

The Inverted Yield Curve & Potential Opportunities

Overview of the Quadratic Interest Rate
Volatility and Inflation Hedge ETF (IVOL)



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Agenda:

- Nancy Davis and Guy Ferrara introduction
- How to potentially benefit from the yield curve and market volatility
- Is an inverted yield curve a reliable economic predictor?
- What can the FED do to help the yield curve?
- Overview of The Quadratic Interest Rate Volatility and Inflation Hedge ETF (IVOL) and how it may potentially benefit portfolios

This presentation contains several charts including index return charts. These charts are provided for illustrative purposes only and do not represent actual Fund performance. Index returns do not reflect management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results. For actual Fund performance, please visit www.ivoletf.com



THE INVERTED YIELD CURVE & POTENTIAL OPPORTUNITIES



- Nancy Davis: Nancy Davis founded Quadratic Capital Management in 2013 and is the Chief Investment Officer and Managing Partner. Ms Davis is the portfolio manager for The Quadratic Interest Rate Volatility and Inflation Hedge ETF (ticker: IVOL). Ms. Davis began her career at Goldman Sachs where she spent nearly ten years, the last seven at the proprietary trading group where she rose to become the Head of Credit, Derivatives and OTC Trading. Prior to starting Quadratic, she served as a portfolio manager at Highbridge where she managed \$500 million of capital in a derivatives-only portfolio. She later served in a senior executive role at AllianceBernstein.

- Guy has spent the last 20 years in the asset management industry helping financial professionals with all aspects of their business. His experience spans marketing, management, client education, portfolio construction, and asset retention. Over the course of his 20 year career his mission has always been improving real financial outcomes for client's and the financial advisors who serve them.
- Prior to joining KFA Funds, Guy worked for UBS Global Asset Management where he spent the last 15 years helping financial advisors, institutions , and select family offices.



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Curve Environments

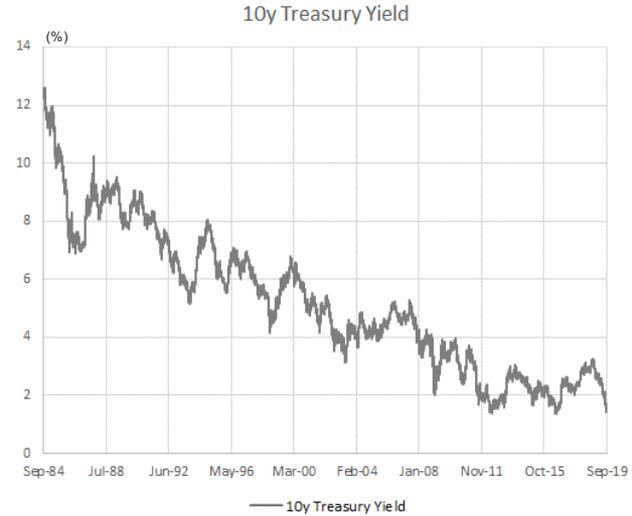
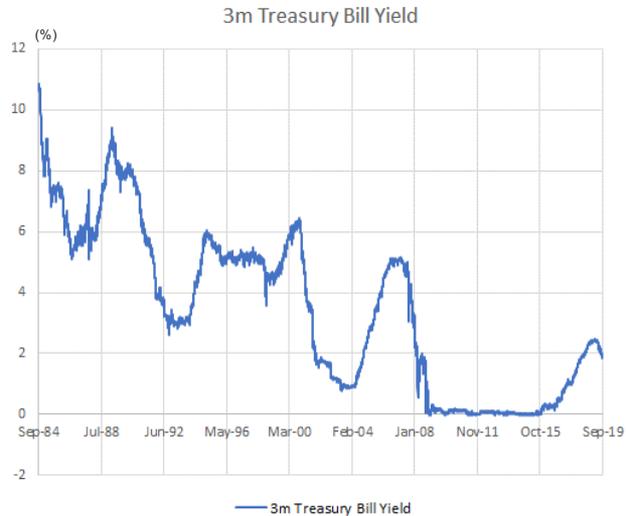
Environment	Yield Curve Description	Chart	Real Life Example
Short Term Rates < Long Term Rates	NORMAL - When the 2yr rate is lower than the 10yr rate	 <p>The chart shows a normal yield curve where the 2-year rate is 1.5% and the 10-year rate is 2.5%.</p>	You would have to decide if the increased yield you receive is worth locking up your money for the additional time
Short Term Rates = Long Term Rates	FLAT - When the 2yr rate equals the 10yr rate	 <p>The chart shows a flat yield curve where both the 2-year and 10-year rates are 1.5%.</p>	You would tend to buy the shorter dated CD in this example. Why lock up your money when you are not getting rewarded
Short Term Rates > Long Term Rates	INVERTED - When the 2yr rate is higher than the 10yr rate	 <p>The chart shows an inverted yield curve where the 2-year rate is 2.5% and the 10-year rate is 1.5%.</p>	You would tend to buy a shorter dated CD in this example. Why lock up your money when you are not getting rewarded

Source: Quadratic Capital

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Declining Yields

- 10y and 3m treasury yields have declined significantly since the 90s



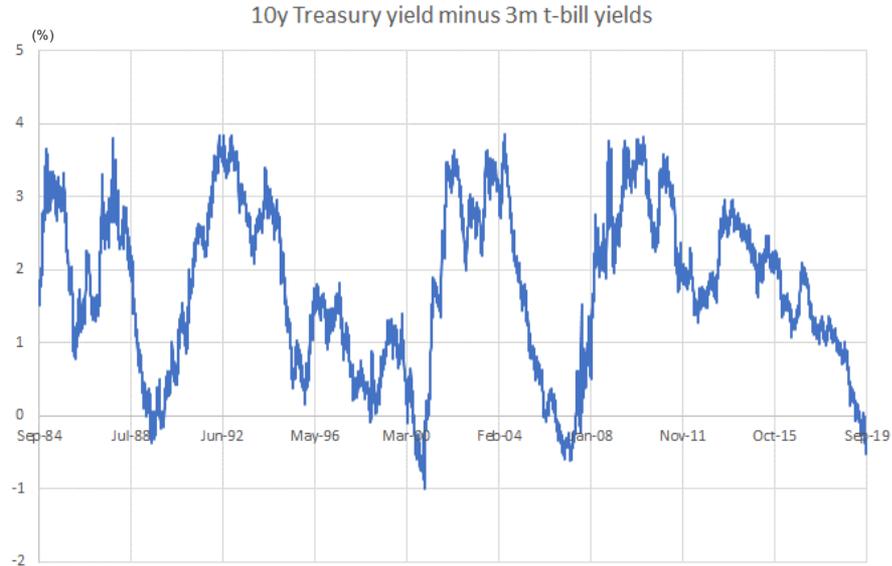
Source: Bloomberg and Quadratic Capital calculations



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Current Curve Steepness

- The spread between the yield on the 10y Treasury bond and the 3m T-bill:
 - It is inverted – meaning an investor is paid more yield to own the 3-month bill vs the 10 year bond

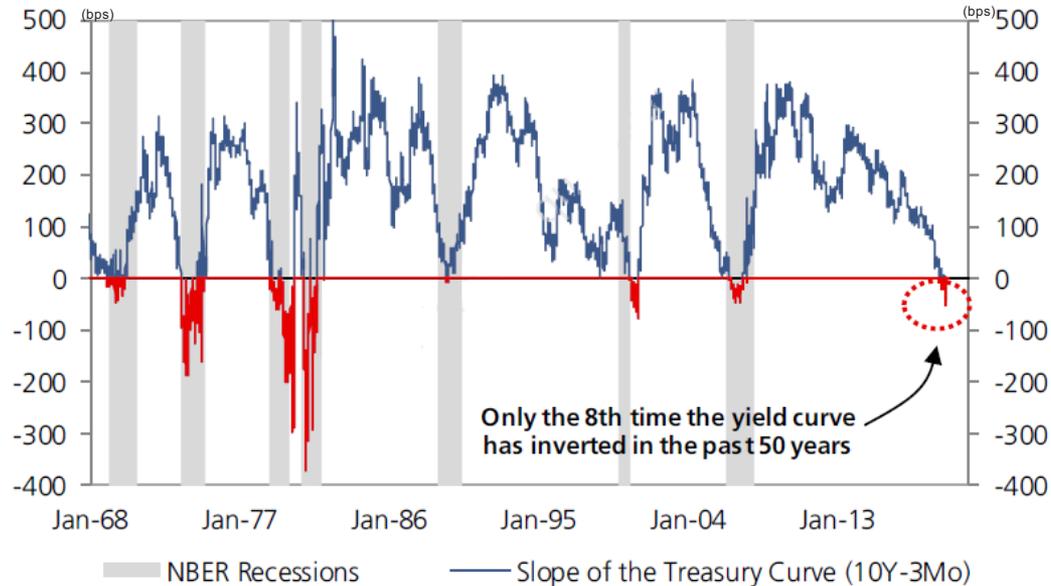


Source: Bloomberg and Quadratic Capital calculations



The Yield Curve – Recession Indicator

Every Inversion Of The Curve In The Last 50 Years Has Resulted In A Recession Shortly Thereafter ...



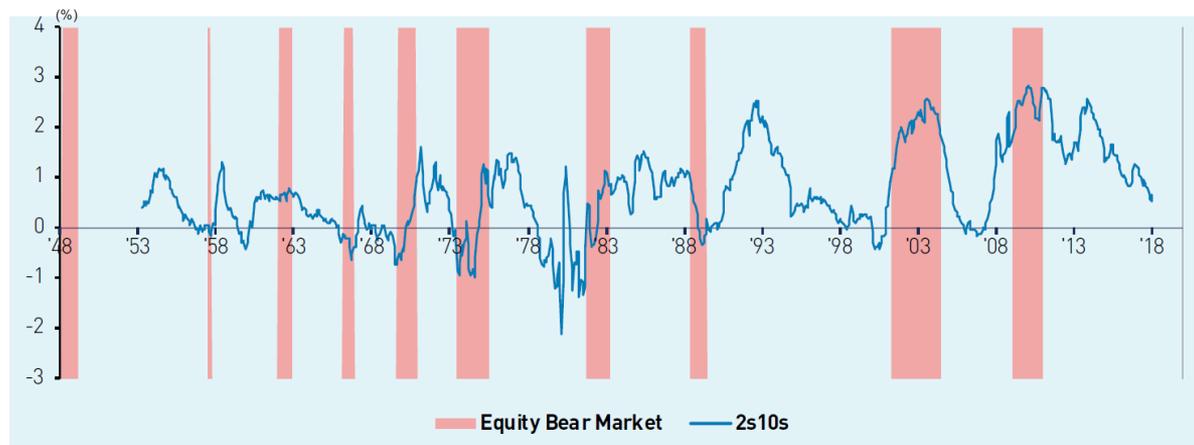
Source: UBS, FactSet, NBER



THE INVERTED YIELD CURVE & POTENTIAL OPPORTUNITIES

Attractive “Risk Off” Hedge for Equities

- The Interest Rate Volatility and Inflation Hedge Portfolio has the ability to benefit from equity market shocks. How can a portfolio which invests in interest rate options potentially benefit equity holders?
- As the chart below shows, equity market sell-offs have historically been associated with a steepening of the yield curve. By holding interest rate options that are expected to pay off when the yield curve steepens, IVOL may also hedge investors against equity market sell-offs.



Source: Goldman Sachs and Quadratic Capital calculations



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Historical Steepness of the 2s10s USD Curve – Market timing

- This might be a once in a lifetime opportunity to express a steepening view in the yield curve.
- The chart on the right shows the historical levels of the 2s10s curve, while the table below shows how many days, the curve stayed under each level of the yield curve.



Percent of days with spot low

2s10s Level	% of days
<0bps	1.8%
<10bps	7.1%
<25bps	16.3%

Percent of days with spot high

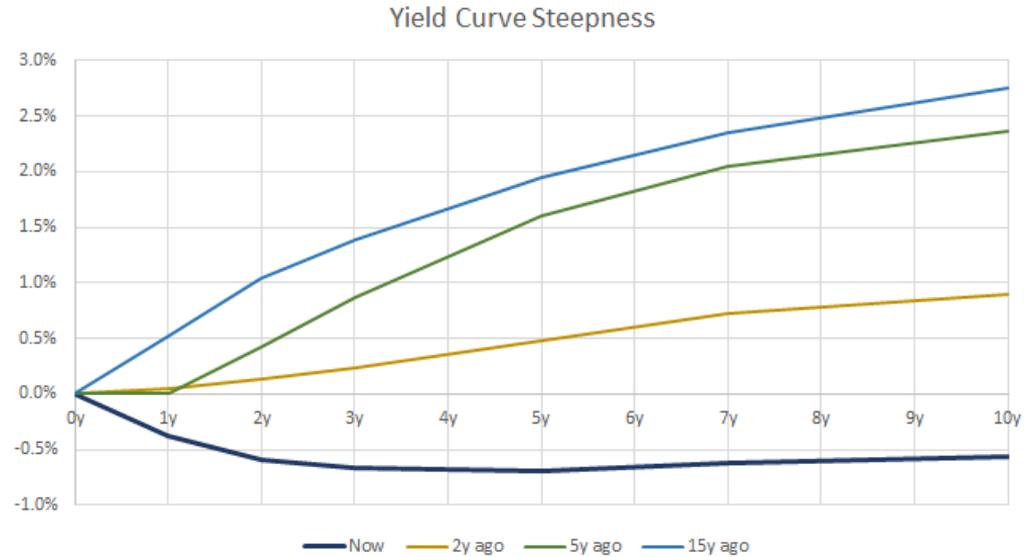
2s10s Level	% of days
>100bps	51.1%
>150bps	36.2%
>200bps	23.7%

Source: Bloomberg and Quadratic Capital calculations, data from November 1988 to September 2019



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The Yield Curve – Historic and Current



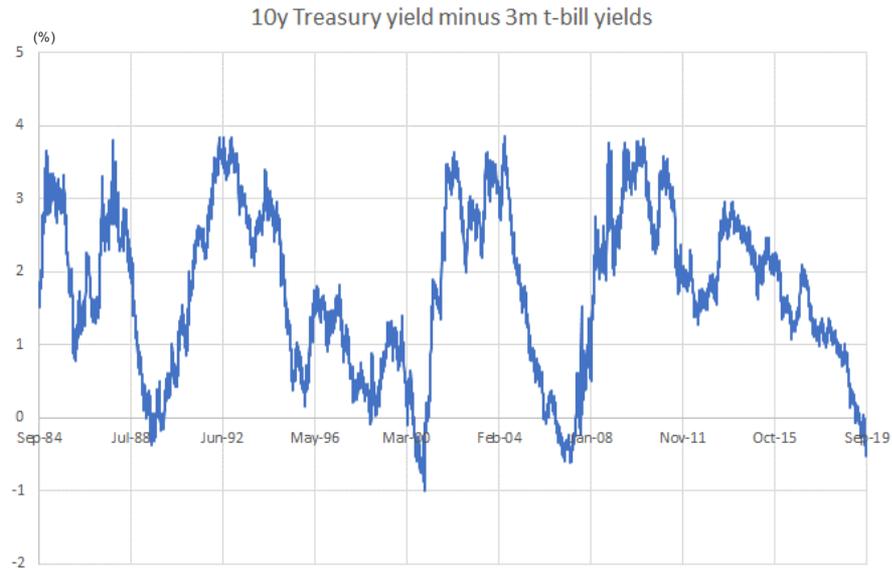
Source: Bloomberg and Quadratic Capital calculations



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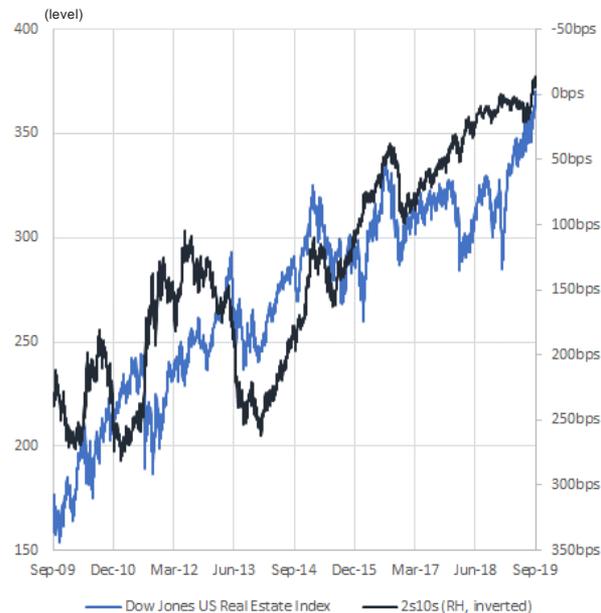
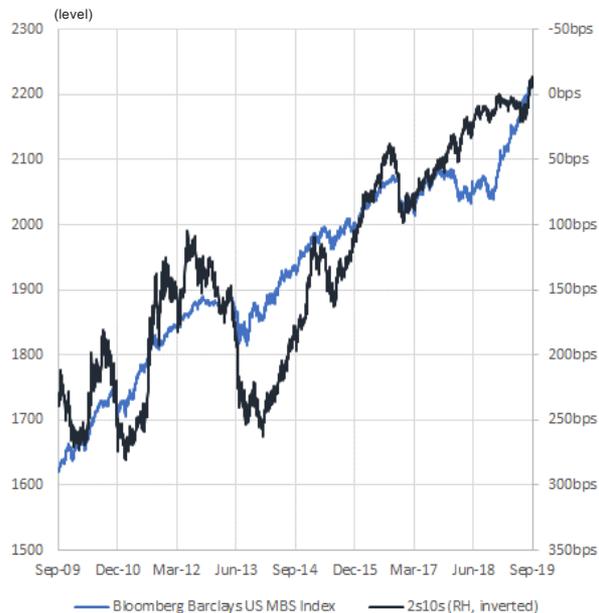
Source: Bloomberg and Quadratic Capital calculations



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Mortgages and Real Estate

- IVOL may act as potential hedge against corrections in equity and real estate as the prices of equities and properties tend to fall during times of increased fixed income volatility and/or a steepening of the interest rate curve



Source: Bloomberg and Quadratic Capital calculations



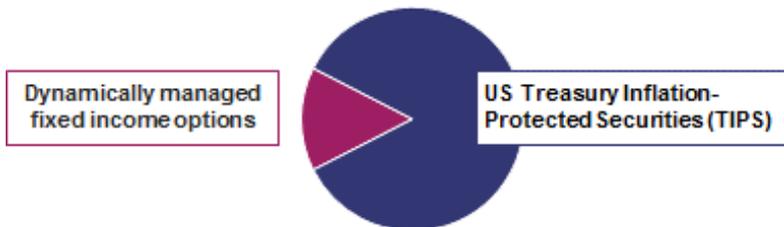
IVOL Strategy, Application and Composition

Overview:

- Seeks to profit from relative interest rate movements through lower short term rates or rising long-term interest rates
- Provides potential for true portfolio diversification while also delivering inflation-protected income
- Potential to profit from market stress as volatility increases

Diversification:

- IVOL has had very low correlations with common asset classes.
- More importantly, the correlation data tells us that, since inception IVOL has done well on days that these stock and bond markets fell.

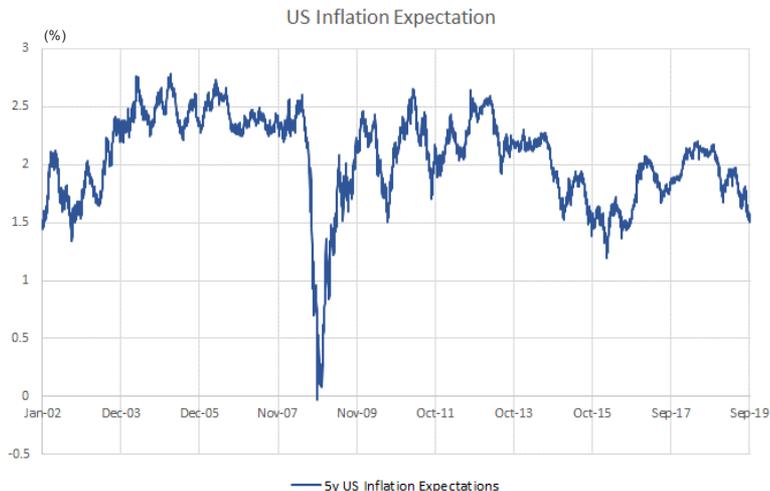


Source: Quadratic Capital



Chair Powell said inflation expectations "are the most important driver of actual inflation". (WSJ, 2019)

- US rates market is pricing in disinflation for the next decade!
- Market implied inflation for the following years
 - Market implied inflation for the next 5y and next 10y are below current CPI
 - Implying a decline of inflation from the current level of CPI (1.8%)
- If the FED manages to increase inflation expectations, one should expect the curve to steepen. The 5y inflation expectation is now below 1.4%, which is quite low compared to recent history.



Source: Bloomberg and Quadratic Capital calculations



What's next? Potential outcomes

- Recession – “Risk Off”
- Continued rally fueled by rate cut(s) – “Risk On”
- Muddling on? – “Volatile”





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Q&A

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IVOL: www.ivoletf.com

Factsheet: www.ivoletf.com/wp-content/uploads/2019/09/IVOL-Factsheet.pdf

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How to Buy IVOL ETF



Share IVOL with your financial advisor to find out if it may fit in your portfolio



Buy IVOL shares on the NYSE Exchange or with your brokerage firm



Disclosures

This webinar represented the manager's opinion. It should not be regarded as investment advice or recommendation of specific securities.

Diversification does not ensure a profit or guarantee against a loss.

The fund's investment objectives, risks, charges and expenses must be considered carefully before investing. The prospectus contains this and other important information about the company and may be obtained by calling +1-833-IVOL-ETF. Please read it carefully before investing.

Investing involves risk. Principal loss is possible. IVOL has a limited performance history, and there is no guarantee the Fund will achieve its objectives. Shares of any ETF are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. Brokerage commissions will reduce returns. The Fund's derivatives investments involve risks. The derivatives used by the Fund may give rise to a form of leverage. Leverage magnifies the potential for gain and the risk of loss. The prices of options can be highly volatile and the use of options can lower total returns.

OTC options generally have more flexible terms negotiated between the buyer and the seller. As a result, such instruments generally are subject to greater credit risk and counterparty risk. OTC instruments also may be subject to greater liquidity risk. Investments in debt securities typically decrease in value when interest rates rise. This risk is usually greater for longer term debt securities.

The Fund seeks to mitigate the risk associated with the potential impact of a steepening swap curve ("curve risk") on the performance of U.S. government bonds by investing in products designed to appreciate in value when the swap curve steepens. The Fund's use of such instruments is intended to mitigate the curve risk and is not intended to mitigate credit risk, or non-curve interest rate risk. There is no guarantee that the Fund's investments will completely eliminate the curve or inflation risk of the long positions in U.S. government bonds. In addition, when the swap curve flattens, the Fund's investments will generally underperform a portfolio comprised solely of the U.S. government bonds. In a flattening curve environment, the Fund's hedging strategy could result in disproportionately larger losses in the Fund's options as compared to gains or losses in the U.S. government bond positions attributable to interest rate changes. The Fund's exposure to derivatives tied to interest rates subjects the Fund to greater volatility than investments in traditional securities, such as stocks and bonds. Investing in derivatives tied to interest rates, including through options tied to the shape of the swap curve, is speculative and can be extremely volatile. The Fund is non-diversified.

There are risks involved with investing in options including total loss of principal. Options investing is not suitable for all investors. This fund utilizes sophisticated options strategies which may not be suitable for all investors. For a more comprehensive discussion of the risks involved in options investing, please review Characterizations and Risks of Standardized Options available at www.theocc.com/about/publications/character-risks.jsp or contact the Options Clearing Corporation directly at 1 N. Wacker Dr., Suite 500, Chicago, IL 60606. (1-888-678-4667)

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Questions?

Email: info@kfafunds.com

