

# ETFMG PRODUCT GUIDE:

The Benefits and Risks  
of Leveraged and Inverse  
Exchange-Traded Funds

etfmg<sup>®</sup>

# INTRODUCING ETFMG 2x DAILY LEVERAGED & INVERSE ETFs

ETFMG 2x Daily Leveraged exchange-traded funds (ETFs) are leveraged funds that seek a return that is +200% (or -200% with respect to any 2x Daily Inverse ETF) of the return of their benchmark index for a single day, offering investors the ability to navigate everchanging markets with ease of use.

## About ETFMG®

In 2014, ETFMG was founded by Sam Masucci with a vision of developing innovative thematic exchange-traded funds that provide investors unique exposure to new markets. Today, the ETFMG fund lineup provides access to a diverse collection of global themes and is comprised of 75% first-to-market products.

## About ETFMG 2x Daily Leveraged ETFs

Passive ETFs are investable products that hold a basket of securities which correspond to the index they track.

A leveraged ETF is also an exchange-traded investable product that uses financial derivatives and debt to amplify the returns of an underlying index. While a traditional passive ETF typically seeks to track the total return performance, before fees and expenses, of its underlying index, a leveraged ETF may seek 2 times that return on a daily basis.

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**ETFMG 2x Daily Leveraged ETFs share similarities with non-leveraged ETFs, with two fundamental distinctions that impact the way they are managed and the way they perform:**

**1** Each dollar invested provides \$2 of the performance of the benchmark daily, which means 200% of the daily risk and volatility.

**2** ETFMG 2x Daily Leveraged ETFs seek to magnify the returns of their benchmarks for a single day; returns for periods greater than a day are impacted by compounded daily leveraged returns during the period.

## FUND OBJECTIVES

Each ETFMG 2x Daily Leveraged ETF is designed to seek daily leveraged investment results, before fees and expenses, of two times (2x) or 200% of the performance of its benchmark index. The Fund does not seek to achieve its stated investment objective over a period of time greater than a single day. There is no guarantee that the funds will achieve their investment objective.

These ETFs are **intended** for use only by investors who:

- understand the risks of leverage, and can accept substantial losses in short periods of time;
- understand the unique nature and performance characteristics of funds which seek daily leveraged investment results; and
- are knowledgeable investors and have time to manage positions frequently to respond to changing market conditions and fund performance.

These ETFs are **not intended** for use by investors who:

- cannot tolerate substantial or even complete losses in short periods of time;
- are unfamiliar with the unique nature and performance characteristics of funds that seek daily leveraged investment results; and
- are unable to manage a portfolio actively and make changes as market conditions and fund performance dictate.

*We recommend that prospective investors seek the advice of an investment professional before making an investment in ETFMG 2x Daily Leveraged ETFs.*

## COMPOSITION AND EXPOSURE

To obtain the necessary exposure, ETFMG 2x Daily Leveraged ETFs will invest all or a portion of their net assets in derivatives – typically swaps or futures. These derivatives are agreements that provide the ability to gain leveraged exposure to respective indexes and sectors without the need for full dollar-for-dollar investment.

STRATEGY	EQUITIES	DERIVATIVES
THEMATIC EXPOSURE FUNDS	15%-30%	70%-85%
DAILY 2X FUNDS	0%-30%	170%-200%
DAILY -2X FUNDS	0%	200%

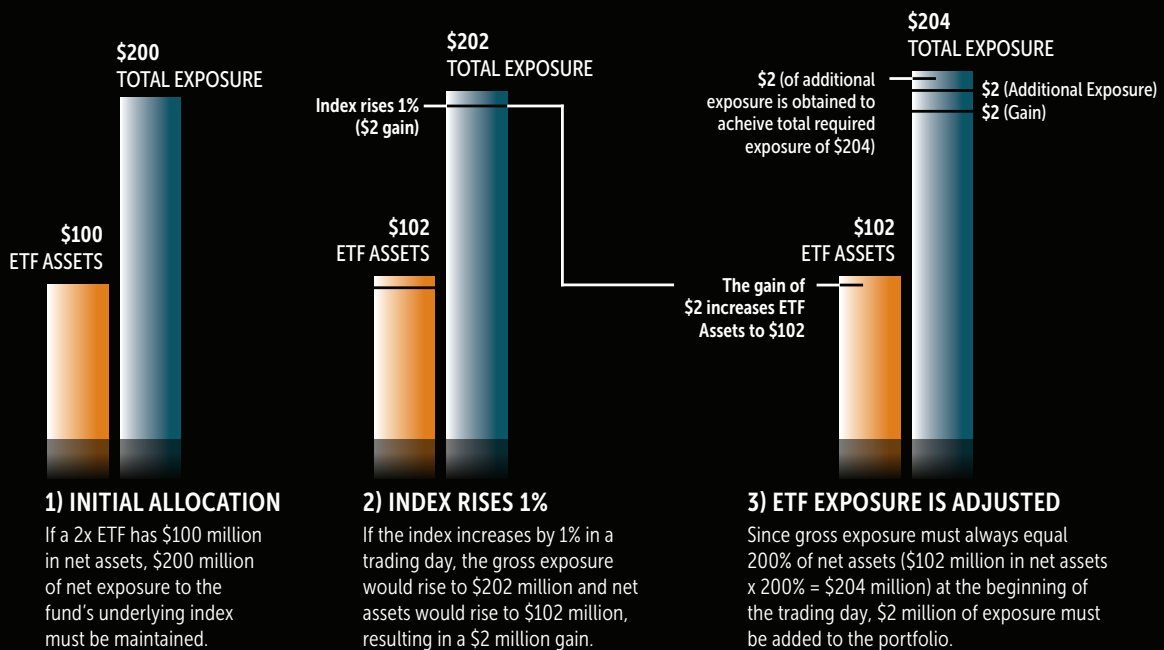


# MANAGING EXPOSURE IN EVERCHANGING MARKETS

Because leveraged and inverse leveraged funds are designed to track a multiple of the performance, or inverse of the performance, of their respective benchmark indexes, daily market fluctuations will cause the funds' net asset levels to rise or fall. These daily market fluctuations result in portfolio adjustments by the funds' investment adviser (ETFMG) to help achieve exposure levels for each leveraged and inverse leveraged fund at the correct multiple (i.e., 2x daily exposure).

ETFMG may adjust exposure to derivatives as frequently as daily, seeking to track, as closely as possible, 200% of the performance or inverse performance, of the respective benchmark's daily performance.

## Hypothetical Example (A 2x Daily Fund)



## THE EFFECTS

ETFMG 2x Daily Leveraged ETFs have a daily leveraged investment objective and the funds' performance for periods greater than a trading day will be the result of each day's returns compounded over the period, which is very likely to differ from two times (2x) the benchmark indexes performance, over a longer period of time, before fees and expenses.

Compounding affects all investments but has a more significant impact on funds that are leveraged and that rebalance daily. For a leveraged fund, adverse daily performance of the index reduces the amount of a shareholder's investment, whereas favorable daily performance increases the amount of a shareholder's investment. Equally, future adverse daily performance on a reduced shareholder's investment will result in a smaller subsequent dollar amount lost, while future adverse daily performance on an increased shareholder's investment will result in a larger subsequent dollar amount lost.

The effect of compounding becomes more pronounced as index volatility and the holding period increase. The impact of compounding will affect each shareholder differently depending on the period of time an investment in the fund is held and the volatility of the Index during the shareholder's holding period.



## THE EFFECTS

The table below illustrates hypothetical returns for a 2x fund in upward trending, downward trending and volatile markets.

**Upwards:** Two days of 3% gains produces a 6.1% return for the benchmark, which is better than adding up each day's individual return, and a 12.4% return for the 2x fund – more than twice the benchmark return.

DAY		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
INDEX VALUE	100	103	106	109	112	115
INDEX DAILY RETURN (%)		3.00	2.91	2.83	2.75	2.68
INDEX CUMULATIVE RETURN (%)		3.00	6.00	9.00	12.00	15.00
INDEX CUMULATIVE RETURN 2X (%)		6.00	12.00	18.00	24.00	30.00
2X FUND EXPECTED DAILY RETURN (%)		6.00	5.83	5.66	5.50	5.36
FUND NAV (\$)	10	10.60	11.22	11.85	12.50	13.17
ACTUAL CUMULATIVE RETURN (%)		6.00	12.17	18.52	25.05	31.75

**Downwards:** Two days of 3% losses produces a -5.9% return for the benchmark, which is less than adding up each day's negative return and a -11.6% return for the 2x fund.

DAY		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
INDEX VALUE	100	97	94	91	88	85
INDEX DAILY RETURN (%)		-3.00	-3.09	-3.19	-3.30	-3.41
INDEX CUMULATIVE RETURN (%)		-3.00	-6.00	-9.00	-12.00	-15.00
INDEX CUMULATIVE RETURN 2X (%)		-6.00	-12.00	-18.00	-24.00	-30.00
2X FUND EXPECTED DAILY RETURN (%)		-6.00	-6.19	-6.38	-6.59	-6.82
FUND NAV (\$)	10	9.40	8.82	8.26	7.71	7.19
ACTUAL CUMULATIVE RETURN (%)		-6.00	-11.81	-17.44	-22.89	-28.14

**Volatile:** A 3% gain followed by a 3% loss does not result in a 0% return, but a negative return of -0.09% for the benchmark and a -0.36% return for the 2x fund. Investors using geared funds over periods longer than one day are encouraged to actively monitor their investments, as frequently as daily, and to consider a rebalancing strategy for their holdings.

DAY		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
INDEX VALUE	100	97	100	103	100	97	100
INDEX DAILY RETURN (%)		-3.00	3.09	3.00	-2.91	-3.00	3.09
INDEX CUMULATIVE RETURN (%)		-3.00	0.00	3.00	0.00	-3.00	0.00
INDEX CUMULATIVE RETURN 2X (%)		-9.00	0.00	9.00	0.00	-9.00	0.00
2X FUND EXPECTED DAILY RETURN (%)		-9.00	9.28	9.00	-8.74	-9.00	9.28
FUND NAV (\$)	10	9.10	9.94	10.84	9.89	9.00	9.84
ACTUAL CUMULATIVE RETURN (%)		-9.00	-0.56	8.39	-1.08	-9.98	-1.63

*In the table above we see an example of a fund that had a negative return after a six-day period of volatile yet cumulatively flat benchmark index returns. You can follow the math to better understand how this occurs.*

# USING DAILY LEVERAGED FUNDS OVER LONGER PERIODS

Although most daily leveraged funds have one-day objectives, there are several approaches investors can take to use them for longer periods.

Some investors may decide they want to hold a daily leveraged fund for more than a day. There are several strategies that either mitigate the effects of daily rebalancing and compounding or seek to take advantage of the way daily leveraged and inverse funds can perform over time. Each has unique risks and benefits, and it is important to monitor the investments daily.

## Hold for a short period

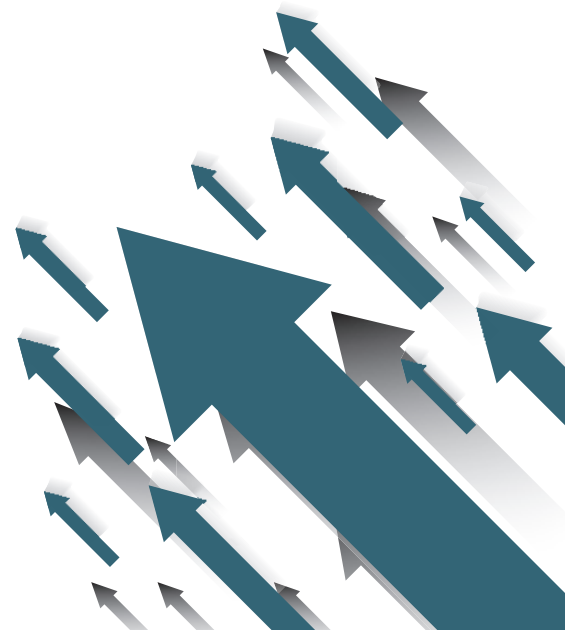
For many investors, the most direct way to mitigate the effect of holding daily leveraged funds over time is to simply limit the holding period. Returns for short periods (that are longer than a day) can still differ in amount and possibly direction from the target return for the same period.

## Adjust holdings

Investors looking to approximate a fund's multiple for longer than a day may need to rebalance their holdings by increasing or decreasing the investment to maintain a desired exposure. Rebalancing may result in transaction costs and tax consequences. Of course, rebalancing can reduce the negative effects of compounding on performance, but it may reduce the positive effects as well.

## Seek to take advantage of compounding

An investor who has a conviction about the volatility and direction of a benchmark may use daily leveraged funds to seek to benefit from the effect of the compounding of the daily returns of the fund - for example, when expecting a low-volatility, trending period. However, investors should consider the cost of the investment and how their portfolios will be affected if the investment goes in the opposite direction of what they were expecting.





## UNDERSTANDING THE IMPACT OF SEEKING DAILY LEVERAGE ON LONG-TERM PERFORMANCE

Each ETFMG 2x Daily Leveraged ETF seeks to provide returns which are a multiple of the return of a particular benchmark index. The daily reset feature has important implications for the performance of a fund for periods longer than a day.

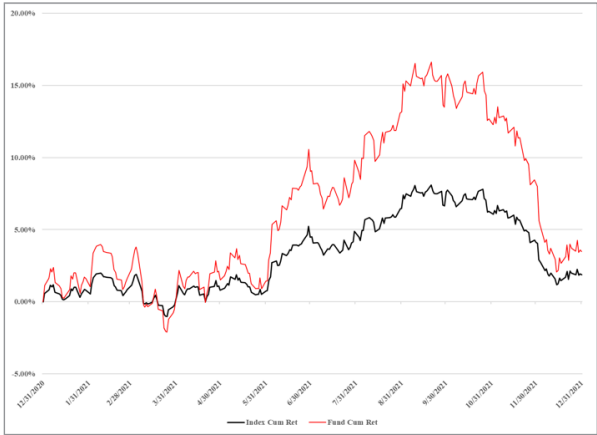
A daily leveraged ETF's exposure is a product of its target magnification and its net assets. Favorable moves in the benchmark index push net assets higher, which translates into an increase in exposure by a multiple of the gain in its net assets. As such, unfavorable moves in the benchmark index lead to a decline in net assets, which results in a decrease of exposure in an amount which is a multiple of the decline in the net assets.



# A CLOSER LOOK AT SOME OF THE RISKS

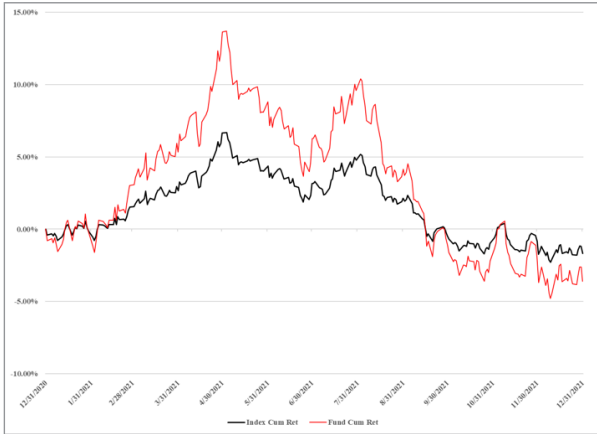
## The following 3 scenarios illustrate how an ETFMG 2x Daily Leveraged Fund performs

**in various market scenarios:** *In trending markets with low volatility, the performance for periods longer than a day may exceed the return of the benchmark index, multiplied by the stated exposure level of the portfolio, as demonstrated by the first two scenarios below.*



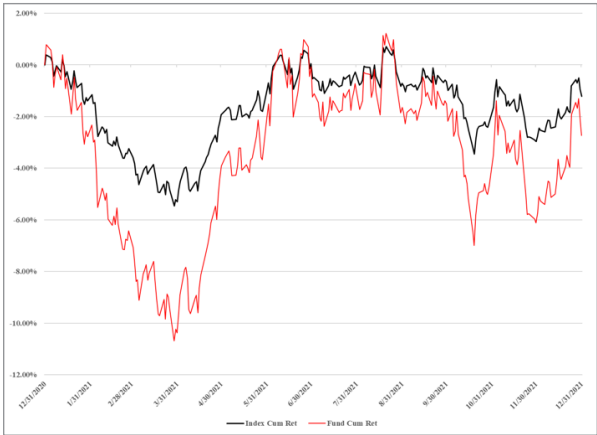
### Market Rises Steadily

If the benchmark index moves in a direction favorable to the fund (meaning up for a 2x Daily Leverage Fund and down for a 2x Daily Leveraged Inverse Fund) in a linear trend for a period greater than one day, the fund’s gain for the period may be larger than the cumulative benchmark index return multiplied by the fund’s stated multiple (i.e. 2x). This is because as the fund’s net assets rise with the favorable market fluctuation, the fund must respond by increasing its exposure to the benchmark index, which therefore amplifies the impact of subsequent favorable index movements.



### Market Declines Steadily

If the benchmark index moves in a direction favorable to the fund (meaning up for a 2x Daily Leverage Fund and down for a 2x Daily Leveraged Inverse Fund) in a linear trend for a period greater than one day, the fund’s gain for the period may be larger than the cumulative benchmark index return multiplied by the fund’s stated multiple (i.e. 2x). This is because as the fund’s net assets rise with the favorable market fluctuation, the fund must respond by increasing its exposure to the benchmark index, which therefore amplifies the impact of subsequent favorable index movements.



### Market is Flat, Yet Volatile

In volatile markets that exhibit no clear trend or direction, the impact of daily rebalancing can be harmful to the performance of daily leveraged ETFs over time. As described above, the funds respond to gains by increasing exposure to the benchmark index and respond to losses by decreasing exposure each day. Increased exposure in advance of a loss will generate a larger loss, and decreased exposure in advance of a gain will decrease the impact and benefit of future gains for the fund. A continued pattern of this sort will typically cause the decay of the longer term returns of the fund.

## THE RISKS

### Market Price Variance Risk

ETFMG 2x Daily Leveraged ETFs are bought and sold in the secondary market on the NYSE ARCA. The market prices of the shares will fluctuate in response to changes in NAV and supply and demand for the shares. It is not possible to accurately predict whether the shares will trade above, below, or at their NAV. On occasion, ETFs may trade at larger-than expected premiums due to a lack of supply of outstanding shares available in the markets. The result could be that an investor may buy shares at a price that is somewhat inflated above the total market value of the underlying holdings of the fund. Conversely, as more shares are introduced into the secondary market, supply and demand ordinarily return to relative balance. The result typically would be a natural decrease in the size of the premiums.

### Derivatives and Counterparty Risk

Derivatives are financial instruments that derive value from the underlying reference asset or assets, such as stocks, bonds, or funds (including ETFs), interest rates or indexes. The 2x Daily Leveraged ETFs' investments in derivatives may pose risks in addition to, and greater than, those associated with directly investing in securities or other ordinary investments, including risk related to the market, leverage, imperfect daily correlations with underlying investments or the Fund's other portfolio holdings, higher price volatility, lack of availability, counterparty risk, liquidity, valuation and legal restrictions.

Derivatives, including swap agreements, are entered into primarily with major global financial institutions, such as broker dealers, referred to as a counterparty. Counterparty risks include a counterparty being unwilling or unable to make timely payments to meet its contractual obligations or failing to return holdings that are subject to the agreement with the counterparty. If the counterparty or its affiliate becomes insolvent, bankrupt or defaults on its payment obligations to the Fund, the value of an investment held by the Fund may decline. Additionally, if any collateral posted by the counterparty for the benefit of the Fund is insufficient or there are delays in the Fund's ability to access such collateral, the Fund may not be able to achieve its leveraged investment objective. In addition, the Fund may enter into swap agreements with a limited number of counterparties, which may increase the Fund's exposure to counterparty credit risk. Further, there is a risk that no suitable counterparties will be willing to enter into, or continue to enter into, transactions with the Fund and, as a result, the Fund may not be able to achieve its leveraged investment objective or may decide to change its leveraged investment objective.

# GLOSSARY OF TERMS FOR LEVERAGED ETF INVESTORS

**Beta:** A measure of the systematic variability of a security or a portfolio in relation to a target index. A beta of more than 1.00 indicates that the security or portfolio would have higher volatility than the index; a beta of less than 1.00 indicates lower volatility.

**Volatility:** A statistical measure of the dispersion of returns for a given security or market index. In most cases, the higher the volatility, the riskier the security. Volatility is often measured as either the standard deviation or variance between returns from that same security or market index.

**Counterparty:** In financial service terms, counterparty can refer to brokers, investment banks, and other securities dealers that serve as the contracting party when completing “over-the-counter” securities transactions. The term is generally used in this context in relation to “counterparty risk,” which is the risk of monetary loss a firm may be exposed to if the counterparty to an over-the-counter securities trade encounters difficulty meeting its obligations under the terms of the transaction.

**Futures Contract:** A contract, traded on a futures exchange, to buy or sell a standardized quantity of a specified commodity of standardized quality (e.g., a “basket” of corporate equities [“stock indices”] at a certain date in the future, at a price (the futures price) determined by the market price at the time of the purchase or sale of the contract.

**Secondary Market:** The financial market for trading of securities that have already been issued in an initial private or public offering. New ETF shares are created in the primary market in large lots called creation units by financial professionals called Authorized Participants. Once these shares are created, they become available for purchase to all investors in the secondary market.

**Swap:** A derivative in which two counterparties agree to exchange one stream of cash flows for another stream. These streams are called the legs of the swap. The cash flows are calculated over a notional principal amount, which is usually not exchanged between counterparties. Consequently, swaps can be used to create unfunded exposures to an underlying asset, since counterparties can earn the profit or loss from movements in price without having to post the notional amount in cash or collateral. ETFMG uses swaps to obtain additional exposure, or inverse exposure, to the benchmark indexes that the funds track.

*Source: Investopedia*