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Are Leveraged ETFs Worth the Costs and Risk?

For most fund categories, the answer is yes, according to new research

By Derek Horstmeyer

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Leveraged ETFs yield better returns over the long run for all categories except small-caps. ILLUSTRATION: ALEX NABAUM

Leveraged ETFs, which aim to amplify returns through the use of futures and other derivatives, have been the go-to for investors looking to make an outsize bet on the direction of a particular index since they were launched 15 years ago.

But are these exchange-traded funds worth the relatively high costs, considering the volatility to which they are prone and the tracking error, or how much the price behavior of the investment diverges from the price behavior of its benchmark.

My research assistants, John Shaffer and Giovanni Rustici, and I examined four categories of leveraged ETF funds—those that track the S&P 500, the Dow industrials, the Nasdaq-100 or the Russell 2000 index of small stocks. We found that leveraged ETFs in three out of the four categories provide sufficient returns over the long run to justify their costs and risks, and despite persistent tracking-error divergence.

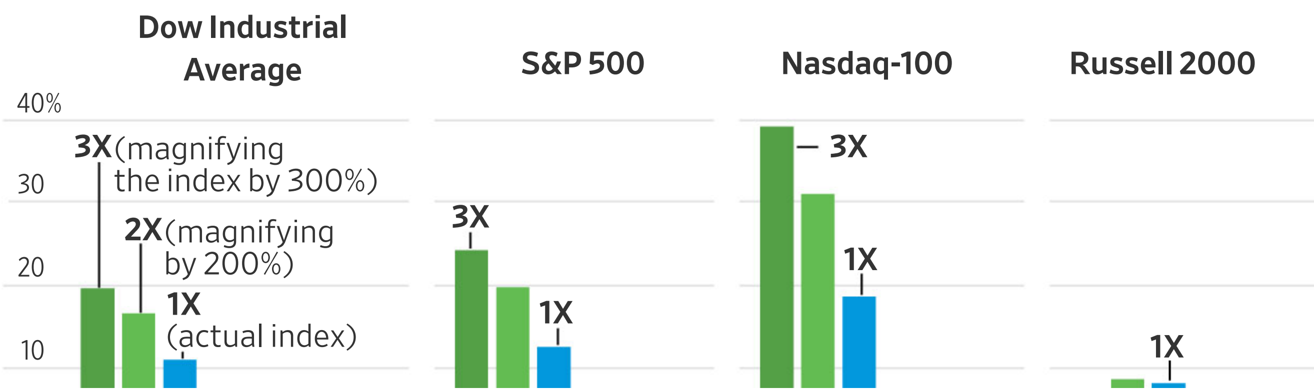
We began our research by pulling data on all leveraged ETFs that have been issued in U.S. markets over the past 10 years. We then drilled down to focus only on S&P 500 leveraged ETFs, Nasdaq leveraged ETFs, Dow leveraged ETFs and Russell 2000 leverage ETFs. We then separated them by their bull or bear construction—3X or 2X (designed to deliver three times or two times the daily performance of the index, respectively) or -1X, -2X, -3X (designed to deliver one, two or three times the inverse of the index's performance).

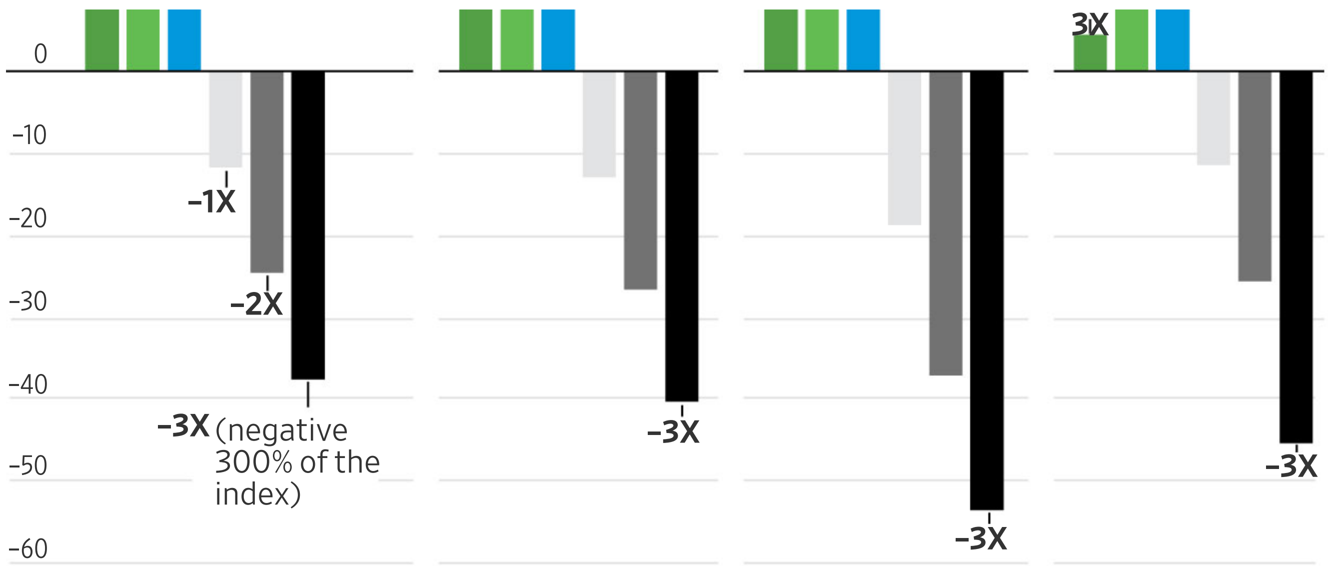
From there, we investigated the average 10-year returns to each grouping by index and how they are structured in terms of magnification (bull or bear structure). The first interesting finding is that in general, as the magnification increases the tracking error from the underlying index increases.

For example, the S&P 500 delivered an average annual return of 12.6% over the past 10 years (with dividends reinvested), while the average 2X leveraged S&P 500 ETF delivered 19.8% a year over the past 10 years. If the average leveraged ETF was actually two times the S&P 500, this would have been a 25.1% return over the past 10 years, meaning the tracking error for these investments is about 5.3 percentage points annually.

Feeling the Leverage

Average annual return for various leveraged ETFs over a 10-year period





Source: Derek Horstmeyer, George Mason University

When we look at 3X leveraged ETFs for the S&P 500, the tracking error gets even worse. The average 3X leveraged ETF delivered a return of 24.26%, leaving a tracking error of about 13.5 percentage points a year.

For the leveraged ETFs tracking the S&P 500, the Dow industrials and the Nasdaq-100, the relationship appears to hold for all—that is, the magnification is in line with the performance. This falls apart, however, for leveraged ETFs tracking the Russell 2000.

The 3X ETFs for the Russell 2000 actually performed worse than the Russell 2000 index itself. Over the past 10 years the Russell 2000 delivered an average annual return of 8.1%, but the average 3X ETF tracking the Russell 2000 delivered an average annual return of 4.3%. If the 3X ETF worked as intended, it should have delivered returns somewhere in the range of 24.3% a year. By investing in the leveraged ETF, an investor would have underperformed the actual index just due to severe tracking error.

It is also important to note that these leveraged ETFs have two things going against them. First, their expense ratios are high—they average about 0.95% a year versus 0.10% for nonleveraged ETFs. And second, the tracking error of these products increasing during high-volatility periods, which can severely inhibit long-run returns.

All in all, the risks scale with the magnification of these leveraged products. If you are willing to take on the risk of a magnified performance, leveraged ETFs do yield better returns over the long run for all categories except small-caps (those tracking the Russell 2000).

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