 852(b)(6) protects it from the recognition of gain.
- The authorized participant does not recognize any gain or loss because the value of the appreciated securities is equal to its cost of the RIC stock.

Creation – Redemption Transactions cont'd

- The authorized participant takes a basis in the securities received in redemption of the RIC shares equal to the fair market value of the securities.
- The authorized participant then sell the securities received in the redemption without gain or loss.
- Wall Street wags have called creation redemption transactions "heartbeat" trades because the authorized participant only holds the RIC shares for a heartbeat.

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The Tax Issue With Creation – Redemption Transactions

- Should the authorized participant be treated as a shareholder in the RIC or as an agent disposing of the appreciated securities on behalf of the RIC?
 - How long should the authorized participant hold the RIC shares before the redemption?
 - How long should the authorized participant hold the securities received in the redemption prior to selling such securities?
 - Does it matter if the authorized participant short sold the securities that it received in the redemption prior to receiving such shares?

BOXX's Use of Creation – Redemption Transactions



Code § 852(b)(2) Does Not Reach Section 1256 Contracts

- Code § 852(b)(6) does not allow a RIC to avoid recognizing the appreciation inherent in a Section 1256 contract because Code § 1256(c) requires the holder of the contract to recognize gain when the contract is assigned.
- Prudent reading of Code § 1256(c) is that it applies prior to the disposition in the redemption transaction
- As a result, the gain is recognized even though Code § 852(b)(6) would shelter gain on the redemption distribution
- These rules effectively prevent BOXX from distributing the appreciated legs of its S&P500 box spreads.

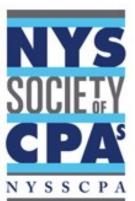
BOXX Distributes the Gain Legs on Its Single Stock Positions

- Although the synthetic short against the box positions that BOXX creates in the single stock does not appear to have the potential for any net gain, after any price movement, two legs will be in the money and two legs will be out of the money.
- BOXX distributes the single stock options with gain in creation redemption transactions to its authorized participant.
- BOXX then closes the single stock options in a loss position and recognizes a capital loss.
- BOXX shelters the capital gains recognized in the S&P500 box option positions with the capital losses recognized on the closing of the single stock option positions.

Tax Considerations Applicable to the BOXX Transactions (Where Mark & Dan are likely to differ)







Conversion Transactions

- Section 1258(c) defines a conversion transaction as any transaction in which all the taxpayer's return is attributable to the time value of money and meets one of four specified filters:
- 1. the holding of property and the execution of a substantially contemporaneous contract to sell property at a price determined in accordance with that contract;
- 2. a straddle;
- 3. a transaction that is marketed or sold as producing capital gains from a transaction that meets the first test stated above; or
- 4. any other transaction designated by the IRS in regulations.

Conversion Transaction Considerations

- Seems incontrovertible that BOXX return is based on the time value of money. What about the second leg of the conversion transaction rule?
- Shareholder level What was the shareholder told about the tax considerations applicable to the transaction?
 - The prospectus states that "on the advice of its accountants, the Fund expects that distributions related to the Fund's SPX positions, if any, will be characterized by the Fund as capital gains"
 - Recent interviews with BOXX principals have discussed tax considerations
- BOXX level Does the S&P500 trading result in a straddle?

Straddles that Create Conversion Transactions

- Straddle for conversion rule purposes means a straddle as defined in Code § 1092(c).
- Code § 1256(a)(4) states that all positions making up a straddle are section 1256 contracts, that "section 1092 shall not apply with respect to such straddle."
- BOXX position appears to be that the S&P500 box positions are made up entirely of section 1256 contracts, that they cannot constitute an applicable straddle because Code § 1256(a)(4) carves out such transactions from constituting a straddle under Code § 1092(c).

The Overlay Transactions in Single Stock Futures



The Single Stock Option Transactions

- The single stock options may qualify as straddles within the meaning of section 1092
- <u>Question 1</u>: When BOXX distributes in-the-money single stock options to an authorized participant in a redemption transaction, does it have gain that is "realized but not recognized?"
 - If yes, then losses on out-of-the-money single stock options are likely deferred for at least one year and carried forward to the next
- <u>Question 2</u>: When BOXX retests the next year, can it use the losses it has carried forward?
 - "Unrecognized gain" includes gain that, "as of the close of the taxable year," has been "realized but not recognized" (Code § 1092(a)(3)(A)(ii))

The Single Stock Option Transactions

- If the losses from these transactions are generated in transactions that do not have a reasonable opportunity for pre-tax profit, the losses can be disallowed for federal income tax purposes
 - K2 Trading Losses from Son of Boss Transaction disallowed because it lacked economic substance. (Loss on disposition of partnership interest successfully challenged when inherent loss in put option contributed to partnership did not reduce basis in partnership interest)
 - Palm Canyon X Similar to K-2 (Loss on FX distributed by partnership was disallowed when basis was not reduced by loss position assumed by partnership).
 - Lots of similar cases discussed in Tax Notes article.

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Thank You!