ProShares

An Introduction to Leveraged And Inverse Investing

Prepared for Interactive Brokers

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Agenda

- Opening Comments
- Traditional Ways to Get Leveraged or Short Exposure
- Modern Leveraged and Inverse Investing Using ETFs
- Mechanics of Leveraged and Inverse ETFs
- How a Hedge Might Behave in Different Market Conditions
- Closing Remarks

Opening Comments

Traditional Ways to Get Leveraged or Short Exposure

Evolution of Leveraged and Inverse Investing

Investors have been using varying ways to get leveraged and short exposure for a very long time:

- Margin, short selling, options and futures were traditionally used as leverage and inverse strategies, before other vehicles became available.
- Leveraged and inverse mutual funds were introduced in the United States in 1993.
- First leveraged and inverse exchange traded funds (ETFs) launched in 2006, by ProShares.

Challenges With Traditional Leverage and Inverse Strategies

These types of sophisticated strategies (i.e. margin, options, futures) have traditionally been out of reach or too risky for most investors, as they:

- Typically require margin accounts, special brokerage approval and significant collateral minimums
- Can include borrowing costs and other fees, such as premiums on options
- Can have higher risks
  - With traditional short selling, losses can exceed the amount invested.
  - With traditional leverage, investors are subject to margin calls if the security drops below a certain amount

Modern Leveraged and Inverse Investing Using ETFs

Advantages of Leveraged and Inverse ETFs

Accessing leveraged and inverse strategies through ETFs can provide many advantages to investors, as ETFs:

- Do not require margin accounts
- Typically have no minimums or low minimums
- Losses are limited to the amount invested
- May have lower costs than traditional inverse and leveraged strategies (ordinary brokerage fees may apply)
- Enable investors to enter or exit positions at any time throughout the day, if desired
- Please be mindful that these ETFs can carry their own costs and risks, such as trading costs and tax consequences

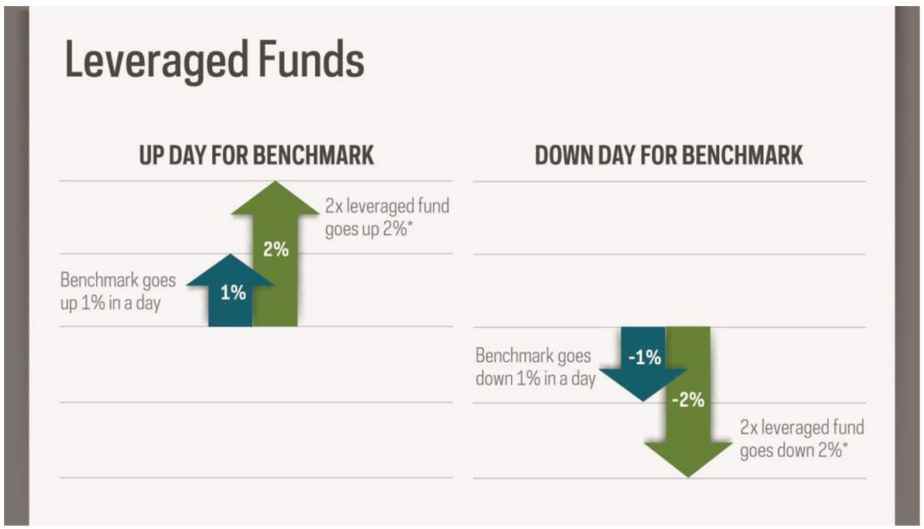
Leveraged and inverse investing is not for everyone. Geared funds are generally riskier than funds without leveraged or inverse exposure. Before investing, read each fund's prospectus to fully understand all the risks and benefits. For a prospectus and other information, visit ProShares.com.

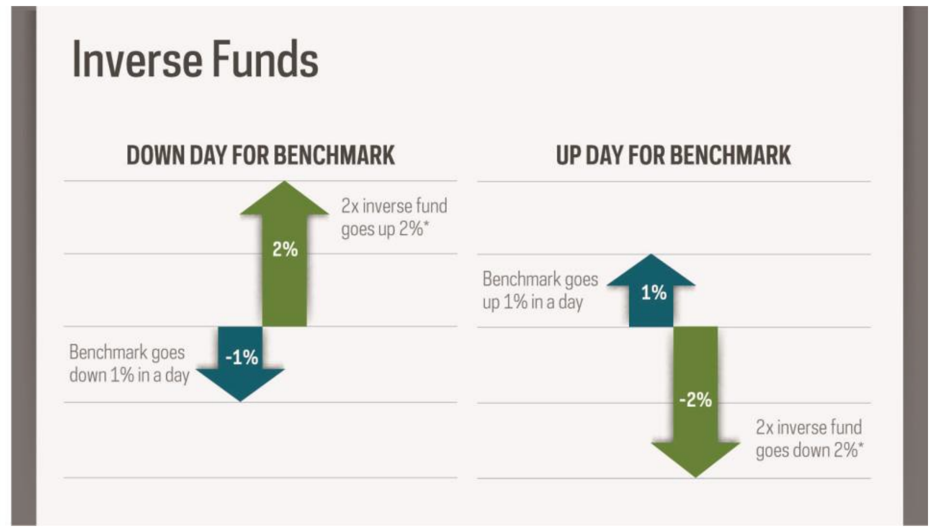
Leveraged and Inverse Funds in Action

Conventional Fund
Seeks to match index return

2x Leveraged Fund
Seeks 2x index return each day

-2x Inverse Fund
Seeks -2x index return each day





For illustrative purposes only; not representative of an actual investment. Does not include fees and expenses.

Leveraged and Inverse ETFs in portfolios

While ETFs make these strategies more accessible, investors should not use them without fully understanding how they work.

- Leveraged funds can be used by knowledgeable investors seeking to:
  - Profit from rising markets through directional trades
  - Overweight segments of the market
  - Increase exposure to securities for less cash
- Inverse funds can be used by knowledgeable investors seeking to:
  - Profit from declining markets through directional trades
  - Underweight segments of the market
  - Develop a hedging strategy to offset losses in long investments
- Investors should have a comprehensive understanding of the features, benefits and risks associated with leveraged and inverse funds before investing
- Investors should be prepared to monitor their positions regularly, as frequently as daily

Mechanics of Leveraged and Inverse ETFs

One-Day Investment Objective & How To Manage To It

- Unlike conventional index funds designed to match the performance of an underlying index over any time period, most leveraged and inverse funds are designed to meet an investment objective for <u>a single day</u>, before fees and expenses

- Without a one-day objective, gains and losses might result in compounded returns, which could cause the fund's exposure to its benchmark to float

- To maintain their investment objectives, leveraged and inverse funds rebalance their exposure to their underlying benchmarks each day by trimming or adding to their positions

- The market environment and volatility can impact performance for periods longer than a day

How Compounding Affects Leveraged and Inverse Funds

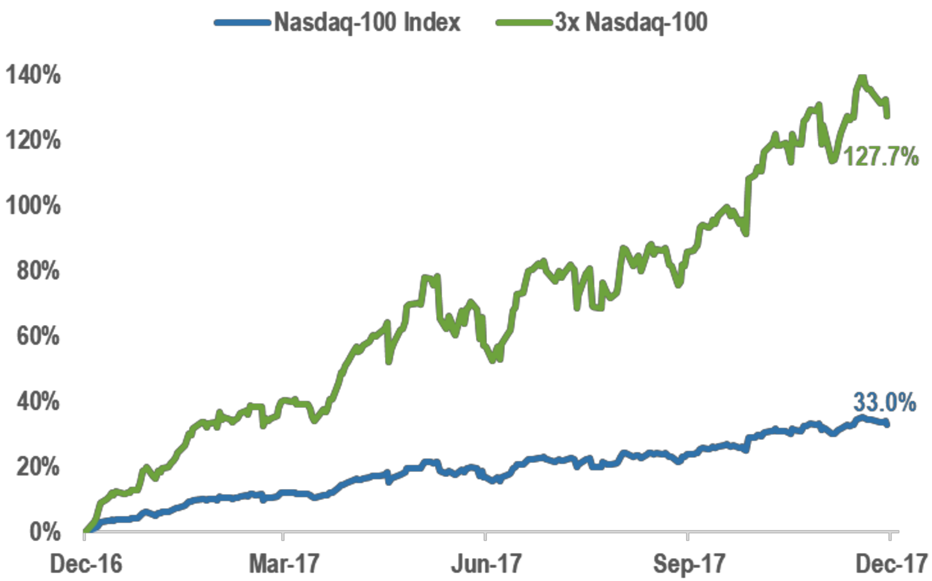
- Compounding is magnified in leveraged and inverse funds—especially those funds with larger multiples or exposure to volatile benchmarks.
- Compounding can enhance returns during trending periods, but it can hurt returns in volatile periods

	BENCHMARK RETURN	2x FUND RETURN
UPWARD TREND		
Day 1 Return	+5.00%	+10.00%
Day 2 Return	+5.00%	+10.00%
Compounded 2-Day Return	+10.25%	+21.00%
DOWNWARD TREND		
Day 1 Return	-5.00%	-10.00%
Day 2 Return	-5.00%	-10.00%
Compounded 2-Day Return	-9.75%	-19.00%
VOLATILE PERIOD		
Day 1 Return	+5.00%	+10.00%
Day 2 Return	-5.00%	-10.00%
Compounded 2-Day Return	-0.25%	-1.00%

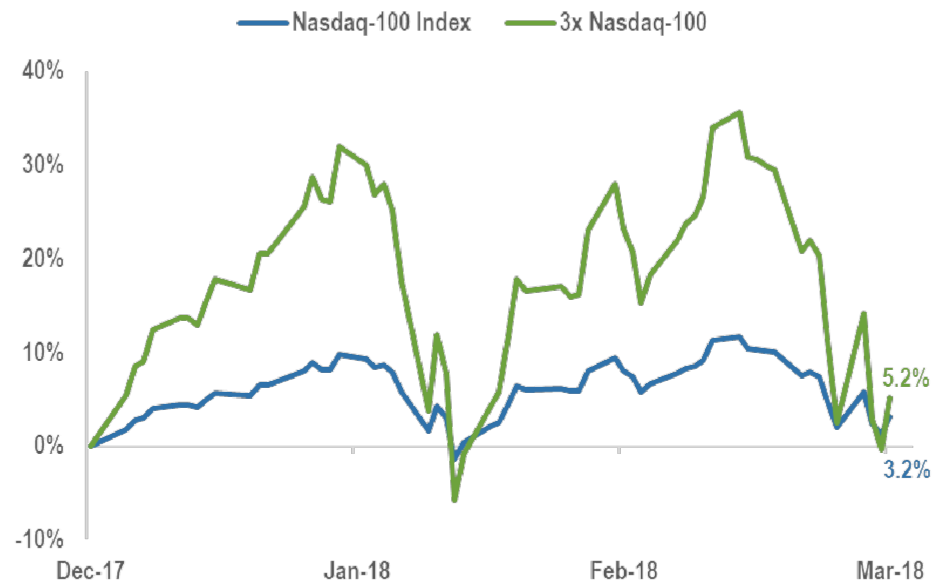
This example shows extreme hypothetical benchmark movement to illustrate the point. Actual benchmark movements can be very different, and returns would be lower after fees, expenses and taxes.

Compounding at Work

2017: Nasdaq 100 vs 3x Nasdaq 100 Low-Volatility, Trending Market



Q1 2018: Nasdaq 100 vs 3x Nasdaq 100 Higher Volatility, Range-Bound Market



December 30, 2016–December 29, 2017	Return	Annualized Volatility	Realized Multiple of Nasdaq 100	December 29, 2017–March 29, 2018	Return	Annualized Volatility	Realized Multiple of Nasdaq 100
Nasdaq 100	33.0%	10.3%	1.0	Nasdaq 100	3.2%	24.1%	1.0
3x Nasdaq 100	127.7%	30.8%	3.9	3x Nasdaq 100	5.2%	72.4%	1.6

Source: Bloomberg, 12/30/2016 – 3/29/2018. The performance quoted represents past performance and does not guarantee future results. For illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in any index. High short-term performance is unusual and may not berepeated.

TQQQ Performance as of March 31, 2019

Fund Inception 2/9/2010	Daily Objective*	1-Year	5-Year	10-Year	Since Inception	Gross Expense Ratio	Net Expense Ratio**
ProShares UltraPro QQQ (TQQQ)—NAV	3x	18.52%	40.84%	-	47.15%	0.98%	0.95%
ProShares UltraPro QQQ (TQQQ)—Market Price		18.28%	40.85%	-	47.13%		
Nasdaq-100 Index	N/A	13.36%	16.83%	-	18.39%	N/A	N/A

For most recent performance, visit: https://www.proshares.com/funds/tqqq_performance_and_quote.html

* Before fees and expenses. **With Contractual Waiver ending 9/30/19.
Source: ProShares and Nasdaq, 3/31/2019. **The performance quoted represents past performance and does not guarantee future results. 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 the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by calling 866.776.5125 or by visiting ProShares.com.** Shares are bought and sold at market price (not NAV) and are not individually redeemed from the fund. Market returns are based on the composite closing price and do not represent the returns you would receive if you traded shares at other times. The listing date is typically one or more days after the fund inception date. Therefore, NAV is used to calculate market returns prior to the listing date. Brokerage commissions will reduce returns. Index returns are for illustrative purposes only and do not represent fund performance. Index returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest in an index.

Considerations for Using Leveraged and Inverse ETFs over Time

Investors who want to hold leveraged or inverse funds longer than one day should consider a rebalancing strategy for their investment. A rebalancing strategy:

- Can buffer the negative effects of compounding (and may mitigate the positive ones)
- Requires investors to increase or decrease their positions at predetermined intervals to maintain their desired level of exposure to the benchmark
- May have transaction costs and tax consequences
- May require available capital for periods when additional share purchases are required
- Does not take the place of daily position monitoring

Choosing a Rebalancing Strategy

- There are two common rebalancing strategies: trigger-based and calendar-based

	TRIGGER-BASED REBALANCING	CALENDAR-BASED REBALANCING
HOW IT WORKS	Investors rebalance each time the difference between an investment's return and its benchmark's return reaches a certain threshold, e.g. 10%.	Investors rebalance at predetermined intervals such as weekly, monthly or quarterly.
ADVANTAGES	Attuned to market conditions—triggers a rebalance more frequently in volatile periods.	Convenience of knowing exactly when and how often to rebalance.
DISADVANTAGES	May require frequent rebalancing, especially with inverse funds and funds with volatile benchmarks or larger multiples.	Not attuned to market conditions, and performance may stray significantly from the benchmark return times the fund multiple between rebalances.

Rebalancing Step by Step

STEP 1: Decide when to rebalance (trigger- or calendar-based strategy)

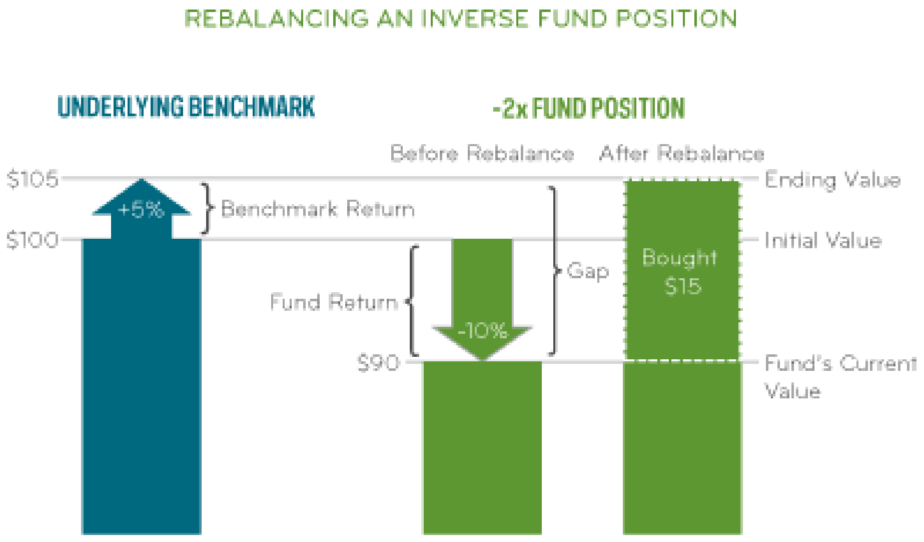
STEP 2: Calculate the gap

Gap = Benchmark Return – Fund Return

STEP 3: Calculate the rebalance trade

Rebalance Trade Amount = Initial Value x (1 + Benchmark Return) – Fund's Current Value

STEP 4: Monitor and repeat as needed



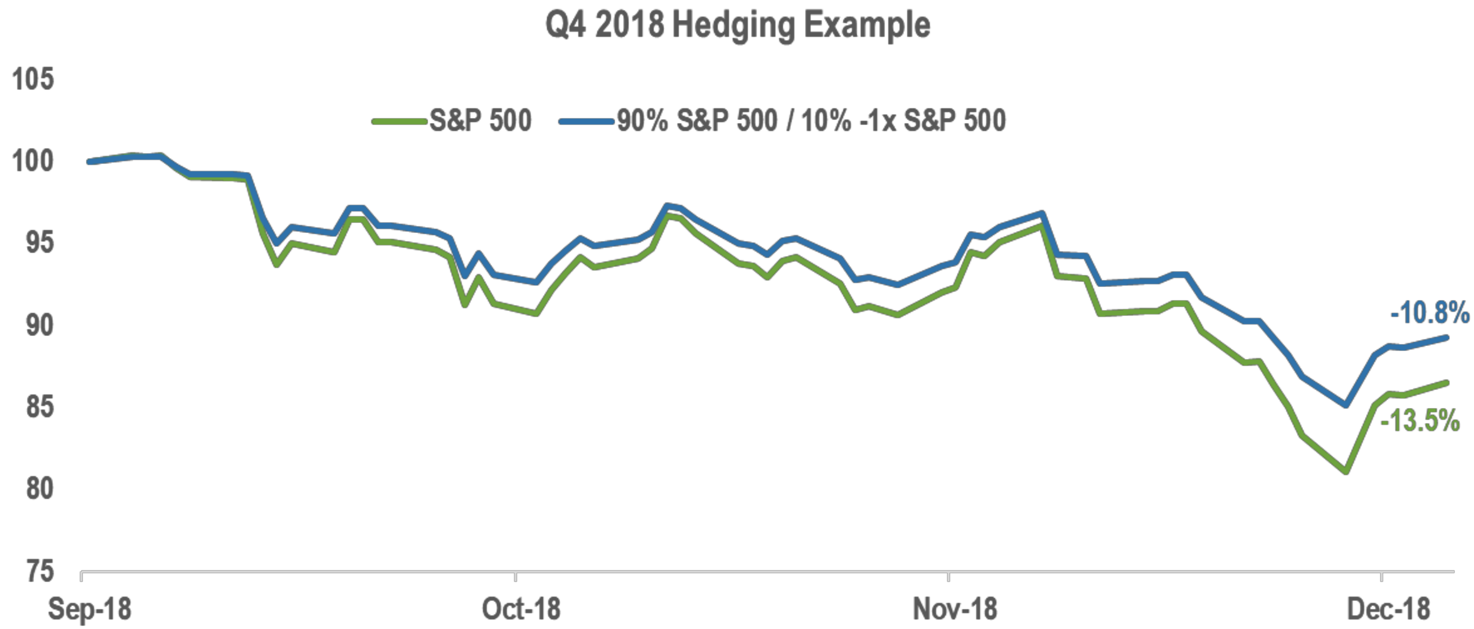
For illustrative purposes only.

How a Hedge Might Behave in Different Market Conditions

Using an Inverse Hedge in a Down Market

Less Downside,

Less Volatility



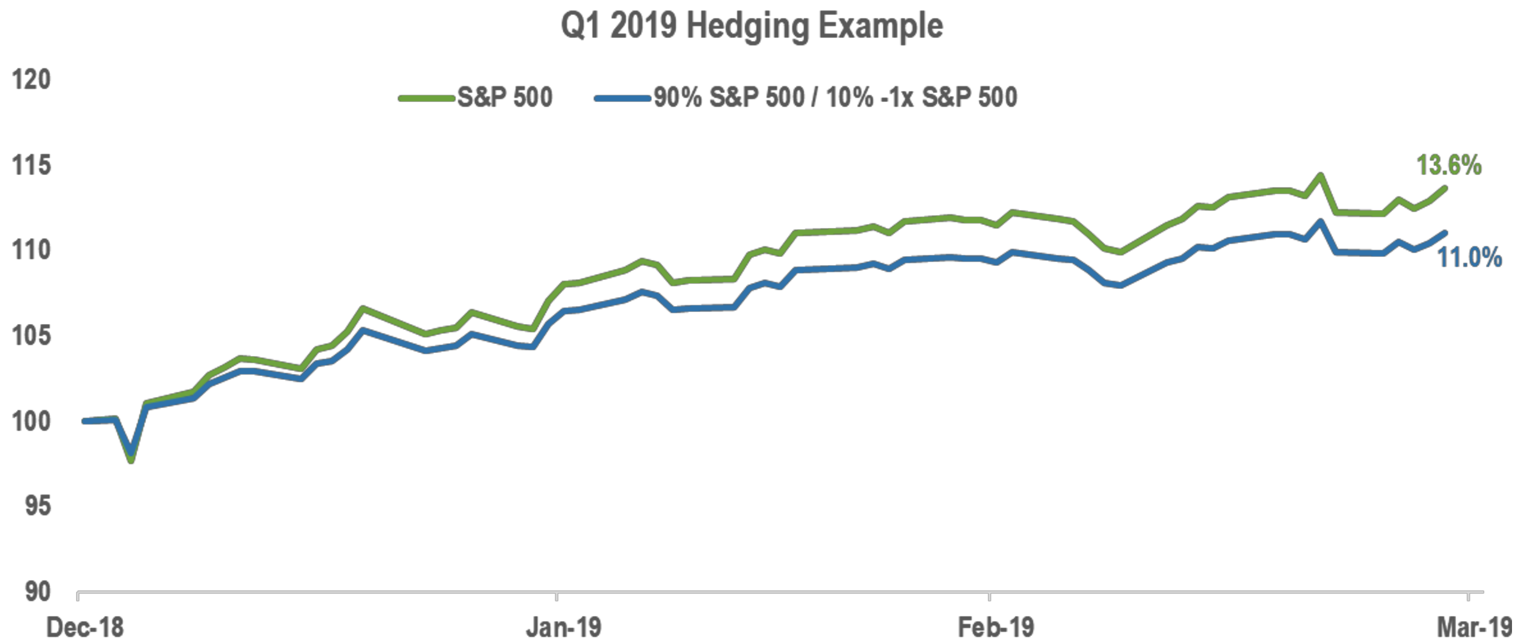
September 28, 2018 – December 31, 2018	Return	Annualized Volatility
S&P 500	-13.5%	23.8%
90% S&P 500 / 10% -1x S&P 500	-10.8%	18.1%

Source: Bloomberg, 9/28/2018–12/31/2018. The performance quoted represents past performance and does not guarantee future results. For illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in any index.

Using an Inverse Hedge in an Up Market

Less Upside,

Less Volatility



December 31, 2018– March 29, 2019	Return	Annualized Volatility
S&P 500	13.6%	13.5%
90% S&P 500 / 10% -1x S&P 500	11.0%	11.0%

Source: Bloomberg, 12/31/2018 – 3/29/2019. The performance quoted represents past performance and does not guarantee future results. For illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in any index.

SH Performance as of March 31, 2019

Fund Inception 6/19/06	Daily Objective*	1-Year	5-Year	10-Year	Since Inception	Expense Ratio
ProShares Short S&P 500 (SH)—NAV	-1x	-7.54%	-10.67%	-15.72%	-10.33%	0.89%
ProShares Short S&P 500 (SH)—Market Price		-7.53%	-10.67%	-15.79%	-10.33%	
S&P 500	N/A	9.50%	10.90%	15.91%	8.96%	N/A

For most recent performance, visit: https://www.proshares.com/funds/sh_performance_and_quote.html

* Before fees and expenses. Source: ProShares and Nasdaq, 3/31/2019. **The performance quoted represents past performance and does not guarantee future results. 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 the original cost. Current performance may be lower or higher than the performance quoted. Performance data current to the most recent month end may be obtained by calling 866.776.5125 or by visiting ProShares.com.** Shares are bought and sold at market price (not NAV) and are not individually redeemed from the fund. Market returns are based on the composite closing price and do not represent the returns you would receive if you traded shares at other times. The listing date is typically one or more days after the fund inception date. Therefore, NAV is used to calculate market returns prior to the listing date. Brokerage commissions will reduce returns. Index returns are for illustrative purposes only and do not represent fund performance. Index returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest in an index.

Closing Remarks

- 20+ years in asset management
- At the forefront of the ETF revolution since 2006
- Offer a wide range of ETFs
  - Leveraged & Inverse
  - Dividend Growth, Multi-Factor, Thematic, Alternative
  - Asset Class Diversification
- Innovation with products that provide strategic and tactical opportunities for investors to manage risk and enhance returns

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Appendix

Traditional Leverage Strategies

- **MARGIN:** When brokerage firms lend investors the cash to purchase securities, it is called buying “on margin.” Investors typically pay interest and are asked to keep a certain level of assets in a brokerage margin account.

- **BUYING CALL OPTIONS:** “Buying a call” option gives investors the opportunity to buy a security at an agreed-upon price during a certain time period. For the price of the call contract, investors can control more shares than investing directly in the security, earning a larger percentage profit if the price of the security rises. If the price falls, call buyers could lose the amount paid for the contract.

- **BUYING FUTURES CONTRACTS:** Buying a futures contract involves buying a security in the future at a price level set now. Investors buying futures may control a larger position than they could by buying the security itself and could earn a larger percentage of profit if the price of the security increases. Investors may be required to maintain a certain account balance. If the price of the security falls, it is possible to lose more than the amount invested.

Traditional Inverse Strategies

- **SHORT SELLING:** “Shorting” a security involves borrowing shares, immediately selling them, and buying them back later to return to the lender. Short selling usually requires a margin account with a certain level of assets. If the price of the security has fallen in the specified time, investors profit from the difference, less the borrowing costs and any dividends paid. If the price has risen, investors could lose an unlimited amount of money to buy the shares back to return to the lender.

- **BUYING PUT OPTIONS:** “Buying a put” option gives investors the opportunity to sell a security at an agreed-upon price during a specified time period. Owners of put contracts hope to profit from a decline in the price of a security. And, put options allow investors to control more shares. However, if the price of the security rises, put buyers could lose the amount paid for the contract.

- **SELLING FUTURES CONTRACTS:** Selling a futures contract involves selling a security in the future at a price level set now, hoping to benefit if the price of the security goes down. Investors selling futures may control a larger amount of shares. Investors are typically required to keep a certain amount of assets in a margin account. If the price of the security rises, investors could lose more than the amount invested.

A Reminder About Risk

Investing involves risk, including the possible loss of principal. Most leveraged and inverse funds seek returns that are a multiple of (e.g., 2x or -2x) the return of a benchmark (target) ***for a single day***, as measured from one NAV calculation to the next. Due to the compounding of daily returns, leveraged and inverse fund returns over periods other than one day will likely differ in amount and possibly direction from the target return for the same period. These effects may be more pronounced in funds with larger or inverse multiples and in funds with volatile benchmarks. Investors should monitor their holdings as frequently as daily. Most leveraged and inverse funds are non-diversified and each entails certain risks, which may include risk associated with the use of derivatives (swap agreements, futures contracts and similar instruments), imperfect benchmark correlation, leverage and market price variance, all of which can increase volatility and decrease performance. Inverse funds should lose money when their benchmarks or indexes rise. Please see their summary and full prospectuses for a more complete description of risks.

To Get a Prospectus

Carefully consider the investment objectives, risks, charges and expenses of ProShares and ProFunds before investing. This and other information can be found in their summary and full prospectuses. Read them carefully before investing. For a ProShares ETF prospectus, visit ProShares.com or obtain one from your financial advisor or broker-dealer representative. For a ProFunds mutual fund prospectus, visit ProFunds.com. There is no guarantee any ProShares ETF will achieve its investment objective.

Shares of any ETF are generally bought and sold at market price (not NAV) and are not individually redeemed from the fund. Brokerage commissions will reduce returns. ProShares ETFs are distributed by SEI Investments Distribution Co., which is not affiliated with the funds' advisors. ProFunds Distributors, Inc. is distributor for ProFunds mutual funds. SEI Investments Distribution Co. is not affiliated with ProFunds or ProFunds Distributors.