

Product Update

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Understanding Leveraged ETF's

Leveraged ETFs have become increasingly popular over the last year. However, with their growing popularity has come increasing controversy and criticism. Our concern is they are complex securities that are not well understood by our retail clients. To be fair, once an investor understands how they are structured and the inherent risks, these securities can provide handsome short-term returns or downside protection in a portfolio.

The largest fund managers in this category are ProShares Advisors LLC, BetaPro Management Inc., Rydex Investments, and Direxion Shares ETF Trust. ProShares, the leading provider of leveraged ETFs was the fastest growing ETF manager in the world in 2008, with assets under management more than doubling to US\$20.5 billion at yearend.

What are Leveraged ETFs?

Leveraged ETFs are similar to other exchange traded funds in that they are structured to provide returns that correspond to an underlying index, and are traded on a stock exchange. That's where the similarity ends. Through the use of derivatives or debt, they magnify the returns of an underlying index. The typical leverage ratio is 2:1, but last fall, Direxion Shares ETF Trust launched funds structured to provide leverage of 3:1 on a number of indices. In all cases, the fund's objectives are to provide multiples of the "daily" investment results for a reference index, less fees and expenses. Seems straight forward enough however there are a couple of twists.

To begin with, the leverage factor applies on a daily basis only, and unless a client's position is rebalanced at the end of the day, leverage changes over time. Due to this factor, leveraged ETFs are highly path dependent and an investor's return experience beyond one day becomes highly unpredictable. The second point is they are also very sensitive to market volatility and the more volatile the market the less likely an investor will receive the expected return. What's troubling is that their popularity has skyrocketed at the same time market volatility has soared to record highs.

Daily Rebalancing

Leveraged ETFs are structured to ensure new investors who purchase a fund will receive the stated leverage. To do this, the fund needs to rebalance or reset the leverage at the end of each trading day. Those familiar with split shares know that leverage changes as the price of the underlying securities changes. Leverage decreases as the underlying securities rise in value, conversely leverage increases as the value of the securities falls.

A leveraged long (Bull) ETF would be required to increase their index exposure if the index finished the day higher, and reduce its exposure if the index finished the day lower. Conversely, a leveraged short (Bear) ETF would decrease their index exposure if the market ended the session higher and increase its position if the index finished lower. So, both bull and bear ETFs are buyers of stocks when the index rises, and sellers of stocks when the index falls. Remember the bear ETF increases its exposure by shorting or selling securities in the index.

- Investor purchases an ETF when it is \$100 per share
- The net asset value of the ETF is also \$100 per share
- The ETF doubles the exposure to \$200 using futures or swaps
- Day 1 - The index rises by 10%, which generates a \$20 profit for the holder of the ETF ($\$200 \times 10\%$), and the ETF closes at \$120 per share; the assets rise to \$220.
- Day 2 – A second investor wants to buy the ETF which is trading at \$120 with stated leverage of 2 times the underlying index; to maintain leverage at 2 times, the ETF needs to increase its assets to \$240 at the end of Day 1.

This re-leveraging of the fund is what causes a leveraged ETFs return to be somewhat random or path dependent and in some instances significantly different from the expected performance. This makes leveraged ETFs unsuitable as longer-term hedges, unless rebalanced daily.

Volatility Works against Investors over Time

It matters less where an index ends up a week, month, or year from now, than the path it took to get there. The more a market moves around from day to day (volatility), the greater the likelihood the leverage will differ from the stated leverage in the fund objective. Unfortunately, 2008 exhibited one of the highest levels of volatility on record. The VIX Index has hovered above 40 for the last six months, spiking at nearly 90, after averaging around 14 in the 2004 to 2007 period.

Let's Look at a Few Examples

Example 1:

- Suppose an index was trading at 100 and there is a leveraged ETF that provides twice the return of the index on a "daily" basis.
- On Day 1 the index rises 15% to 115 (100×1.15) and the ETF increases 30% to \$130 ($\100×1.30).
- On Day 2 the index falls 15% to 97.75 ($115 - (115 \times 0.15)$) and the ETF declines 30% to \$91.00 ($130 - (130 \times 1.30)$). After two days, the index is down 2.25% and the ETF is down 9%.
- Intuitively, some clients might think a 15% rally one day followed by a 15% decline the next day would leave them flat. That's not the case. Also, some may think the leveraged ETF return would be double that of the index. In fact it was four times (Index down 2.25%, ETF down 9.0%).

Example 2:

- Suppose we take our example a step further and look at returns over a three day period.
- Once again, the percentage changes we are using are abnormally large to make our point.
- In this case the index has a similar return experience on Days 1 and 2, leaving the index at 97.75 and the ETF at \$91.00.
- However on Day 3 the index increases 3% to 100.68 (97.75×1.03). The ETF increases 6% to \$96.46 ($\91×1.06).
- We now are in a position where the index is up modestly and the ETF is in a loss position.

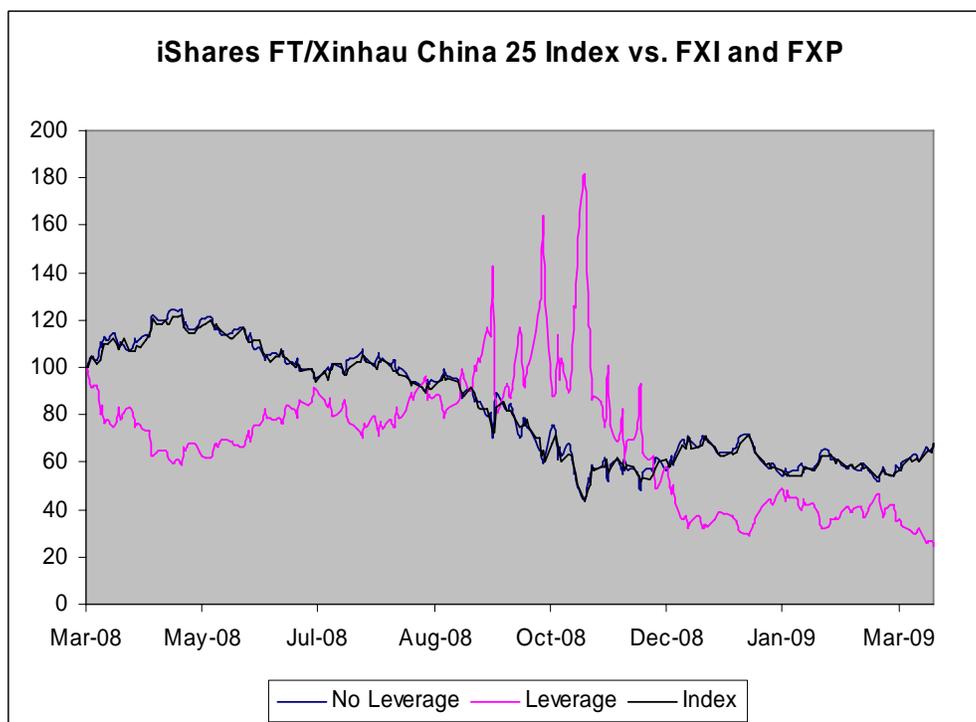
Example 3:

- A study conducted by Credit Suisse analyst Phil Mackintosh showed leveraged bull and bear ETFs could both experience significant losses in a range bound market.
- He simulated a 4-year period where the S&P 500 returns 0% after 48 months and annualized volatility was 30%.
- While the index is unchanged at the end of the period, **both** the leveraged long and short positions would theoretically decline about 40%.

A Real World Example

In an article written by Tom Eidelman for Barron's magazine dated January 12, 2009, he gave a number of real world examples where investors may have correctly predicted directional movements in the market and still lost money using leveraged ETFs over much shorter periods. One example he highlighted showed how the FTSE Xinhua China 25 Index fell 34% over four months, and the ProShares UltraShort FTSE Xinhua China 25 (FXP-NYSE), which intuitively should have increased in value, actually fell 56%.

The chart below shows 1) the China 25 Index, 2) an unleveraged long play on the Index, iShares FTSE/Xinhau China 25 Index Fund, and 3) the UltraShort ETF. The chart helps to visually depict the inherent volatility in the leveraged ETF.



Is Leverage Appropriate

Leveraged ETFs would normally be considered high risk investments. For instance, the Horizons BetaPro ETFs prospectus dated February 27, 2009 states “an investment in Units of an ETF can be speculative, and can involve a high degree of risk and may only be suitable for persons who are able to assume the risk of losing their entire investment”. The relevant prospectus provides a detailed description of the operation, risks and other relevant considerations associated with an investment in a leveraged ETF.

We think the most important question clients and advisors need to ask themselves before purchasing these funds, is leverage appropriate. In a portfolio management context, if targeted long-term return expectations outlined in a client's investment policy statement can be achieved through traditional asset allocation without the use of leverage, then leverage would be considered inappropriate. Case in point, if a target long-term return is 6%, then a client can most likely achieve that return by holding a portfolio constructed of equities, bonds, and cash.

Long-term return assumptions for primary asset classes are as follows:

- Cash 2% - 3%
- Bonds 4% - 6%
- Equities 8% - 9%

The long-term investment horizon and moderate return expectations typical of most registered retirement accounts would typically make leverage inappropriate.

With equities suffering such a dramatic plunge in the last year, investors may be inclined to lever up their portfolios to quickly make back what they lost. This may not be an appropriate strategy for many of our accounts. However, clients with moderate-to-high risk tolerance, and who actively manage their portfolios might want to take advantage of short-term market volatility and trading opportunities.

How to Establish a Leveraged Play on an Index

Those looking to establish a leveraged play on an index might want to consider purchasing an unlevered fund on margin. A 50% margin positioned on SPDR Trust Series 1 (SPY) as a leveraged play on the S&P 500 would provide an investor with twice the return of the S&P 500, albeit an investor risks a margin call.

Conclusion

The first question, investors and advisors need to ask themselves, is leverage appropriate? Those interested in trading in and out of leveraged ETFs must take the time to understand the mechanics of how these structured securities work. Other than for short term trades, we do not recommend retail investors purchase leveraged ETFs, bull or bear. We remind investors that buying and selling unleveraged ETFs on margin may be more appropriate for those looking to establish a leveraged position with a longer term view.

*The author(s) of the report own(s) securities of the following companies.
None.*

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None.*

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