

# **BNDD: The Quadratic Deflation ETF**

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**Q3 2024**

## About Quadratic Capital Management and Krane Funds Advisors, LLC

### Quadratic Capital Management

Quadratic Capital Management is an innovative asset management firm founded in 2013 by Nancy Davis. The firm has utilized its significant expertise in fixed income and options markets to construct The Quadratic Deflation ETF (NYSE Ticker: BNDD). Quadratic Capital Management serves as the Investment Sub-Adviser to the BNDD ETF.

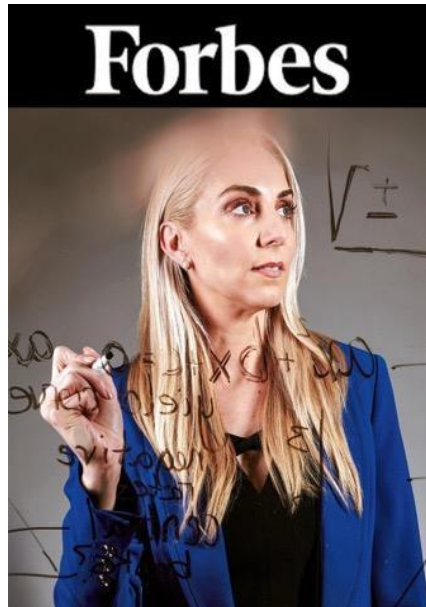
### Krane Fund Advisors, LLC

Krane Funds was founded in 2013 by Jonathan Krane and manages approximately \$8 billion. The firm seeks to provide innovative, first to market strategies that have been developed based on the firm and its partners' deep knowledge of investing. Krane Funds is majority owned by China International Capital Corporation (CICC). Krane Funds Advisors serves as the Investment Adviser to the BNDD ETF.



## Select Quadratic Capital Highlights, Milestones, and Awards

Forbes profiles Nancy Davis



Nancy Davis named to inaugural Barron's "100 Most Influential Women in U.S. Finance" list



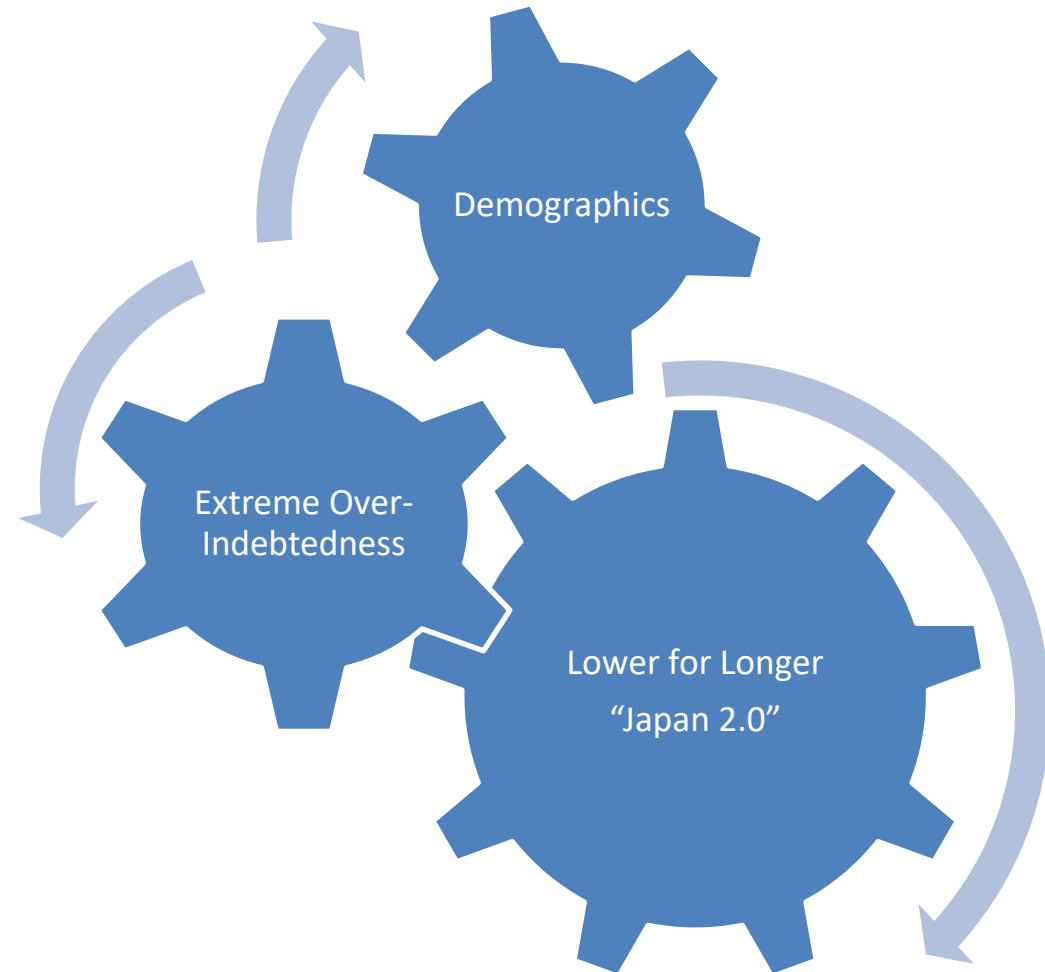
Wall Street Journal profiled 6 investors' market views and strategies



## Problem: The Debt Machine is Challenging Investors

Extreme over-indebtedness has been dramatically worsened by multiple rounds of fiscal stimulus in response to the global pandemic. Deflation may be the most challenging economic environment for investors.

- Is the US different from Japan and Europe?
- Are fundamentals too weak to sustain current yields?
- After years of loose policy and stimulus, will a more hawkish Fed choke off growth and lead to lower long term interest rates?
- Do demographics and high debt service costs breed more and more debt until we reach deflation?
- Is there a way out of this debt trap?

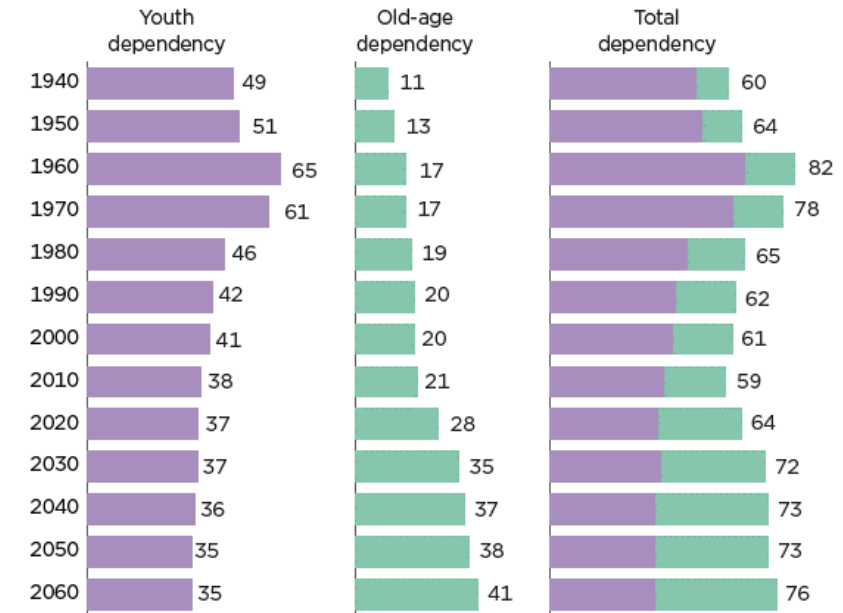


## Demographics

- The US population is aging, and the baby boomers are retiring.
- The birthrate in the US has been falling since the early '90s. The Census Bureau estimates that this decline will continue.
- An economy is strengthened by people having babies, consuming and working. When population growth stalls, the costs of government programs are spread over fewer people.
- The median age in the US has increased by roughly 50% since 1965.

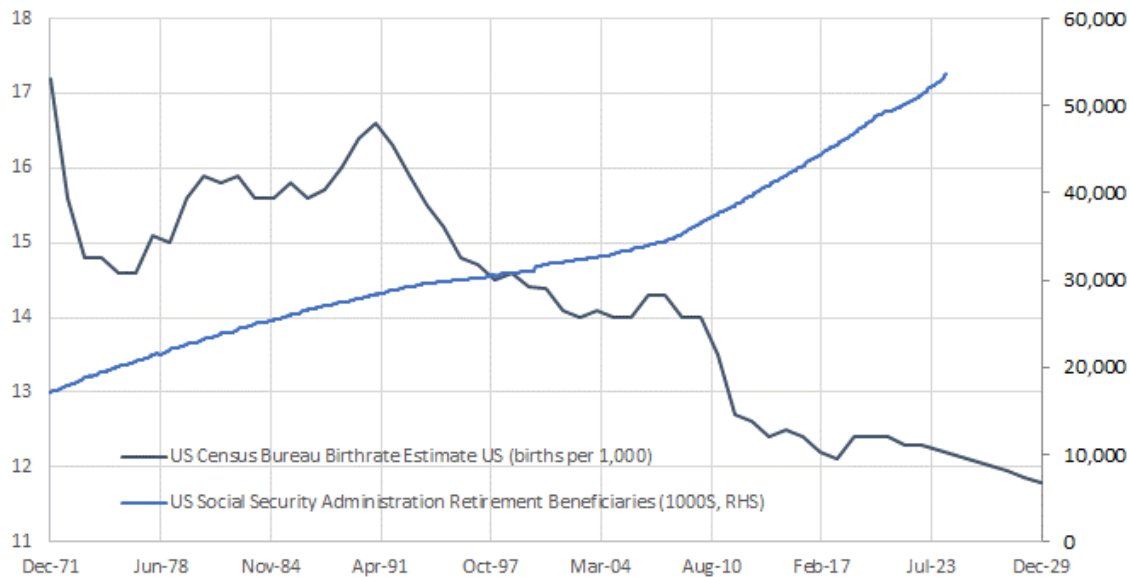
### Dependency Ratios for the Population: 1940 to 2010, Projected Ratios 2020 to 2060

By 2020, there are projected to be two dependents for every three working-age adults.



Note: Dependency ratios are a measure of potential burden on the working-age population.  
 Youth dependency ratio = (population under 18 / population aged 18 to 64) \* 100.  
 Old age dependency ratio = (population aged 65 and older / population aged 18 to 64) \* 100.  
 Source: U.S. Census Bureau, 2017 National Population Projections, 1940-2012 Population Estimates.

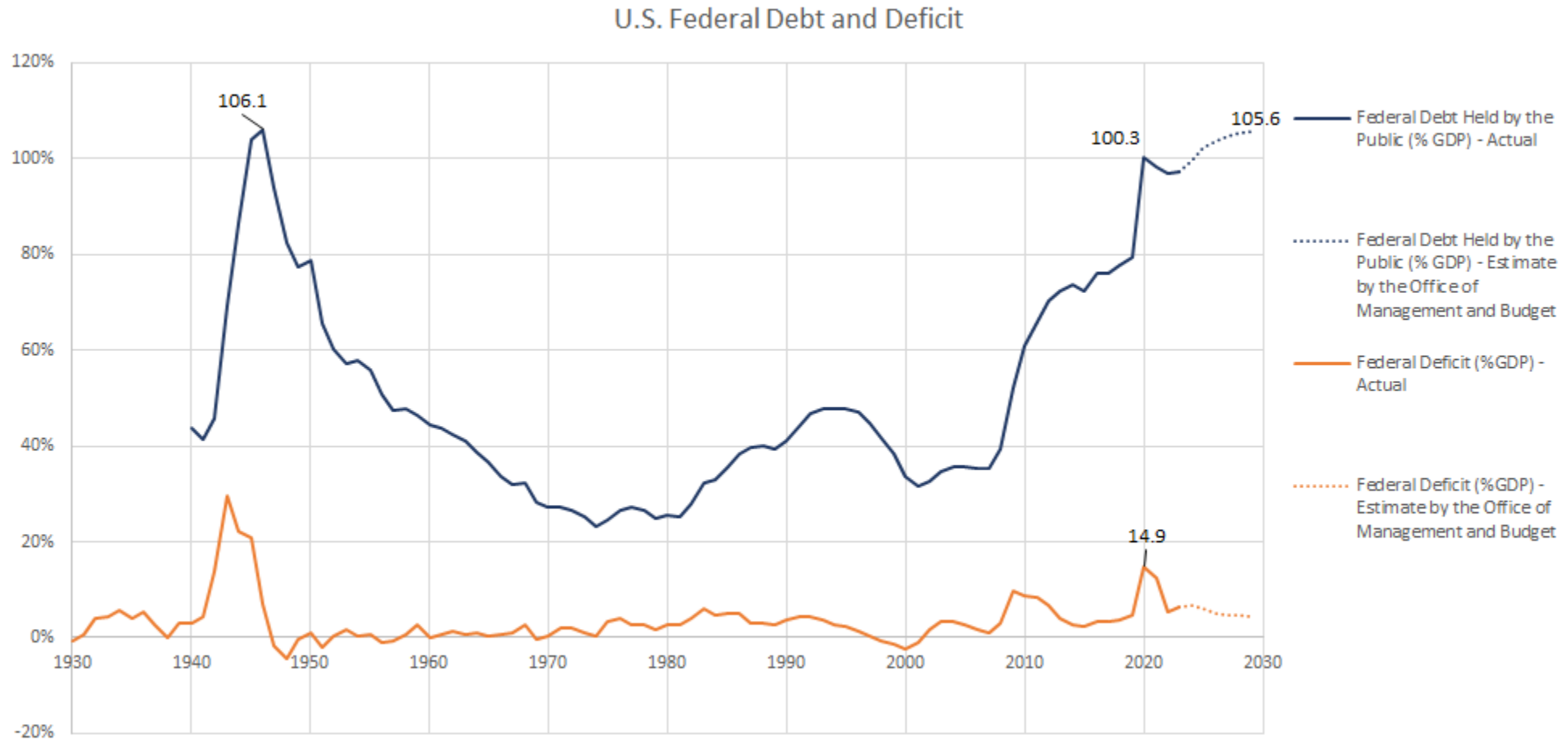
US Census Bureau Birthrate Estimate vs. Social Security Benefits



Sources: 1- U.S. Census Bureau, Population Division  
 2 - Social Security Administration as of June 2024

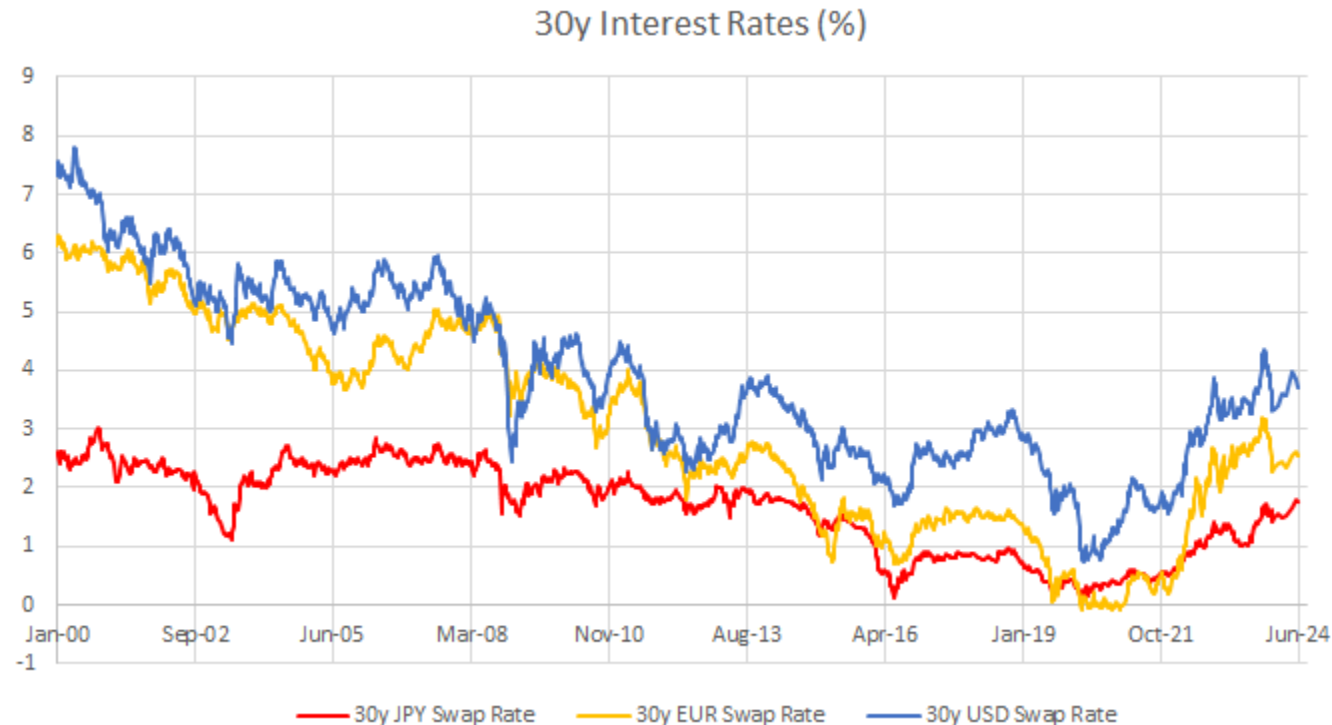
## Extreme Indebtedness

- While many believe stimulus spurs growth, it has ballooned the federal debt to well beyond 100% of GDP.
- These are debt levels never seen outside of wartime.



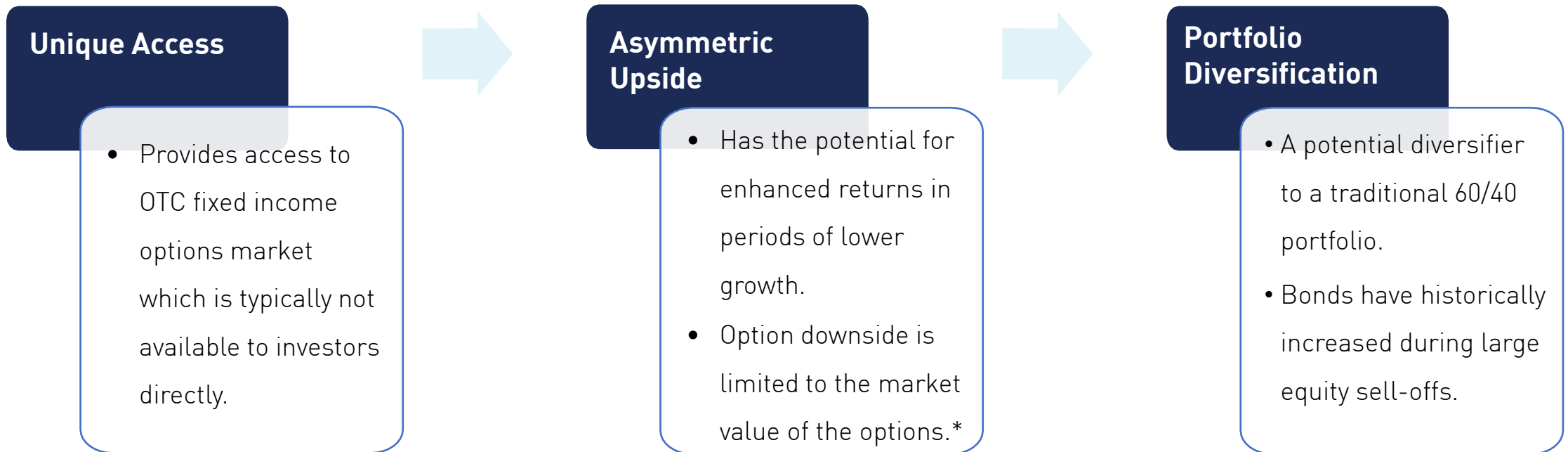
## Lower for Longer: How different is the US from Europe and Japan?

- Global long term interest rates have plummeted over the past three decades amid a surge in sovereign debt issuance.
- This may have created a perverse incentive for central banks to keep interest rates “lower for longer.”
- Is the US heading down the path blazed by Japan and the Eurozone? Are global rates ever going back to the 2000 levels?



## BNDD: Built to Help Investors Navigate the Debt Machine

- The Quadratic Deflation ETF (the “Fund”) seeks to benefit from lower growth, deflation, lower or negative long-term interest rates, and/or a reduction in the spread between shorter and longer term interest rates by investing in U.S. Treasuries and options. It provides access to a part of the market usually reserved for large institutions
- It may potentially help hedge a portfolio against the effects of deflation and/or the compression of the yield curve.

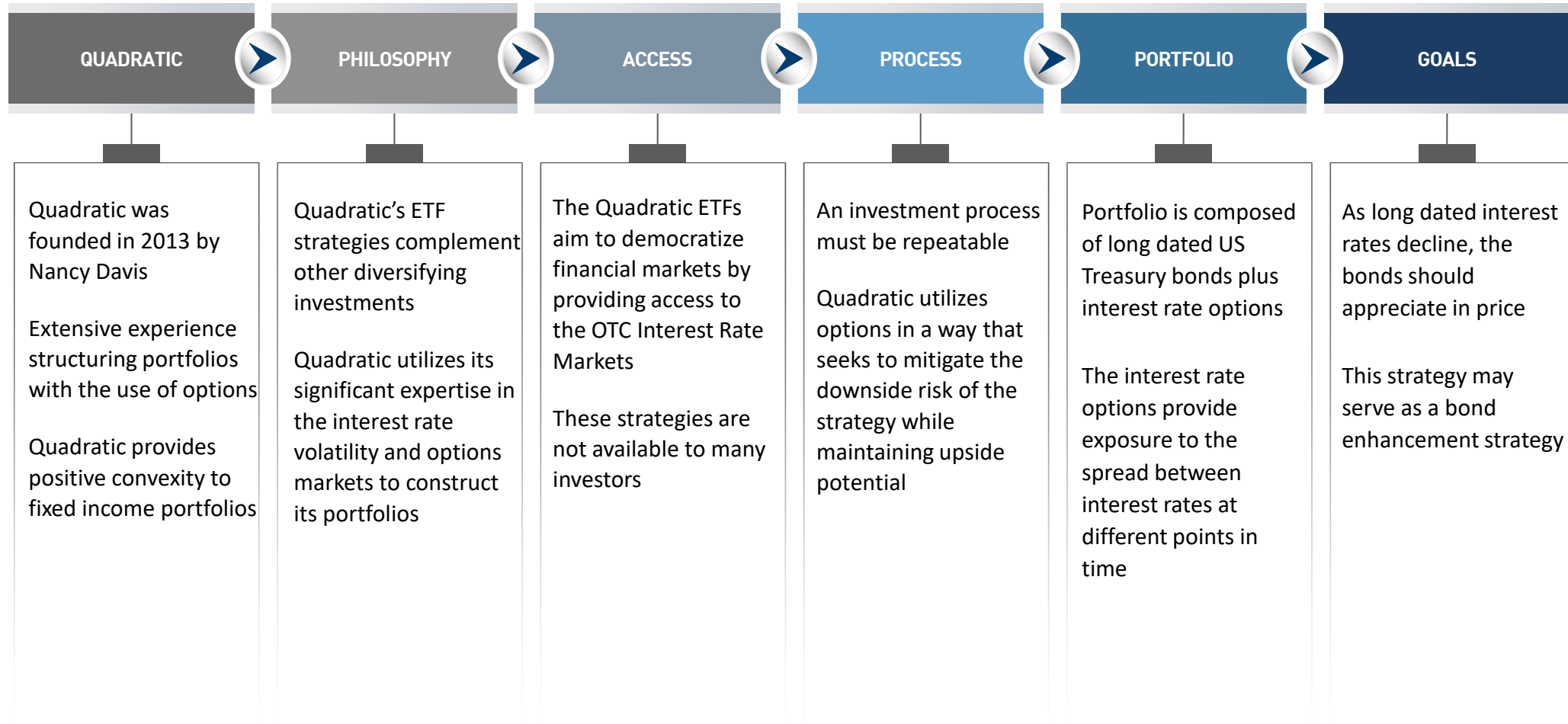


\* This statement applies to the options within the ETF. As with all ETF's, the ETF investor's downside risk is equal to their investment in the Fund.



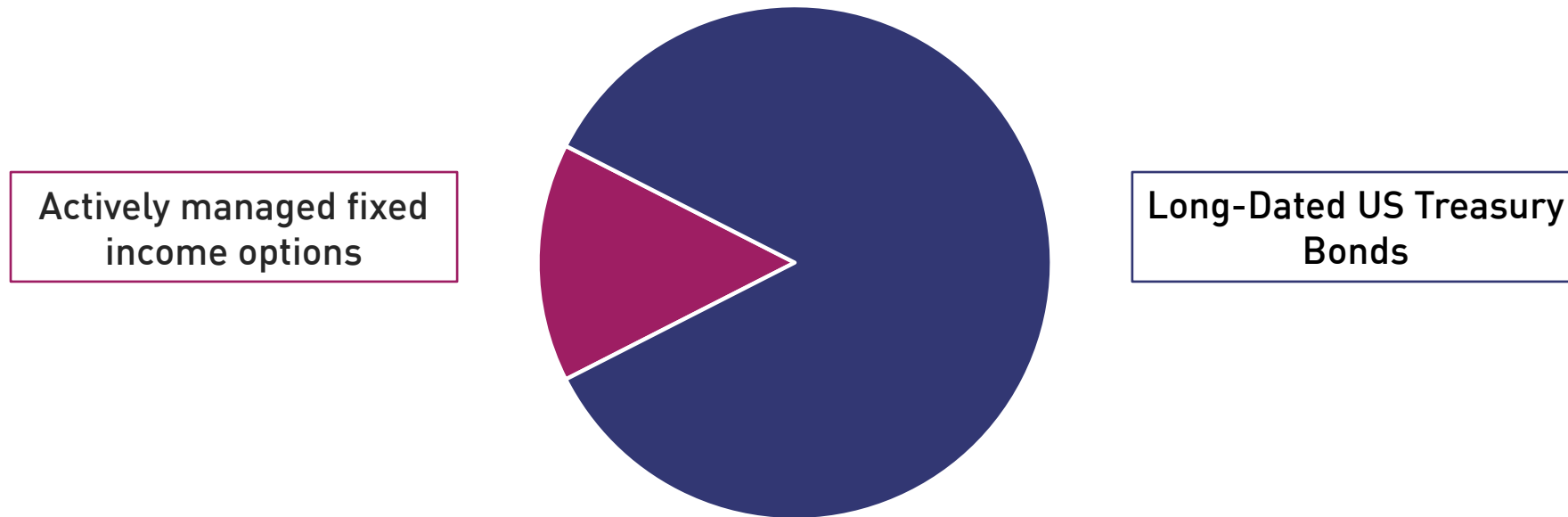
## Quadratic Capital – Our Approach to Investing

BNDD is managed by Quadratic Capital, an innovative, woman-owned asset manager with extensive expertise in options trading and portfolio management.



## BNDD Portfolio Composition

- The BNDD portfolio is composed primarily of long dated US treasury bonds.
- In addition to bonds, the portfolio includes long-only options on the shape of the US interest rate curve.
- As interest rates decline, the bonds should appreciate in price.
- The options provide exposure to spread between interest rates at different points in time.
- As the curve flattens because of lower inflation expectations and/or deflation, the price of the options tends to increase.



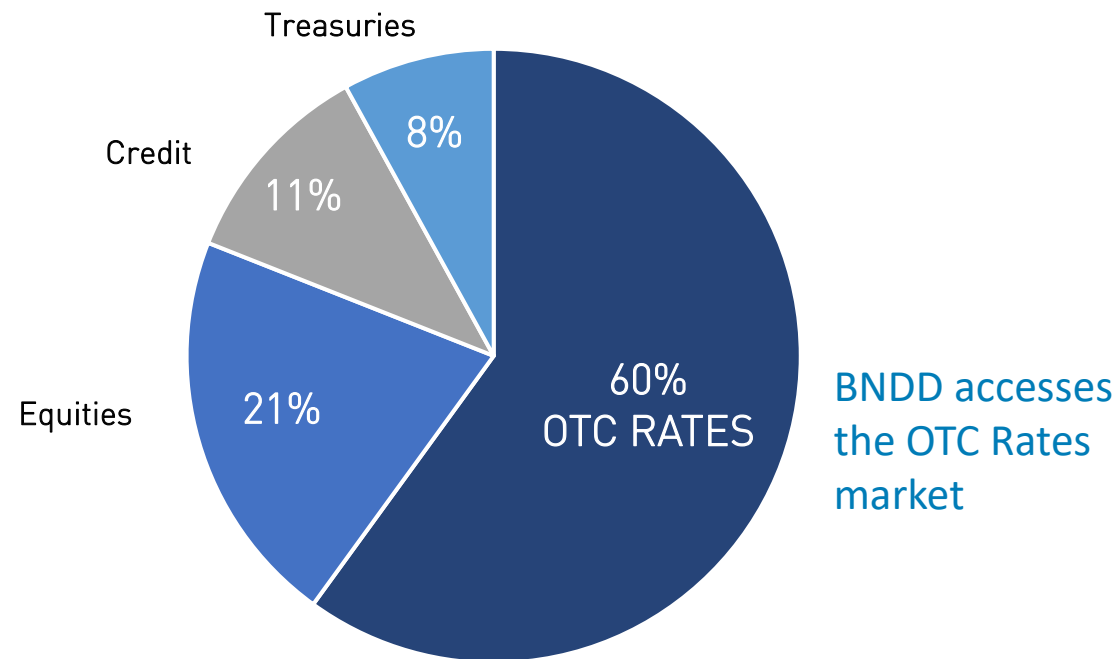
## BNDD Provides Access to the Largest Asset Class: Rates

- BNDD provides access to the largest asset class: OTC rates.
- Most investors limit their exposure to stocks and bonds.
- The rates market is nearly 3 times larger than the US stock market.

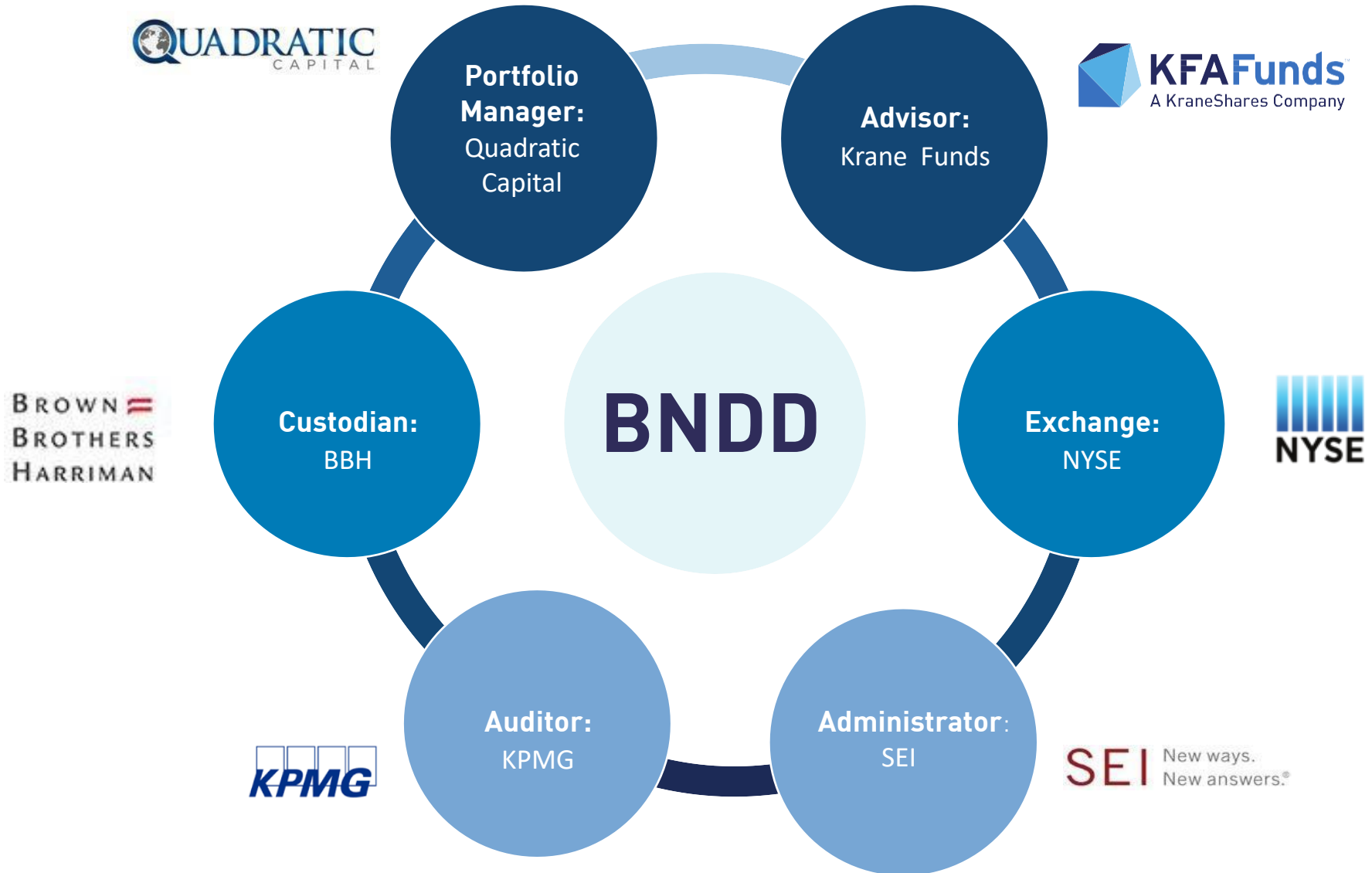
### Potential Benefits:

- By incorporating options, BNDD may enhance a portfolio only consisting of bonds.
- BNDD is a fixed income strategy designed to benefit from the decline in interest rates and flattening or inverting of the yield curve.
- BNDD may act as a market hedge since bond prices have historically increased during large equity sell-offs.

### Relative Sizes of US Financial Markets



# The BNDD Ecosystem



## BNDD Risk Profile

Investing involves risk, including possible loss of principal. There can be no assurance that the Fund will achieve its stated objectives, including its objective of eliminating deflation risk. Investors should take note of the following risks before investing in BNDD. A more thorough discussion of options investing can be found on the Options Clearing Corporation's website. A link to which can be found in the Important Notes section of this presentation.

- **A Steepening Yield Curve Risk:** BNDD may underperform or lose money when the forward U.S. interest rate curve steepens, perhaps significantly. When this occurs the Fund's investments may generally underperform a portfolio consisting solely of U.S. government bonds.
- **Leverage Risk:** BNDD's OTC options may give rise to a form of leverage, which may magnify the Fund's potential for gain and the risk of loss. The Fund may potentially be more volatile than a portfolio of traditional investments such as stocks or bonds.
- **Liquidity & Counterparty Risk:** OTC options may be subject to liquidity risk and counterparty risk.
- **Credit & Non-Curve Interest Rate Risk:** BNDD's use OTC options is not intended to mitigate counterparty risk, or non-curve interest rate risk. Additionally, BNDD invests in debt securities, which typically decrease in value when interest rates rise.
- **Considered Speculative:** Investing in options tied to the shape of the forward swap curve is considered speculative and can be extremely volatile.
- **Concentration Risk:** The fund is non diversified.

## BNDD Performance History

As of 6/30/24	Cumulative %			Average Annualized %		
	3 Mo	6 Mo	Since Inception	1yr	3yr	Since Inception
Fund NAV	-1.38%	-0.16%	-9.96%	-5.99%	-	-3.71%
Closing Price	0.92%	-0.42%	-9.88%	-5.86%	-	-3.68%
Index*	-1.81%	-5.01%	-31.59%	-5.61%	-	-12.77%

BNDD shareholders have received minimum monthly distributions of 30 basis points each month for over 2 years.

As of 6/30/24, the 30-day SEC Yield is 2.16%. *30-day SEC yield is a standard yield calculation developed by the U.S. Securities and Exchange Commission (SEC) that allows for fairer comparisons of bond funds. It is based on the most recent 30-day period covered by the fund's filing with the SEC. It includes any TIPS principal adjustment from inflation as income. An exceptionally high 30-Day SEC yield may be attributable to a rise in the inflation rate, which might not be repeated.*

*The performance data quoted above represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when sold or redeemed, may be worth more or less than their original cost and current performance may be lower or higher than the performance quoted. For performance data current to the most recent month end, please visit [www.bnddetf.com](http://www.bnddetf.com) inception on 9/20/21. Past performance is no guarantee of future results.*

*\*Index is the Bloomberg Long U.S. Treasury Index. Please note that although this index is provided for comparative purposes, the fund's strategy is benchmark agnostic. Index returns are for illustrative purposes only. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index.*

### Performance Comments:

Since inception, BNDD has outperformed long term Treasuries by more than ~20% BNDD.

BNDD seeks to benefit from lower growth, deflation, lower or negative long-term interest rates, and/or a reduction in the spread between shorter- and longer-term interest rates by investing in U.S. Treasuries and options.

Since inception, BNDD has outperformed long-dated treasuries in various environments:

### Risk On:

- BNDD had a very strong performance. In Q4 2021 and Q1 2022, it performed very well in a period of risk on: BNDD was up +9.64% while long term treasuries were down -7.87%. This outperformance happened because 2y yields rose significantly because of an aggressive hiking cycle, causing the 2s30s yield curve to flatten. BNDD's performed much better than equities in the period (S&P500 was up +5.17% in Q4 2021 + Q1 2022)

- The first half of 2024 has also shown strong BNDD outperformance. As the Fed delayed interest rate cuts, the rolldown in BNDD interest rate options helped the fund's performance. BNDD was roughly flat in the first half of the year (-0.16%), while long-term treasuries dropped more than -5%.

### Risk Off:

- In Q3 2022 BNDD also managed to outperform long term treasuries in a period of risk off. BNDD was down -2.98% while long term treasuries were down -9.64%. As a reference, S&P500 was down -5.28% % in Q3 2022.

## ESG Considerations

### Quadratic Capital Management LLC is a registered MWBE firm:



- Registered Small/Minority Business Enterprise
- Majority woman-owned firm

### The BNDD Fund:

**BNDD**

LISTED NYSE ARCA

- The BNDD Fund represents an “impact” investment in so far as Quadratic is a registered Small/Minority Business Enterprise and a majority woman-owned firm and, thus, an investment in the Fund advances certain ESG social and governance principles.
- An investment in BNDD provides diversification to the “S” and “G”
- Democratizes financial markets by giving investors access to the OTC rates markets

### Krane Funds is a UN PRI signatory and as such adheres to the following principles:

- To be active owners and incorporate ESG issues into our ownership policies and practices
- To seek appropriate disclosure on ESG issues by the entities in which we invest
- To promote acceptance and implementation of the Principles within the investment industry
- To work together to enhance our effectiveness in implementing the Principles
- To report on our activities and progress towards implementing the Principles



## Portfolio Management and Capital Markets Leadership



### [Nancy Davis, Chief Investment Officer, Quadratic Capital Management](#)

Nancy Davis founded Quadratic Capital in 2013. Nancy is the portfolio manager for the Quadratic Deflation ETF (Ticker: BNDD) and the Quadratic Interest Rate Volatility and Inflation Hedge ETF (Ticker: IVOL). Nancy began her career at Goldman Sachs where she spent nearly ten years, the last seven with the proprietary trading group where she became Head of Credit, Derivatives and OTC Trading.

Nancy has been the recipient of numerous industry recognitions. Barron's named her to their inaugural list of the "100 Most Influential Women in U.S. Finance." Institutional Investor called her a "Rising Star of Hedge Funds." The Hedge Fund Journal tapped her as one of "Tomorrow's Titans."

Nancy writes and speaks frequently about markets and investing. She has been profiled by Forbes, and interviewed by Barron's, The Economist, The Wall Street Journal, and The Financial Times among others. Ms. Davis is a frequent guest on television including CNBC, Bloomberg, CNN and ABC.



### [Glenn Christal, Chief Operating Officer, Quadratic Capital Management](#)

Glenn Christal is responsible for overseeing the business and trading operations for the company. Previously, Glenn Christal was at Tudor Investment Corp, a multi-billion macro hedge fund, for fifteen years where he was the Treasurer and chair of the Treasury and Credit Committees. Mr. Christal oversaw collateral management, cash management, credit and trade documentation negotiations. His prior role was the Chief Operations Officer at Millennium Partners where he oversaw trade operations.



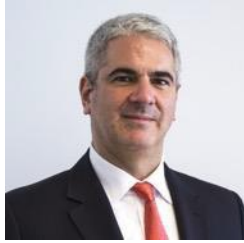
### [Henrique Rocha, Market Strategist, Quadratic Capital Management](#)

Henrique Rocha joined Quadratic in 2015. Previously, he worked at Goldman Sachs as an Interest Rates and Foreign Exchange Strategist, responsible for idea generation for institutional clients, including banks, corporations, hedge funds, asset managers, and sovereigns.

He holds a B.S. magna cum laude in Electrical Engineering from Yale University, where he was a member of Phi Beta Kappa and Tau Beta Pi.



## Quadratic Capital and Krane Funds Leadership



[Jonathan Krane, Chief Executive Officer, Krane Funds Advisors](#)

Jonathan Krane is the founder and Chief Executive Officer of Krane Funds Advisors, the premier platform for developing and delivering differentiated, high-conviction investment strategies to global investors and KraneShares, an asset management firm delivering China-focused exchange traded funds to global investors.



[Jonathan Shelon, Chief Operating Officer, Krane Funds Advisors](#)

Jonathan is the Chief Operating Officer at KraneShares. Prior to KFA, he was the Chief Investment Officer of the Specialized Strategies Team at J.P. Morgan, overseeing \$40 billion in AUM and a Portfolio Manager at Fidelity Investments where he was responsible for \$150 billion in assets for over five million shareholders in Fidelity's target date strategies, the Freedom Funds.



[Odette Gafner, Chief Compliance Officer, Krane Funds Advisors](#)

Odette Gafner is Head of Compliance at KFA and joined the firm March in 2019 to oversee the compliance program for the Funds and to serve as the Chief Compliance Officer (CCO) to Krane Fund Advisors. Odette has over 12 years of experience implementing policies and establishing best practice across the asset management industry. Prior to joining the KraneShares team, Odette worked at BlackRock for 12 years.



[James Maund, Head of Capital Markets, Krane Funds Advisors](#)

James Maund joined KraneShares as head of Capital Markets in January 2020. James has more than 15 years of experience in ETF trading and capital markets. Prior to joining KraneShares, James was a vice president in the Institutional ETF Group / ETF Capital Markets Group at State Street Global Advisors. Prior to State Street, James was an ETF trader at Goldman Sachs & Co.

## Quadratic Capital and Krane Funds Leadership



[Brendan Ahern, Chief Investment Officer, Krane Funds Advisors](#)

Brendan Ahern is the Chief Investment Officer at Krane Funds Advisors (KFA). Mr. Ahern joined KFA in 2012 and was an original member of the team that launched its first ETFs. He leads the firm's research and education efforts and actively works with investors on a variety of subjects ranging from asset allocation to trading to articulating the growing influence that index providers hold in the asset management industry. Prior experience includes over ten years with Barclays Global Investors (subsequently BlackRock's iShares), which he joined in 2001 during the rollout of their ETF business.



[Julian Daniels, Managing Director, Krane Funds Advisors](#)

Julian Daniels joined KraneShares in August 2018 as a Managing Director to head the firm's institutional efforts. Prior to KraneShares, Julian was a senior member of the VanEck institutional business development team. Prior to VanEck, he was an Associate at Select Access Management.



[Florence Moon, Director, Krane Funds Advisors](#)

Florence Moon joined KraneShares in June 2019 as a Director to support the firm's institutional efforts. Florence has over 12 years of experience working with institutional clients, handling all aspects of client service and relationship development. Prior to KraneShares, Florence spent 12 years with VanEck Global where she was a senior member of the institutional business development team.



[Bill Fagan, Head of West Coast, Krane Funds Advisors](#)

Bill Fagan joined KraneShares in 2017. He leads the firm's efforts across the Western U.S. & Canada. He has spent his career helping professional investors build portfolios to solve the needs of their clients. His expertise spans investment strategy, portfolio construction, exchange-traded products, trade execution/guidance, and retirement solutions. Prior to joining KraneShares, Bill worked at BlackRock with a focus on both traditional and alternative investment strategies. Bill received his Bachelor's in Science from Duquesne University, with a focus on Finance & Investment Management.

## Quadratic Capital and Krane Funds Leadership



[Joseph Dube, Head of Marketing, Krane Funds Advisors](#)

Joseph joined KraneShares in June 2012 as Head of Marketing. He is in charge of creating and maintaining all client-facing marketing materials including websites, advertisements, pitch books, and fact sheets as well as the bi-weekly research newsletter. He takes pride in designing and developing the highest quality educational material for retail investors, financial advisors, and journalists. Joseph has a BFA from the Rochester Institute of Technology. He was a Rotary Youth Exchange student to Argentina and is fluent in Spanish.



[Kaitlyn Arico, Vice President, Client Services, Krane Funds Advisors](#)

Kaitlyn joined KraneShares in March 2018 to further support the firm's Business Development efforts. As an Associate, Client Service, she focuses on cultivating new relationships with financial advisors, educating investors on China's investable markets and presenting KraneShares China-focused ETFs within the Wirehouses, RIA channels, Independent Brokers-Dealers and Institutions. Prior to KraneShares, Kaitlyn held positions as an Internal Sales Director and Regional Sales Director, representing a handful of different boutique asset managers across various asset classes. Kaitlyn received her BA in Business Economics from the State University of New York at Oneonta, with a concentration in Finance.



[Kyle McGrath, Director, Client Services, Krane Funds Advisors](#)

Kyle joined KraneShares to help the firm achieve its mission of being a leading provider of China-focused Exchange Traded Funds and Chinese Investment education for U.S. clients. Kyle will focus his efforts in the Northeast by deepening relationships with financial advisors, independent broker-dealers, RIAs, institutions, and banks. Prior to joining KraneShares, Kyle spent five years with WisdomTree where he specialized in ETFs and portfolio construction. Kyle also earned the Certified Investment Management Analyst (CIMA®) designation in 2016 at the Wharton School of the University of Pennsylvania. He brings his passion and deep knowledge of ETFs to our educational and product development efforts. Kyle attended Gettysburg College where he received his BA in Business Management and was Captain of the Men's Lacrosse Team.



[Brooke Farley, Business Development, Quadratic Capital Management](#)

Brooke Farley joined Quadratic in 2018. Previously, she was a consultant for McKinsey & Company and a risk underwriter at Bond Investors Guaranty. Ms. Farley received her BA in Art History from Manhattanville College and received a Master of International Affairs (MIA) from Columbia University's School of International and Public Affairs. Ms. Farley holds her Series 7 and Series 63 Securities licenses.

## Guide to Trading ETFs

### ETF liquidity is determined by the asset class, not by the fund size

- Exchange-traded funds (ETFs) are a wrapper, and although an investor may hold a large percentage of an ETF, one must look at the percentage owned of the underlying asset class.

### ETF investors are not impacted by other investors' trades in the same ETF

- The ETF structure is unique in that all investors transact independently on an exchange. Being a large or small owner in a fund does not mean you're more or less impacted by the actions of other investors. In a mutual fund, all investors are impacted by the trading activity of other holders in the fund.

### An ETF closure does not create principal risk

- If a fund were to close, neither large nor small investors would have a principal risk. The fund would be liquidated by the portfolio manager, and the investors would receive back NAV of the fund, minus costs, at the time of liquidation.

### Trading in and out and fund size

- Investors can trade in and out of a fund regardless of the fund's AUM. ETF liquidity providers (market makers) can easily transfer the liquidity of the underlying basket into ETF shares. Market makers also accept NAV based orders for larger tickets.

## Understanding ETF Liquidity

### An ETF is not a stock

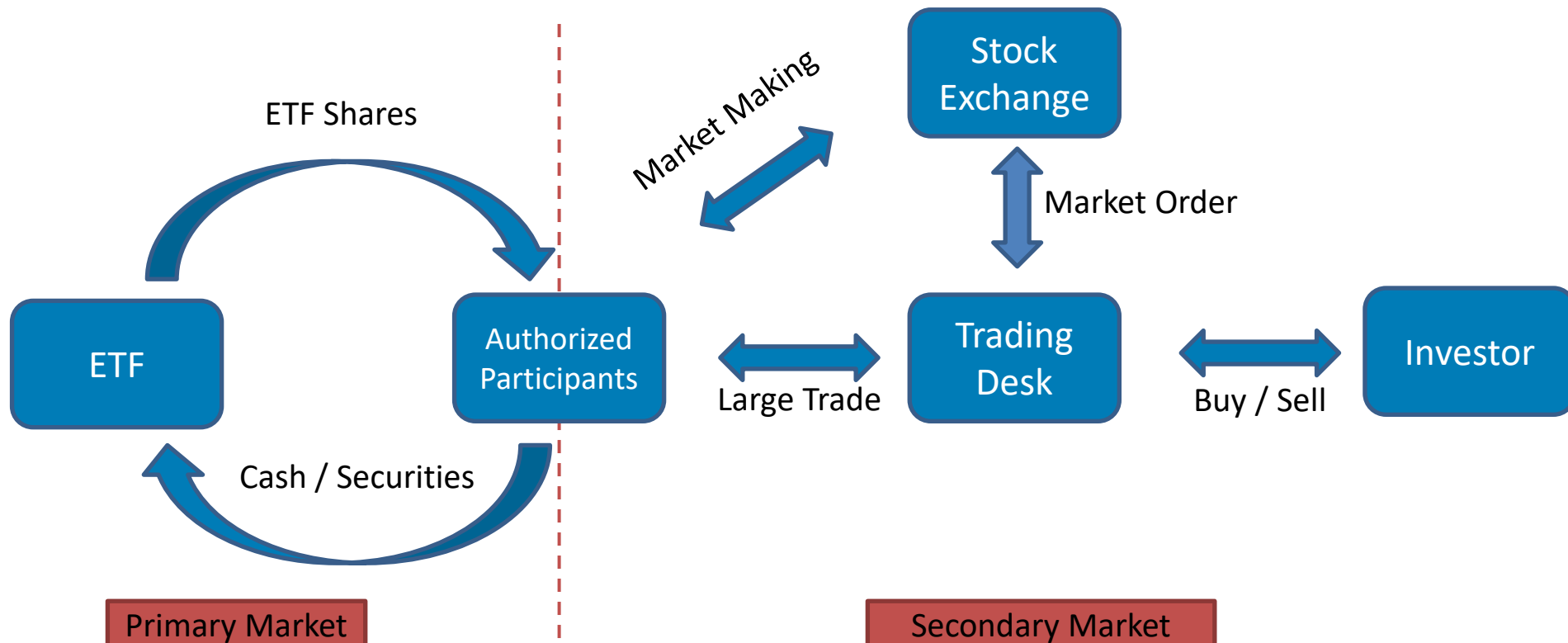
- If an ETF does not trade a certain number of shares per day, is the fund illiquid? No. It's a plausible assumption from a single-stock perspective, but with ETFs, there is more to consider. The key is to understand the difference between the primary and secondary market liquidity of an ETF.

### Primary Market vs. Secondary Market

- Most noninstitutional investors transact in the secondary market—which means investors are trading the ETF shares that currently exist. Secondary liquidity is the “on screen” liquidity you see from your brokerage (e.g., volume and spreads), and it's determined primarily by the volume of ETF shares traded.
- However, one of the key features of ETFs is that the supply of shares is flexible—shares can be “created” or “redeemed” to offset changes in demand. Primary liquidity is concerned with how efficient it is to create or redeem shares. Liquidity in one market is not indicative of liquidity in the other market.
- The determinants of primary market liquidity are different than the determinants of secondary market liquidity. In the secondary market, liquidity is primarily a function of the value of the ETF shares traded and frequency and volume of the trading of those shares throughout the trading day. When placing a large trade—on the scale of tens of thousands of shares—investors are sometimes able to circumvent an illiquid secondary market by using an “authorized participant” (AP) to reach through to the primary market to “create” new ETF shares at NAV price.

## Flow Chart of Creation Redemption Process for ETFs

- Small trades in ETFs flow normally are done in the secondary market, where all market participants can trade. It behaves like a stock, and everyone can buy (sell) from the best seller (buyer)
- Large and institutional trades – which normally would be a high percentage of the daily volume – are done in the primary market. The trading desk of the major broker dealers are called Authorized Participants and can create and redeem shares directly with the fund.
- IVOL Unit size for the primary market is 25,000 shares



# The Quadratic Deflation ETF

## Key Fund Information

Ticker	BNDD
Fund Name	Quadratic Deflation ETF
Primary Exchange	NYSE
Total Annual Fund Operating Expense	1.04%
Total Annual Fund Operating Expenses After Fee Waiver*	0.99%
Inception Date	9/21/21
Distribution Frequency	Monthly

## Important Notes

**Carefully consider the Funds' investment objectives, risk factors, charges and expenses before investing. This and additional information can be found in the Funds' full and summary prospectus, which may be obtained by visiting [www.kfafunds.com](http://www.kfafunds.com). Read the prospectus carefully before investing.**

Investing involves risk, including possible loss of principal. There can be no assurance that a Fund will achieve its stated investment objectives. The Fund does not seek to mitigate credit risk, non-curve interest rate risk, or other factors influencing the price of U.S. government bonds, which factors may have a greater impact on the bonds' returns than the U.S. interest rate curve or deflation. There is no guarantee that the Fund's investments will eliminate or mitigate curve risk, or deflation risk on long positions in U.S. government bonds. In addition, when the forward U.S. interest rate curve steepens, the Fund's investments will generally underperform a portfolio comprised solely of the U.S. government bonds. In a steepening curve environment (increase in the spread between shorter and longer term interest rates), the Fund's 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. The Fund's exposure to options subjects the Fund to greater volatility than investments in traditional securities and may magnify the Funds' gains or losses. The Fund is non-diversified and therefore has concentration risk.

ETF shares are not redeemable with the issuing fund other than in large Creation Unit aggregations. Shares of any ETF are bought and sold at market price (not NAV) and are not individually redeemed from the Fund. The returns shown do not represent the returns you would receive if you traded shares at other times. Brokerage commissions will reduce returns. Market price returns are based on the official closing price of an ETF share or, if the official closing price isn't available, the midpoint between the national best bid and national best offer ("NBBO") as of the time the ETF calculates current NAV per share.

There is no guarantee by the Fund will declare distributions in the future or that, if declared, such distributions will remain at current levels or increase over time. The Fund is non-diversified. The Funds may invest in derivatives, which are often more volatile than other investments and may magnify the Funds' gains or losses.

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 <http://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)

The KFA ETFs are distributed by SEI Investments Distribution Company (SIDCO), 1 Freedom Valley Drive, Oaks, PA 19456, which is not affiliated with Krane Funds Advisors, LLC, the Investment Adviser for the Fund. [R\_US\_KS\_SEI] or Quadratic Capital Management LLC (Quadratic), the Fund's subadvisor.

**Please carefully read the BNDD [prospectus](#). Investors should read it carefully before investing or sending money.**

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